Special, 5/17/2022 10:30:00 AM

BE IT REMEMBERED that on May 17, 2022, there was begun and holden a SPECIAL session of the Commissioners Court of Jefferson County, Texas, with the following members and officers present and participating except those absent as indicated:

Honorable Jeff Branick, County Judge

Commissioner Vernon Pierce, Commissioner Pct. No. 1

Commissioner Darrell Bush, Commissioner Pct. No. 2

Commissioner Michael Sinegal, Commissioner Pct. No. 3

Commissioner Everette D. Alfred, Commissioner Pct. No. 4

Honorable Zena Stephens, Sheriff (ABSENT)

Chief Donta Miller and Chief John Schauberger

Honorable Laurie Leister, County Clerk

When the following proceedings were had and orders made, to-wit:

Jeff R. Branick, County Judge
Vernon Pierce, Commissioner, Precinct One
Darrell Bush, Commissioner, Precinct Two
Michael S. Sinegal, Commissioner, Precinct Three
Everette "Bo" Alfred, Commissioner, Precinct Four

NOTICE OF MEETING AND AGENDA OF COMMISSIONERS' COURT OF JEFFERSON COUNTY, TEXAS May 17, 2022

Notice is hereby given that the Commissioners' Court of Jefferson County, Texas, will meet at **10:30 AM,** on the **17th** day of **May 2022** at its regular meeting place in the Commissioners' Courtroom, 4th Floor, Jefferson County Courthouse, 1149 Pearl Street, Beaumont, Texas.

Said meeting will be a **Special** meeting for the purpose of transacting the routine business of the County. Persons with disabilities requiring auxiliary aids for services who wish to attend this meeting should contact the County Judge's Office to arrange for assistance.

In addition to the routine business of the County, the subject of said meeting will be the following:

9:30 a.m.- WORKSHOP-To receive information from AT&T regarding providing countywide fiber internet service.

Jefferson County has taken steps to minimize the exposure of COVID-19 by implementing the following steps to allow the public to view the Commissioner's Court meeting.

The following options are available:

View live with audio from the County Webpage:
https://co.jefferson.tx.us/comm_crt/commlink.htm

Listen to audio by calling 346-248-7799 Meeting ID: 917 160 6532# Participant ID: #

The court will also have a question and answer session at the end of the meeting. If you would like to ask any questions of the Court, please be on the phone call. The Court will give a question and answer session at the end of the meeting as time allows. You will be called upon by your last 4 digits of your phone number. If you do not have any questions, you can pass.

Please be mindful that the audio portion of this meeting will be of better quality from the website.

INVOCATION: Everette "Bo" Alfred, Commissioner, Precinct Four

PLEDGE OF ALLEGIANCE: Vernon Pierce, Commissioner, Precinct One

PURCHASING:

(a). Receive and file bids for Invitation for Bid (IFB 12-023/YS), Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.

SEE ATTACHMENTS ON PAGES 10 - 731

Motion by: Sinegal
Second by: Alfred
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(b). Consider and possibly approve a revised cost increase for the replacement of the Ford Park South Cooling Tower with Industrial and Commercial Mechanical (ICM) due to market pricing increase. This increase in the amount of $2,000.00; bringing the total amount from $205,000.00 up to $207,000.00; this in accordance with Region V ESC HVAC Capital Equipment, Supplies and/or Services #20140501.

SEE ATTACHMENTS ON PAGES 732 - 733

Motion by: Sinegal
Second by: Alfred
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

COUNTY AUDITOR:

(a). Consider and approve budget transfer– 58th District Court – additional cost for sound system repairs.

SEE ATTACHMENTS ON PAGES 734 - 737

120-2033-412-1095	EDUCATION PAY		$2,000.00
120-2033-412-3084	MINOR EQUIPMENT	$2,000.00	

Motion by: Alfred
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(b). Consider and approve budget transfer – Health & Welfare I – additional requested camera for security system.

SEE ATTACHMENTS ON PAGES 738 - 738

120-5074-441-6002	COMPUTER EQUIPMENT		$500.00
120-5074-441-6018	POWER TOOLS & APPLIANCES	$500.00	

Motion by: Alfred
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(c). Consider and approve budget transfer – Indigent Health – replacement of steps for mobile unit.

SEE ATTACHMENTS ON PAGES 739 - 739

120-5079-442-5080	ADMINISTRATIVE SERVICES		$8,100.00
120-5079-442-6007	AUTOMOBILES	$8,100.00	

Motion by: Alfred
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(d). Consider and approve budget transfer – District Court Records Technology – replacement of printer.

SEE ATTACHMENTS ON PAGES 740 - 740

864-0000-414-5062	TRAVEL EXPENSE		$360.00
864-0000-414-3084	MINOR EQUIPMENT	$360.00	

Motion by: Alfred
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(e). Regular County Bills – check #495065 through check #495293.

SEE ATTACHMENTS ON PAGES 741 - 749

Motion by: Alfred
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

COUNTY CLERK:

ADDENDUMS:

(a).Consider and possibly approve Order Canvassing the results of the May 7, 2022, Constitutional Amendment, Special, and Joint Election.

SEE ATTACHMENTS ON PAGES 750 - 750

Motion by: Bush
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

COUNTY COMMISSIONERS:

(a).Receive and file executed Tax Abatement Agreement between Jefferson County and Aditya Birla Chemicals (USA), LLC for Project Raman pursuant to Texas Tax Code, Sec. 312.401 et seq.

Clerk's Notes: Document will be reviewed to confirm the signature dates are current.

SEE ATTACHMENTS ON PAGES 751 - 767

Motion by: Pierce
Second by: Alfred
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(b).Receive and file Oath of Office and Statement of Officer of Frank R. Rose to the Board of Commissioners for Jefferson County Drainage District No.3.

SEE ATTACHMENTS ON PAGES 771 - 772

Motion by: Pierce
Second by: Alfred
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

TAX OFFICE:

(a).Consider and possibly approve a Resolution recognizing Gina Huebel for her 33 1/2 years of service to Jefferson County and to the citizens of Jefferson County and wishing her well in her retirement.

SEE ATTACHMENTS ON PAGES 768 - 768

Motion by: Bush
Second by: Sinegal
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

ENGINEERING DEPARTMENT:

(a). Consider and possibly approve a Final Plat of The Stockyards, out of the Manual Chirino League, Abstract No. 10, Jefferson County, Texas. This property is located at the corner of F.M Highway 365 and Old Fannett Lovell Lake Road in Precinct #2. This plat has met all of Jefferson County's platting requirements.

SEE ATTACHMENTS ON PAGES 769 - 769

Motion by: Alfred
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(b). Consider and possibly approve a Plat and Replat into Quiktrip 7943 Addition, an 8.848 acre tract of land, out of the T. &.O.R.R. Co. Survey No. 21, Abstract 261, Jefferson County, Texas and being all of a called 8.848 acre tract of land as described of record in document no. 2021044494 of the official public records of Jefferson County, Texas. It is located at the corner of Smith Road and Industrial Road in Precinct #4. This plat is within the City of Beaumont ETJ and meets the requirements of Jefferson County.

SEE ATTACHMENTS ON PAGES 770 - 770

Motion by: Alfred
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

OTHER BUSINESS:

*****DISCUSSION ON ANY OTHER ITEM NOT ON AGENDA WITHOUT TAKING ACTION.**

Receive reports from Elected Officials and staff on matters of community interest without taking action.

_____

Jeff R. Branick
County Judge

Special, May 17, 2022

There being no further business to come before the Court at this time, same is now here adjourned on this date, May 17, 2022.

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Preserving Public Health

Innovation through formulation

ADAPCO GENERAL BID PACKAGE CONTENT*

**OTHER ITEMS TO APPLY DEPENDENT ON INDIVIDUAL BID SPECIFICATIONS*

If you have any questions or ideas on how we can better serve you, please email me at krussell@myadapco.com or give me a call at (800) 367-0659. Thank you, Kathy Russell

Enclosed with each Bid Package

1. **ADAPCO** – Attn: Purchasing/Board of Commissioners/End Users; ADAPCO is serious about public health.
2. **ADAPCO CONTACT/PAYMENT INFORMATION PAGE** - Contact and details regarding ADAPCO Bids/Orders/Payments
3. **CERTIFICATE OF LIABILITY INSURANCE** – General evidence of coverage with Additional Coverage Schedule.
4. **TAXPAYER ID** – W-9 Form
5. **LABELS & SAFETY DATA SHEETS:** IF requirement of bid all Product Labels and SDS will be enclosed. Please also view or print all product Labels from our WEBSITE at **www.MyADAPCO.com**
6. **DROPLET ANALYSIS** - Droplet analysis and testing provided FREE with chemical and equipment purchases.
7. **CONCENTRATED PRODUCTS WITH WATER OR OIL** - First time purchases in 30 gallon drums may include FREE lease of Patented ADAPCO Concentrated Insecticide Injection System (CIIS) Mixing Station. Please email bids@myadapco.com or call us at (407) 328-6519 for more information.
8. **TRAINING** – Training in person or online available, please check with us for details.
9. **ADAPCO REQUIRES BID TABULATIONS and AWARDS** – If not available online or by email to bids@myadapco.com, please see enclosed self-addressed stamped envelope.
10. **SOLE SOURCE or DISTRIBUTION** Manufacturer Letters included, if required.
11. **VALENT Biosciences** - Sole Source Letter if required.
12. **ADAPCO E-Verify** - Company ID#494894
13. **ADAPCO Payment Terms** - Normal net 30 days.
14. **ADAPCO Sustainability Link:** https://www.azelis.com/en/sustainability

azelis

ADAPCO
Preserving Public Health

Innovation through formulation

Attn: Purchasing/Board of Commissioners/End Users

ADAPCO is serious about public health and your business.

Low price may not always designate the best value in the interest of an agency's mosquito control needs. ADAPCO is a full service Mosquito Control Company dedicated to the latest Mosquito Control Chemicals, Equipment, Technology and Surveillance Tools. All citizens deserve the best quality and professionals when it comes to preventing illnesses due to mosquito borne diseases.

We have a team of Mosquito Control experts who have been with ADAPCO for decades that have the knowledge and expertise to help your government agency 24/7.

- ADAPCO continually supports the Mosquito Control industry by providing application and product training for CEU credits, attending all tradeshows, and having Vector professionals available for any questions. Thank you for helping us support scholarships for young professionals in the field of Vector Control. We believe in providing ongoing support for communities that utilize our product line, and we can support these programs through your business.

- Our Vector Control Technical Sales Representatives are available to handle equipment calibrations, droplet testing and analysis, as well as provide the latest product formulations and information for all your mosquito control questions.

- Our dedicated Customer Service Department is available with extended hours to process orders, help with shipping questions, arrange for empty returnable drums or totes (product dependent) as well as provide assistance with any additional Vendor information required.

- ADAPCO also has a separate team of Service Technicians who are available to help you with sprayer equipment and technology related questions.

- Our Warehouses and Manufacturers are strategically located throughout the U.S. for 1 - 3 day fastest delivery timeframes.

ADAPCO is strictly devoted to Mosquito Control; it's what we've been doing for over 30 years! A complete product portfolio, superior service and sales support with a commitment to technology innovation is our promise and it's why ADAPCO is the name you can trust in the mosquito control industry.

Should you have any questions, please call me at (407) 328-6519.

Thank you,
Kathy - Contract Manager
krussell@myadapco.com or bids@myadapco.com

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Preserving Public Health

Innovation through formulation

ADAPCO CONTACT/PAYMENT INFORMATION PAGE

BID CONTACT:

Kathy Russell
Email: bids@myadapco.com
Direct Phone: (407) 328-6519

BID RELATED:

Bid Distribution to ADAPCO (Headquarters):
- **Email** (PREFERRED): bids@myadapco.com
- **Fax:** 866-330-9888
- **Mail:** ADAPCO, LLC
  100 Colonial Dr. Suite 170
  Lake Mary, FL 32746

ORDER PROCESSING:

- **Online:** www.myadapco.com
- **Email:** orders@myadapco.com
- **Fax:** 866.330.9888
- **Call:** 800.367.0659
- **Customer Service** is available to help with any orders or questions.

PAYMENT/ACCOUNTS RECEIVABLE CONTACT:

Jacky Ajalat – ar@myadapco.com
Please send check payments to:
ADAPCO, LLC
PO BOX 931574
ATLANTA, GA 31193-1574
Payment options include Check, Mastercard, Visa, American Express or Wire Transfers*
*Please call 800.367.0659 for Wire Transfer Information.

WEBSITE:

www.myadapco.com
- Find your Sales Representative and Inside Sales Representative
- View Product Information

azelis SPECIALTY AGRI/HORTI

ADAPCO

Kathy Russell
Contract Manager, ADAPCO
Azelis Americas
krussell@myadapco.com
550 Aero Ln
Sanford, FL 32771
P 407 328 6519
www.azelisamericas.com / www.myadapco.com

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 11/19/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Willis Towers Watson Northeast, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	CONTACT NAME: Willis Towers Watson Certificate Center PHONE (A/C, No, Ext): 1-877-945-7378 FAX (A/C, No): 1-888-467-2378 E-MAIL ADDRESS: certificates@willis.com
INSURED Adapco, LLC 100 Colonial Center Parkway, Suite 170 Lake Mary, FL 32746	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: Indian Harbor Insurance Company — 36940 INSURER B: National Union Fire Insurance Company of P — 19445 INSURER C: Commerce & Industry Insurance Company — 19410 INSURER D: INSURER E: INSURER F:

COVERAGES **CERTIFICATE NUMBER:** W22909290 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:			U800076793LI21A	11/14/2021	11/14/2022	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO X OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			8901451	11/15/2021	11/15/2022	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: No If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		15203132	11/15/2021	11/15/2022	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
C	Automobile Liability Any MA Auto			4257274	11/15/2021	11/15/2022	Combined Single Limit	$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Mosquito Control Chemical Distribution

SEE ATTACHED

CERTIFICATE HOLDER

Evidence of Coverage

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

ADAPCO LLC

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

☑ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see Instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

100 Colonial Center Parkway, Suite 170

6 City, state, and ZIP code

Lake Mary, FL 32746

7 List account number(s) here (optional)

Requester's name and address (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

5	9	–	2	5	7	4	5	2	3

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ *Joseph Balducci* Controller Date ▶ 1-4-2022

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

CIIS By ADAPCO

CIIS: Concentrated Insecticide Injection System

Description

ADAPCO®'s patented Concentrated Insecticide Injection System (CIIS) is a dual pump mixing station created to ensure that you pump the correct chemical concentration every time. Designed to take the guess work out of mixing and keep you safe from handling chemical concentrate.

Product Information

Where and When to Use CIIS: Concentrated Insecticide Injection System:

The Concentrated Insecticide Injection System (CIIS) system is intended for use with a 30- or 55-gallon drum of concentrate. Installation is straight forward; attach to a secure wall or concrete pad, plug in to a 110 VAC outlet, and connect to a water source. Calibration is simple and maintenance is minimal. Operators then simply pull up their vehicles and squeeze the handle to begin use. **Simple, easy, and accurate.**

Features:

- CIIS is the first system that creates accurate proportions of concentrated products with either water or oil, reducing concerns of proper mixing of concentrated products.
- No buying, storing, or mixing of oil or water including handling of diluent drums.
- CIIS improves worker safety by eliminating chemical exposure.
- System is easy to install, maintain and use.
- Injector hooks up to any water source.
- Simple, accurate calibration.
- Injector turns concentrate into ready-to-use instantly.
- Reduces concerns with improper pesticide proportioning.

Mode of Action:

The CIIS injector simply pumps the concentrated product mixed perfectly with water or oil into your sprayer. There is no exposure to chemical for workers using this method.

Dimensions:

32 1/2" x 25" x 72"

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street, 1st Floor, Beaumont, TX 77701 409-835-8593 Fax 409-835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

April 12, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for **IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and three (3) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District**
BID NO:	**IFB 22-023/YS**
DUE DATE/TIME:	**11:00 AM CT, Wednesday, May 11, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these requirements should be directed to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provisions of services. Individuals requiring special accommodations are requested to contact our office at 409-835-8593 to make arrangements no later than seven (7) calendar days prior to the submittal deadline. Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation.

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

Publish: Beaumont Enterprise & Port Arthur News – April 13, 2022 and April 20, 2022

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Bid Submissions:

Bidder is responsible for submitting: One (1) original and three (3) bid copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to see if addenda or additional instructions have been posted. Failure to return all required forms could result in a response being declared as non-responsive. https://www.co.jefferson.tx.us/Purchasing/

Instructions to Bidders

1. Bid Submission

Bids must be submitted in complete original form by mail or messenger to the following address:

Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Late bids will not be accepted and will be returned unopened to the bidder.

All bids submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

Bidder shall submit bid in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the Bid Number, Bid Name, Bid Due Date, aud the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Bidder is responsible for submitting:

- **One (1) Original Bid Copy and (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.**

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

https://www.co.jefferson.tx.us/Purchasing/

DEADLINE FOR QUESTIONS:

The deadline for asking questions in writing or requesting additional information (in writing or in person) is 5:00 pm, Thursday, April 28, 2022.

2. Bid Submissions During Time of Inclement Weather, Disaster, or Emergency

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3. Courthouse Security

Bidders are advised that all visitors to the Courthouse must pass through Security. **Bidders planning to hand deliver bids must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal.** Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures recommended by the CDC within its facilities. Visitors to the courthouse will be required to wear a mask within the courthouse.

Bidders are strongly urged to plan accordingly.

4. Preparation of Bids

The bid shall be legibly printed in ink or typed.

The County requests that bid submissions NOT be bound by staples or glued spines.

If a unit price or extension already entered is to be altered, it shall be crossed out and initialed in ink by the bidder.

The bid shall be legally signed and shall include the complete address of the bidder.

Jefferson County is exempt from Federal and State Sales Taxes, and such taxes shall not be included in bid prices.

5. Signatures

All bids, notifications, claims, and statements must be signed by an individual authorized to bind the bidder. The individual signing certifies, under penalty of perjury, that he or she has the legal authorization to bind the bidder.

6. County Holidays – 2021:

January 18, 2021	Martin Luther King, Jr. Day	Monday
February 15, 2021	President's Day	Monday
April 2, 2021	Good Friday	Friday
May 31, 2021	Memorial Day	Monday
July 5, 2021	Independence Day	Monday
September 6, 2021	Labor Day	Monday
November 11, 2021	Veteran's Day	Thursday
November 25 & 26, 2021	Thanksgiving	Thursday & Friday
December 23 & 24, 2021	Christmas	Thursday & Friday
December 31, 2021	New Year's	Friday

7. Rejection or Withdrawal

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within 90 days after opening date.

8. Emergency/Declared Disaster Requirements

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptanee of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

9. Award

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group,

whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial nonconformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment. In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

10. Contract

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

11. Waiver of Subrogation

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

12. Fiscal Funding

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

13. Bid Results

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

14. Changes and Addenda to Bid Documents

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

15. Specifications

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate.

All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

16. Delivery

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

17. Interpretation of Bid and/or Contract Documents

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

18. Currency

Prices calculated by the bidder shall be stated in U.S. dollars.

19. Pricing

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

20. Notice to Proceed/Purchase Order

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

21. Certification

By signing the offer section of the Offer and Acceptance page, bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The bidder hereby certifies that the individual signing the bid is an authorized agent for the bidder and has the authority to bind the bidder to the contract.

22. Definitions

"County" – Jefferson County, Texas.

"Contractor" – The bidder whose proposal is accepted by Jefferson County.

23. Minority-Women Business Enterprise Participation

It is the desire of Jefferson County to increase the participation of Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

General Conditions of Bidding and Terms of Contract

By execution of this document, the vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. Bidding

1.1 Bids. All bids must be submitted on the bid form furnished in this package.

1.2 Authorized Signatures. The bid must be executed personally by the vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the vendor shall accompany the bid to become a valid bid.

1.3 Late Bids. Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 Withdrawal of Bids Prior to Bid Opening. A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 Withdrawal of Bids after Bid Opening. Bidder agrees that its offer may not be withdrawn or cancelled by the vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 Bid Amounts. Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 Exceptions and/or Substitutions. All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 Alternates. The Invitation for Bid and/or specifications may expressly allow bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 Descriptions. Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 Bid Alterations. Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 Tax Exempt Status. Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 Quantities. Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 Bid Award. Award of contract shall be made to the most responsible, responsive bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 Silence of Specifications for Complete Units. All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 Addenda. Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 General Bid Bond/Surety Requirements. Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 General Insurance Requirements. Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 Responsiveness. A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 Responsible Standing of Bidder. To be considered for award, bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 Confidential/Proprietary Information

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 Public Bid Opening. Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. Performance

2.1 Design, Strength, and Quality. Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 Age and Manufacture. All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 Delivery Location. All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 a.m. to 4:00 p.m., Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 Delivery Schedule. Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 Delivery Charges. All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 Installation Charges. All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 Operating Instructions and Training. Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 Storage. Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 Compliance with Federal, State, County, and Local Laws. Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA. The bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 Patents and Copyrights. The successful vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 Samples, Demonstrations and Testing. At Jefferson County's request and direction, bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the bidder/vendor.

2.13 Acceptability. All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 Maintenance. Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 Material Safety Data Sheets. Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 Evaluation. Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. Purchase Orders and Payment

3.1 Purchase Orders. A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 Invoices. All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 Prompt Payment. In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful bidder(s) is required to pay subcontractors within ten (10) days after the successful bidder receives payment from the County.

3.4 Funding. Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. Contract

4.1 Contract Definition. The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful bidder and Jefferson County.

4.2 Change Order. No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 Price Re-determination. A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 Termination. Jefferson County reserves the right to terminate the contract for default if the bidder breached any of the terms therein, including warranties of bidder or if the bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies

which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the bidder in default.

4.5 Conflict of Interest. Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 Injuries or Damages Resulting from Negligence. Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 Interest by Public Officials. No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 Warranty. The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.9 Uniform Commercial Code. The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.10 Venue. This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.11 Sale, Assignment, or Transfer of Contract. The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.12 Silence of Specifications. The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

Federal Emergency Management Agency (FEMA)
MANDATED CONTRACT PROVISIONS

1. REMEDIES

a. Standard. Contracts for more than the simplified acquisition threshold, currently set at $250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. See 2 C.F.R. Part 200, Appendix II(A).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

2. TERMINATION FOR CAUSE AND CONVENIENCE

a. Standard. All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity, including the manner by which it will be affected and the basis for settlement. See 2 C.F.R. Part 200, Appendix II(B).

b. Applicability. This requirement applies to all FEMA grant and co-operative agreement programs.

3. EQUAL EMPLOYMENT OPPORTUNITY

If applicable, exact language below in subsection 3.d is required.

a. Standard. Except as otherwise provided under 41 C.F.R. Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. §60- 1.4(b), in accordance with Executive Order 11246, Equal Employment Opportunity (30 Fed. Reg. 12319, 12935, 3 C.F.R. Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, Amending Executive Order 11246 Relating to Equal Employment Opportunity, and implementing regulations at 41 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See 2 C.F.R. Part 200, Appendix II(C).

b. Key Definitions.

i. Federally Assisted Construction Contract. The regulation at 41 C.F.R. § 60-1.3 defines a "federally assisted construction contract" as any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself partieipates in the construction work.

ii. Construction Work. The regulation at 41 C.F.R. § 60-1.3 defines "construction work" as the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

c. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

d. Required Language. The regulation at 41 C.F.R. Part 60-1.4(b) requires the insertion of the following contract clause.

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's non-compliance with the non-discrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any sub-contract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it

participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24,1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

4. DAVIS-BACON ACT

a. Standard. All prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction). See 2 C.F.R. Part 200, Appendix II(D). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week.

b. Applicability. The Davis-Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Non-profit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It DOES NOT apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must do the following:

i. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

ii. Additionally, pursuant 2 C.F.R. Part 200, Appendix II(D), contracts subject to the Davis-Bacon Act, must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). The Copeland Anti-Kickback Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA.

iii. Include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction").

COMPLIANCE WITH THE DAVIS-BACON ACT:

a. All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) and the requirements of 29C.F.R.pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable.

b. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.

c. Additionally, contractors are required to pay wages not less than once a week.

5. COPELAND ANTI-KICKBACK ACT

a. Standard. Recipient and subrecipient contracts must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

b. Applicability. This requirement applies to all contracts for construction or repair work above $2,000 in situations where the Davis-Bacon Act also applies. It DOES NOT apply to the FEMA Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). Each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA. Additionally, in accordance with the regulation, each contractor and subcontractor must furnish each week a statement with respect to the wages paid each of its employees engaged in work covered by the Copeland Anti-Kickback Act and the Davis Bacon Act during the preceding weekly payroll period. The report shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work.

COMPLIANCE WITH THE COPELAND "ANTI-KICKBACK ACT":

a. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

b. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. §5.12."

6. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

a. Standard. Where applicable (see 40 U.S.C. §§ 3701-3708), all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II(E). Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Further, no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous.

b. Applicability. This requirement applies to all FEMA contracts awarded by the non-federal entity in excess of $100,000 under grant and cooperative agreement programs that involve the employment of mechanics or laborers. It is applicable to construction work. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open
market, or contracts for transportation or transmission of intelligence.

The regulation at 29 C.F.R. § 5.5(b) provides contract clause language concerning compliance with the Contract Work Hours and Safety Standards Act. FEMA suggests including the following contract clause: Compliance with the Contract Work Hours and Safety Standards Act.

> **(1) Overtime requirements.** No contractor or subcontractor contracting for any Part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
>
> **(2) Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
>
> **(3) Withholding for unpaid wages and liquidated damages.** Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
>
> **(4) Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

7. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

a. Standard. If the FEMA award meets the definition of "funding agreement" under 37C.F.R. § 401.2(a) and the non-Federal entity wishes to enter into a contract with a small business firm or non-profit organization regarding the substitution of parties, assignment or performance of experimental,
developmental, or research work under that "funding agreement," the non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA. See 2 C.F.R. Part 200, Appendix II(F).

b. Applicability. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

c. Funding Agreements Definition. The regulation at 37 C.F.R. § 401.2(a) defines "funding agreement" as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

8. CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

a. Standard. If applicable, contracts must contain a provision that requires the contractor to agree to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). Violations must be reported to FEMA and the Regional Office of the Environmental Protection Agency. See 2 C.F.R. Part 200, Appendix II(G).

b. Applicability. This requirement applies to contracts awarded by a non-Federal entity of amounts in excess of $150,000 under a federal grant.

CLEAN AIR ACT:

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

2. The contractor agrees to report each violation to Jefferson County and understands and agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contraetor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT:

1. The contractor agrees to comply with all applicahle standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

2. The contractor agrees to report each violation to Jefferson County agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

9. DEBARMENT AND SUSPENSION

a. Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

c. Requirements.

i. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. See 2

C.F.R. Part 200, Appendix II(H); and 2 C.F.R. § 200.213. A contract award must not be made to parties listed in the SAM Exclusions. SAM Exclusions is the list maintained by the General Services Administration that contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. SAM exclusions can be accessed at www.sam.gov. See 2 C.F.R. § 180.530.

ii. In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. This includes parties that receive Federal funding indirectly, such as contractors to recipients and subrecipients. The key to the exclusion is whether there is a "covered transaction," which is any non-procurement transaction (unless excepted) at either a "primary" or "secondary" tier. Although "covered transactions" do not include contracts awarded by the Federal Government for purposes of the non-procurement common rule and DHS's implementing regulations, it does include some contracts awarded by recipients and subrecipients.

iii. Specifically, a covered transaction includes the following contracts for goods or services:

1. The contract is awarded by a recipient or subrecipient in the amount of at least $25,000.

2. The contract requires the approval of FEMA, regardless of amount.

3. The contract is for federally-required audit services.

4. A subcontract is also a covered transaction if it is awarded by the contractor of a recipient or subrecipient and requires either the approval of FEMA or is in excess of $25,000.

The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified.

SUSPENSION AND DEBARMENT:

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by the County. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the County, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

10. BYRD ANTI-LOBBYING AMENDMENT

a. Standard. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. FEMA's regulation at 44 C.F.R. Part 18 implements the requirements of 31 U.S.C. § 1352 and provides, in Appendix A to Part 18, a copy of the certification that is required to be completed by each entity as described in 31 U.S.C. § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the Federal awarding agency.

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs. Contractors that apply or bid for a contract of $100,000 or more under a federal grant must file the required certification. See 2 C.F.R.Part 200, Appendix II(I); 31 U.S.C. § 1352; and 44 C.F.R. Part 18.
Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

c. Required Certification.

If applicable, contractors must sign and submit to the non-Federal entity the **"Certification Regarding Lobbying" Form** included within these bid specifications.

11. PROCUREMENT OF RECOVERED MATERIALS

a. Standard. A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. See 2 C.F.R. Part 200, Appendix II(J); and 2 C.F.R. §200.322.

b. Applicability. This requirement applies to all contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.

c. Requirements. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired by the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

1. Competitively within a timeframe providing for compliance with the contract performance schedule;

2. Meeting contract performance requirements; or

3. At a reasonable price.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:
https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Although FEMA does not currently require additional provisions, FEMA recommends
the following:

1. ACCESS TO RECORDS

a. Standard. All recipients, subrecipients, successors, transferees, and assignees must acknowledge and agree to comply with applicable provisions governing DHS access to records, accounts, documents, information, facilities, and staff. Recipients must give DHS/FEMA access to, and the right to examine and copy, records, accounts, and other documents and sources of information related to the federal financial assistance award and permit access to facilities, personnel, and other individuals and information as may be necessary, as required by DHS regulations and other applicable laws or program guidance. See DHS Standard Terms and Conditions: Version 8.1 (2018). Additionally, Section 1225 of the Disaster Recovery Reform Act of 2018 prohibits FEMA from providing reimbursement to any state, local, tribal, or territorial government, or private non-profit for activities made pursuant to a contract that purports to prohibit audits or internal reviews by the FEMA administrator or Comptroller General.

ACCESS TO RECORDS:

The following access to records requirements apply to this contract:

(1)The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

(2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.

(4) In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

2. CHANGES

a. Standard. To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

b. Applicability. FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

3. DHS SEAL, LOGO, AND FLAGS

a. Standard. Recipients must obtain permission prior to using the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials. See DHS Standard Terms and Conditions: Version 8.1 (2018).

b. Applicability. FEMA recommends that all non-Federal entities place in their contraets a provision that a contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

"The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval."

4. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

a. Standard. The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

b. Applicability. FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

c. "This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

5. NO OBLIGATION BY FEDERAL GOVERNMENT

a. Standard. FEMA is not a party to any transaction between the recipient and its contractor. FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

6. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

a. Standard. Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

Special Requirements/Instructions

The following requirements and instructions **supersede** General Requirements where applicable.

1. Bid Requirement

Each bidder shall ensure that required parts of the bid are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Bidder is responsible for submitting:

One (1) Original Bid Copy and three (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

All bids shall be tightly sealed in an opaque envelope or box and plainly marked "SEALED BID."

The outside of the envelope or box shall also include: Bid Number, Bid Name, Bid Due Date, Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB. All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

2. Vendor Registration: SAM (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

Bidders are strongly encouraged to review their firm's SAM (System for Award Management) status prior to Bid Submission.

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission)

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission) – CONTINUED

FORM 1295 Exemptions:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law? The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement. A completed Form 1295 is not required for:

• a sponsored research contract of an institution of higher education

• an interagency contract of a state agency or an institution of higher education

• a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and o any qualified vendor is eligible for the contract

• a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity

• a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code

• a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

Upon entering into a contract or professional agreement, the Jefferson County Purchasing Department will submit a request to the Vendor to both:

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department.

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

4. Multiple Vendor Award

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

5. Delivery

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

6. Payment

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to: Jefferson County Auditing Department, Attention: Accounts Payable, 1149 Pearl Street, 7th floor, Beaumont, TX 77701.

7. Usage Reports

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases

to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

8. Insurance

The contractor (including any and all subcontractors as defined in Section 9.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation	Statutory Coverage (See Section 9 Below)

9. Workers' Compensation Insurance

9.1 Definitions:

9.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

9.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

9.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

9.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the projeet, for the duration of the project.

9.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – refer to Section 8 above.

9.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

9.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

9.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

9.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

9.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

9.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

9.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

9.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

9.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

9.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

9.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

9.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

9.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

9.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

9.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

9.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

9.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs 9.1. – 9.7., with the certificates of coverage to be provided to the person for whom they are providing services.

9.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements

will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

9.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

Minimum Specifications

The following requirements and specifications **supersede** General Requirements where applicable. Contact Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us, regarding any questions or comments. Please reference bid number IFB 22-023/YS.

Scope

Vendor shall provide Insecticides, Herbicides, Spray Adjuvants, and Adulticides for the Jefferson County Mosquito Control District subject to the terms and conditions stated for an initial period **beginning on or about date of award.**

Bidders shall attach to bid form, a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Prices quoted shall be F.O.B. Jefferson County Mosquito Control District, Jefferson County Airport, 1st Street, Nederland, TX. Bidder bears freight charges. All prices must be written in ink or typewritten.

Quote unit prices extended to lump sum prices. The basis of the award will be the unit prices quoted. The County reserves the right to increase or decrease the quantity purchased based on weather conditions and availability of funds.

The County reserves the right to make the award to one (1) successful bidder or per line item.

Purchase orders for insecticides, herbicides, adjuvants, and adulticides will be released to the successful bidder(s) **on an as-needed basis. MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Refer questions of a commercial nature to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us; and questions of a technical nature to Denise Wheeler, Director, Jefferson County Mosquito Control, whceler@co.jefferson.tx.us.

A price re-determination may be considered by Jefferson County only at the twelve (12) month and twenty-four (24) month anniversary dates of the contract. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

Approximate Annual Usage

No promise is made or implied for quantities that will be purchased. Orders will be placed on an **as-needed basis** for the duration of the contract. Purchase Orders will be released to the successful bidder(s) as required. **MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Contract

This bid, when properly accepted by Jefferson County Commissioners' Court, shall constitute a contract equally binding between the successful bidder and Jefferson County. No different or additional terms will become a part of this contract.

The brand name references are for description only, and are not intended to exclude other herbicides or adjuvants of equal quality. Bidders desiring to substitute items may do so provided brand name is **indicated on Bid Form.** Change of container size may disqualify bid. Dilution ratio will be a factor in award of chemicals.

Bidders shall attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Item	Description
1	**MSMA herbicide** – to contain 6.00 lb. MSMA (Mono-sodium Acid Methanearsonate) plus surfactant per gallon
2	**Tordon 101** – to contain 10.2% 4-amino3,5,6-trichloropicolinic acid (picloram), tri-isopropanolomine salt 39.6% 2,4-Dichlorophenoxyacetric acid, tri-isopropanolomiane salt.
3	**Roundup herbicide or equivalent** – to contain 41.0% by weight Isopropylamine Salt of Glyphosate
4	**Rodeo herbicide or equivalent** – to contain 53.5% by weight Isopropylamine Salt of Glyphosate
5	**Nalco Trol II or equivalent** – water soluble spray drift control agent
6	**Aqua-King or equivalent** – product must be a non-ionic aquatic surfactant approved for use in the State of Texas, contain 90% active ingredient (excluding alcohols, fatty acids, oils ethylene glycol or diethylene glycol), a minimum of 80% surfactant load, possess an HLB (hydrophilic to lipophilic balance) ratio of 12 to 17, a maximum of 10% isopropyl alcohol, have a flash point greater than 200 degrees F., and contain an anti-foaming agent that will provide instantaneous foam breakdown when agitation ceases.
7	**Malathion insecticide** – concentrate to contain a minimum of 9.9 lb. of malathion per gallon (96.5% by weight active ingredient). Product offered must have current approval in Texas for both aerial and ground ULV application against adult mosquitoes. Bulk shipments only.
8	**Bio Mist 3-15 ULV** - ACTIVE INGREDIENTS Permethrin (3-phenoxyphenyl) methyl (+/-) cis, trans3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate.....3.0% Piperonyl Butoxide*.....15.0% OTHER INGREDIENTS**..... 82.0% 100.0% Contains 0.222 pounds of Permethrin and 1.113 pounds of PBO per gallon Contains petroleum distillate *Ordered as 275 gallon containers. **Successful bidder will deliver full containers and pick up empty containers at no additional charge.
9	**Envion 30/30 insecticide or equivalent** - water compatible concentrate in 2.52 lb. Permethrin (30.0% by weight) and 2.52 lb. Piperonyl Butoxide (30.0% by weight) per gallon. Product offered must have current approval in Texas for aerial and ground ULV application against adult mosquitoes.

Bidder Information Form

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.

Bidder's Company/Business Name: ADAPCO, LLC

Bidder's TAX ID Number: 59-2574523

Contact Person: Kathy Russell **Title:** Contract Manager

Phone Number (with area code): (407) 328-6519 or (800) 367-0659

Alternate Phone Number if available (with area code): (407) 328-6519 or (800) 367-0659

Fax Number (with area code): (866) 330-9888

Email Address: bids@myadapco.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

N/A
Address

City, State, Zip Code

Bidder: Complete & Return this Form with Offer.

OFFER AND ACCEPTANCE FORM

OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer. We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

ADAPCO, LLC
Company Name

100 Colonial Center Parkway, Suite 170
Address

Lake Mary, FL 32746
City State Zip

Signature of Person Authorized to Sign

Andy Pierce
Printed Name

Sr. VP of Sales
Title

For clarification of this offer, contact:

Kathy Russell
Name

(407) 328-6519 None
Phone Fax

bids@myadapco.com
E-mail

<u>Bidder</u>: Complete & Return this Form with Offer.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. Contract Term: One (1) year from date of award with an option to renew for four (4) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

Countersigned:

_____ _____

Jeff R. Branick
County Judge

Date

Attest:

_____

Laurie Leister
County Clerk

<u>Bidder</u>: Complete & Return this Form with Offer.

Bid Form

Item	Est Qty. (Gal.)	Description	Brand bid	MSDS Labels Attached	Price per Gallon	Total Price
1	700	MSMA Herbicide – 2.5 gal. container	No Bid		$	$
2	700	Tordon 101 Herbicide or equivalent – 2.5 gal. container	No Bid		$	$
3	700	Roundup Herbicide or equivalent – 2.5 gal. container	No Bid		$	$
4	100	Rodeo Herbicide or equivalent – 2.5 gal. container	No Bid		$	$
5	100	Nalco Trol II or equivalent – 2.5 gal. (or smaller) container	No Bid		$	$
6	400	Aqua-King Surfactant or equivalent – 2.5 gal. (or smaller) container	No Bid		$	$
7	20,000	Malathion Insecticide – **bulk shipment only** 260 gl totes	FMC Fyfanon ULV	✓	$ $59.50/gl*	$ $1,190,000.00
8	1,100	Bio Mist 3-15 ULV – 275 gal containers	CSI PermaSease 3-15 ULV	✓	$ $47.73/gl*	$ $52,503.00
9	600	Envion 30/30 insecticide – 2.5 gal. containers (2x2.5 gl case)	CSI PermSease 30-30 (2x2.5 gl case)	✓	$ $124.00/gl*	$ $74,400.00

*ADAPCO to provide technical support, droplet testing and calibrations if required.

Bidders must attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Acknowledgment of Addenda (if any):

Addendum 1 None Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

Bidder: Complete & Return this Form with Offer.

Vendor References Form

Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

THIS FORM MUST BE RETURNED WITH YOUR BID.

REFERENCE ONE

Government/Company Name: Harris County Auditor, TX

Address: 1001 Preston Ste 800 Houston, TX 77002

Contact Person and Title: Tanzania Leassear

Phone: (713) 274-5668 Fax:

Email Address: tleassear@phs.hctx.net Contract Period: Ongoing

Scope of Work: Ongoing Mosquito Control Related

REFERENCE TWO

Government/Company Name: Chambers County, TX

Address: PO Box 1109, Anahuac, TX 77514

Contact Person and Title: Lawrence Lewis

Phone: (409) 267-2720 Fax:

Email Address: llewis@chamberstx.gov Contract Period: Ongoing

Scope of Work: Ongoing Mosquito Control Related

REFERENCE THREE

Government/Company Name: Brazoria County Mosquito Control, TX

Address: 111 E Locust, Room 303, Angleton, TX 77515

Contact Person and Title: Monica Steves

Phone: (979) 864-1532 Fax:

Email Address: monicas@brazoria-county.com Contract Period: Ongoing

Scope of Work: Ongoing Mosquito Control Related

Bidder: Complete & Return this Form with Offer.

Signature Page

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions?..... **Yes** [x] **No** [ ]

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

ADAPCO, LLC	
Bidder (Entity Name)	Signature
100 Colonial Center Parkway, Suite 170	Andy Pierce
Street & Mailing Address	Print Name
Lake Mary, FL 32746	May 4, 2022
City, State & Zip	Date Signed
(407) 328-6519 or (800) 367-0659	(866) 330-9888
Telephone Number	Fax Number
bids@myadapco.com	
E-mail Address	

Bidder: Complete & Return this Form with Offer.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Andy Pierce, Sr. VP of Sales

Name and Title of Contractor's Authorized Official *(Please Print)*

May 4, 2022

Date

Bidder: Complete & Return this Form with Offer.

Conflict of Interest Questionnaire

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

ADAPCO, LLC

2 ☑ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

Mosquito Control Director

Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☒ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☒ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☒ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

Sales and Distribution of Mosquito Control Chemicals, Equipment and Surveilliance Tools

4

Signature of vendor doing business with the governmental entity

May 4, 2022

Date

Adopted 8/7/2015

Bidder: Complete & Return this Form with Offer.

Local Government Officer

Conflicts Disclosure Statement – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT — **FORM CIS**

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath — Printed name of officer administering oath — Title of officer administering oath

Adopted 8/7/2015

Note: This Form is for Office Use Only.

Good Faith Effort (GFE) Determination Checklist

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .

☑ Yes	☐ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?
☐ Yes	☑ No	2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☑ No	3. **Provide** HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☑ No	4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders?
☐ Yes	☑ No	5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?
☑ Yes	☐ No	6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

* **If "No" was selected, please explain and include any pertinent documentation with your bid. If necessary, please use a separate sheet to answer the above questions.**

Andy Pierce
Printed Name of Authorized Representative

Signature

Sr. VP of Sales
Title

May 4, 2022
Date

*ADAPCO is a distributor. We have distribution agreements with the manufacturers as to which territories and how we can provide product to then end users which are the Mosquito Control Customers.

Bidder: Complete & Return this Form with Offer.

Notice of Intent (NOI) to Subcontract with

Historically Underutilized Business (HUB)

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: ADAPCO, LLC HUB: p Yes p No

Address: 100 Colonial Center Parkway, Suite 170 Lake Mary, FL 32746
Street City State Zip

Phone (with area code): (407) 328-6519 Fax (with area code): _____

Project Title & No.: IFB 22-023/YS Term Contract for Insecticides, Herbicides, Spray Adjuvants and Adulticides

Prime Contract Amount: $ Unknown

HUB Subcontractor Name: None

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Andy Pierce		05/04/2022
Printed Name of Contractor Representative	Signature of Representative	Date
Printed Name of HUB	Signature of Representative	Date

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

<u>Bidder</u>: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

HUB SUBCONTRACTOR DISCLOSURE

PART I: Continuation Sheet **(Duplicate as Needed)**

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☑ Other: ADAPCO is a direct distributor from the Manufacturer in the niche Mosquito Market.

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☑ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that bidder is the apparent low bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: We do not apply pesticides and no subcontractors are utilized.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required.** I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Andy Pierce

Title: Sr. VP of Sales

Signature: _____

Date: May 4, 2022

E-mail address: bids@myadapco.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): Customer Service: Joy or Tiffany

Title: Customer Service Representitives

Date: May 4, 2022

E-mail address: orders@myadapco.com

Bidder: Complete & Return this Form with Offer.

Residence Certification/Tax Form

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Nonresident bidder" refers to a person who is not a resident.

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☐ I certify that _____ [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☑ I certify that ADAPCO, LLC [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is Lake Mary, FL (city and state).

Taxpayer Identification Number (T.I.N.):	59-2574523
Company Name submitting bid/proposal:	ADAPCO, LLC
Mailing address:	100 Colonial Center Parkway, Suite 170 Lake Mary, FL 32746
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
None	

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

Bidder: Complete & Return this Form with Offer.

Bid Affidavit

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF FL COUNTY OF Seminole

BEFORE ME, the undersigned authority, a Notary Public in and for the State of FL,

on this day personally appeared Andy Pierce (name), who

after being by me duly sworn, did depose and say:

"I, Andy Pierce (name) am a duly authorized officer of/agent

for ADAPCO, LLC (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said ADAPCO, LLC (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of bidder: ADAPCO, LLC

100 Colonial Center Parkway, Suite 170 Lake Mary, FL 32746

Fax: (866) 330-9888 Telephone# (407) 328-6519

by: Andy Pierce (print name) Title: Sr. VP of Sales

Signature:

SUBSCRIBED AND SWORN to before me by the above-named
Andy Pierce, Sr. VP of Sales for ADAPCO on

this the 4th day of May, 20 22.

Notary Public State of Florida
Kathryn A Russell
My Commission
HH 186179
Exp. 12/7/2025

Notary Public in and for Kathryn A. Russell
the State of FL

Bidder Shall Return Completed Form with Offer.

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
11/16/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Willis Towers Watson Northeast, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	CONTACT NAME: Willis Towers Watson Certificate Center PHONE (A/C, No, Ext): 1-877-945-7378 FAX (A/C, No): 1-888-467-2378 E-MAIL ADDRESS: certificates@willis.com
INSURED Adapco, LLC 550 Aero Lane Sanford, FL 32771	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: Indian Harbor Insurance Company — 36940 INSURER B: National Union Fire Insurance Company of P — 19445 INSURER C: Commerce & Industry Insurance Company — 19410 INSURER D: INSURER E: INSURER F:

COVERAGES **CERTIFICATE NUMBER:** W22862213 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:			US00076793LI21A	11/14/2021	11/14/2022	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO X OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			8901451	11/15/2021	11/15/2022	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBEREXCLUDED? (Mandatory in NH) Y/N No If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		15203132	11/15/2021	11/15/2022	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
C	Automobile Liability Any MA Auto			4257274	11/15/2021	11/15/2022	Combined Single Limit	$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

SEE ATTACHED

CERTIFICATE HOLDER

JEFFERSON COUNTY PURCHASING DEPARTMENT
Attn: Deborah L. Clark
1001 Pearl Street, 3rd Floor
Beaumont, TX 77701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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FYFANON® ULV MOSQUITO INSECTICIDE

ULTRA LOW VOLUME CONCENTRATE INSECTICIDE

FOR USE ONLY BY FEDERAL, STATE, TRIBAL, OR LOCAL GOVERNMENT OFFICIALS RESPONSIBLE FOR PUBLIC HEALTH OR VECTOR CONTROL, OR BY PERSONS CERTIFIED IN THE APPROPRIATE CATEGORY OR OTHERWISE AUTHORIZED BY THE STATE OR TRIBAL LEAD PESTICIDE REGULATORY AGENCY TO PERFORM ADULT MOSQUITO CONTROL APPLICATIONS, OR BY PERSONS UNDER THEIR DIRECT SUPERVISION.

EPA Reg. No. 279-3539 **EPA Est. 39578-TX-1**

ACTIVE INGREDIENT:	**By Wt.**
Malathion*	96.5%
OTHER INGREDIENTS:	3.5%
TOTAL:	100.0%

* O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate.
Contains 9.9 lbs. malathion per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND USE DIRECTIONS

IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT, 1-800-331-3148

Product of Denmark

® Fyfanon is a registered trademark of FMC Corporation or an affiliate

Sold By

FMC

FMC Corporation
2929 Walnut Street
Philadelphia PA 19104

NET CONTENTS:

FIRST AID **This product is an organophosphate and is a cholinesterase inhibitor.**	
IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.	
NOTE TO PHYSICIAN	
This product is a cholinesterase inhibitor. Treat symptomatically. Atropine is antidotal.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful by swallowing, inhalation or skin contact. Avoid contact with skin. Avoid breathing spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, Loaders and Flaggers must wear:
- Long sleeved shirt and long pants;
- Shoes plus socks
- Chemical-resistant gloves made of barrier laminate, butyl-rubber ≥14 mils, nitrile rubber ≥14 mils, or viton ≥ 14 mils

Aerial applications, pilots must wear:
- Long sleeved shirt and long pants;
- Shoes plus socks

Ground applications must be made using enclosed cabs only. Drivers must wear:
- Long sleeved shirt and long pants;
- Shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Rates for Fyfanon ULV Mosquito					
Undiluted Apply as follows:					
Lbs.A.I./Acre/Day	Application Rates Fluid Ounces per Minute at Vehicle Speeds				Fluid Ounces of Fyfanon ULV Mosquito per acre
	5 mph	10 mph	15 mph	20 mph	
0.03 – 0.06*	1.0 - 2.1	2.0 - 4.3	3.0 - 6.3	4.0 - 8.6	0.38 - 0.75

*Use higher rate of application when vegetation is dense and/or mosquito populations are heavy.

OPERATING EQUIPMENT

Each nonthermal aerosol generator used for dispersal of Fyfanon ULV Mosquito to control adult mosquitoes must have minimum capability of producing the droplet spectrum described under GROUND-BASED APPLICATION. The initial determination of droplet size is made after the unit is installed in a vehicle and prior to its use in mosquito control operations. Recheck the unit frequently to insure that proper droplet size is maintained for each operation. Determination of droplet size every two months is usually sufficient if the unit has been maintained in good operating condition. Equipment manufacturer's instructions setting forth cleaning and maintenance of the unit must be followed. The unit must be inspected before each operation to correct any leaks or obstructions in the spray system; to detect whether the nozzle, hoses, or other parts are worn and need replacement; to insure that the flow meter is properly calibrated and to determine that the pressure recommended by the manufacturer is being maintained.

Flow Rate
- Must be regulated by accurate flow meter
- Not greater than 1 gallon per hour at 5 mph; 2 gallons per hour at 10 mph; 3 gallons per hour at 15 mph, or 4 gallons per hour at 20 mph

Nozzle Direction
- Rear of the vehicle
- Upward at an angle of 45° or more

Vehicle Speed
- Not greater than 20 mph
- Shut off spray equipment when vehicle is stopped

IMPORTANT: Spray droplets of undiluted Fyfanon ULV Mosquito will permanently damage automobile paint unless all the conditions described and recommended in this label are met. If accidental exposure does occur, the vehicle should be washed at once.

WARRANTY DISCLAIMER

FMC Corporation warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC CORPORATION MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of FMC Corporation or the Seller. All such risks shall be assumed by Buyer and User, and the Seller harmless for any claims related to such factors. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User. To the extent consistent with applicable law, Buyer and User agree to hold FMC Corporation and the Seller harmless for any claims related to such factors.

LIMITATION OF REMEDIES

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to one of the following, at FMC Corporation's election:

(1) Refund of purchase price paid by buyer or user for product bought, or

(2) Replacement of amount of product used.

To the extent consistent with applicable law, FMC Corporation shall not be liable for consequential, incidental, or special damages or losses in any matter.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of FMC Corporation or the Seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

SAFETY DATA SHEET
Fyfanon ULV Mosquito

SDS # : FO002161-1-A
Revision date: 2018-06-28
Format: NA
Version 1.01

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name	Fyfanon ULV Mosquito

Other means of identification

Product Code(s)	FO002161-1-A
Legacy Product Code	300
Synonyms	MALATHION: diethyl [(dimethoxyphosphinothioyl)thio]butanedioate (CAS Name); diethyl(dimethoxyphosphinothioylthio)succinate (IUPAC Name)
Active Ingredient(s)	Malathion
Chemical Family	Organophosphate
PCP #	9337

Recommended use of the chemical and restrictions on use

Recommended Use:	Insecticide
Restrictions on Use:	Use as recommended by the label.

Supplier Address

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
msdsinfo@fmc.com (E-Mail General Information)

Emergency telephone number

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical Emergencies:
1 800 / 331-3148 (ProPharma Group - U.S.A. & Canada)
1 651 / 632-6793 (ProPharma Group - All Other Countries - Collect)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2

4. FIRST AID MEASURES

Eye Contact	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
Inhalation	Move person from contaminated area to fresh air. Seek medical attention immediately. If person is not breathing, give artificial respiration, preferably by mouth-to-mouth, if possible.
Ingestion	Do not induce vomiting without medical advice. Rinse mouth with water and afterwards drink plenty of water or milk. If vomiting does occur, rinse mouth and drink fluids again. Never give anything by mouth to an unconscious person. Immediate medical attention is required.
Most important symptoms and effects, both acute and delayed	Malathion is a cholinesterase inhibitor affecting the central and peripheral nervous systems producing respiratory depression.
Indication of immediate medical attention and special treatment needed, if necessary	This product contains a reversible cholinesterase inhibitor. If any sign of cholinesterase inhibition occurs, call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to an organophosphorus insecticide. Describe his/her condition and the extent of exposure. Immediately remove the exposed person from the area where the product is present. ANTIDOTE: If symptoms are present, administer atropine sulphate, which often is a lifesaving antidote, in large doses, TWO to FOUR mg intravenously or intramuscularly as soon as possible. Repeat at 5 to 10 minute intervals until signs of atropinisation appear and maintain full atropinisation until all organophosphate is metabolized. Relapse can occur after intial improvement. VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS DEPENDING ON THE SEVERITY OF THE POISONING.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Carbon dioxide (CO_2), Dry chemical, Water spray, Foam. Avoid heavy hose streams.
Specific Hazards Arising from the Chemical	This product is considered non-flammable. Material will decompose rapidly when exposed to heat (>212° F/100° C) and flame, increasing the risk of explosion. Heat of decomposition may cause closed containers to build up pressure and explode.
Hazardous Combustion Products	The essential breakdown products are volatile, toxic, irritant and inflammable compounds such as: Dimethyl sulphide, methyl mercaptan, Sulfur dioxide, Carbon monoxide, Carbon dioxide (CO_2), phosphorus pentoxide.
Explosion data **Sensitivity to Mechanical Impact** **Sensitivity to Static Discharge**	 Not expected to be sensitive to mechanical impact. Not expected to be sensitive to static discharge.
Protective equipment and precautions for firefighters	Use water spray to cool fire exposed surfaces and protect personnel. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Dike to prevent runoff. As in any fire, wear self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
Other	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

work area.

Skin and Body Protection	Use coveralls or long-sleeved uniform and head covering. For large exposures as in case of a spill, use barrier suit covering the entire body, such as a waterproof PVC suit. Leather items, including shoes, belts and watchbands, that have been contaminated should be removed and destroyed. Wash all work clothing before reuse (separately from clothing commonly used).
Hand Protection	Use protective gloves made of chemical materials such as nitrile or neoprene. Wash the outside of gloves with soap and water before reuse. Check regularly for leaks.
Respiratory Protection	Do not breathe vapors, mist or gas. The product does not automatically present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment with a universal filter type including particle filter.
Hygiene measures	Avoid contact with skin, eyes and clothing. Must have clean water available for washing in case of eye or skin contamination. Wash skin before eating, drinking, chewing gum, or using snuff. Shower after work. Remove contaminated clothing and wash before reuse. Wash all work clothing separately; do not mix with household laundry. Persons working with this product for a longer period should have frequent blood tests for cholinesterase levels. If the cholinesterase levels fall below a critical point, no further exposure should be allowed until it has been determined, by means of blood tests, that cholinesterase levels have returned to normal.
General information	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Suspension
Physical State	Liquid
Color	Colorless, Light yellow
Odor	Aromatic
Odor threshold	No information available
pH	3.7-3.8 @ 20 °C (when equal amounts of malathion and distilled water are dispersed)
Melting point/freezing point	2.85 °C
Boiling Point/Range	156 °C @ 0.7 mm Hg (Decomposes)
Flash point	163 °C (PMCC)
Evaporation Rate	No information available
Flammability (solid, gas)	Not applicable (Product is a liquid)
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	3.4×10^{-6} @ 25°C 1.4×10^{-4} @ 45°C
Vapor density	No information available
Density	1.23 g/mL @ 20°C
Specific gravity	1.23 g/mL @ 20°C
Water solubility	Emulsifies
Solubility in other solvents	Solubility of malathion @20°C in: ethyl acetate = >250 g/L= 57-67 g/L= 148.2 mg/L @ 25°C
Partition coefficient	K_{ow} = 560 (n-octanol/water)
Autoignition temperature	278 °C
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	Not explosive
Oxidizing properties	Non-oxidizing
Molecular weight	No information available
Bulk density	10.26 lb/gal

IARC (International Agency for Research on Cancer)
Group 2A - Probably Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

12. ECOLOGICAL INFORMATION

Ecotoxicity

Malathion is very toxic to fish, aquatic invertebrates, aquatic life stages of amphibians and insects. It is less toxic to aquatic plants, birds and soil macro- and microorganisms.

Malathion Technical (121-75-5)				
Active Ingredient(s)	Duration	Species	Value	Units
Malathion	96 h LC50	Oncorhynchus mykiss (rainbow trout)	0.18	mg/L
	37-day NOEC	Oncorhynchus mykiss (rainbow trout)	21	µg/L
	48 h EC50	Daphnia magna	0.72	µg/L
	21 d NOEC	Daphnia magna	0.06	µg/L
	72-h IC50	Selenastrum capricornutum	4.06	mg/L
	LD50	Bobwhite quail	359	mg/kg
	5-day dietary LC50	Bobwhite quail	3497	mg/kg
	LD50	Mallard duck	1485	mg/kg
	14-day LC50	Earthworm	613	mg/kg
	LD50 acute oral	Honey bees	0.38	µg/bee
	LD50 topical	Honey bees	0.27	µg/bee

Persistence and degradability Malathion: Readily biodegradable, Non-persistent.

Bioaccumulation Malathion: Not expected to bioaccumulate.

Mobility Malathion: Medium mobility; has some potential to reach groundwater.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

Contaminated Packaging Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

14. TRANSPORT INFORMATION

DOT Product is not regulated if containers are less than 100 pounds. If containers are 100 pounds or more, the classification below applies:

UN/ID no UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
Packing Group III
Marine Pollutant Malathion.
Description UN3082, Environmentally hazarodous substance, liquid, n.o.s. (malathion), 9, III, Marine pollutant, RQ

TDG
UN/ID no UN3082

FIFRA Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION
Harmful if swallowed.
Harmful if absorbed through skin.
Harmful if inhaled.
Avoid contact with eyes, skin, or clothing.
Avoid breathing spray mist.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Prop. 65
Malathion Technical - 121-75-5	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Malathion Technical 121-75-5	X	X	X

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Malathion Technical 121-75-5		X	X	X	X	X	X	X

Mexico - Grade Moderate risk, Grade 2

Chemical name	Carcinogen Status	Mexico
Malathion Technical		Mexico: TWA 10 mg/m^3

CANADA

WHMIS Statement

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR

This product is a Pest Control Product and is not regulated as a Controlled Product under the Hazardous Products Act (HPA). However, for reference purposes only, this product would have the following WHMIS Classification if it were regulated as a Controlled Product under the HPA:

WHMIS Hazard Class D2B - Toxic materials
F - Dangerously reactive material

PermaSe se™ 3-15

For use outdoors as an Ultra-Low Volume (ULV) application to control adult mosquitoes in residential and recreational areas. Also for use against biting and non-biting midges and black flies.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

ACTIVE INGREDIENTS:

Permethrin (3-Phenoxyphenyl) methyl (+/-) cis, trans-3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate:	3.0%
Piperonyl Butoxide*:	15.0%
OTHER INGREDIENTS:**	82.0%
TOTAL:	100.0%

Contains 0.222 pounds of Permethrin and 1.113 pounds of Piperonyl Butoxide per gallon

* PBO (butyl carbityl) (6-propylpiperonyl) ether and related compounds

** Contains petroleum distillate

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Inside Booklet for Additional Precautionary Statements.

FIRST AID	
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye. Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact SafetyCall® International (866) 897-8050 for emergency medical treatment information.	
NOTE TO PHYSICIAN: Product contains a petroleum distillate. Vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing.

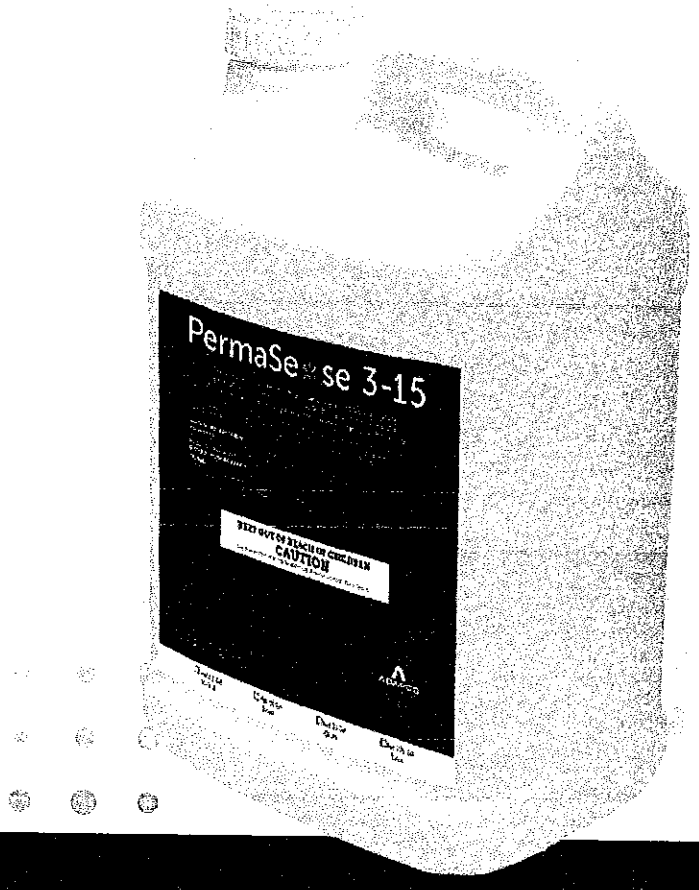
Personal Protective Equipment (PPE):

Some materials that are chemical-resistant to this product are: barrier laminate, nitrile rubber, neoprene rubber, or Viton.

Mixers, loaders, applicators, and other handlers must wear :

- Long-sleeved shirt and long pants,
- Shoes plus socks.

In addition, all handlers except for applicators using motorized ground equipment, pilots and flaggers, must wear chemical-resistant gloves. In addition, mixers/loaders, persons cleaning equipment, and other persons exposed to the concentrate must wear a chemical-resistant apron. See engineering controls for additional requirements.



EPA Reg. No. 86291-4-96263
EPA Est. No. 53883-TX-002

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Sanford, FL 32771

Aerial Application made at or below 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 µm) and that 90% of the spray is contained in droplets smaller than 100 microns (Dv 0.9 < 100 µm). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at greater than 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns (Dv 0.5 < 70 µm) and that 90% of the spray is contained in droplets smaller than 145 microns (Dv 0.9 < 145 µm). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

GROUND APPLICATION

Apply **PermaSease™ 3-15** through standard ULV cold aerosol or non-thermal aerosol (cold fog) generators undiluted at a flow rate of 3.1 to 17.4 fluid ounces per minute, and an average vehicle speed of 10 MPH. If a different vehicle speed is used, adjust rate accordingly. These rates are equivalent to 0.00088 to 0.005 pounds of Permethrin and 0.0044 to 0.0264 pounds of Piperonyl Butoxide per acre. An accurate flow meter must be used to ensure the proper flow rates.

Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when populations are high.

Permethrin/ PBO Pounds per Acre	Application Rates Fl. oz./Min.				Fl. oz. PermaSease™ 3-15 per Acre
	5MPH	10MPH	15MPH	20MPH	
0.005/0.025	8.7	17.4	26.1	34.9	2.88
0.0025/0.0125	4.4	8.7	13.1	17.4	1.44
0.00088/0.0044	1.5	3.1	4.6	6.1	0.51

Failure to follow the above directions may result in reduced effectiveness.

AERIAL APPLICATION

PermaSease™ 3-15 may be applied undiluted at rates of 0.0025 to 0.005 pounds Permethrin (1.44 to 2.88 fl. oz. **PermaSease™ 3-15**) per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment. Do not apply by fixed wing aircraft at a height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs. Aerial applications shall only be made when recommended by public health officials and trained personnel of mosquito abatement districts and other mosquito control programs.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container handling: Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent), then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Refillable Containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

WARRANTY STATEMENT

NOTICE: To the extent provided by law, seller makes no warranty, expressed or implied, concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.

SECTION 1: IDENTIFICATION

Product Name: **PERMASEASE® 3-15**
Description: Insecticide for control of adult mosquitoes, biting and non-biting midges, and blackflies
EPA Reg. No.: 86291-4-96263

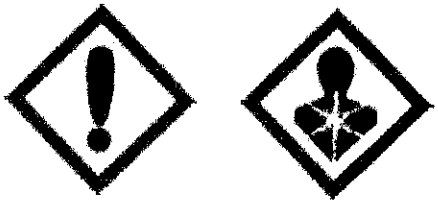
Company Identification:
ADAPCO LLC.
550 Aero Lane
Sanford, FL 32725

Emergency Response Telephone Numbers
For Spills Call: 1-(800)-424-9300
For Medical Emergencies Call: 1-(866)-897-8050

SECTION 2: HAZARD IDENTIFICATION

United States (US)
According to OSHA 29 CFR 1910.1200 HSC (2012)

Classification of the Substance or Mixture
Aspiration Hazard: Category 1
Acute Toxicity (Inhalation): Category 4



Signal Word: Danger

Hazard Statements
May be fatal if swallowed and enters airways.
Harmful if inhaled

Precautionary Statements
Prevention: Avoid breathing mist/spray. Use only outdoors or in a well-ventilated area.

Response: If swallowed: Immediately call a poison control center or doctor. Do NOT induce vomiting.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a Poison center or doctor if you feel unwell.

Storage: Store locked up.
Disposal: Dispose of contents and container in accordance with local/regional/national regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS:	CAS NO.	(% w/w)
Permethrin	52645-53-1	3.0%
Piperonyl Butoxide	51-03-6	15.0%
Aliphatic Petroleum Distillate	64741-89-5	82.0%

SECTION 4: FIRST AID MEASURES

SECTION 7: HANDLING AND STORAGE

Keep out of reach of children. Do not contaminate water, food or feed by storage or disposal. Do not use, pour, spill or store near heat or open flame.

Skin Protection: While using or handling this product wear long sleeved shirt and long pants, socks, and shoes. Contaminated leather articles, such as shoes, belts, and watchbands, should be removed and destroyed. Launder all work clothing before reuse. Keep work clothing separated from household laundry.

Special Precautions for Handling and Storage: See product label. Harmful if swallowed, inhaled, or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Remove contaminated clothing and wash clothing before reuse.

Store product in its original labeled container in a cool, dry, locked place designated for such insecticides and out of reach of children. In case of spillage, soak up with absorbent material such as sawdust, or fuller's earth; sweep up and place in a labeled container and dispose of as follows.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

Control Parameters

Component Name	CAS No.	List/Source	Type	Value
Permethrin	52645-53-1	ACGIH	TWA	5 mg/m^3
		NIOSH	REL	5 mg/m^3
		OSHA	PEL	5 mg/m^3
Mineral Oil	64741-89-5	ACGIH	TLV	5 mg/m^3 inhalable fraction
		NIOSH	REL	5 mg/m^3 form: mist
		OSHA	PEL	5 mg/m^3

Engineering Controls: Use with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Wash hands thoroughly after handling. Wash clothing before re-using.

Individual Protection Measures (Personal Protection Equipment)

Eye Protection: Safety Glasses, Goggles or Face Shield

Skin Protection: Wear suitable protective clothing including long-sleeve shirt, long pants, shoes, and socks. Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron.

Hand Protection: Protective glove selection must be based on the user's assessment of the workplace hazards. Suitable protective chemical resistant materials include barrier laminate, nitrile, neoprene, or Viton.

Respiratory Protection: Not usually required. In instances where exposure limits are exceeded, wear a NIOSH-approved pesticide respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides.

Germ Cell Mutagenicity	This product has not been tested. No data is available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. For permethrin and for piperonyl butoxide, no mutagenic effect was found in various tests with microorganisms and mammalian cell culture.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. Permethrin and Piperonyl Butoxide are classified by IARC as Group 3: Not classifiable as to carcinogenicity to humans. Permethrin caused at high dose levels an increased incidence of tumors in mice in the following organ(s): liver, Lungs. The mechanism that triggers tumors in rodents is not relevant for the low exposures encountered under normal use conditions. Piperonyl butoxide was not carcinogenic in lifetime feeding studies in rats and mice.
Reproductive Effects:	No data is available to indicate product or any components present at greater than 0.1% cause reproductive or teratogenic toxicity. Permethrin did not cause reproductive toxicity in a two-generation study in rats. Piperonyl butoxide did not cause reproductive toxicity in a two-generation study in rats.
STOT – Repeated exposure	No data is available to indicate product or any components present at greater than 0.1% present a specific target organ toxicity hazard from repeat exposure Permethrin did not cause specific target organ toxicity in experimental animal studies. Piperonyl butoxide did not cause specific target organ toxicity in experimental animal studies.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Product specific data is not available. Data referenced is in relation to the active ingredients, Permethrin and Piperonyl Butoxide.

Toxicity to Fish:	Permethrin: 96-hr Acute LC50 0.79 ppb, Bluegill Sunfish (*Lepomis macrochirus*) Piperonyl Butoxide: 96-hr Acute LC50 6.12 ppm, Rainbow Trout (*Oncorhynchus mykiss*)
Toxicity to Aquatic Invertebrates:	Permethrin: 96-hr LC50 0.019 ppb, Mysid Shrimp (*Americamysis bahia*) Piperonyl Butoxide: 96-hr LC50 0.49 ppm, Mysid Shrimp (*Americamysis bahia*)
Toxicity to Aquatic Plants:	Permethrin: 72-hr EC50 0.5 mg/L, Algae Piperonyl Butoxide: 72-hr EC50 > 9.1 mg/L, Algae
Persistence and Degradability	Product specific data not available. Data referenced is in relation to the active ingredients, Permethrin and Piperonyl Butoxide.
Biodegradability:	Not rapidly biodegradable.
Partition Coefficient, Koc:	Permethrin: 100,000 Piperonyl Butoxide: 399 – 830
Bioaccumulation:	Bioconcentration (BCF) Permethrin: 300 Bioconcentration (BCF) Piperonyl Butoxide: 2,175

Other Federal Regulations

SARA Title III Classification

Section 302:	None		
Section 311/312:	Immediate (acute) hazard		
Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372		
	Permethrin	CAS# 52645-53-1	3.0%
	Piperonyl Butoxide	CAS# 51-03-6	15.0%

CERCLA RQ: None

OSHA Hazard Communication Standard: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. California Proposition 65: Not listed

State Right-To-Know: National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws

SECTION 16: OTHER INFORMATION

SDS Date: August 18, 2020

This document is prepared pursuant to the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012. In addition, other substances not "Hazardous" per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, and local laws and regulations. See SDS for health and safety information.

PermaSe[x]se™ 30-30

For use as a spray by air and ground application to control adult mosquitoes, biting and non-biting midges, gnats, and black flies.

For use by federal, state, tribal, or local governmental officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

A synergized permethrin formulation that provides quick knockdown and effective control of mosquitoes, black flies, gnats, biting and non-biting midges, as well as other biting flies in residential, recreational, urban, rural, and agricultural areas where mosquitoes and flies are found.

- ULV application provides excellent control at rates from 0.001 up to 0.007 pounds permethrin per acre.
- May be applied undiluted or diluted.

ACTIVE INGREDIENTS:

Permethrin: (3-phenoxyphenyl) methyl (+/-) Cis/trans 3-(2,2-dichloroethenyl) 2,2-Dimethyl-cyclopropanecarboxylate:	30.0%
Piperonyl Butoxide*:	30.0%
OTHER INGREDIENTS:**	40.0%
TOTAL:	100.0%

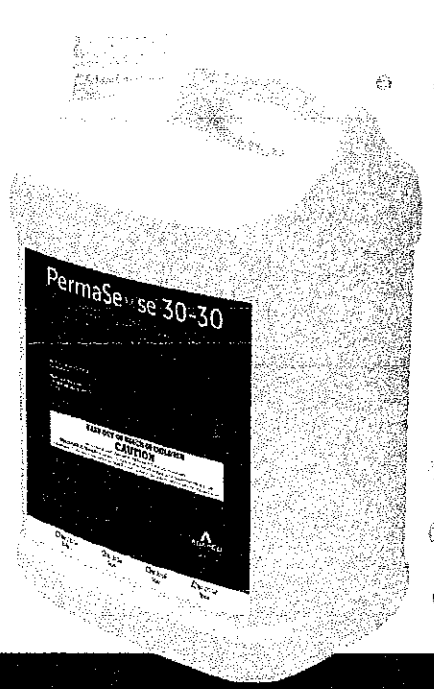
*(butylcarbityl)(6-propylpiperonyl) ether and related compounds
**Contains Petroleum Distillate
Contains 2.5 lbs. A.I. Permethrin per gallon and 2.5 lbs. A.I. Piperonyl Butoxide per gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Inside Attached Booklet for Additional Precautionary Statements.
PRECAUCION AL USUARIO: Si usted no lee inglés, no use este producto hasta que la etiqueta haya sido explicado ampliamente.
(To the User: If you cannot read English, do not use this product until the label has been fully explained to you.)

FIRST AID	
IF SWALLOWED:	Call a poison control center or doctor for treatment advice. Do not induce vomiting unless told to by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to mouth, if possible. Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact SafetyCall® International (866) 897-8050 for emergency medical treatment information.	
Note to Physician: Contains petroleum distillate-vomiting may cause aspiration hazard.	



EPA Reg. No. 86291-2-96263
EPA Est. No. 53883-TX-002

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550 Aero Lane
Sanford, FL 32771

Flowrate Chart for PermaSease™ 30-30

PermaSease™ 30-30 may also be applied by diluting with a light mineral oil or suitable solvent, applied so as not to exceed 0.007 lbs. of permethrin per acre. If an alternate dilution rate is required, adjust the flow rate, accordingly, provided the droplet size and spectrum remain within label specifications.

Ground Application Rate Chart– For Use of PermaSease™ 30-30

Application Rate (lbs. permethrin/ acre)	Vehicle Speed (mph)	Undiluted	Diluted 1+1	Diluted 1+2	Diluted 1+3	Diluted 1+4	Diluted 1+8
0.001	5	0.16	0.31	0.47	0.62	0.78	1.40
	10	0.31	0.62	0.93	1.24	1.55	2.79
	15	0.47	0.93	1.40	1.86	2.33	4.19
	20	0.62	1.24	1.86	2.48	3.10	5.59
0.00175	5	0.27	0.54	0.81	1.09	1.36	2.44
	10	0.54	1.09	1.63	2.17	2.72	4.89
	15	0.81	1.63	2.44	3.26	4.07	7.33
	20	1.09	2.17	3.26	4.34	5.43	9.77
0.0025	5	0.39	0.78	1.16	1.55	1.94	3.49
	10	0.78	1.55	2.33	3.10	3.88	6.98
	15	1.16	2.33	3.49	4.65	5.82	10.47
	20	1.55	3.10	4.65	6.21	7.76	13.96
0.0035	5	0.54	1.09	1.63	2.17	2.72	4.89
	10	1.09	2.17	3.26	4.34	5.43	9.77
	15	1.63	3.26	4.89	6.52	8.15	14.66
	20	2.17	4.34	6.52	8.69	10.86	19.55
0.005	5	0.78	1.55	2.33	3.10	3.88	6.98
	10	1.55	3.10	4.65	6.21	7.76	13.96
	15	2.33	4.65	6.98	9.31	11.64	20.95
	20	3.10	6.21	9.31	12.41	15.52	27.93
0.007	5	1.09	2.17	3.26	4.31	5.43	9.77
	10	2.17	4.34	6.52	8.69	10.86	19.55
	15	3.26	6.52	9.77	13.03	16.29	29.32
	20	4.34	8.69	13.03	17.38	21.72	39.10

Thermal Aerosol Fogging

Apply **PermaSease™ 30-30** diluted or undiluted with suitable Thermal Fogging equipment such as vehicle mounted or handheld thermal fog generators capable of making thermal fog applications. Use only well maintained and properly calibrated thermal fogging equipment to ensure optimum performance and effectiveness. If diluted, use a light mineral oil, or another suitable non-phytotoxic diluent, to reduce oil requirement and sludge buildup in equipment. Do not exceed the maximum rate of 0.007 lbs. of permethrin per acre. Apply **PermaSease™ 30-30** to deliver 0.001 to 0.007 lb. a.i. per acre. Droplet size of thermal fog will be very small usually in the 0.5 to 1.0 micron range. For best results, fog downwind by directing thermal fog into the air and allowing it to drift through areas with active mosquitoes or where mosquitoes find harborage. Do not thermal fog when winds exceed 10 mph. Do not fog wet foliage.

Vehicle Mounted: May be applied with vehicle mounted sprayers at speeds of 5 to 20 mph using a treatment swath width of 300 ft.

Portable or Hand Carried: For use with hand carried and/or portable thermal foggers, use a walking speed of 2 mph and a 50-foot swath.

Use as An Insect Barrier Treatment

For use in Non-Thermal ULV, motorized, portable, backpack, handheld, or vehicle mounted fogging equipment or fog type mist blower equipment, apply **PermaSease™ 30-30** with equipment adjusted to deliver ULV particles of 50 to 120 microns volume median diameter. **PermaSease™ 30-30** may be applied undiluted or diluted. If diluted, use a light mineral oil, or another suitable non-phytotoxic diluent. Do not apply more than 0.007 lbs. of permethrin per acre using an appropriate swath width based on the capabilities of your equipment, typically a 50 ft swath width is used. Direct spray onto foliage at the perimeter of areas from which mosquitoes or flies are to be excluded or direct spray into harborage areas where adult mosquitoes or flies may be found. May be used to treat aggregation and harborage sites such as abandoned buildings, residential buildings, warehouses, storm drains, and underground drainage pipes where adult mosquitoes find harborage. When this product is applied as a barrier treatment, do not apply within 100 feet (30 meters) of lakes and streams.

AERIAL APPLICATION INSTRUCTIONS

PermaSease™ 30-30 may be applied diluted or undiluted at rates of 0.001 to 0.007 pounds of permethrin per acre by fixed wing or rotary aircraft that are capable of making an ULTRA LOW VOLUME (ULV) application. For fixed wing and rotary aircraft with flat fan or rotary nozzles, apply at a sufficient airspeed to deliver the appropriate amount of a.i./acre and to achieve the appropriate droplet range as prescribed by this label. Apply when wind speed is equal to or greater than 1 mph. In order to compensate for windy and meteorological conditions and ensure drift into the target area, aerial applications with aircraft equipped with Global Positioning Systems (GPS) and/or spray cloud drift optimization software is recommended.

Do not apply by fixed wing aircraft at a height less than 100 ft, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.

Spray Droplet Size Calibration

For aerial applications made ≤ 200 ft above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60µm) and that 90% of the spray is contained in droplets smaller than 100 microns (Dv 0.9 < 100µm).

For aerial applications made >200 ft above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns (Dv 0.5 < 70µm) and that 90% of the spray is contained in droplets smaller than 145 microns (Dv 0.9 < 145µm).

The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, or pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Prohibition on Aerial Use in Florida: Not for aerial application in the State of Florida unless specifically authorized by the Florida Bureau of Entomology and Pest Control and the Florida Department of Agriculture and Consumer Services.

SECTION 1: IDENTIFICATION

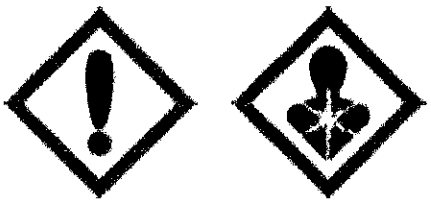
Product Name: **PERMASEASE® 30-30**
Description: Insecticide
EPA Reg. No.: 86291-2-96263

Company Identification:
ADAPCO LLC
550 Aero Lane
Sanford, FL 32771

Emergency Response Telephone Numbers
For Spills Call: 1-(800)-424-9300
For Medical Emergencies Call: 1-(866)-897-8050

SECTION 2: HAZARD IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200



Signal word: Warning

Hazard statements
Harmful if swallowed, inhaled, or absorbed through the skin.
Causes moderate eye irritation.
May cause moderate skin irritation with prolonged or repeated contact.
May cause allergic skin reactions

Precautionary statements
Prevention
Wash thoroughly after handling.
Wear protective gloves.

Response
IF ON SKIN: Wash with plenty of water/soap. If skin irritation persists, get medical advice/ attention. Take off contaminated clothing and wash before reuse.
IF SWALLOWED: Call a poison control center/doctor/physician if you do not feel well. Rinse mouth.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison control center/doctor/physician if you do not feel well.

Dispose of contents/container in accordance with local regulation.

Other hazards
No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS:	CAS NO.	(% w/w)
Permethrin	52645-53-1	30.0%
Piperonyl Butoxide	51-03-6	30.0%
Aliphatic Petroleum Distillate	64741-89-5	40.0%

SECTION 4: FIRST AID MEASURES

ADAPCO LLC
PERMASEASE® 30-30 SAFETY DATA SHEET

Advice on safe handling: Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Advice on protection against fire and explosion: Keep away from heat and sources of ignition.

Hygiene measures: Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet, or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Requirements for storage areas and containers: Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls

Personal protective equipment: Please refer to the label and/or booklet. In all other cases the following recommendations would apply.

Respiratory protection: When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection: Chemical resistant nitrile rubber gloves

Eye protection: Safety glasses with side-shields

Skin and body protection: Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm water. Keep and wash PPE separately from other laundry.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Color:	Yellow, Gardner 3
Physical State:	Liquid
Odor:	Faint Chemical Odor
Density:	0.992 g/cc @ 25° C
Flash Point:	>230° F (>110° C) (TCC)
Solubility:	Does not disperse in water
Viscosity:	30.17 CPS @ 25° C
pH:	3.74 (1% dispersion)
Stability:	Stable

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Neurotoxicity:
Permethrin caused neurobehavioral effects (e.g., tremors) in an acute and subchronic neurotoxicity screening study in rats without any correlating neuropathological changes.
Piperonyl butoxide did not demonstrate the potential to cause neurotoxicity in standard toxicity studies submitted to the Agency. EPA has concluded that there is not a concern for neurotoxicity resulting from exposure to piperonyl butoxide.

Mutagenicity:
Permethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo mutagenicity studies. Piperonyl butoxide does not have significant potential for mutagenicity based on sufficient evidence.

SECTION 12: ECOLOGICAL INFORMATION

Environmental Hazards: This pesticide is extremely toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

Bioaccumulation (Permethrin & Piperonyl butoxide): Will not bioaccumulate.

Environmental Fate
Permethrin: The average half-life of permethrin in aerobic soils is 39.5 days, with a range from 11.6 to 113 days. Permethrin binds tightly to soil and is broken down primarily by microorganisms, but also by photolysis.

Piperonyl Butoxide: Reported to have a maximum half-life of 4.3 days in soil and from 0.55 to 1.64 days in aqueous environments. Gravitational settling removes piperonyl butoxide released in the atmosphere as an aerosol. Gaseous piperonyl butoxide degrades in the atmosphere with an estimated half-life of 3.4 hours.

Ecotoxicological Information
Permethrin: (EPA Ecotox Database)

Rain trout LC50 (96-h):	0.62 µg/L
Bluegill LC50 (96-h):	0.79 µg/L
Bobwhite quail LD50 (8-day):	5,200 ppm

Piperonyl Butoxide: (Based on Piperonyl Butoxide Technical)

Rainbow trout LC50 (96-h):	6.12 ppm
Bluegill Sunfish LC50 (96-h):	5.37 ppm
Bobwhite Quail LD50 (Oral):	> 2,250 mg/kg
Bobwhite Quail LC50 (5-day dietary):	> 5,620 ppm
Mallard Duck LC50 (5-d dietary):	> 5,620 ppm

SECTION 13: DISPOSAL CONSIDERATIONS

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site, or at an approved waste disposal facility.

Section 313: Permethrin (30.0%) CAS #:52645-53-1
Piperonyl Butoxide (30.0%) CAS #: 51-03-6

CA Proposition 65: Not applicable

CERCLA RQ: Not applicable.

RCRA Classification: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA Status: The ingredients of this product are listed on the TSCA inventory or are exempt.

SECTION 16: OTHER INFORMATION

HAZARD RATINGS	NFPA	HMIS		
HEALTH:	1	1	0	MINIMAL
FLAMMABILITY:	1	1	1	SLIGHT
REACTIVITY:	0	0	2	MODERATE
			3	HIGH
			4	SEVERE

SDS Date: August 18, 2020

This document is prepared pursuant to the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012. In addition, other substances not "Hazardous" per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, and local laws and regulations. See SDS for health and safety information.

Bid Title: Insecticides, Herbicides, Adulticides
Bid #: IFB-22-023/YS
Bid Due: 05/11/2022
Bid Opens: 11:00am Central

SEALED BID

ADAPCO
100 Colonial Center Parkway, Suite 170
Lake Mary, FL 32746

Jefferson County Purchasing Dept.
Attn: Sealed Bid
1149 Pearl St., 1st Floor
Beaumont, TX 77701

Innovation
through
formulation

ADAPCO, LLC
Mosquito Control – Bid Related
Bid Contact: Kathy Russell
Ph: 800-367-0659 or 407-328-6519
Email: bids@MYADAPCO.COM

ORIGIN ID:SFBA (800) 367-0659
KATHY RUSSELL
ADAPCO, LLC
100 COLONIAL CTR PARKWAY
SUITE 170
LAKE MARY, FL 32746
UNITED STATES US

SHIP DATE: 06MAY22
ACTWGT: 2.00 LB
CAD: 5416512/NET4490

BILL SENDER

TO **ATTN: PURCHASING - SEALED BID**
JEFFERSON COUNTY PURCHASING
1149 PEARL ST, 1ST FLOOR

BEAUMONT TX 77701
(409) 835-8593
INV:
PO:
REF: JEFFERSON CO TX IFB22-023/YS
DEPT: PURCHASING DEPT

577J5/1BD6/FE4A

J222022041201uv

FedEx Express

XA BPTA

TRK# 0201 **7767 9600 8000**

MON - 09 MAY 4:30P
STANDARD OVERNIGHT

77701
IAH
TX-US

rec. 5/9/22
Upper
10:00 am

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

ORIGINAL

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street, 1st Floor, Beaumont, TX 77701 409-835-8593 Fax 409-835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

April 12, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for **IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and three (3) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District**
BID NO:	**IFB 22-023/YS**
DUE DATE/TIME:	**11:00 AM CT, Wednesday, May 11, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these requirements should be directed to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provisions of services. Individuals requiring special accommodations are requested to contact our office at 409-835-8593 to make arrangements no later than seven (7) calendar days prior to the submittal deadline. Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

Publish: Beaumont Enterprise & Port Arthur News – April 13, 2022 and April 20, 2022

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Bid Submissions:

Bidder is responsible for submitting: One (1) original and three (3) bid copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to see if addenda or additional instructions have been posted. Failure to return all required forms could result in a response being declared as non-responsive. https://www.co.jefferson.tx.us/Purchasing/

Instructions to Bidders

1. Bid Submission

Bids must be submitted in complete original form by mail or messenger to the following address:

Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Late bids will not be accepted and will be returned unopened to the bidder.

All bids submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

Bidder shall submit bid in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the Bid Number, Bid Name, Bid Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Bidder is responsible for submitting:

- **One (1) Original Bid Copy and (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.**

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

https://www.co.jefferson.tx.us/Purchasing/

DEADLINE FOR QUESTIONS:

The deadline for asking questions in writing or requesting additional iuformation (in writing or in person) is 5:00 pm, Thursday, April 28, 2022.

2. Bid Submissions During Time of Inclement Weather, Disaster, or Emergency

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3. Courthouse Security

Bidders are advised that all visitors to the Courthouse must pass through Security. **Bidders planning to hand deliver bids must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal.** Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures recommended by the CDC within its facilities. Visitors to the courthouse will be required to wear a mask within the courthouse.

Bidders are strongly urged to plan accordingly.

4. Preparation of Bids

The bid shall be legibly printed in ink or typed.

The County requests that bid submissions NOT be bound by staples or glued spines.

If a unit price or extension already entered is to be altered, it shall be crossed out and initialed in ink by the bidder.

The bid shall be legally signed and shall include the complete address of the bidder.

Jefferson County is exempt from Federal and State Sales Taxes, and such taxes shall not be included in bid prices.

5. Signatures

All bids, notifications, claims, and statements must be signed by an individual authorized to bind the bidder. The individual signing certifies, under penalty of perjury, that he or she has the legal authorization to bind the bidder.

6. County Holidays – 2021:

January 18, 2021	Martin Luther King, Jr. Day	Monday
February 15, 2021	President's Day	Monday
April 2, 2021	Good Friday	Friday
May 31, 2021	Memorial Day	Monday
July 5, 2021	Independence Day	Monday
September 6, 2021	Labor Day	Monday
November 11, 2021	Veteran's Day	Thursday
November 25 & 26, 2021	Thanksgiving	Thursday & Friday
December 23 & 24, 2021	Christmas	Thursday & Friday
December 31, 2021	New Year's	Friday

7. Rejection or Withdrawal

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within 90 days after opening date.

8. Emergency/Declared Disaster Requirements

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

9. Award

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group,

whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial nonconformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment. In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

10. Contract

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

11. Waiver of Subrogation

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

12. Fiscal Funding

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

13. Bid Results

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

14. Changes and Addenda to Bid Documents

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

15. Specifications

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate.

All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

16. Delivery

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

17. Interpretation of Bid and/or Contract Documents

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

18. Currency

Prices calculated by the bidder shall be stated in U.S. dollars.

19. Pricing

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

20. Notice to Proceed/Purchase Order

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

21. Certification

By signing the offer section of the Offer and Acceptance page, bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The bidder hereby certifies that the individual signing the bid is an authorized agent for the bidder and has the authority to bind the bidder to the contract.

22. Definitions

"County" – Jefferson County, Texas.

"Contractor" – The bidder whose proposal is accepted by Jefferson County.

23. Minority-Women Business Enterprise Participation

It is the desire of Jefferson County to increase the participation of Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

General Conditions of Bidding and Terms of Contract

By execution of this document, the vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. Bidding

1.1 Bids. All bids must be submitted on the bid form furnished in this package.

1.2 Authorized Signatures. The bid must be executed personally by the vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the vendor shall accompany the bid to become a valid bid.

1.3 Late Bids. Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 Withdrawal of Bids Prior to Bid Opening. A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 Withdrawal of Bids after Bid Opening. Bidder agrees that its offer may not be withdrawn or cancelled by the vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 Bid Amounts. Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 Exceptions and/or Substitutions. All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 Alternates. The Invitation for Bid and/or specifications may expressly allow bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 Descriptions. Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 Bid Alterations. Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 Tax Exempt Status. Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 Quantities. Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 Bid Award. Award of contract shall be made to the most responsible, responsive bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 Silence of Specifications for Complete Units. All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 Addenda. Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 General Bid Bond/Surety Requirements. Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 General Insurance Requirements. Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 Responsiveness. A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 Responsible Standing of Bidder. To be considered for award, bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 Confidential/Proprietary Information

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 Public Bid Opening. Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. Performance

2.1 Design, Strength, and Quality. Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 Age and Manufacture. All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 Delivery Location. All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 a.m. to 4:00 p.m., Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 Delivery Schedule. Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 Delivery Charges. All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 Installation Charges. All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 Operating Instructions and Training. Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 Storage. Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 Compliance with Federal, State, County, and Local Laws. Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA. The bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 Patents and Copyrights. The successful vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 Samples, Demonstrations and Testing. At Jefferson County's request and direction, bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the bidder/vendor.

2.13 Acceptability. All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 Maintenance. Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 Material Safety Data Sheets. Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 Evaluation. Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. Purchase Orders and Payment

3.1 Purchase Orders. A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 Invoices. All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 Prompt Payment. In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful bidder(s) is required to pay subcontractors within ten (10) days after the successful bidder receives payment from the County.

3.4 Funding. Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. Contract

4.1 Contract Definition. The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful bidder and Jefferson County.

4.2 Change Order. No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 Price Re-determination. A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 Termination. Jefferson County reserves the right to terminate the contract for default if the bidder breached any of the terms therein, including warranties of bidder or if the bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies

which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the bidder in default.

4.5 Conflict of Interest. Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 Injuries or Damages Resulting from Negligence. Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 Interest by Public Officials. No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 Warranty. The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.9 Uniform Commercial Code. The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.10 Venue. This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.11 Sale, Assignment, or Transfer of Contract. The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.12 Silence of Specifications. The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

Federal Emergency Management Agency (FEMA)
MANDATED CONTRACT PROVISIONS

1. REMEDIES

a. Standard. Contracts for more than the simplified acquisition threshold, currently set at $250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. See 2 C.F.R. Part 200, Appendix II(A).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

2. TERMINATION FOR CAUSE AND CONVENIENCE

a. Standard. All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity, including the manner by which it will be affected and the basis for settlement. See 2 C.F.R. Part 200, Appendix II(B).

b. Applicability. This requirement applies to all FEMA grant and co-operative agreement programs.

3. EQUAL EMPLOYMENT OPPORTUNITY

If applicable, exact language below in subsection 3.d is required.

a. Standard. Except as otherwise provided under 41 C.F.R. Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. §60- 1.4(b), in accordance with Executive Order 11246, Equal Employment Opportunity (30 Fed. Reg. 12319, 12935, 3 C.F.R. Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, Amending Executive Order 11246 Relating to Equal Employment Opportunity, and implementing regulations at 41 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See 2 C.F.R. Part 200, Appendix II(C).

b. Key Definitions.

> **i. Federally Assisted Construction Contract.** The regulation at 41 C.F.R. § 60-1.3 defines a "federally assisted construction contract" as any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.
>
> **ii. Construction Work.** The regulation at 41 C.F.R. § 60-1.3 defines "construction work" as the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

c. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

d. Required Language. The regulation at 41 C.F.R. Part 60-1.4(b) requires the insertion of the following contract clause.

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's non-compliance with the non-discrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any sub-contract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it

participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24,1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

4. DAVIS-BACON ACT

a. Standard. All prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction). See 2 C.F.R. Part 200, Appendix II(D). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week.

b. Applicability. The Davis-Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Non-profit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It DOES NOT apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must do the following:

i. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

ii. Additionally, pursuant 2 C.F.R. Part 200, Appendix II(D), contracts subject to the Davis-Bacon Act, must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). The Copeland Anti-Kickback Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA.

iii. Include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction").

COMPLIANCE WITH THE DAVIS-BACON ACT:

a. All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) and the requirements of 29C.F.R.pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable.

b. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.

c. Additionally, contractors are required to pay wages not less than once a week.

5. COPELAND ANTI-KICKBACK ACT

a. Standard. Recipient and subrecipient contracts must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

b. Applicability. This requirement applies to all contracts for construction or repair work above $2,000 in situations where the Davis-Bacon Act also applies. It DOES NOT apply to the FEMA Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). Each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA. Additionally, in accordance with the regulation, each contractor and subcontractor must furnish each week a statement with respect to the wages paid each of its employees engaged in work covered by the Copeland Anti-Kickback Act and the Davis Bacon Act during the preceding weekly payroll period. The report shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work.

COMPLIANCE WITH THE COPELAND "ANTI-KICKBACK ACT":

a. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

b. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. §5.12."

6. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

a. Standard. Where applicable (see 40 U.S.C. §§ 3701-3708), all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II(E). Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Further, no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous.

b. Applicability. This requirement applies to all FEMA contracts awarded by the non-federal entity in excess of $100,000 under grant and cooperative agreement programs that involve the employment of mechanics or laborers. It is applicable to construction work. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open
market, or contracts for transportation or transmission of intelligence.

The regulation at 29 C.F.R. § 5.5(b) provides contract clause language concerning compliance with the Contract Work Hours and Safety Standards Act. FEMA suggests including the following contract clause: Compliance with the Contract Work Hours and Safety Standards Act.

> **(1) Overtime requirements.** No contractor or subcontractor contracting for any Part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
>
> **(2) Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
>
> **(3) Withholding for unpaid wages and liquidated damages.** Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
>
> **(4) Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

7. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

a. Standard. If the FEMA award meets the definition of "funding agreement" under 37C.F.R. § 401.2(a) and the non-Federal entity wishes to enter into a contract with a small business firm or non-profit organization regarding the substitution of parties, assignment or performance of experimental,
developmental, or research work under that "funding agreement," the non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA. See 2 C.F.R. Part 200, Appendix II(F).

b. Applicability. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

c. Funding Agreements Definition. The regulation at 37 C.F.R. § 401.2(a) defines "funding agreement" as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

8. CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

a. Standard. If applicable, contracts must contain a provision that requires the contractor to agree to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). Violations must be reported to FEMA and the Regional Office of the Environmental Protection Agency. See 2 C.F.R. Part 200, Appendix II(G).

b. Applicability. This requirement applies to contracts awarded by a non-Federal entity of amounts in excess of $150,000 under a federal grant.

CLEAN AIR ACT:

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

2. The contractor agrees to report each violation to Jefferson County and understands and agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT:

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

2. The contractor agrees to report each violation to Jefferson County agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

9. DEBARMENT AND SUSPENSION

a. Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

c. Requirements.

i. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. See 2

C.F.R. Part 200, Appendix II(H); and 2 C.F.R. § 200.213. A contract award must not be made to parties listed in the SAM Exclusions. SAM Exclusions is the list maintained by the General Services Administration that contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. SAM exclusions can be accessed at www.sam.gov. See 2 C.F.R. § 180.530.

ii. In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. This includes parties that receive Federal funding indirectly, such as contractors to recipients and subrecipients. The key to the exclusion is whether there is a "covered transaction," which is any non-procurement transaction (unless excepted) at either a "primary" or "secondary" tier. Although "covered transactions" do not include contracts awarded by the Federal Government for purposes of the non-procurement common rule and DHS's implementing regulations, it does include some contracts awarded by recipients and subrecipients.

iii. Specifically, a covered transaction includes the following contracts for goods or services:

1. The contract is awarded by a recipient or subrecipient in the amount of at least $25,000.

2. The contract requires the approval of FEMA, regardless of amount.

3. The contract is for federally-required audit services.

4. A subcontract is also a covered transaction if it is awarded by the contractor of a recipient or subrecipient and requires either the approval of FEMA or is in excess of $25,000.

The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified.

SUSPENSION AND DEBARMENT:

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by the County. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the County, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring sucb compliance in its lower tier covered transactions.

10. BYRD ANTI-LOBBYING AMENDMENT

a. Standard. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. FEMA's regulation at 44 C.F.R. Part 18 implements the requirements of 31 U.S.C. § 1352 and provides, in Appendix A to Part 18, a copy of the certification that is required to be completed by each entity as described in 31 U.S.C. § 1352. Eacb tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the Federal awarding agency.

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs. Contractors that apply or bid for a contract of $100,000 or more under a federal grant must file the required certification. See 2 C.F.R.Part 200, Appendix II(I); 31 U.S.C. § 1352; and 44 C.F.R. Part 18.
Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

c. Required Certification.

If applicable, contractors must sign and submit to the non-Federal entity the **"Certification Regarding Lobbying" Form** included within these bid specifications.

11. PROCUREMENT OF RECOVERED MATERIALS

a. Standard. A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. See 2 C.F.R. Part 200, Appendix II(J); and 2 C.F.R. §200.322.

b. Applicability. This requirement applies to all contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.

c. Requirements. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired by the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

1. Competitively within a timeframe providing for compliance with the contract performance schedule;

2. Meeting contract performance requirements; or

3. At a reasonable price.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:
https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Although FEMA does not currently require additional provisions, FEMA recommends the following:

1. ACCESS TO RECORDS

a. Standard. All recipients, subrecipients, successors, transferees, and assignees must acknowledge and agree to comply with applicable provisions governing DHS access to records, accounts, documents, information, facilities, and staff. Recipients must give DHS/FEMA access to, and the right to examine and copy, records, accounts, and other documents and sources of information related to the federal financial assistance award and permit access to facilities, personnel, and other individuals and information as may be necessary, as required by DHS regulations and other applicable laws or program guidance. See DHS Standard Terms and Conditions: Version 8.1 (2018). Additionally, Section 1225 of the Disaster Recovery Reform Act of 2018 prohibits FEMA from providing reimbursement to any state, local, tribal, or territorial government, or private non-profit for activities made pursuant to a contract that purports to prohibit audits or internal reviews by the FEMA administrator or Comptroller General.

ACCESS TO RECORDS:

The following access to records requirements apply to this contract:

(1)The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

(2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.

(4) In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

2. CHANGES

a. Standard. To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

b. Applicability. FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

3. DHS SEAL, LOGO, AND FLAGS

a. Standard. Recipients must obtain permission prior to using the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials. See DHS Standard Terms and Conditions: Version 8.1 (2018).

b. Applicability. FEMA recommends that all non-Federal entities place in their contracts a provision that a contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

"The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval."

4. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

a. Standard. The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

b. Applicability. FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

c. "This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

5. NO OBLIGATION BY FEDERAL GOVERNMENT

a. Standard. FEMA is not a party to any transaction between the recipient and its contractor. FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

6. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

a. Standard. Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

Special Requirements/Instructions

The following requirements and instructions **supersede** General Requirements where applicable.

1. Bid Requirement

Each bidder shall ensure that required parts of the bid are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Bidder is responsible for submitting:

One (1) Original Bid Copy and three (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

All bids shall be tightly sealed in an opaque envelope or box and plainly marked "SEALED BID."

The outside of the envelope or box shall also include: Bid Number, Bid Name, Bid Due Date, Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB. All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

2. Vendor Registration: SAM (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

Bidders are strongly encouraged to review their firm's SAM (System for Award Management) status prior to Bid Submission.

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission)

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission) – CONTINUED

FORM 1295 Exemptions:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law? The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement. A completed Form 1295 is not required for:

• a sponsored research contract of an institution of higher education

• an interagency contract of a state agency or an institution of higher education

• a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and o any qualified vendor is eligible for the contract

• a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity

• a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code

• a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

Upon entering into a contract or professional agreement, the Jefferson County Purchasing Department will submit a request to the Vendor to both:

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department.

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

4. Multiple Vendor Award

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

5. Delivery

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

6. Payment

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to: Jefferson County Auditing Department, Attention: Accounts Payable, 1149 Pearl Street, 7th floor, Beaumont, TX 77701.

7. Usage Reports

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases

to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

8. Insurance

The contractor (including any and all subcontractors as defined in Section 9.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation	Statutory Coverage (See Section 9 Below)

9. Workers' Compensation Insurance

9.1 Definitions:

9.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

9.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

9.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

9.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

9.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – refer to Section 8 above.

9.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

9.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

9.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

9.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

9.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

9.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

9.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

9.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

9.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

9.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

9.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

9.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

9.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

9.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

9.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

9.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

9.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs 9.1. – 9.7., with the certificates of coverage to be provided to the person for whom they are providing services.

9.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements

will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

9.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

Minimum Specifications

The following requirements and specifications **supersede** General Requirements where applicable. Contact Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us, regarding any questions or comments. Please reference bid number IFB 22-023/YS.

Scope

Vendor shall provide Insecticides, Herbicides, Spray Adjuvants, and Adulticides for the Jefferson County Mosquito Control District subject to the terms and conditions stated for an initial period **beginning on or about date of award.**

Bidders shall attach to bid form, a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Prices quoted shall be F.O.B. Jefferson County Mosquito Control District, Jefferson County Airport, 1st Street, Nederland, TX. Bidder bears freight charges. All prices must be written in ink or typewritten.

Quote unit prices extended to lump sum prices. The basis of the award will be the unit prices quoted. The County reserves the right to increase or decrease the quantity purchased based on weather conditions and availability of funds.

The County reserves the right to make the award to one (1) successful bidder or per line item.

Purchase orders for insecticides, herbicides, adjuvants, and adulticides will be released to the successful bidder(s) **on an as-needed basis. MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Refer questions of a commercial nature to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us; and questions of a technical nature to Denise Wheeler, Director, Jefferson County Mosquito Control, wheeler@co.jefferson.tx.us.

A price re-determination may be considered by Jefferson County only at the twelve (12) month and twenty-four (24) month anniversary dates of the contract. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

Approximate Annual Usage

No promise is made or implied for quantities that will be purchased. Orders will be placed on an **as-needed basis** for the duration of the contract. Purchase Orders will be released to the successful bidder(s) as required. **MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Contract

This bid, when properly accepted by Jefferson County Commissioners' Court, shall constitute a contract equally binding between the successful bidder and Jefferson County. No different or additional terms will become a part of this contract.

The brand name references are for description only, and are not intended to exclude other herbicides or adjuvants of equal quality. Bidders desiring to substitute items may do so provided brand name is **indicated on Bid Form**. Change of container size may disqualify bid. Dilution ratio will be a factor in award of chemicals.

Bidders shall attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Item	Description
1	**MSMA herbicide** – to contain 6.00 lb. MSMA (Mono-sodium Acid Methanearsonate) plus surfactant per gallon
2	**Tordon 101** – to contain 10.2% 4-amino3,5,6-trichloropicolinic acid (picloram), tri-isopropanolomine salt 39.6% 2,4-Dichlorophenoxyacetric acid, tri-isopropanolomiane salt.
3	**Roundup herbicide or equivalent** – to contain 41.0% by weight Isopropylamine Salt of Glyphosate
4	**Rodeo herbicide or equivalent** – to contain 53.5% by weight Isopropylamine Salt of Glyphosate
5	**Nalco Trol II or equivalent** – water soluble spray drift control agent
6	**Aqua-King or equivalent** – product must be a non-ionic aquatic surfactant approved for use in the State of Texas, contain 90% active ingredient (excluding alcohols, fatty acids, oils ethylene glycol or diethylene glycol), a minimum of 80% surfactant load, possess an HLB (hydrophilic to lipophilic balance) ratio of 12 to 17, a maximum of 10% isopropyl alcohol, have a flash point greater than 200 degrees F., and contain an anti-foaming agent that will provide instantaneous foam breakdown when agitation ceases.
7	**Malathion insecticide** – concentrate to contain a minimum of 9.9 lb. of malathion per gallon (96.5% by weight active ingredient). Product offered must have current approval in Texas for both aerial and ground ULV application against adult mosquitoes. Bulk shipments only.
8	**Bio Mist 3-15 ULV** - ACTIVE INGREDIENTS Permethrin (3-phenoxyphenyl) methyl (+/-) cis, trans3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate.....3.0% Piperonyl Butoxide*.....15.0% OTHER INGREDIENTS**..... 82.0% 100.0% Contains 0.222 pounds of Permethrin and 1.113 pounds of PBO per gallon Contains petroleum distillate *Ordered as 275 gallon containers. **Successful bidder will deliver full containers and pick up empty containers at no additional charge.
9	**Envion 30/30 insecticide or equivalent** - water compatible concentrate in 2.52 lb. Permethrin (30.0% by weight) and 2.52 lb. Piperonyl Butoxide (30.0% by weight) per gallon. Product offered must have current approval in Texas for aerial and ground ULV application against adult mosquitoes.

Bidder Information Form

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.

Bidder's Company/Business Name: Clarke Mosquito Control Products, Inc.

Bidder's TAX ID Number: 36-3672438

Contact Person: Doug Carroll **Title:** Control Consultant

Phone Number (with area code): 817-600-5353

Alternate Phone Number if available (with area code): 800-323-5727

Fax Number (with area code): 630-443-3070

Email Address: customercare@clarke.com

Mailing Address (Please provide a physical address for bid bond return, if applicable): no bond required

N/A
Address

City, State, Zip Code

Bidder: Complete & Return this Form with Offer.

OFFER AND ACCEPTANCE FORM

OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer. We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

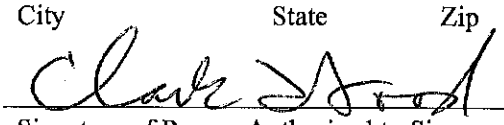
We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

Clarke Mosquito Control Products, Inc.
Company Name

675 Sidwell Ct
Address

St Charles, IL 60174
City State Zip


Signature of Person Authorized to Sign

Clark Wood
Printed Name

VP Service Operations
Title

For clarification of this offer, contact:

Doug Carroll
Name

817-600-5353 630-443-3070
Phone Fax

customercare@clarke.com
E-mail

<u>Bidder</u>: Complete & Return this Form with Offer.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. Contract Term: One (1) year from date of award with an option to renew for four (4) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

Countersigned:

Jeff R. Branick
County Judge

Date

Attest:

Laurie Leister
County Clerk

Bidder: Complete & Return this Form with Offer. There is nothing to complete?

Bid Form

Item	Est Qty. (Gal.)	Description	Brand bid	MSDS Labels Attached	Price per Gallon	Total Price
1	700	MSMA Herbicide – 2.5 gal. container			$ No Bid	$
2	700	Tordon 101 Herbicide or equivalent – 2.5 gal. container			$ No Bid	$
3	700	Roundup Herbicide or equivalent – 2.5 gal. container			$ No Bid	$
4	100	Rodeo Herbicide or equivalent – 2.5 gal. container			$ No Bid	$
5	100	Nalco Trol II or equivalent – 2.5 gal. (or smaller) container			$ No Bid	$
6	400	Aqua-King Surfactant or equivalent – 2.5 gal. (or smaller) container			$ No Bid	$
7	20,000	Malathion Insecticide – **bulk shipment only**			$ No Bid	$
8	1,100	Bio Mist 3-15 ULV – 275 gal containers	Clarke Biomist 3+15	Yes	$ 91.55	$ 100,705.00
9	600	Envion 30/30 insecticide – 2.5 gal. containers	Clarke Biomist 30+30	Yes	$68.67	$41,202.00

Bidders must attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Acknowledgment of Addenda (if any):

Addendum 1 _____ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

Bidder: Complete & Return this Form with Offer.

Vendor References Form

Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

THIS FORM MUST BE RETURNED WITH YOUR BID.

REFERENCE ONE

Government/Company Name: City of Baytown Health Department

Address: PO Box 424, Baytown, TX 77522-0424

Contact Person and Title: James Garcia

Phone: (281) 420-5384 Fax:

Email Address: james.garcia@baytown.org Contract Period: 5/1/21 - 4/30/23

Scope of Work: provide mosquito control products

REFERENCE TWO

Government/Company Name: Orange County Mosquito Control

Address: 714 Polk Ave, Orange, TX 77630-6348

Contact Person and Title: Patrick D. Beebe, Director

Phone: 409-883-5717 Fax:

Email Address: pbeebe@co.orange.tx.us Contract Period: 6/3/19 - 6/18/22

Scope of Work: provide mosquito control products

REFERENCE THREE

Government/Company Name: Fort Bend County

Address: 301 Jackson Street, Richmond, TX 77469-3108

Contact Person and Title: Brian Culpepper

Phone: 281-342- 0508 Fax:

Email Address: brian.culpepper@fortbendcountytx.gov Contract Period: 4/1/22 - 3/30/23

Scope of Work: provide mosquito control products

Bidder: Complete & Return this Form with Offer.

Signature Page

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions?..... **Yes** ☒ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Clarke Mosquito Control Products, Inc. Bidder (Entity Name)	Clark Wood Signature
675 Sidwell Ct Street & Mailing Address	Clark Wood Print Name
St Charles, IL 60174 City, State & Zip	4-29-2022 Date Signed
800-323-5727 Telephone Number	630-443-3070 Fax Number
customercare@clarke.com E-mail Address	

<u>Bidder</u>: Complete & Return this Form with Offer.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Clark Wood

Signature of Contractor's Authorized Official

Clark Wood VP Service Operations

Name and Title of Contractor's Authorized Official *(Please Print)*

4-29-2022

Date

Bidder: Complete & Return this Form with Offer.

Conflict of Interest Questionnaire

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY
Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

N/A

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

N/A
Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4

Clark Ford
Signature of vendor doing business with the governmental entity

4-29-2022
Date

Adopted 8/7/2015

Bidder: Complete & Return this Form with Offer.

Local Government Officer

Conflicts Disclosure Statement – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT — **FORM CIS**

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

Note: This Form is for Office Use Only.

Good Faith Effort (GFE) Determination Checklist

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . . **N/A**

☐ Yes	☐ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?
☐ Yes	☐ No	2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☐ No	3. **Provide** HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☐ No	4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders?
☐ Yes	☐ No	5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?
☐ Yes	☐ No	6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

Clark Wood
Printed Name of Authorized Representative

Clark Wood
Signature

VP Service Operations
Title

4-29-2022
Date

Bidder: Complete & Return this Form with Offer.

Notice of Intent (NOI) to Subcontract with

Historically Underutilized Business (HUB)

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

N/A

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: p Yes p No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

Printed Name of Contractor Representative	Signature of Representative	Date
Printed Name of HUB	Signature of Representative	Date

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

This information must be submitted with your bid.

N/A

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

HUB SUBCONTRACTOR DISCLOSURE

N/A

PART I: Continuation Sheet **(Duplicate as Needed)**

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that bidder is the apparent low bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: **N/A**

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Subcontractor Name: **N/A**

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required.** I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): *N/A*

Title: _____

Signature: _____

Date: _____

E-mail address: _____

Contact person that will be in charge of invoicing for this project:

Name (print or type): _____

Title: _____

Date: _____

E-mail address: _____

Bidder: Complete & Return this Form with Offer.

Residence Certification/Tax Form

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Nonresident bidder" refers to a person who is not a resident.

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☐ I certify that _____ [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☒ I certify that Clarke Mosquito Control Products, Inc [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is St. Charles, IL (city and state).

Taxpayer Identification Number (T.I.N.):	36-3672438
Company Name submitting bid/proposal:	Clarke Mosquito Control Products, Inc
Mailing address:	675 Sidwell Ct, St Charles, IL 60174
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
N/A	

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

Bidder: Complete & Return this Form with Offer.

House Bill 89 Verification

I, Clark Wood, the undersigned representative of (company or business name) Clarke Mosquito Control Products, Inc (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and

2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Clark Wood
Signature of Company Representative

4-29-2022
Date

On this 29 day of April, 2022, personally appeared

Clark Wood, the above named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

KAREN J LARSON
Official Seal
Notary Public - State of Illinois
My Commission Expires Aug 12, 2024

Karen J Larson
Notary Signature

April 29, 2022
Date

Bidder: Complete & Return this Form with Offer.

Senate Bill 252 Certification

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

Clarke Mosquito Control Products, Inc
Company Name

22-023/YS
IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

Bidder: Complete & Return this Form with Offer.

Bid Affidavit

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Illinois COUNTY OF Kane

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Illinois,

on this day personally appeared Clark Wood (name), who

after being by me duly sworn, did depose and say:

"I, Clark Wood (name) am a duly authorized officer of/agent

for Clarke Mosquito Control Products, Inc (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Clarke Mosquito Control Products, Inc (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of bidder: Clarke Mosquito Control Products, Inc

675 Sidwell Ct, St. Charles, IL 60174

Fax: 630-443-3070 Telephone# 800-323-5727

by: Clark Wood (print name) Title: VP Service Operations

Signature: Clark Wood

SUBSCRIBED AND SWORN to before me by the above-named

Clark Wood on

this the 29 day of April, 2022

KAREN J LARSON
Official Seal
Notary Public - State of Illinois
My Commission Expires Aug 12, 2024

Karen J. Larson
Notary Public in and for
the State of Illinois

Bidder Shall Return Completed Form with Offer.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
2/28/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: CSU Chicago - Midwest
HUB International Midwest Limited 55 East Jackson Boulevard Chicago IL 60604	PHONE (A/C, No, Ext): 312-922-5000 FAX (A/C, No): E-MAIL ADDRESS: CSUChicago@hubinternational.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : National Union Fire Insurance Company of Pittsburg	19445
INSURER B : Navigators Specialty Insurance Company	36056
INSURER C : Navigators Insurance Company	42307
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Clarke Mosquito Control Products, Inc.
675 Sidwell Court
Saint Charles, IL 60174

COVERAGES **CERTIFICATE NUMBER:** 535209557 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR X Pollution Legal Liability GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY X PRO-JECT X LOC OTHER:			CH22NP3Z03944IC	3/1/2022	3/1/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Pollution Legal Liab	$ 1,000,000 $ 300,000 $ 25,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
C	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY X HIRED AUTOS ONLY SCHEDULED AUTOS X NON-OWNED AUTOS ONLY			FA19NCP02119202	3/1/2022	3/1/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
B	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 0			CH22NP3Z03944IC	3/1/2022	3/1/2023	EACH OCCURRENCE AGGREGATE	$ 10,000,000 $ 10,000,000
A A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		WC012-05-6817 WC012-05-6818	3/1/2022 3/1/2022	3/1/2023 3/1/2023	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Pollution Legal Liability includes coverage for Third Party On-site, Third Party Off-site, Hostile Fire and Building Equipment, Products Pollution, Contractors Pollution and Transportation Cargo.
JEFFERSON COUNTY IS INCLUDED AS ADDITIONAL INSURED UNDER THE GENERAL LIABILITY AND AUTO LIABILITY POLICIES AS REQUIRED BY WRITTEN CONTRACT WITH THE NAMED INSURED.

CERTIFICATE HOLDER

JEFFERSON COUNTY
1149 PEARL STREET
BEAUMONT TX 77701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Neil R. Hughes

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clarke

BIOMIST® 3+15 ULV

For Use Outdoors as an Ultra-Low Volume (ULV) Application to Control Adult Mosquitoes in Residential and Recreational Areas. Also for use against Biting and Non-Biting Midges and Blackflies.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

ACTIVE INGREDIENTS	
Permethrin (3-phenoxyphenyl) methyl (+/-) cis, trans-3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate	3.0%
Piperonyl Butoxide*	15.0%
OTHER INGREDIENTS**	82.0%
	100.0%

Contains 0.222 pounds of Permethrin and 1.113 pounds of PBO per gallon

*PBO, (butyl carbityl) (6-propylpiperonyl) ether and related compounds

** Contains petroleum distillate

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
Have product container or label with you when calling a poison control center or doctor, or going for treatment. For Medical Emergencies, call the International Poison Control Center at 1-800-214-7753.	
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye. Call a poison control center or doctor for treatment advice.
NOTE TO PHYSICIAN: Product contains a petroleum distillate. Vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE): Some materials that are chemical-resistant to this product are: barrier laminate, nitrile rubber, neoprene rubber, or viton. Mixers, loaders, applicators, and other handlers must wear long-sleeve shirt and long pants, shoes plus socks. In addition, all handlers except for applicators using motorized ground equipment, pilots and flaggers, must wear chemical-resistant gloves. In addition, mixers/loaders, persons cleaning equipment, and other persons exposed to the concentrate must wear a chemical-resistant apron. See engineering controls for additional requirements.

User Safety Requirements: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS: Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes, or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Not for use in metered release systems. Not for use in outdoor residential misting systems.

Do not contaminate crop land (other than crops listed) or potable water supplies with spray drift.

Do not make applications during rain.

USE INFORMATION

BIOMIST® 3+15 ULV is approved for applications as an ultra low volume (ULV) nonthermal aerosol (cold fog) to control adult mosquitoes in residential and recreational areas and other areas these insects occur, such as but not limited to parks, campsites, woodlands, athletic fields, golf courses, residential areas and municipalities, gardens, playgrounds, and overgrown waste areas.

BIOMIST® 3+15 ULV can be applied over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes within or adjacent to these areas. Application can be made where the following crops are present:

Alfalfa	*Corn, grain*	*Onion, bulb*
Almond	*Corn, stover*	*Peach*
Apple	*Corn, sweet, kernel + cob with husks removed*	*Pepper, bell*
Artichoke	*Eggplant*	*Pistachio*
Asparagus	*Fruit, pome, group 11*	*Potato*
Avocado	*Garlic*	*Soybean, seed*
Broccoli	*Range grasses*	*Spinach*
Brussels sprouts	*Horseradish*	*Tomato*
Cabbage	*Leaf petioles subgroup 4B*	*Vegetable, cucurbit, group 9**
Cauliflower	*Leafy greens subgroup 4A*	*Walnut*
Celery	*Lettuce, head*	*Watercress*
Cherry	*Mushroom*	
Corn, forage		

** 40 CFR 180.41 Crop Group 9: Cucurbit Vegetables, includes Crop Subgroup 9A (melon) and Crop Subgroup 9B (squash/cucumber).*

In the treatment of corrals, feedlots, swine lots, poultry ranges and zoos cover any exposed drinking water, drinking fountains and animal feed before application.

For best results treat when mosquitoes are most active and weather conditions are conducive to keeping the spray cloud close to the ground. An inversion of air temperatures and a light breeze is preferable. Application in calm air conditions is to be avoided. Apply only when wind speed is greater than 1 mph. Air temperature should be greater than 50°F when conducting all types of applications.

Do not treat a site with more than 0.007 lb. permethrin and 0.035 lb. PBO per acre in a 3-day period. Retreatments within a 3-day period shall not exceed 0.007 total lbs. permethrin or 0.035 total lbs. PBO in

any site. Do not exceed 25 applications at maximum labeled rate (0.005 lbs permethrin/0.025 lbs PBO per acre) at any site in one year. When targeting *Aedes taeniorhynchus* and other difficult species, applications may be made up to 0.007 lbs permethrin and 0.035 lbs PBO (4.0 fl. oz. BIOMIST 3+15 ULV) per acre. Do not exceed 0.18 lbs of permethrin or 0.90 lbs PBO per acre per site per year. When rotating this product with other insecticides containing PBO, do not exceed 2 lbs PBO per acre per site per year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or is specifically approved by the state or tribe during a natural disaster recovery effort.

SPRAY DROPLET SIZE DETERMINATION

Ground-based Application: Spray equipment must be adjusted so that the volume median diameter (VMD) is less than 30 microns (Dv 0.5 < 30 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 um). Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at or below 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 um) and that 90% of the spray is contained in droplets smaller than 100 microns (Dv 0.9 < 100 um). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at greater than 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns (Dv 0.5 < 70 um) and that 90% of the spray is contained in droplets smaller than 145 microns (Dv 0.9 < 145 um). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

GROUND APPLICATION

Apply BIOMIST® 3+15 ULV through standard ULV cold aerosol or non-thermal aerosol (Cold Fog) generators undiluted at a flow rate of 3.1 to 17.4 fluid ounces per minute, and an average vehicle speed of 10 MPH. If a different vehicle speed is used, adjust rate accordingly. These rates are equivalent to 0.00088 to 0.005 pounds of Permethrin and 0.0044 to 0.0264 pounds of PBO per acre. An accurate flow meter must be used to ensure the proper flow rates. Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when populations are high.

Permethrin/ PBO Pounds per Acre	*Application Rates Fl.oz./Minute*				*Fl.oz. BIOMIST 3+15 ULV per Acre*
	5 MPH	*10 MPH*	*15 MPH*	*20 MPH*	
0.005/0.025	*8.7*	*17.4*	*26.1*	*34.9*	*2.88*
0.0025/0.0125	*4.4*	*8.7*	*13.1*	*17.4*	*1.44*
0.00088/0.0044	*1.5*	*3.1*	*4.6*	*6.1*	*0.51*

Failure to follow the above directions may result in reduced effectiveness..

AERIAL APPLICATION

BIOMIST® 3+15 ULV may be applied undiluted at rates of 0.0025 to 0.005 pounds Permethrin (1.44 to 2.88 fl.oz. BIOMIST® 3+15 ULV) per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment. Do not apply by fixed wing aircraft at a height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs. Aerial applications shall only be made when recommended by public health officials and trained personnel of mosquito abatement districts and other mosquito control programs.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

STORAGE & DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE AND SPILL PROCEDURES: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING:

For Nonrefillable Containers:

Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent), then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

For Refillable Containers:

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

NOTICE: To the extent provided by law, seller makes no warranty, expressed or implied, concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.
BIOMIST® is a Registered Trademark of Clarke Mosquito Control Products, Inc.

IN CASE OF MEDICAL EMERGENCY, CALL THE INTERNATIONAL POISON CONTROL CENTER 1-800-214-7753

IN CASE OF TRANSPORTATION EMERGENCY, CALL INFO-TRAC 1-800-553-5053

FOR MORE INFORMATION CALL 1-800-323-5727

MANUFACTURED FOR:
CLARKE MOSQUITO CONTROL PRODUCTS, INC.
159 N. GARDEN AVENUE
ROSELLE, ILLINOIS 60172

EPA Reg. No.: 8329-33
EPA Est. No. _____

NET CONTENTS: Marked on Container
LOT NO._____

AL0404

SAFETY DATA SHEET

BIOMIST® 3 + 15 ULV

Effective Date: 15 July 2015
v.02

SECTION 1. Identification of the Substance/Mixture and of the Company

1.1 Product Identifier

Formulation Identifier: BIOMIST® 3 + 15 ULV

EPA Registration Number: 8329-33

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant identified uses: Insecticide for control of adult mosquitoes, biting and non-biting midges, and blackflies

Uses advised against: See product label for use restrictions

1.3 Details of the Supplier of the Safety Data Sheet

Clarke Mosquito Control Products, Inc.
675 Sidwell Court
St. Charles, IL 60174 U.S.A.
+1 (630) 894-2000
Email: Clarke@clarke.com

1.4 Emergency Telephone Number

24-Hour Medical Emergency: POISON CONTROL Toll-free (800) 214 – 7753

24-Hour Transportation Emergency: INFOTRAC (800) 535-5053

SECTION 2. Hazards identification

United States (US)
According to OSHA 29 CFR 1910.1200 HCS (2012)

2.1 Classification of the Substance or Mixture

Aspiration Hazard: Category 1
Acute Toxicity (Inhalation): Category 4

Pictogram:

Signal Word: Danger

Hazard Statements: May be fatal if swallowed and enters airways.
Harmful if inhaled

Precautionary Statements:

PREVENTION: Avoid breathing mist/spray. Use only outdoors or in a well-ventilated area,

RESPONSE: If swallowed: Immediately call a poison control center or doctor. Do NOT induce vomiting.

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.

STORAGE: Store locked up.

DISPOSAL: Dispose of contents and container in accordance with local/regional/national regulations.

2.2 Other Hazards Not Classifiable Under OSHA 2012 HCS

See product label for any additional hazards

SECTION 3. Composition/Information on Ingredients

3.1 Components

Substance Name	CAS No.	Concentration % w/w
Permethrin	52645-53-1	3.00
Piperonyl Butoxide	51-03-6	15.00
Petroleum Distillate Mixture:		< 82.00
White Mineral Oil	8042-47-5	
Hydrotreated Distillate, Heavy Paraffin	64742-54-7	
Hydrotreated Distillate, Light Paraffin	64742-55-8	
Hydrotreat Neutral Oil	72623-87-1	

Ingredients not identified are non-hazardous and/or are not required to be disclosed pursuant to 29 CFR 1910.1200 (2012), and are withheld as trade secret.

SECTION 4. First Aid Measures

4.1 Description of First Aid Measures

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed.

See section 2 and/or section 11.

4.3 Indication of Immediate Medical Attention and Special Treatment

Treatment: Contains petroleum distillate. Gastric lavage is indicated if material was taken internally. May pose an aspiration pneumonia hazard. Appropriate supportive and symptomatic treatment is indicated by the patient's condition is recommended. For medical treatment information, contact the poison control hotline at 1-800-214-7753. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5. Fire-Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Carbon Dioxide (CO_2), Dry Chemical, Foam

Unsuitable Extinguishing Media: Water jet

5.2 Special Hazards Arising From the Substance or Mixture

Specific Hazards: Under fire conditions some components may decompose. Combustion products may include CO and NOx.

5.3 Special Protective Equipment and Precautions for Fire-Fighters

Protection Against Fire: Wear positive pressure, self-contained breathing apparatus and protective firefighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves).

Special Procedures: Treat as oil fire. Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SECTION 6. Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Use appropriate protection (see section 8)

Environmental Precautions: Prevent product from entering into drains and waterways. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Collect and dispose of this material and its container in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. See Section 12 for additional ecological information.

6.2 Methods and Material for Containment and Cleaning Up

Clean Up Methods: Soak up with absorbent, non-combustible material, such as sand, silica gel, clay, or sawdust, while using appropriate personal protection equipment. Collect material in appropriate container for disposal.

SECTION 7. Handling and Storage

7.1 Precautions for Safe Handling

Handling: Keep out of reach of children. Do not take internally. Avoid contact with skin and eyes. Avoid inhalation of vapors from product.

Hygiene Measuras: Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove soiled clothing immediately and clean thoroughly before using again.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage: Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilizers. Keep out of reach of children.

SECTION 8. Exposure Controls / Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

8.1 Control Parameters

Component Name	CAS No.	List/Source	Type	Value

Permethrin	52645-53-1	ACGIH	TWA	5 mg/m^3
		NIOSH	REL	5 mg/m^3
		OSHA	PEL	5 mg/m^3
Petroleum Distillate Mixture*:	See section 3	ACGIH	TLV	5 mg/m^3 inhalable fraction
		NIOSH	REL	5 mg/m^3 form: mist
		OSHA	PEL	5 mg/m^3

*Exposure limits based on limits established for White Mineral Oil (CAS# 8042-47-5) component of mixture.

8.2 Exposure controls

Engineering Controls: Use with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Wash hands thoroughly after handling. Wash clothing before re-using.

Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection: Safety Glasses, Goggles or Face Shield

Skin Protection: Wear suitable protective clothing including long-sleeve shirt, long pants, shoes and socks. Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron.

Hand Protection: Protective glove selection must be based on the user's assessment of the workplace hazards. Suitable protective chemical resistant materials include barrier laminate, nitrile, neoprene or Viton.

Respiratory Protection: Not usually required. In instances where exposure limits are exceeded, wear a NIOSH-approved pesticide respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides.

SECTION 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Appearance:	Liquid
Color:	Pale Yellow
Odor:	Odorless
Odor Threshold:	Not Available
pH:	Not Available, not miscible in water
Melting Point:	Not Applicable
Freezing Point:	Not Determined
Initial Boiling Point:	Not Determined
Flash Point:	>300° F
Evaporation Rate:	Not Determined
Flammability:	Not Determined
Explosion limits [U/L]:	Not Applicable
Vapor Pressure:	Not Determined
Vapor Density:	Not Determined
Relative Density:	7.42 lbs/gal
Solubility:	Not Determined
Partition Coefficient:	Not Determined
Auto-Ignition Temperature:	Not Determined
Viscosity:	15.16 cSt @ 40 °C (22.6 cSt @ 20 °C)
Decomposition Temperature:	Not Available

Explosive Properties:	Not Available
Oxidizing Properties:	Not Available

SECTION 10. Stability and Reactivity

10.1 Reactivity

Not Available

10.2 Chemical Stability

Stable under normal conditions

10.3 Possibility of Hazardous Reactions

Hazardous Reactions:	None under normal conditions
Hazardous Polymerization:	Not known to occur

10.4 Conditions to avoid

Protect from direct sunlight and excessive heat.

10.5 Incompatible materials

Avoid contact with strong oxidizing agents, strong acids, strong bases

10.6 Hazardous decomposition products

None known under normal conditions of storage and use

SECTION 11. Toxicological Information

11.1 Information on Likely Routes of Exposure

Inhalation:	May be harmful if inhaled
Ingestion:	May be fatal if swallowed and enters airways due to petroleum distillate. Vomiting may cause aspiration pneumonia.

11.2 Information on Toxicological Effects

Acute Toxicity/Effects

Oral, Rat LD_{50}	> 5,000 mg/kg-bw
Dermal, Rat LD_{50}	> 2,000 mg/kg-bw
Inhalation, Rat LC_{50}	> 3.9 mg/L
Skin Corrosion/Irritation:	Not corrosive or irritating to the skin on acute exposure. Mild skin irritation or cracking may occur from prolonged or repeated exposure to this product.
Serious Eye Damage/Irritation:	Mild (transient) eye irritation may occur from direct exposure of the product in the eyes.
Skin Sensitization:	Not a skin sensitizer
STOT – Single exposure	No data is available to indicate product or any components present at greater than 0.1% present a specific target orgen toxicity hazard from single exposure.

Chronic Toxicity/Effects

Germ Cell Mutagenicity	This product has not been tested. No data is available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. For permethrin and for piperonyl butoxide, no mutagenic effect was found in various tests with microorganisms and mammalian cell culture.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. Permethrin and Piperonyl Butoxide are classified by IARC as Group 3: Not classifiable as to carcinogenicity to humans. Permethrin caused at high dose levels an increased incidence of tumors in mice in the following organ(s): liver, Lungs. The mechanism that triggers tumors in rodents is not relevant for the low exposures encountered under normal use conditions. Piperonyl butoxide was not carcinogenic in lifetime feeding studies in rats and mice.
Reproductive Effects:	No data is available to indicate product or any components present at greater than 0.1% cause reproductive or teratogenic toxicity. Permethrin did not cause reproductive toxicity in a two-generation study in rats. Piperonyl butoxide did not cause reproductive toxicity in a two-generation study in rats.
STOT – Repeated exposure	No data is available to indicate product or any components present at greater than 0.1% present a specific target organ toxicity hazard from repeat exposure Permethrin did not cause specific target organ toxicity in experimental animal studies. Piperonyl butoxide did not cause specific target organ toxicity in experimental animal studies.

SECTION 12. Ecological Information

12.1 Ecotoxicity

Product specific data is not available. Data referenced is in relation to the active ingredients, Permethrin and Piperonyl Butoxide.

Toxicity to Fish:	Permethrin: 96-hr Acute LC_{50} 0.79 ppb, Bluegill Sunfish (*Lepomis macrochirus*) Piperonyl Butoxide: 96-hr Acute LC_{50} 6.12 ppm, Rainbow Trout (*Oncorhynchus mykiss*)
Toxicity to Aquatic Invertebrates:	Permethrin: 96-hr LC_{50} 0.019 ppb, Mysid Shrimp (*Americamysis bahia*) Piperonyl Butoxide: 96-hr LC_{50} 0.49 ppm, Mysid Shrimp (*Americamysis bahia*)
Toxicity to Aquatic Plants:	Permethrin: 72-hr EC_{50} 0.5 mg/L, Algae Piperonyl Butoxide: 72-hr EC_{50} > 9.1 mg/L, Algae

12.1 Persistence and Degradability

Product specific data not available. Data referanced is in relation to the active ingredients, Permethrin and Piperonyl Butoxide.

Biodegradability:	Not rapidly biodegradable.
Partition Coefficient, K_{oc}:	Permethrin: 100,000 Piperonyl Butoxide: 399 - 830
Bioaccumulation:	Bioconcentration (BCF) Permethrin: 300 Bioconcentration (BCF) Piperonyl Butoxide: 2,175
Mobility in Soil:	Permethrin: Immobile in soil

Piperonyl Butoxide: Moderately mobile in soil

SECTION 13. Disposal Considerations

13.1 Waste Treatment and Disposal methods
Pesticide wastes are regulated. Consult product label for chemical substance and container disposal instructions. Avoid release to the environment. Improper disposal of excess product or rinsate is a violation of Federal law. If these wastes cannot be disposed or by use according to label instructions, contect your State Pesticide or Environmentel Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance.

Container disposal: Rinse thoroughly in accordance with label instructions.

SECTION 14. Transport Information

14.1 DOT (US)
Not regulated (Bulk and Non-Bulk Quantities)

14.2 IMDG (Vessel)

UN Number:	3082
Hazard Class:	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (PERMETHRIN)
Marine Pollutant:	Yes

14.3 ICAO/IATA (Air transport)

UN Number:	3082
Hazard Class:	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (PERMETHRIN)
Environmental Hazard:	Yes

SECTION 15. Regulatory Information

FIFRA Information: This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal Word: CAUTION
KEEP OUT OF REACH OF CHILDREN

FIRST AID	
Have product container or label with you when calling a poison control center or doctor, or going for treatment. For Medical Emergencies, call the International Poison Control Center at 1-800-214-7753.	
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye. Call a poison control center or doctor for

	treatment advice.
NOTE TO PHYSICIAN: Product contains a petroleum distillate. Vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE): Some materials that are chemical-resistant to this product are: barrier laminate, nitrile rubber, neoprene rubber, or Viton. Mixers, loaders, applicators, and other handlers must wear long-sleeve shirt and long pants, shoes plus socks. In addition, all handlers except for applicators using motorized ground equipment, pilots and flaggers, must wear chemical-resistant gloves. In addition, mixers/loaders, persons cleaning equipment, and other persons exposed to the concentrate must wear a chemical-resistant apron. See engineering controls for additional requirements.

User Safety Requirements: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS: Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Other Federal Regulations

SARA TITLE III CLASSIFICATION

Section 302:	None		
Section 311/312:	Immediate (acute) hazard		
Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372		
	Permethrin	CAS# 52645-53-1	3.0%
	Piperonyl Butoxide	CAS# 51-03-6	15.0%

CERCLA RQ: None

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. California Proposition 65: Not listed

STATE RIGHT-TO-KNOW: National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

SECTION 16. Other Information

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources we believe to be reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared as is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

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BIOMIST® 30+30 ULV

For Use Outdoors as an Ultra-Low Volume (ULV) Application to Control Adult Mosquitoes in Residential and Recreational Areas. Also for use against Biting and Non-Biting Midges and Blackflies.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

ACTIVE INGREDIENTS	
Permethrin (3-Phenoxyphenyl) methyl (+/-) cis, trans-3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate	30.0%
Piperonyl Butoxide*	30.0%
OTHER INGREDIENTS**	40.0%
	100.0%

Contains 2.5 pounds of Permethrin and 2.5 pounds of PBO per gallon

*PBO, (butyl carbityl) (6-propylpiperonyl) ether and related compounds

** Contains petroleum distillate

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
Have product container or label with you when calling a poison control center or doctor, or going for treatment. For Medical Emergencies, call the International Poison Control Center at 1-800-214-7753.	
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.
NOTE TO PHYSICIAN: Product contains a petroleum distillate. Gastric lavage is indicated if material was taken internally. Vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE): Some materials that are chemical-resistant to this product are: barrier laminate, nitrile rubber, neoprene rubber, or Viton. Mixers, loaders, applicators, and other handlers must wear long-sleeve shirt and long pants, shoes plus socks. In addition, all handlers except for applicators using motorized ground equipment, pilots and flaggers, must wear chemical-resistent gloves. In addition, mixers/loaders, persons cleaning equipment, and other persons exposed to the concentrate must weer a chemical-resistant apron. See engineering controls for additional requirements.

User Safety Requirements: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS: Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes, or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Not for use in metered release systems. Not for use in outdoor residential misting systems. Do not contaminate cropland (other than crops listed) or potable water supplies with spray drift. Do not make applications during rain.

USE INFORMATION: BIOMIST 30+30 ULV is approved for applications as a thermal aerosol and an ultra low volume (ULV) nonthermal aerosol (cold fog) to control adult mosquitoes in residential and recreational areas and other areas these insects occur, such as but not limited to parks, campsites, woodlands, athletic fields, golf courses, residential areas and municipalities, gardens, playgrounds, and overgrown waste areas.

BIOMIST 30+30 ULV can be applied over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes within or adjacent to these areas. In the treatment of corrals, feedlots, swine lots, poultry ranges and zoos cover any exposed drinking water, drinking fountains and animal feed before application. Application can be made where the following crops are present:

Alfalfa	*Cauliflower*	*Garlic*	*Peach*
Almond	*Celery*	*Range grasses*	*Pepper, bell*
Apple	*Cherry*	*Horseradish*	*Pistachio*
Artichoke	*Corn, forage*	*Leaf petioles subgroup*	*Potato*
Asparagus	*Corn, grain*	*4B*	*Soybean, seed*
Avocado	*Corn, stover*	*Leafy greens subgroup*	*Spinach*
Broccoli	*Corn, sweet, kernel + cob*	*4A*	*Tomato*
Brussels	*with husks removed*	*Lettuce, head*	*Vegetable, cucurbit,*
sprouts	*Eggplant*	*Mushroom*	*group 9**
Cabbage	*Fruit, pome, group 11*	*Onion, bulb*	*Walnut*
			Watercress

** 40 CFR 180.41 Crop Group 9: Cucurbit Vegetables, includes Crop Subgroup 9A (melon) and Crop Subgroup 9B (squash/cucumber).*

For best results treat when mosquitoes are most active and weather conditions are conducive to keeping the spray cloud close to the ground. An inversion of air temperatures and a light breeze is preferable. Application in calm air conditions is to be avoided. Apply only when wind speed is greater than 1 mph. Air temperature should be greater than 50°F when conducting all types of applications.

Do not treat a site with more than 0.007 lbs of each active ingredient, permethrin and PBO, per acre in a 3-day period. Retreatments within a 3-day period shall not exceed 0.007 total lbs permethrin in any site. Do not exceed 25 applications at 0.007 lbs permethrin or PBO per acre at any site in one year, or exceed 0.18 lbs of permethrin or PBO per acre per site per year. When rotating this product with other insecticides containing PBO, do not exceed 2 lbs PBO per acre per site per year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

SPRAY DROPLET SIZE DETERMINATION

Ground-based Application: Spray equipment must be adjusted so that the volume median diameter (VMD) is less than 30 microns (Dv 0.5 < 30 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 um). Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at or below 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 um) and that 90% of the spray is contained in droplets smaller than 100 microns (Dv 0.9 < 100 um). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at greater than 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns (Dv 0.5 < 70 um) and that 90% of the spray is contained in droplets smaller than 145 microns (Dv 0.9 < 145 um). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

GROUND ULV APPLICATION: Apply BIOMIST 30+30 ULV through a standard ULV cold aerosol or non-thermal aerosol (Cold Fog) generator undiluted at a flow rate of 0.5 to 2.2 fluid ounces per minute, and an average vehicle speed of 10 MPH. If a different vehicle speed is used, adjust rate accordingly. Those rates are equivalent to 0.00175 to 0.007 pounds each of Permethrin and PBO per acre. BIOMIST 30+30 ULV may also be applied by diluting with a suitable solvent such as mineral oil and applying so as not to exceed 0.007 pounds Permethrin per acre. The following charts represent suggested dilution and application rates for ground ULV applications. If an alternate dilution rate is used, adjust flow rate accordingly. Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when populations are high.

CONDITIONS and RATES to USE for MOSQUITO CONTROL - UNDILUTED

Permethrin/PBO Pounds per Acre	*Application Rates Fl.oz./Minute*				*Fl.oz. BIOMIST 30+30 ULV per Acre*
	5 MPH	*10 MPH*	*15 MPH*	*20 MPH*	
0.007	*1.1*	*2.2*	*3.3*	*4.3*	*0.36*
0.0035	*0.5*	*1.1*	*1.6*	*2.2*	*0.18*
0.00175	*0.3*	*0.5*	*0.8*	*1.1*	*0.09*

FOR A 1:2 BIOMIST 30+30 ULV/SOLVENT DILUTION RATIO: Mix one (1) part BIOMIST 30+30 with two (2) parts solvent and apply at the following rates:

Permethrin/PBO Pounds per Acre	*Application Rates Fl.oz./Minute*				*Fl.oz. finished spray per Acre*
	5 MPH	*10 MPH*	*15 MPH*	*20 MPH*	
0.007	*3.3*	*6.5*	*9.8*	*13.0*	*1.08*
0.0035	*1.6*	*3.3*	*4.9*	*6.5*	*0.54*
0.00175	*0.8*	*1.6*	*2.4*	*3.3*	*0.27*

FOR A 1:4 BIOMIST 30+30 ULV/SOLVENT DILUTION RATIO: Mix one (1) part BIOMIST 30+30 with four (4) parts solvent and apply at the following rates:

Permethrin/PBO Pounds per Acre	*Application Rates Fl.oz./Minute*				*Fl.oz. finished spray per Acre*
	5 MPH	*10 MPH*	*15 MPH*	*20 MPH*	
0.007	*5.4*	*10.9*	*16.3*	*21.7*	*1.79*
0.0035	*2.7*	*5.4*	*8.2*	*10.9*	*0.90*
0.00175	*1.4*	*2.7*	*4.1*	*5.4*	*0.45*

FOR A 1:8 BIOMIST 30+30 ULV/SOLVENT DILUTION RATIO: Mix one (1) part BIOMIST 30+30 with eight (8) parts solvent and apply at the following rates:

Permethrin/PBO Pounds per Acre	*Application Rates Fl.oz./Minute*				*Fl.oz. finished spray per Acre*
	5 MPH	*10 MPH*	*15 MPH*	*20 MPH*	
0.007	*9.8*	*19.6*	*29.3*	*39.1*	*3.23*
0.0035	*4.9*	*9.8*	*14.7*	*19.6*	*1.61*
0.00175	*2.4*	*4.9*	*7.3*	*9.8*	*0.81*

Failure to follow the above directions may result in reduced effectiveness..

BIOMIST 30+30 ULV may be applied through truck-mounted thermal fogging equipment. Do not exceed the maximum rates listed above. To reduce oil requirement and sludge buildup in equipment, use a 60- 100-second viscosity mineral "fog" oil or other fuel-type oil. Use a clean, well-maintained and properly calibrated fogger. Do not wet foliage since oil base formulations may be phytotoxic. For use with hand carried foggers, use same rates of active ingradient per acre and a swath width of 50 ft with a walking speed of 2 mph. Do NOT use hand carried thermal fogger for application in enclosed spaces. Fog downwind, with the wind at your back.

AERIAL APPLICATION: BIOMIST 30+30 ULV may be applied undiluted at rates up to 0.36 fl.oz. BIOMIST 30+30 ULV per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment. BIOMIST 30+30 ULV may also be diluted with a suitable solvent such as mineral oil and applied by aerial ULV equipment so long as 0.007 pounds permethrin or PBO per acre is not exceeded. Do not apply by fixed wing aircraft at a height less than 100 feet, or by helicopter at a height less than 75 feet, unless specifically approved by the state or tribe based on public health needs. Aerial applications shall only be made when recommended by public health officials and trained personnel of mosquito abatement districts and other mosquito control programs.

IN FLORIDA: Aerial applications of this product require trained personnal to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

STORAGE & DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE AND SPILL PROCEDURES: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING:

For Non-Refillable Containers, capacity 5 gallons or less:

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with mineral oil and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For Refillable Containers:

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

NOTICE: To the extent provided by law, seller makes no warranty, expressed or implied, concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.

BIOMIST® is a Registered Trademark of Clarke Mosquito Control Products, Inc.

IN CASE OF MEDICAL EMERGENCY, CALL THE INTERNATIONAL POISON CONTROL CENTER 1-800-214-7753
IN CASE OF TRANSPORTATION EMERGENCY, CALL INFO-TRAC 1-800-553-5053
FOR MORE INFORMATION CALL 1-800-323-5727

MANUFACTURED FOR:
CLARKE MOSQUITO CONTROL PRODUCTS, INC.
159 N. GARDEN AVENUE, ROSELLE, ILLINOIS 60172

EPA Reg. No.: 8329-42
EPA Est. No.: _____
Net Contents: Marked on Conteiner
Lot No.: _____

AL0407

SAFETY DATA SHEET

BIOMIST® 30 + 30 ULV

Effective Date: 1 June 2015
v.01

SECTION 1. Identification of the Substance/Mixture and of the Company

1.1 Product Identifier

Formulation Identifier: BIOMIST® 30 + 30 ULV

EPA Registration Number: 8329-42

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant identified uses: Insecticide for control of edult mosquitoes, biting and non-biting midges, and blackflies

Uses advised against: See product label for use restrictions

1.3 Details of the Supplier of the Safety Data Sheet

Clarke Mosquito Control Products, Inc.
675 Sidwell Court
St. Charles, IL 60174 U.S.A.
+1 (630) 894-2000
Email: Clarke@clarke.com

1.4 Emergency Telephone Number

24-Hour Medical Emergency: POISON CONTROL Toll-free (800) 214 – 7753

24-Hour Transportation Emergency: INFOTRAC (800) 535-5053

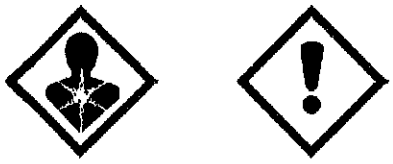
SECTION 2. Hazards Identification

United States (US)
According to OSHA 29 CFR 1910.1200 HCS (2012)

2.1 Classification of the Substance or Mixture

Aspiration Hazard: Category 1
Acute Toxicity (Oral): Category 4
Acute Toxicity (Inhalation): Category 4

Pictogram:



Signal Word: Danger

Hazard Statements: May be fatal if swallowed and enters airways.
Harmful if swallowed
Harmful if inhaled

Precautionary Statements:

PREVENTION: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing spray. Use only outdoors or in a well-ventilated area,

RESPONSE: If swallowed: Immediately call a poison control center or doctor. Do NOT induce vomiting. Rinse mouth.

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.

STORAGE: Store locked up.

DISPOSAL: Dispose of contents and container in accordance with local/regional/national regulations.

2.2 Other Hazards Not Classifiable Under OSHA 2012 HCS

See product label for any additional hazards

SECTION 3. Composition/Information on Ingredients

3.1 Components

Substance Name	CAS No.	Concentration % w/w
Permethrin	52645-53-1	30.0
Piperonyl Butoxide	51-03-6	30.0
White Mineral Oil	8042-47-5	< 40.0

Ingredients not identified are non-hazardous and/or are not required to be disclosed pursuant to 29 CFR 1910.1200 (2012), and are withheld as trade secret.

SECTION 4. First Aid Measures

4.1 Description of First Aid Measures

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. .

4.2 Most Important Symptoms and Effects, Both Acute and Delayed.

See section 2 and/or section 11.

4.3 Indication of Immediate Medical Attention and Special Treatment

Treatment: Contains petroleum distillate. Gastric lavage is indicated if material was taken internally. May pose an aspiration pneumonia hazard. Appropriate supportive and symptomatic treatment is indicated by the patient's condition is recommended. For medical treatment information, contact the poison control hotline at 1-800-214-7753. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5. Fire-Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Carbon Dioxide (CO_2), Dry Chemical, Foam

Unsuitable Extinguishing Media: Water jet

5.2 Special Hazards Arising From the Substance or Mixture

Specific Hazards: Under fire conditions some components may decompose. Combustion products may include CO and NOx.

5.3 Special Protective Equipment and Precautions for Fire-Fighters

Protection Against Fire: Wear positive pressure, self-contained breathing apparatus and protective firefighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves).

Special Procedures: Treat as oil fire. Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SECTION 6. Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Use appropriate protection (see section 8)

Environmental Precautions: Prevent product from entering into drains and waterways. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Collect and dispose of this material and its container in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. See Section 12 for additional ecological information.

6.2 Methods and Material for Containment and Cleaning Up

Clean Up Methods: Soak up with absorbent, non-combustible material, such as sand, silica gel, clay, or sawdust, while using appropriate personal protection equipment. Collect material in appropriate container for disposal.

SECTION 7. Handling and Storage

7.1 Precautions for Safe Handling

Handling: Keep out of reach of children. Do not take internally. Avoid contact with skin and eyes. Avoid inhalation of vapors from product. Do not take internally.

Hygiene Measures: Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove soiled clothing immediately and clean thoroughly before using again.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage: Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilizers. Keep out of reach of children.

SECTION 8. Exposure Controls / Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

8.1 Control Parameters

Component Name	CAS No.	List/Source	Type	Value
Permethrin	52645-53-1	ACGIH	TWA	5 mg/m^3
		NIOSH	REL	5 mg/m^3

White Mineral Oil	8042-47-5	OSHA	PEL	5 mg/m^3
		ACGIH	TLV	5 mg/m^3 inhalable fraction
		NIOSH	REL	5 mg/m^3 form: mist
		OSHA	PEL	5 mg/m^3

8.2 Exposure controls

Engineering Controls: Use with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Wash hands thoroughly after handling. Wash clothing before re-using.

Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection: Safety Glasses, Goggles or Face Shield

Skin Protection: Wear suitable protective clothing including long-sleeve shirt, long pants, shoes and socks. Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron.

Hand Protection: Protective glove selection must be based on the user's assessment of the workplace hazards. Suitable protective chemical resistant materials include barrier laminate, nitrile, neoprene or Viton.

Respiratory Protection: Not usually required. In instances where exposure limits are exceeded, wear a NIOSH-approved pesticide respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides.

SECTION 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Appearance:	Liquid
Color:	Pale Yellow
Odor:	Light Petroleum
Odor Threshold:	Not Available
pH:	7.0
Melting Point:	Not Applicable
Freezing Point:	Not Determined
Initial Boiling Point:	Not Determined
Flash Point:	302° F
Evaporation Rate:	Not Determined
Flammability:	Not Determined
Explosion limits [U/L]:	Not Applicable
Vapor Pressure:	Not Determined
Vapor Density:	Not Determined
Relative Density:	8.33 lbs/gal
Solubility:	Not Determined
Partition Coefficient:	Not Determined
Auto-Ignition Temperature:	Not Determined
Viscosity:	15.10 cp at 40°C
Decomposition Temperature:	Not Available
Explosive Properties:	Not Available
Oxidizing Properties:	Not Available

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SAFETY DATA SHEET

BIOMIST® 30 + 30 ULV

SECTION 10. Stability and Reactivity

10.1 Reactivity

Not Available

10.2 Chemical Stability

Stable under normal conditions

10.3 Possibility of Hazardous Reactions

Hazardous Reactions: None under normal conditions

Hazardous Polymerization: Not known to occur

10.4 Conditions to avoid

Protect from direct sunlight and excessive heat.

10.5 Incompatible materials

Avoid contact with strong oxidizing agents, strong acids, strong bases

10.6 Hazardous decomposition products

None known under normal conditions of storage and use

SECTION 11. Toxicological Information

11.1 Information on Likely Routes of Exposure

Inhalation: May be harmful if inhaled

Ingestion: May be harmful if ingested.

May be fatal if swallowed and enters airways due to petroleum distillate. Vomiting may cause aspiration pneumonia.

11.2 Information on Toxicological Effects

Acute Toxicity

Oral, Rat LD_{50}	891 mg/kg-bw
Dermal, Rat LD_{50}	> 2,000 mg/kg-bw
Inhalation, Ret LC_{50}	> 4.3 mg/L
Skin Corrosion/Irritation:	Not corrosive or irritating to the skin on acute exposure. Mild skin irritation or cracking may occur from prolonged or repeated exposure to this product.
Serious Eye Damage/Irritation:	Mild (transient) eye irritation may occur from direct exposure of the product in the eyes.
Skin Sensitization:	Not a skin sensitizer
STOT – Single exposure	No deta is available to indicate product or any components present at greater than 0.1% present a specific target organ toxicity hazard from single exposure.

Chronic Toxicity/Effects

Germ Cell Mutagenicity: This product has not been tested. No data is available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. For

	permethrin and for piperonyl butoxide, no mutagenic effect was found in various tests with microorganisms and mammalian cell culture.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. Permethrin and Piperonyl Butoxide are classified by IARC as Group 3: Not classifiable as to carcinogenicity to humans.
	Permethrin caused at high dose levels an increased incidence of tumors in mice in the following organ(s): liver, Lungs. The mechanism that triggers tumors in rodents is not relevant for the low exposures encountered under normal use conditions. Piperonyl butoxide was not carcinogenic in lifetime feeding studies in rats and mice.
Reproductive Effects:	No data is available to indicate product or any components present at greater than 0.1% cause reproductive or teratogenic toxicity. Permethrin did not cause reproductive toxicity in a two-generation study in rats. Piperonyl butoxide did not cause reproductive toxicity in a two-generation study in rats.
STOT – Repeated exposure	No data is available to indicate product or any components present at greater than 0.1% present a specific target organ toxicity hazard from repeat exposure Permethrin did not cause specific target organ toxicity in experimental animal studies. Piperonyl butoxide did not cause specific target organ toxicity in experimentel animal studies..
	Piperonyl butoxide did not cause specific target organ toxicity in experimental animal studies.

SECTION 12. Ecological Information

12.1 Ecotoxicity

Product specific data is not available. Data referenced is in relation to the active ingredients, Permethrin and Piperonyl Butoxide.

Toxicity to Fish:	Permethrin: 96-hr Acute LC_{50} 0.79 ppb, Bluegill Sunfish (*Lepomis macrochirus*)
	Piperonyl Butoxide: 96-hr Acute LC_{50} 6.12 ppm, Rainbow Trout (*Oncorhynchus mykiss*)
Toxicity to Aquatic Invertebrates:	Permethrin: 96-hr LC_{50} 0.019 ppb, Mysid Shrimp (*Americamysis bahia*)
	Piperonyl Butoxide: 96-hr LC_{50} 0.49 ppm, Mysid Shrimp (*Americamysis bahia*)
Toxicity to Aquatic Plants:	Permethrin: 72-hr EC_{50} 0.5 mg/L, Algae
	Piperonyl Butoxide: 72-hr EC_{50} > 9.1 mg/L, Algae

12.1 Persistence and Degradability

Product specific data not available. Data referenced is in relation to the active ingredients, Permethrin and Piperonyl Butoxide.

Biodegradability:	Not rapidly biodegradable.
Partition Coefficient, K_{oc}:	Permethrin: 100,000
	Piperonyl Butoxide: 399 - 830
Bioaccumulation:	Bioconcentretion (BCF) Permethrin: 300
	Bioconcentration (BCF) Piperonyl Butoxide: 2,175
Mobility in Soil:	Permethrin: Immobile in soil
	Piperonyl Butoxide: Moderately mobile in soil
	Piperonyl Butoxide: Moderetely mobile in soil

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SAFETY DATA SHEET

BIOMIST® 30 + 30 ULV

SECTION 13. Disposal Considerations

13.1 Waste Treatment and Disposal methods
Pesticide wastes are regulated. Consult product label for chemical substance and container disposal instructions. Avoid release to the environment. Improper disposal of excess product or rinsate is a violation of Federal law. If these wastes cannot be disposed or by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance.

Container disposal: Rinse thoroughly in accordance with label instructions.

SECTION 14. Transport Information

14.1 DOT (US)
Not regulated (Bulk and Non-Bulk Quantities)

14.2 IMDG (Vessel)

UN Number:	3082
Hazard Class:	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (PERMETHRIN)
Marine Pollutant:	Yes

14.3 ICAO/IATA (Air transport)

UN Number:	3082
Hazard Class:	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (PERMETHRIN)
Environmental Hazard:	Yes

SECTION 15. Regulatory Information

FIFRA Information: This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal Word: CAUTION
KEEP OUT OF REACH OF CHILDREN

FIRST AID	
Have product container or label with you when calling a poison control center or doctor, or going for treatment. For Medical Emergencies, call the International Poison Control Center at 1-800-214-7753.	
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.
NOTE TO PHYSICIAN: Product contains a petroleum distillate. Gastric lavage is indicated if material was taken internally. Vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE): Some materials that are chemical-resistant to this product are: barrier laminate, nitrile rubber, neoprene rubber, or Viton. Mixers, loaders, applicators, and other handlers must wear long-sleeve shirt and long pants, shoes plus socks. In addition, all handlers except for applicators using motorized ground equipment, pilots and flaggers, must wear chemical-resistant gloves. In eddition, mixers/loaders, persons cleaning aquipment, and other persons exposed to the concentrate must wear a chemical-resistant apron. See engineering controls for additional requirements.

User Safety Requirements: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminatad with the product's concentrate. Do not reuse them.

Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS: Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Other Federal Regulations

SARA TITLE III CLASSIFICATION

Section 302: None

Section 311/312: Immediate (acute) hazard

Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372

Permethrin	CAS# 52645-53-1	30.0%
Piperonyl Butoxide	CAS# 51-03-6	30.0%

CERCLA RQ: None

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. California Proposition 65: Not listed

STATE RIGHT-TO-KNOW : National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

SECTION 16. Other Information

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources we believe to be reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposel of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared as is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

® BIOMIST is a Registered Trademark of Clarke Mosquito Control Products, Inc.

End of document

ORIGIN ID:GBGA (630) 671-3007
LORI PRICE
CLARKE MOSQUITO CONTROL
675 SIDWELL COURT
ST CHARLES, IL 60174
UNITED STATES US

SHIP DATE: 02MAY22
ACTWGT: 4.00 LB
CAD: 104902478/INET4490

BILL SENDER

TO **JEFFERSON COUNTY PURCHASING DEPT.**

1149 PEARL STREET
1ST FLOOR
BEAUMONT TX 77701
(630) 671-3007
INV:
PO:
DEPT:

577J2/BDF9/FE4A

FedEx Express

J222022041201uv

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**** 2DAY ****

TRK# 0201 **7767 3496 7896**

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77701
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TX-US

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instrumentia and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Original

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street, 1st Floor, Beaumont, TX 77701 409-835-8593 Fax 409-835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

April 12, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for **IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and three (3) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District**
BID NO:	**IFB 22-023/YS**
DUE DATE/TIME:	**11:00 AM CT, Wednesday, May 11, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these requirements should be directed to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provisions of services. Individuals requiring special accommodations are requested to contact our office at 409-835-8593 to make arrangements no later than seven (7) calendar days prior to the submittal deadline. Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

Publish: Beaumont Enterprise & Port Arthur News – April 13, 2022 and April 20, 2022

WO
~~COL 1295~~
Labels ~~Finale Fyf~~ Permy Surfac

Minimum Specifications

The following requirements and specifications **supersede** General Requirements where applicable. Contact Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us, regarding any questions or comments. Please reference bid number IFB 22-023/YS.

Scope

Vendor shall provide Insecticides, Herbicides, Spray Adjuvants, and Adulticides for the Jefferson County Mosquito Control District subject to the terms and conditions stated for an initial period **beginning on or about date of award.**

Bidders shall attach to bid form, a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Prices quoted shall be F.O.B. Jefferson County Mosquito Control District, Jefferson County Airport, 1st Street, Nederland, TX. Bidder bears freight charges. All prices must be written in ink or typewritten.

Quote unit prices extended to lump sum prices. The basis of the award will be the unit prices quoted. The County reserves the right to increase or decrease the quantity purchased based on weather conditions and availability of funds.

The County reserves the right to make the award to one (1) successful bidder or per line item.

Purchase orders for insecticides, herbicides, adjuvants, and adulticides will be released to the successful bidder(s) **on an as-needed basis. MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Refer questions of a commercial nature to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us; and questions of a technical nature to Denise Wheeler, Director, Jefferson County Mosquito Control, wheeler@co.jefferson.tx.us.

A price re-determination may be considered by Jefferson County only at the twelve (12) month and twenty-four (24) month anniversary dates of the contract. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

Approximate Annual Usage

No promise is made or implied for quantities that will be purchased. Orders will be placed on an **as-needed basis** for the duration of the contract. Purchase Orders will be released to the successful bidder(s) as required. **MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Contract

This bid, when properly accepted by Jefferson County Commissioners' Court, shall constitute a contract equally binding between the successful bidder and Jefferson County. No different or additional terms will become a part of this contract.

The brand name references are for description only, and are not intended to exclude other herbicides or adjuvants of equal quality. Bidders desiring to substitute items may do so provided brand name is **indicated on Bid Form**. Change of container size may disqualify bid. Dilution ratio will be a factor in award of chemicals.

Bidders shall attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Item	Description
1	**MSMA herbicide** – to contain 6.00 lb. MSMA (Mono-sodium Acid Methanearsonate) plus surfactant per gallon
2	**Tordon 101** – to contain 10.2% 4-amino3,5,6-trichloropicolinic acid (picloram), tri-isopropanolomine salt 39.6% 2,4-Dichlorophenoxyacetric acid, tri-isopropanolomiane salt.
3	**Roundup herbicide or equivalent** – to contain 41.0% by weight Isopropylamine Salt of Glyphosate
4	**Rodeo herbicide or equivalent** – to contain 53.5% by weight Isopropylamine Salt of Glyphosate
5	**Nalco Trol II or equivalent** – water soluble spray drift control agent
6	**Aqua-King or equivalent** – product must be a non-ionic aquatic surfactant approved for use in the State of Texas, contain 90% active ingredient (excluding alcohols, fatty acids, oils ethylene glycol or diethylene glycol), a minimum of 80% surfactant load, possess an HLB (hydrophilic to lipophilic balance) ratio of 12 to 17, a maximum of 10% isopropyl alcohol, have a flash point greater than 200 degrees F., and contain an anti-foaming agent that will provide instantaneous foam breakdown when agitation ceases.
7	**Malathion insecticide** – concentrate to contain a minimum of 9.9 lb. of malathion per gallon (96.5% by weight active ingredient). Product offered must have current approval in Texas for both aerial and ground ULV application against adult mosquitoes. Bulk shipments only.
8	**Bio Mist 3-15 ULV** - ACTIVE INGREDIENTS Permethrin (3-phenoxyphenyl) methyl (+/-) cis, trans3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate.....3.0% Piperonyl Butoxide*.....15.0% OTHER INGREDIENTS**..... 82.0% 100.0% Contains 0.222 pounds of Permethrin and 1.113 pounds of PBO per gallon Contains petroleum distillate *Ordered as 275 gallon containers. **Successful bidder will deliver full containers and pick up empty containers at no additional charge.
9	**Envion 30/30 insecticide or equivalent** - water compatible concentrate in 2.52 lb. Permethrin (30.0% by weight) and 2.52 lb. Piperonyl Butoxide (30.0% by weight) per gallon. Product offered must have current approval in Texas for aerial and ground ULV application against adult mosquitoes.

Bidder Information Form

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.

Bidder's Company/Business Name: ES OPCO LLC DBA Veseris

Bidder's TAX ID Number: 84-3689531

Contact Person: John West **Title:** OSR

Phone Number (with area code): 979 574 5275

Alternate Phone Number if available (with area code): N/A

Fax Number (with area code): N/A

Email Address: John.West@Veseris.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

PO Box 29391
Address

Beaumont, TX 77720
City, State, Zip Code

Bidder: Complete & Return this Form with Offer.

OFFER AND ACCEPTANCE FORM

OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer. We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

Veseris
Company Name

PO Box 20301
Address

Beaumont TX 77720
City State Zip

Signature of Person Authorized to Sign

John West
Printed Name

OSR
Title

For clarification of this offer, contact:

John West
Name

979 574 5275
Phone Fax

John.West@Veseris.com
E-mail

Bidder: Complete & Return this Form with Offer.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. Contract Term: One (1) year from date of award with an option to renew for four (4) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

Countersigned:

Jeff R. Branick
County Judge

Date

Attest:

Laurie Leister
County Clerk

<u>Bidder</u>: Complete & Return this Form with Offer.

Bid Form

Item	Est Qty. (Gal.)	Description	Brand bid	MSDS Labels Attached	Price per Gallon	Total Price
1	700	MSMA Herbicide – 2.5 gal. container			$	$
2	700	Tordon 101 Herbicide or equivalent – 2.5 gal. container			$	$
3	700	Roundup Herbicide or equivalent – 2.5 gal. container	Finale XL 2.5 gal	yes	$ 102.16	$ 255.40
4	100	Rodeo Herbicide or equivalent – 2.5 gal. container			$	$
5	100	Nalco Trol II or equivalent – 2.5 gal. (or smaller) container			$	$
6	400	Aqua-King Surfactant or equivalent – 2.5 gal. (or smaller) container	Surfac AC 2.5 gal	yes	$	$ 39.96
7	20,000	Malathion Insecticide – **bulk shipment only**	Fyfanon ULV	yes	$ 55.46	$
8	1,100	Bio Mist 3-15 ULV – 275 gal containers			$	$
9	600	Envion 30/30 insecticide – 2.5 gal. containers	Perm X 30/30	yes	$ 69.95	$ 174.88

Bidders must attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Acknowledgment of Addenda (if any):

Addendum 1 _____ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

Bidder: Complete & Return this Form with Offer.

Vendor References Form

Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

THIS FORM MUST BE RETURNED WITH YOUR BID.

REFERENCE ONE

Government/Company Name: Chambers Co. Mosquito Control

Address: 215 Airport RD Anahuac, TX 77514

Contact Person and Title: Lawrence Lewis - Director

Phone: 409 658 0900 Fax: N/A

Email Address: LLewis@chambers.TX.gov Contract Period: 2021-2022

Scope of Work: Wide Area Mosquito Control

REFERENCE TWO

Government/Company Name: Galveston County Mosquito

Address: 5115 Hwy 3 Galveston, TX 77539

Contact Person and Title: John Marshall Director

Phone: 800 842 5622 Fax: NA

Email Address: Contract Period: 2021-2022

Scope of Work: Wide Area Mosquito

REFERENCE THREE

Government/Company Name: Patrick Beebe

Address: 690 Old Timers Rd Orange TX 77630

Contact Person and Title: Patrick Beebe Director

Phone: 979 574 5275 Fax: NA

Email Address: Patrick@.OrangeCountyTX.gov Contract Period: 2021-2022

Scope of Work: Wide Area Mosquito Control

Bidder: Complete & Return this Form with Offer.

Signature Page

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions?..... **Yes** ☒ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Veseris	
Bidder (Entity Name)	Signature
1919 Jacintoport Blvd	John West
Street & Mailing Address	Print Name
Houston TX 77019	5/9/22
City, State & Zip	Date Signed
979 574 5275	N/A
Telephone Number	Fax Number
John.West@Veseris.com	
E-mail Address	

Bidder: Complete & Return this Form with Offer.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

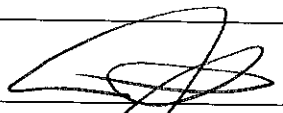
1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

John West - OSR

Name and Title of Contractor's Authorized Official *(Please Print)*

5/9/22

Date

Bidder: Complete & Return this Form with Offer.

Conflict of Interest Questionnaire

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Veseris

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

N/A

Name of Officer

This section (Item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4

Signature of vendor doing business with the governmental entity

5/9/22

Date

Adopted 8/7/2015

Bidder: Complete & Return this Form with Offer.

Local Government Officer

Conflicts Disclosure Statement – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

NONE

2 **Office Held**

N/A

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

Veseris

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

N/A

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

Note: This Form is for Office Use Only.

Good Faith Effort (GFE) Determination Checklist

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .

☒ Yes	☐ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?
☐ Yes	☒ No	2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☒ No	3. **Provide** HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☒ No	4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders?
☐ Yes	☒ No	5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?
☐ Yes	☒ No	6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

John West
Printed Name of Authorized Representative

Signature

OSR
Title

5/9/22
Date

Bidder: Complete & Return this Form with Offer.

Notice of Intent (NOI) to Subcontract with

Historically Underutilized Business (HUB)

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: p Yes p No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

John West		5/9/22
Printed Name of Contractor Representative	Signature of Representative	Date
Printed Name of HUB	Signature of Representative	Date

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Prime Contractor: Veseris HUB: ☐ Yes ☒ No

HUB Status (Gender & Ethnicity): N/A

Address: 1919 Jacintoport Blvd Houston, TX 77019
Street City State Zip

Phone (with area code): 979 574 5275 Fax (with area code): N/A

Project Title & No.: _____ IFB/RFP No.: 22-023/YS

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

HUB SUBCONTRACTOR DISCLOSURE

PART I: Continuation Sheet **(Duplicate as Needed)**

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

HUB Subcontractor Name: _____

HUB Statns (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Snbcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☒ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that bidder is the apparent low bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required.** I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): _____

Title: _____

Signature: _____

Date: _____

E-mail address: _____

Contact person that will be in charge of invoicing for this project:

Name (print or type): _____

Title: _____

Date: _____

E-mail address: _____

Bidder: Complete & Return this Form with Offer.

Residence Certification/Tax Form

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Nonresident bidder" refers to a person who is not a resident.

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☑ I certify that Veseris [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	84-3689531
Company Name submitting bid/proposal:	Veseris
Mailing address:	PO Box 20301 Beaumont TX 77720
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
None	None

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

Bidder: Complete & Return this Form with Offer.

House Bill 89 Verification

I, John West, the undersigned representative of (company or business name) Veseris (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and

2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

5/9/22
Date

On this 9th day of May, 2022, personally appeared Jonnatan Jonnatan West, the above named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

Notary Signature

May 9, 2022
Date

Bidder: Complete & Return this Form with Offer.

YADIRA DELFIN
Notary Public, State of Texas
Comm. Expires 04/20/2024
Notary ID 13244310-4

Senate Bill 252 Certification

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

Veseris

Company Name

22-023/YS

IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

Bidder: Complete & Return this Form with Offer.

Bid Affidavit

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Jefferson

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas

on this day personally appeared Johnathan Lee West (name), who

after being by me duly sworn, did depose and say:

"I, John West (name) am a duly authorized officer of/agent

for Veseris (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Veseris (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of bidder: John West / Veseris

Fax: N/A Telephone# 979 574 5275

by: John West (print name) Title: OSR

Signature:

SUBSCRIBED AND SWORN to before me by the above-named Johnathan West on

this the 9th day of May, 2022

YADIRA DELFIN
Notary Public, State of Texas
Comm. Expires 04/20/2024
Notary ID 13244310-4

Notary Public in and for the State of Texas

Bidder Shall Return Completed Form with Offer.

SPECIMEN

Glufosinate | Group 10 | Herbicide

Finale® XL T&O

Herbicide

For nonselective postemergence weed control on golf courses, in landscaping and ornamental sites

Active Ingredient:	
glufosinate-ammonium*	24.50%**
Other Ingredients:	75.50%
Total:	100.00%

*CAS Number 77182-82-2
**Equivalent to 2.34 pounds of active ingredient per U.S. gallon, formulated as a soluble concentrate

EPA Reg. No. 7969-464 **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

See full label for complete **First Aid**, **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709

BASF
We create chemistry

FIRST AID	
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes; then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • **DO NOT** induce vomiting unless told to by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person.

HOTLINE NUMBER
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).
NOTE TO PHYSICIAN: If this product is ingested, endotracheal intubation and gastric lavage must be performed as soon as possible, followed by charcoal and sodium sulfate administration. Additionally, call 1-800-832-HELP (4357) immediately for further information.

Precautionary Statements

Hazards to Humans and Domestic Animals

WARNING. Causes substantial but temporary eye injury. Harmful if absorbed through skin. Harmful if swallowed. **DO NOT** get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS
Users must: • Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. • Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. Glufosinate-ammonium and its degradates have properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

POLLINATOR ADVISORY. This product contains a herbicide. Follow all label directions and precautions to minimize potential off-target exposure in order to prevent effects to nontarget plants adjacent to the treated site that may serve as habitat or forage for pollinators.

Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at time of application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Finale® XL T&O herbicide is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses; and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours.**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)

NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. The applications for trimming and edging, industrial, recreational and public areas, and farmsteads are not within the scope of the WPS.

DO NOT enter treated areas without protective clothing until sprays have dried.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

DO NOT use or store near heat or open flame. Keep the container tightly closed and dry in a cool, well-ventilated place. Storage temperature must not exceed 125° F. Protect against direct sunlight.

Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

Steps to take if material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing, and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Use Sites

Finale® XL T&O herbicide may be applied for control of emerged weeds to the following use sites, see the **Specific Use Site Instructions** section for details:

- Golf courses
- Native grass areas
- Dormant Bermudagrass
- Ornamental production nurseries (including greenhouses, lath houses, shade houses)
- Commercial, residential, and industrial landscaping and lawns
- Christmas trees
- Vegetation management in noncropland areas

Product Information

Finale XL T&O is a broad-spectrum, postemergence herbicide that contains the active ingredient glufosinate-ammonium. **Finale XL T&O** is a water-soluble concentrate for application as a foliar spray to control annual and perennial emerged broadleaves, grasses, and sedges. **Finale XL T&O** also controls many terrestrial and riparian invasive and noxious weeds and controls or suppresses certain woody species (brush, trees, and vines) including conifers. **Finale XL T&O** is nonselective and injures or kills green vegetation contacted by the spray.

Mode of Action

Glufosinate-ammonium, the active ingredient in **Finale XL T&O**, is a **Group 10** herbicide and a potent inhibitor of glutamine synthetase.

Herbicide Resistance Management

Any weed population may contain or develop plants naturally resistant to this product. Weed species with resistant biotypes may eventually dominate the population if this herbicide is used repeatedly in the same area or in successive years as the primary method of control for the targeted species. Appropriate resistance-management strategies must be followed.

To delay herbicide resistance consider:

- Avoiding the consecutive use of **Finale XL T&O**, or other glufosinate-containing products, on the same weed species over time.
- Using tank mixes or premixes with herbicides from different target-site-of-action groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive Integrated Pest Management (IPM) program including cultural and mechanical weed control methods.
- Monitoring treated weed populations for loss of field efficacy and control of escapes with effective alternative herbicides or mechanical methods.
- Identify weeds present in the area through scouting and area history and understand their biology. The weed control program needs to consider all of the weeds present.
- Scout areas prior to application to identify the weeds present and their growth stage to determine if the intended application will be effective.
- Scout areas after application to verify the treatment was effective.
- Suspected herbicide resistant weeds may be identified by the following indicators:
  1. Failure to control a species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  2. A spreading patch of noncontrolled plants of a particular species; and
  3. Surviving plants mixed with controlled individuals of the same species
- If resistance is suspected, treat escapes with a herbicide with a different MOA and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM guidance for certain areas or specific weeds.
- Report any incidence of nonperformance of this product against a particular weed species or suspected weed resistance to your local extension specialist, certified crop advisor, BASF representative, or your **Finale XL T&O** supplier.

Application Instructions

- Apply **Finale XL T&O** to foliage of emerged weeds and woody (brush) species.
- Apply **Finale XL T&O** in a single application or sequential applications.
- For best results, apply **Finale XL T&O** under warm temperatures, high humidity, and bright sunlight.
- Weed control may be reduced when application is made when heavy dew, fog, and mist/rain are present, or to weeds under stress due to environmental conditions including drought, cool temperatures (below 50°F), or extended periods of cloudiness.
- Apply a higher rate of **Finale XL T&O** for plant sizes listed (see **Use Rates** table) when vegetation cover is dense or when weeds are growing under stressed conditions or cool temperatures (below 50°F).
- **Finale XL T&O** is rainfast between 30 minutes and 4 hours after application depending on weed species, application rate, and environmental conditions.
- Under active growing conditions, symptoms of **Finale XL T&O** application on treated plant material occur within 2 to 4 days after application.

- Regrowth may occur under certain conditions, including: weed growth stage at application, using less than the specified label rate, or environmental conditions.
- Plants may be safely transplanted into **Finale® XL T&O herbicide** treated areas after spray has dried.
- **Finale XL T&O** may be applied by air or ground.

Application Methods and Equipment

Use and configure application equipment for spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Maintain continuous agitation during spraying with mechanical or bypass agitation. Avoid overlaps that will increase rates above use rates specified in this label.

For best results, apply **Finale XL T&O** in spray volumes that ensure uniform and thorough coverage of target vegetation.

Thoroughly clean sprayer after each use.

Ground Application

- **Broadcast, Banded or Boom Spray.** Apply **Finale XL T&O** at a minimum of 15 gallons of water per acre with spray pressure no more than is required for thorough target plant coverage.
- **Spot or Directed Spray.** Apply **Finale XL T&O** with backpack, pump, or hydraulic sprayer to weeds or other undesirable foliage on a spray-to-wet basis. Ensure uniform and thorough coverage, but avoid applying beyond runoff.
- **Trimming and Edging.** When spraying **Finale XL T&O** adjacent to desirable plants, use a shield made of cardboard, plywood, or sheet metal to help prevent spray from contacting foliage of desirable plants.
- **Side Trimming.** Direct the **Finale XL T&O** spray solution to thoroughly cover (spray-to-wet) only the portion of the plant to be controlled.
- **Broadcast Spray for Brush Control.** Apply **Finale XL T&O** with ground equipment at spray volume depending on height and density of the brush (see following paragraphs).

  Low volume brush application: Apply 20 to 50 gallons per acre when brush height is less than 6 feet and brush cover is less than 60% of the area.
  High volume brush application: Apply 50 to 100 gallons per acre when spraying medium-to-high density vegetation.
- **Individual Plant Treatments (IPT).** Apply **Finale XL T&O** utilizing a selective foliar application method that targets individual plants (e.g., herbaceous or woody weed species). The application spray volume needs to be adjusted to account for the height and density of target vegetation to ensure thorough and uniform coverage of the target plant. Higher spray volumes may be necessary for taller/denser vegetation. Make IPT using backpack or hydraulic handgun equipment. Selectively wet all foliage on the target plant, starting at top of plant and covering all sides, but **DO NOT** drench target vegetation causing spray solution to run off. For best results, make IPT with an additive (see the **Tank Mixing Other Products and Additives** section for details).

Aerial Application

- **Broadcast Spray.** Apply **Finale XL T&O** at a minimum of 15 gallons of water per acre. The spray volume per acre is determined by the equipment to ensure thorough spray coverage of target vegetation.

Mandatory Spray Drift Mitigation

Aerial Applications

- **DO NOT** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- The spray boom length must not exceed 75% of the wingspan.
- Applicators are required to select nozzles that deliver a medium to coarse spray droplet size (ASABE S572.1).
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply when wind speed exceeds 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 4 feet above the ground or vegetative canopy, unless necessitated by application equipment.
- Applicators are required to select nozzles that deliver a medium to coarse spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speed exceeds 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Spray Drift Advisory

The applicator is responsible for avoiding off-site spray drift. Be aware of nearby nontarget sites and environmental conditions.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if application is made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

Volume. Increasing the spray volume so larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure. Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle. Use a spray nozzle designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size - Aircraft

Adjust Nozzles. Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, orient nozzles parallel with the airflow in flight.

Boom Height - Ground Boom

Use the lowest boom height compatible with the spray nozzles that will provide thorough and uniform coverage. The boom must remain level with the vegetation canopy and have minimal bounce.

Release Height - Aircraft

Higher release heights increase the potential for spray drift.

Temperature and Humidity

When applying in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversion

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light-to-no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid application during temperature inversions.

Wind

Drift potential generally increases with wind speed. Avoid applications during gusty wind conditions. Applicators must be familiar with local wind patterns and terrain that could affect spray drift.

Shielded Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that shields are not interfering with uniform deposition of spray on the target area.

Use Restrictions for All Labeled Uses

- Grazing of vegetation treated with **Finale® XL T&O herbicide** is prohibited for one year after treatment.
- **DO NOT** apply directly or allow drift to contact desirable green tissue, or green, thin, or uncalloused bark of desirable vegetation.
- **DO NOT** apply this product through any type of irrigation system.

Use Site	Application Method	Maximum Single Application Rate	Maximum Annual Application Rate	Maximum Number of Application Per Year*	Minimum Retreatment Interval (days)
Golf Course Maintenance and Landscaping; Native Grass Areas; Ornamentals; Commercial, Residential, and Industrial Landscaping; Christmas Trees; Vegetation Control and Management in Noncropland Areas	Broadcast	82 fl ozs/A (1.5 lbs ai/A)	246 fl ozs/A (4.5 lbs ai/A)	3	5
	Spot	3.2 fl ozs per gallon of spray (0.058 lb ai)			
Dormant Bermudagrass	Broadcast	82 fl ozs/A (1.5 lbs ai/A)	246 fl ozs/A (4.5 lbs ai/A)	3	5
	Spot	3.2 fl ozs per gallon of spray (0.058 lb ai)			

*When using the maximum single application rate (excluding spot treatments).

Tank Mixing Other Products and Additives

It is the pesticide user's responsibility to ensure that all products in the mixtures are registered for the intended use. Read and follow the applicable restrictions and precautions and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Finale XL T&O may be tank mixed or applied sequentially with other herbicide products registered for use in any use site found in this label. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for the intended use. Read and follow the specific tank mixing instructions on this label and respective product labels.

Finale XL T&O may be tank mixed with one or more pre-emergence herbicide(s) for residual control of emerging underground reproductive plant parts or weed seeds, as well as vegetative growth from previously treated plants.

Additives

Addition of nonionic antifoaming agent may reduce foaming, especially when using soft water.

Spray drift control additives may be used; read and follow all directions and precautions as specified on the drift control additive label.

Ammonium sulfate (AMS), methylated seed oil (MSO), or nonionic surfactant (NIS) may be added for foliar applications.

For optimum burndown activity with **Finale® XL T&O herbicide** and to achieve consistent weed control in postemergence use patterns, an adjuvant system may be used that includes any of the following:

Additive/Adjuvant	Rate
AMS (spray grade)	2 to 4 lbs/A
plus one of the following	
MSO	1% volume/volume (v/v)
or	
NIS	0.25% v/v

Compatibility Test for Tank Mixing Other Products and Additives

Before tank mixing components, always perform a compatibility jar test.

1. In a clear glass jar, add components in the order listed.
2. Add the appropriate amount of herbicide in the following order: (a) dry flowable, (b) wettable powder, (c) aqueous suspensions, (d) flowables, (e) liquids, and (f) solutions and emulsifiable or liquid concentrates. Shake or gently stir jar after each addition to thoroughly mix.
3. After all components have been added, cap jar, tighten lid, and invert ten cycles to mix.
4. Let solution in jar stand for 15 minutes.
5. **Evaluate** the solution for uniformity and stability. Look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. If the tank mix partners are not compatible, **DO NOT** use the mixture in any spray solution that could clog spray nozzles.

Mixing Order

Make sure each component is thoroughly mixed and suspended before adding tank mix partners. Maintain constant agitation during mixing and application until spraying is completed.

1. Start with calibrated and clean equipment.
2. Fill the spray tank half full with water.
3. Start agitation.
4. If mixing with a flowable/wettable powder tank mix partner prepare a slurry of the appropriate amount of the product in a small amount of water. Add the slurry to the spray tank.
5. Add ammonium sulfate (AMS) to the spray tank if needed.
6. If mixing with a liquid tank mix partner, add the liquid mix partner next.
7. Complete filling the spray tank with water **before adding Finale XL T&O, because foaming may occur.**
8. Add **Finale XL T&O** when tank is full and continue agitation.
9. If foaming occurs, use a silicone-based **antifoaming agent.**

If the spray mixture is allowed to settle for any period of time, thorough agitation is required to resuspend the mixture before spraying is resumed. Maintain constant agitation while spraying.

Use Rates

Weed Size and Growth Stage	Broadcast Rate of Finale XL T&O (fl ozs/A)	Spot Spray Rate of Finale XL T&O (% solution)
Weeds < 3 inches in diameter or height	27 to 41	0.4 to 0.6
Weeds < 6 inches in diameter or height, pre-tiller grasses	41 to 55	0.6 to 1.0
Weeds ≥ 6 inches in diameter or height, tillered grasses	55 to 82	1.0 to 1.25
Weeds > 8 inches in diameter or height	82	1.25
Brush	27 to 82	0.4 to 1.25

Rate of Finale XL T&O (fl ozs/A)	Glufosinate Rate Equivalency (lbs ai/A)
27	0.5
41	0.75
55	1.0
82	1.5
246	4.5

Spot Spray Dilution. Amount of **Finale XL T&O** added to water to make 1 to 100 gallons of spot spray solution at dosages of 0.4% to 2.5% solution.

Desired % Solution (v/v)	Volume of Spot Spray Solution				
	1 gallon	10 gallons	25 gallons	50 gallons	100 gallons
	Amount of Finale® XL T&O herbicide				
0.4%	0.5 fl oz	5 fl ozs	12.8 fl ozs	0.8 quart	0.4 gallon
0.6%	0.75 fl oz	7.7 fl ozs	19.2 fl ozs	1.2 quarts	0.6 gallon
0.8%	1.0 fl oz	10.25 fl ozs	25.6 fl ozs	1.6 quarts	0.8 gallon
1.0%	1.25 fl ozs	12.8 fl ozs	32 fl ozs	2 quarts	1 gallon
1.25%	1.6 fl ozs	16 fl ozs	40 fl ozs	2.5 quarts	1.25 gallons
2.5%*	3.2 fl ozs	32 fl ozs	80 fl ozs	5 quarts	2.5 gallons

* Spot treatment rate for Individual Plant Treatment applications only.

Weeds Controlled

For postemergence control of emerged weeds listed in the following tables, apply **Finale XL T&O** at the rates for broadcast or spot applications based on weed size and growth stage.

Broadleaf Weeds Controlled

Common Name	Scientific Name
Bindweed	*Convolvulus* spp.
Buckwheat, wild	*Polygonum convolvulus*
Buffalobur	*Solanum rostratum*
Burdock, common	*Arctium minus*
Chickweed, common	*Stellaria media*
Clover, white	*Trifolium repens*
Cocklebur, common	*Xanthium strumarium*
Dandelion, common	*Taraxacum officinale*
Dock, curly	*Rumex crispus*
Dogbane, hemp	*Apocynum cannabinum*
Filaree, redstem	*Erodium cicutarium*
Fleabane	*Erigeron* spp.
Goldenrod	*Solidago* spp.
Gromwell, field or corn**	*Buglossoides arvense*
Henbit	*Lamium amplexicaule*
Horsetail, field	*Equisetum arvense*
Jimsonweed	*Datura stramonium*
Kochia	*Kochia scoparia*
Lambsquarters, common	*Chenopodium* spp.
Lettuce, prickly	*Lactuca serriola*
Mallow, little (cheeseweed)	*Malva parviflora*

(continued)

Broadleaf Weeds Controlled (continued)

Common Name	Scientific Name
Marestail (horseweed)	*Conyza canadensis*
Mugwort	*Artemisia vulgaris*
Mullein	*Verbascum* spp.
Mustard, tansy (flixweed)**	*Descurainia sophia*
Mustard, wild	*Sinapis arvensis*
Nettle	*Urtica* spp.
Nightshade	*Solanum* spp.
Onion, wild	*Allium canadense*
Pennycress, field	*Thlaspi arvense*
Pigweed, redroot	*Amaranthus retroflexus*
Plantain	*Plantago* spp.
Pokeweed, common	*Phytolacca americana*
Purslane, common	*Portulaca oleracea*
Ragweed	*Ambrosia* spp.
Rocket, London	*Sisymbrium irio*
Rocket, yellow	*Barbarea vulgaris*
Rose, wild**	*Rosa* spp.
Shepherd's purse	*Capsella bursa-pastoris*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Sowthistle, annual	*Sonchus oleraceus*
Spurge, leafy	*Euphorbia esula*
Thistle, Canada	*Cirsium arvense*
Thistle, musk	*Carduus nutans*
Thistle, Russian	*Salsola iberica*
Turnip, wild (wild radish)	*Raphanus raphanistrum*
Velvetleaf	*Abutilon theophrasti*
Vervain	*Verbena* spp.
Virginia copperleaf	*Acalypha virginica*
White heath aster	*Erigeron* spp.
Woodsorrel	*Oxalis* spp.

Grass Weeds and Sedges Controlled

Common Name	Scientific Name
Bahiagrass	*Paspalum notatum*
Barley	*Hordeum* spp.
Barnyardgrass	*Echinochloa crus-galli*
Bermudagrass**	*Cynodon dactylon*
Bluegrass, annual	*Poa annua*
Bluegrass, Kentucky	*Poa pratensis*
Brome, downy	*Bromus tectorum*
Brome, smooth	*Bromus inermis*
Carpetgrass	*Axonopus affinis*

(continued)

BASF
We create chemistry

Safety Data Sheet
Finale XL T&O Herbicide

1. Identification

Product identifier used on the label

Finale XL T&O Herbicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, herbicide

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number:	870945
EPA Registration number:	7969-464
Synonyms:	Glufosinate Ammonium

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Acute Tox.	4 (Inhalation - mist)	Acute toxicity
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Skin Sens.	1	Skin sensitization
Repr.	1B (fertility)	Reproductive toxicity

Repr.	1B (unborn child)	Reproductive toxicity
STOT RE	2	Specific target organ toxicity — repeated exposure
Aquatic Acute	3	Hazardous to the aquatic environment - acute

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure.
H360	May damage fertility. May damage the unborn child.
H302 + H332	Harmful if swallowed or if inhaled
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P271	Use only outdoors or in a well-ventilated area.
P260	Do not breathe dust/gas/mist/vapours.
P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P202	Do not handle until all safety precautions have been read and understood.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P308 + P311	IF exposed or concerned: Call a POISON CENTER or physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P314	Get medical advice/attention if you feel unwell.
P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P330	Rinse mouth
P362 + P364	Take off contaminated clothing and wash it before reuse.
P337 + P311	If eye irritation persists: Call a POISON CENTER or physician.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, nitrous gases, sulfur oxides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

Fyfanon® ULV

Mosquito Insecticide

ULTRA LOW VOLUME CONCENTRATE INSECTICIDE

FOR USE ONLY BY FEDERAL, STATE, TRIBAL, OR LOCAL GOVERNMENT OFFICIALS RESPONSIBLE FOR PUBLIC HEALTH OR VECTOR CONTROL, OR BY PERSONS CERTIFIED IN THE APPROPRIATE CATEGORY OR OTHERWISE AUTHORIZED BY THE STATE OR TRIBAL LEAD PESTICIDE REGULATORY AGENCY TO PERFORM ADULT MOSQUITO CONTROL APPLICATIONS, OR BY PERSONS UNDER THEIR DIRECT SUPERVISION.

EPA Reg. No. 279-3539 **EPA Est. 39578-TX-1**

ACTIVE INGREDIENT:	**By Wt.**
Malathion*	96.5%
OTHER INGREDIENTS:	3.5%
TOTAL:	100.0%

* O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate. Contains 9.9 lbs. malathion per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND USE DIRECTIONS

IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT, 1-800-331-3148

Product of Denmark

Sold By

FMC

FMC Corporation
2929 Walnut Street
Philadelphia PA 19104

NET CONTENTS: 5 Gallons

08-20-20

FIRST AID

This product is an organophosphate and is a cholinesterase inhibitor.

IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

NOTE TO PHYSICIAN

This product is a cholinesterase inhibitor. Treat symptomatically. Atropine is antidotal.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful by swallowing, inhalation or skin contact. Avoid contact with skin. Avoid breathing spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, Loaders and Flaggers must wear:

- Long sleeved shirt and long pants;
- Shoes plus socks
- Chemical-resistant gloves made of barrier laminate, butyl-rubber ≥14 mils, nitrile rubber ≥14 mils, or viton ≥ 14 mils

Aerial applications, pilots must wear:

- Long sleeved shirt and long pants;
- Shoes plus socks
- Chemical-resistant gloves made of barrier laminate, butyl-rubber ≥14 mLs, nitrile rubber ≥14 mLs, or viton ≥ 14 mLs must be worn when a pilot comes into contact with, adjusts, or makes repairs to contaminated equipment after applications but prior to routine decontamination procedures. Gloves are not required while inside the aircraft.

Ground applications must be made using enclosed cabs only. Drivers must wear:

- Long sleeved shirt and long pants;
- Shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms, including fish and invertebrates. Use care when applying in or to an area which is adjacent to any body of water, and do not apply when weather conditions favor drift from target area. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

When applying as a wide area mosquito adulticide, before making the first application in a season, it is advisable to consult with the state or tribal agency charged with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply or allow to drift onto blooming crops or weeds while bees are actively visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local public health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort. When applying as a wide area mosquito adulticide, do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

PESTICIDE STORAGE: Fyfanon® ULV mosquito insecticide should be stored in the original unopened container in a secure, dry place. Do not contaminate with other pesticides or fertilizers. Fyfanon® ULV mosquito insecticide should never be heated above 55°C (131°F), and should not be stored for long periods of time at a temperature in excess of 25°C (77°F).

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING:

Containers equal to or less than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or dispose of empty container in a sanitary landfill or by other procedures approved by state or local authorities.

Containers greater than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure Rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain fo 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for late use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Offer for recycling if available or dispose of empty container in a sanitary landfill or by other procedures approved by state or local authorities.

Containers greater than 250 gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Return container to point of sale. Empty containers may be returned to FMC by calling customer service at 1-800-311-3148 or disposed of by other procedures approved by state and local authorities.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For use by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

MOSQUITO CONTROL IN POPULATED AND RURAL AREAS

PRECAUTIONS AND RESTRICTIONS

Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

RESTRICTIONS

- Do not apply more than 0.23 lb ai /Acre/day.
- Only treat when mosquitoes are swarming or biting. Do not re-treat a site more than 3 times in any one week. However, more frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne diseases in animal or human populations, or if specifically approved by the state or tribe during a natural disaster effort.
- Apply when wind speed is greater than or equal to 1 mph.
- Do not apply by fixed wing aircraft at height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.
- Ground applications must be made using enclosed cabs only.

PRECAUTIONS

- **IMPORTANT:** IN AREAS WHERE AUTOMOBILES, TRAILERS, TRUCKS AND PLEASURE BOATS ARE PRESENT, undiluted spray droplets of Fyfanon® ULV mosquito insecticide will permanently damage vehicle paint finishes unless the aircraft used for the ultra low volume application meets all of the specifications listed under **AERIAL APPLICATION.**

AERIAL APPLICATION

Adult Mosquitoes on Rangeland, Pasture, and Other Uncultivated Non-Agricultural Areas (Wastelands, Roadsides)

Apply 1.0 to 3.0 fluid ounces of Fyfanon® ULV mosquito insecticide per acre (0.08 to 0.23 lbs AI per acre).

Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 um) and that 90% of the spray is contained in droplets smaller than 100 microns (Dv 0.9 < 100 um). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated. Adult mosquito control over cities, towns, and other areas where automobiles, trailers, trucks, and pleasure boats are present: Apply only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control. See Precautions and Restrictions for additional instructions.

GROUND-BASED APPLICATION

Spray equipment must be adjusted so that the volume median diameter is less than 30 microns (Dv 0.5 < 30 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 um). Directions from the equipment manufacturer or vendor, pesticide registrant or test facility using laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Thermal Aerosols or Fogs

For control of adult mosquitoes with thermal aerosols or fogs. Apply Fyfanon® ULV mosquito insecticide at the rate of 3.9 - 5.2 gallons Fyfanon® ULV mosquito insecticide in 100 gallons of finished solution by ground equipment delivering 40 gallons per hour at a vehicle speed of 5 miles per hour to treat a swath width of 300 feet (equivalent to 180 acres per hour). At 3.9 gallons product per 100 gallons of finished solution this is equivalent to 0.08 lbs active/acre. At 5.2 gallons per 100 gallons of finished solution, this is equivalent to 0.11 lbs active/acre.

*There is a great variation in the chemical composition of fuel oils which may be used as thermal fog solvents. These differences may cause sludge and/or affect the solubility of the Fyfanon® ULV mosquito insecticide.

Nonthermal Aerosols

Adult Mosquito Control - Control of adult mosquitoes over a 300-foot swath can be obtained with nonthermal aerosols of Fyfanon® ULV mosquito insecticide using the following rates at the indicated vehicle speeds:

RATES FOR FYFANON® ULV MOSQUITO INSECTICIDE					
Undiluted Apply as follows:					
Lbs.A.I./Acre/Day	Application Rates Fluid Ounces per Minute at Vehicle Speeds				Fluid Ounces of Fyfanon® ULV mosquito insecticide per acre
	5 mph	10 mph	15 mph	20 mph	
0.03 – 0.06*	1.0 - 2.1	2.0 - 4.3	3.0 - 6.3	4.0 - 8.6	0.38 - 0.75

*Use higher rate of application when vegetation is dense and/or mosquito populations are heavy.

OPERATING EQUIPMENT

Each nonthermal aerosol generator used for dispersal of Fyfanon® ULV mosquito insecticide to control adult mosquitoes must have minimum capability of producing the droplet spectrum described under GROUND-BASED APPLICATION. The initial determination of droplet size is made after the unit is installed in a vehicle and prior to its use in mosquito control operations. Recheck the unit frequently to insure that proper droplet size is maintained for each operation. Determination of droplet size every two months is usually sufficient if the unit has been maintained in good operating condition.

Equipment manufacturer's instructions setting forth cleaning and maintenance of the unit must be followed. The unit must be inspected before each operation to correct any leaks or obstructions in the spray system; to detect whether the nozzle, hoses, or other parts are worn and need replacement; to insure that the flow meter is properly calibrated and to determine that the pressure recommended by the manufacturer is being maintained.

Flow Rate
- Must be regulated by accurate flow meter
- Not greater than 1 gallon per hour at 5 mph; 2 gallons per hour at 10 mph; 3 gallons per hour at 15 mph, or 4 gallons per hour at 20 mph

Nozzle Direction
- Rear of the vehicle
- Upward at an angle of 45° or more

Vehicle Speed
- Not greater than 20 mph
- Shut off spray equipment when vehicle is stopped

IMPORTANT: Spray droplets of undiluted Fyfanon® ULV mosquito insecticide will permanently damage automobile paint unless all the conditions described and recommended in this label are met. If accidental exposure does occur, the vehicle should be washed at once.

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before using this product. If the terms are not acceptable, return the product at once, unopened.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC. To the extent consistent with applicable law, all such risks shall be asumed by User, and User agrees to hold FMC harmless for any claims relating to such factors.

FMC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILTY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH REPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) FMC, and user assumes the risk of any such use.

To the extent consistent with applicable law, FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER, AND THE EXCLUSIVE LIABILITY OF FMC FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

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SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION

Product Identifier : **FYFANON ULV MOSQUITO**
EPA Reg. No. : **67760-34**
Product Use : Insecticide

Supplier's name and address:

Cheminova, Inc.
One Park Drive, Suite 150
PO Box 110566
Research Triangle Park, NC, USA
27709
Phone #: (919) 474-6600 (8:00 AM to 5:00 PM EST, Monday to Friday)

Manufacturer's name and address:

Cheminova A/S
PO Box 9
DK-7620
Lemvig, Denmark

Emergency Telephone #: 1-866-303-6950 (Medical Emergencies)
1-800-424-9300 (24 Hr. Chemtrec Number)

SDS Prepared by: Cheminova Inc.
SDS Preparation date: August 19, 2003
Revision date: May 27, 2015
Revision reason: GHS Revision

SECTION 2 – HAZARDS IDENTIFICATION

GHS Signal Word:

Warning

Classification:

Health	Environmental	Physical
Skin Irritation – Category 2 Eye Irritation – Category 2B	Aquatic Toxicity – Acute 1 Aquatic Toxicity – Chronic 1	Not applicable

GHS Pictogram:

Hazard Statements:

Causes skin irritation.
Causes eye irritation.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention:

Wash hands thoroughly after handling.
Wear protective gloves.
Avoid release to the environment.

Response:

If on skin: Wash with plenty of water.

For specific treatment, refer to product label.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Collect spillage.

Storage:

Not applicable.

Disposal:

Dispose of contents/container according to label directions.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (weight)
Malathion (O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate)	121-75-5	60.00 – 100.00

This material is classified as hazardous under OSHA regulations (29 CFR 1910.1200).

SECTION 4 – FIRST AID MEASURES

IF SWALLOWED:
- Call a poison control center or doctor immediately for treatment advice.
- Have a person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call poison control center or doctor for further treatment advice.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

IF IN EYES:
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-303-6950 for emergency medical treatment information.

Note to physician: This product is a cholinesterase inhibitor. Treat symptomatically. Atropine is antidotal.

Signs and symptoms of short-term (acute) exposure

Inhalation : Fyfanon (malathion) is a cholinesterase inhibitor of low mammalian toxicity. However storage at too high temperature may induce formation of the much more toxic and synergistic contaminant isomalathion (LD50 acute oral, rat = 89 mg/kg). Malathion and isomalathion can affect you when breathed in and can cause organophosphorous poisoning. Symptoms of poisoning may include headache, nausea, vomiting, blurred vision, tightness in chest, drooling, frothing of mouth and nose, convulsions, coma and death.

Skin : Direct skin contact may result in little or no irritation. Malathion and isomalathion can be rapidly absorbed through all skin surfaces. Causes symptoms similar to those listed for inhalation.

Eyes : Direct contact causes eye irritation. Malathion and isomalathion can be rapidly absorbed through all skin and eye surfaces. Causes symptoms similar to those listed for inhalation.

Ingestion : Malathion and isomalathion are poisons through ingestion. Causes symptoms similar to those listed for inhalation.

Effects of long-term (chronic) exposure

: Repeated ingestion may cause severe weight loss.

Conditions aggravated by overexposure

: Prolonged or repeated overexposures may cause behavioral changes.

SECTION 5 – FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability

: This product is considered non-flammable. Material will decompose rapidly when exposed to heat (>212° F/100° C) and flame, increasing the risk of explosion. Heat of decomposition may cause closed containers to build up pressure and explode.

Flammability classification (OSHA 29 CFR 1910.1200)

: Non-flammable.

Oxidizing properties : None known

Explosion data: Sensitivity to mechanical impact / static discharge

: Not expected to be sensitive to mechanical impact or static discharge.

Suitable extinguishing media

: Carbon dioxide or dry chemical for small fires. For large fires, use water spray or foam.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water spray used for cooling purposes.

Hazardous combustion products

: Carbon oxides; Oxides of phosphorus; oxides of sulfur; dimethyl sulfide; irritating fumes and smoke.

NFPA Rating :	0 – Minimal	1 – Slight	2 – Moderate	3 – Serious	4 – Severe
	Health: 1	*Flammability:* 1	*Instability:* 1	*Special Hazards:*	None

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways or confined spaces. If necessary, dike well ahead of the spill to prevent

runoff into drains, sewers, or any natural waterway or drinking supply. Do not flush into surface water or sanitary sewer system. Uncontrolled discharge into water courses may be alerted to the appropriate regulatory body.

Spill response/cleanup : Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled material with inert, non-combustible absorbent material, such as sand. Sweep up and shovel into suitable containers for disposal. For a water spill, confine the spill immediately with booms. Notify the appropriate authorities as required. Carefully cover spilled material with soda ash or quicklime to neutralize. Do not flush into surface water or sanitary sewer system. For large spills on surfaces other than pavement (e.g. soil or sand), spills may be handled by digging up and removing the affected surface and placing it in approved containers.

Prohibited materials : None known.

Special spill response procedures

: In case of spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002)
US CERCLA Reportable quantity (RQ): Malathion (100 lbs/45.4 kg)

SECTION 7 – HANDLING AND STORAGE

Safe handling procedures : This material is a toxic liquid. Wear chemically resistant protective equipment during handling. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not use near welding operations, flames or hot surfaces. Malathion should never be heated above 131° F (55° C) and also local heating above this temperature should be avoided. Keep away from acids and other incompatibles. Keep containers tightly closed when not in use. Wash thoroughly after handling. Use caution when opening cap.

Storage requirements : Store in a cool, dry, well ventilated area. Keep way from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Product should be stored at temperatures not exceeding 68 to 77° F (20 to 25° C). protect against physical damage.

Incompatible materials : Strong alkalis, amines and strong oxidizing compounds. The product can corrode iron, steel, tin plate and copper. Fyfanon is rapidly hydrolyzed at pH > 7.0.

Special packaging materials: Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits

Ingredients	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Malathion	1 mg/m^3 (inhalable)	N/Av	15 mg/m^3 (total dust)	N/Av

Ventilation and engineering measures
: Provide sufficient ventilation to keep vapor concentration below the given TLV and/or PEL.

Respiratory protection : Respiratory protection is required if the concentrations exceed the TLV. Wear a pesticide respirator jointly approved by the MSHA and NIOSH. Seek advice from respiratory protection specialists.

Skin protection : Wear impervious gloves, such as barrier laminate, butyl rubber, nitrile rubber or viton. Advice should be sought from glove suppliers.

Eye / face protection : Safety glasses with side-shields or chemical splash goggles.

Other protective equipment
: Wear appropriate protective clothing to prevent skin contact, such as coveralls or long sleeved shirt, long pants, and shoes and socks. Other protective equipment, such as an eyewash station and safety shower, may be required depending on exposure and on workplace standards.

General hygiene considerations
: Avoid contact with skin, eyes and clothing. Remove soiled clothing and wash it thoroughly before reuse. Separate contaminated work clothes from street clothes. Always wash hands, face and arms with soap and water before smoking, eating or drinking. After work, take off all protective equipment, work clothes and shoes, and wash with soap and water. Respirator should be cleaned and filter replaced according to manufacturer's instructions. Wear only clean, uncontaminated clothes when leaving place of work. Persons working with this product for a longer period should have frequent blood tests for cholinesterase levels. If the cholinesterase levels fall below a critical point, no further exposure should be allowed until it has been determined, by means of blood tests, that cholinesterase levels have returned to normal.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless to light yellow liquid
Odor: Slightly aromatic
Odor threshold: ND
pH: 3.7 – 3.8 (equal amounts Fyfanon and distilled water)
Melting point/Freezing point: 37.1° F (2.85° C)
Initial boiling point and boiling range: 313 – 315° F (156 – 157° C)
Flash point: 325° F (163° C)
Evaporation rate: ND
Flammability: Non-flammable
Upper/lower flammability and explosive limits: NA
Vapor pressure: 3.4×10^{-06} mmHg @ 25° C; 1.4×10^{-04} mmHg @ 45° C
Vapor density: ND
Bulk density: ND
Specific gravity: 1.23 g/mL @ 20° C
Solubility(ies): in water 148.2 mg/L @ 25° C
Partition coefficient (n-octanol/water): Kow = 560
Auto-ignition temperature: 532° F (278° C)
Decomposition temperature: ND
Viscosity: ND

ND=Not determined

Perm-X™ UL 30-30

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

CONTROLS: Adult Mosquitoes, Biting and Non-biting Midges, Black Flies and other outdoor flying insects as listed on this label.

FOR USE AS A: ULV thermal or non-thermal aerosol using ground or aerial equipment in areas including: residential, recreational areas, parks, campsites, woodlands, athletic fields, golf courses, municipalities, playgrounds, and non-crop waste areas and over listed growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas. Refer to label for additional use sites.

SPECIMEN LABEL

ACTIVE INGREDIENTS:

Permethrin	30%
Piperonyl Butoxide	30%
OTHER INGREDIENTS*:	40%
TOTAL:	100%

*(butyl carbityl)(6-propylpiperonyl) ether and related compounds.
**Contains Petroleum Distillate
Contains 2.51 lbs a.i. Permethrin/gallon and 2.51 lbs a.i. Piperonyl Butoxide/gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente.
(**TO THE USER:** If you cannot read English, do not use this product until the label has been fully explained to you.)
See inside label booklet for additional Precautionary Statements.

EPA Reg.No. 89459-44
EPA Est. No. 2724-TX-1

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation.

FIRST AID	
If swallowed	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice. *(continued)*
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to mouth, if possible. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. You may contact 1-800-248-7763 for emergency medical treatment information. You may also contact 1-800-248-7763 for information including health concerns, medical emergencies or pesticide incidents. *(continued)*	

NOTE TO PHYSICIAN: Contains Petroleum Distillates - vomiting may cause aspiration pneumonia.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are listed below. Mixers, loaders, applicators and other handlers including during mixing/loading, repair and cleaning of equipment and disposal of pesticide must wear the following:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves such as barrier laminate, viton, neoprene rubber or nitrile rubber
- Chemical-resistant apron for mixers/loaders, persons cleaning equipment and persons exposed to the concentrate

In addition to the above PPE, mixers and loaders supporting aerial applications to forests must wear at least a NIOSH-approved respirator with:

- A dust/mist filter with MSHA/NIOSH approval number prefix TC-21C, or any R, P, or HE filter.

See Engineering Controls for additional requirements.

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS

- Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates.

Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control application or by persons under their direct supervision.

Precautions and Use Restrictions

- Apply this product only as specified on this label.
- Apply this product at temperatures greater than 50° F and when wind speed equals or exceeds 1 mph.
- Not for use in metered release systems.
- Not for use in outdoor residential misting systems.
- Do not spray this product on or allow it to drift onto cropland (other than crops listed) or potable water supplies.
- In the treatment of corrals, feedlots, animal confinements/houses, swine lots, poultry ranges and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.
- For hand carried and/or lawn mower foggers: Do not fog wet foliage. Do not fog when wind conditions exceed 10 mph. Only use a clean, well maintained and properly calibrated fogger known to give excellent performance. Fog down wind.
- Do not apply by fixed wing aircraft at a height less than 100 feet or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.
- Apply when wind speed is greater than 1 mph.
- Do not make applications during rain.

Do not retreat site more than once in 3 days. Do not exceed 25 applications at 0.007 lbs permethrin per acre per application or 0.007 lbs PBO per acre per application or 0.18 lbs of permethrin per acre per season or 0.18 lbs PBO per acre per year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

HOW TO APPLY

For proper ground application, mount the fog applicator so that the nozzle is at least 4 ½ feet above ground level and directed out the back of the vehicle. May be applied at speeds of 5 mph up to 20 mph. Failure to follow these label directions may result in reduced effectiveness. For "Aerial Application", refer to the Aerial Application section on this label. PERM-X™ UL 30-30 may be used as is, or diluted with a suitable solvent, i.e., a 60 to 100 second viscosity mineral oil and applied at a rate not to exceed 0.9636 fl oz of PERM-X™ UL 30-30 per acre. Both aerial and ground applications should be made when the wind is less than 10 mph. For exact rates, see the "UNDILUTED" or the "DILUTION" Rates charts on this label. PERM-X™ UL 30-30 is approved for application as an Ultra Low Volume (ULV) Thermal or Non-thermal aerosol (cold fog) to control adult mosquitoes, and other insects as listed on this label, in residential and recreational areas where these insect pests become a problem, such as parks, campsites, woodlands, athletic fields, golf courses, residential area, municipalities, gardens, play grounds, and non-crop waste areas. Treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the fog close to the ground, e.g., cool

temperatures and wind speeds not greater than 10 mph. Applications during the cool hours of night or early morning are usually preferable. Repeat treatment when recommended by Public Health officials, or Mosquito Abatement Districts.

Spray Droplet Size Determination

Ground-Based Application: Spray equipment must be adjusted so that the volume median diameter is less than 30 microns ($D_{v\,0.5} < 30$ µm) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v\,0.9} <$ 50 µm). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using laser-based equipment must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at ≤200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ($D_{v\,0.5} < 60$ µm) and that 90% of the spray is contained in droplets smaller than 100 microns ($D_{v\,0.9} < 100$ µm). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at > 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns ($D_{v\,0.5} < 70$ µm) and that 90% of the spray is contained in droplets smaller than 145 microns ($D_{v\,0.9} < 145$ µm). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

ULV NON-THERMAL AEROSOL (COLD FOG)

To control adult mosquitoes, flies, and gnats (black flies) apply PERM-X™ UL 30-30 using truck-mounted ground ULV (cold fog) equipment with a swath width of 300 feet in areas such as residential, recreational, industrial areas. For best results, apply when insects are most active and conditions are conducive to keeping the fog close to the ground. Apply the undiluted product at flow rates of 0.5472 to 2.1816 fluid ounce per minute at a truck speed of 10 mph. These rates are equivalent to 0.00175 to 0.007 pounds of permethrin a.i. and 0.00175 to 0.007 pounds of piperonyl butoxide a.i. per acre. If a different vehicle speed is used, adjust the flow rate accordingly. An accurate flow control system must be used to ensure proper flow rate. Use the maximum flow rates and application rates listed on this label to treat heavy vegetation or when target insect populations are high. Do not exceed the highest flow rates specified by the manufacturer. PERM-X™ UL 30-30 may also be applied by diluting with 60-100 second mineral oil or another suitable solvent, applied so as not to exceed 0.007 lb a.i. per acre using a swath width of 300 feet for calculation. Refer to the rates chart for suggested rates for diluted use. PERM-X™ UL 30-30 may be used to treat outdoor aggregation and harborage sites including storm drains, underground drainage pipes, and pipe chases.

THERMAL AEROSOL FOGGING

Refer to the DILUTION RATES tables for fogging applications. Droplet size of thermal "fog" will be very small usually in the 0.5 to 1.0 micron range.

TRUCK-MOUNTED - Apply PERM-X™ UL 30-30 diluted or undiluted with suitable thermal fogging equipment. If diluted, use a 60 to 100 second viscosity mineral oil or another suitable non-phytotoxic diluent, to reduce oil requirement and sludge buildup in equipment. Do not exceed the maximum 0.007 lb a.i. permethrin per acre rate. May be applied at speeds of 5 mph up to 20 mph. For use with HAND CARRIED and/or LAWN MOWER FOGGERS, use the same rates of a.i. per acre with a 50 foot swath width at a walking speed of 2 mph. Apply PERM-X™ UL 30-30 at 0.00175 lb to 0.007 lb of a.i. permethrin/a.i. piperonyl butoxide per acre.

USE AS AN INSECT BARRIER
AS AN INSECT BARRIER – USE A "BACKPACK" FOG-TYPE MIST BLOWER

For use in Non-Thermal ULV, motorized, portable, backpack, fog-type mist blower equipment, apply PERM-X™ UL 30-30 with equipment adjusted to deliver ULV particles of 50 to 100 volume median diameter. PERM-X™ UL 30-30 may be applied undiluted or diluted (see Application Rates tables section). If diluted, use a 30 to 100 second viscosity mineral oil, or another, (if recommended by Public Health Officials), suitable non-phytotoxic diluent. Use 0.00175 to 0.007 pound permethrin a.i. per acre at a 50 ft (15.2 m) swath width, while walking at a speed of 2 mph (3.2 kph). Whether applied undiluted or diluted or at a different speed, make sure that the same amount of permethrin a.i. – PBO a.i. is applied/acre.

DIRECTIONS FOR AERIAL APPLICATION

Use aircraft specially equipped and capable of applying Ultra-Low Volumes of PERM-X™ UL 30-30 according to the rate chart on this label. Applications can be made diluted or undiluted but cannot exceed the specified rates of 0.007 lbs permethrin per acre and 0.007 lbs PBO per acre, equivalent to 0.3646 fl oz of undiluted PERM-X™ UL 30-30 per acre. Applications should be made at an altitude of 100 to 300 feet. Apply at airspeed sufficient to deliver the appropriate amount of active ingredient per acre. A forward speed of 150 mph achieving a swath width of 500 feet is recommended. The minimum height (from the ground) for aerial application of this product is 100 feet. Treat when insects are most active and meteorological conditions are conducive to keeping the spray cloud close to the ground. In order to compensate for windy conditions and ensure drift onto the target area, aerial application with aircraft equipped with Global Positioning Systems (GPS) is recommended.

PROHIBITION ON AERIAL USE IN FLORIDA: Not for aerial use in Florida UNLESS specifically authorized by the Bureau of Entomology and Pest Control, Florida Department of Agriculture and Consumer Services.

This product can be applied over specific growing crops prior to harvest and range grasses for the control of adult mosquitoes and biting flies within or adjacent to these areas. Application can only be made where the following crops are present:

Alfalfa, Almonds, Apples, Artichokes, Asparagus, Avocados, Broccoli, Brussel sprouts, Cabbages, Cantaloupes, Cauliflower, Celery, Cherries, Corn (field and pop), Corn (sweet), Eggplants, Filberts (Hazelnuts), Garlic, Horseradish, Lettuce, Onions (dry bulb only), Papayas (FL only), Peaches/ Nectarines, Pears, Bell peppers, Pistachios, Potatoes, Soybeans, Spinach, Tomatoes, and Walnuts.

Cucurbit vegetables, including Chayote (fruit), Chinese wax gourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon and winter melon), Pumpkin,

Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, and winter squash types such as: acorn squash and spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

Leafy Vegetables, including Leafy vegetables (except *brassica*) (Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (roquette), Chervil, Chrysanthemum (edible leaved and garland), Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)).

Conditions and Rates To Use Perm-X™ UL 30-30 Undiluted						
Pounds A.I. Per Acre		Application Rates Fluid Ounces per Minute at MPH				Fluid Ounces of Perm-X™ UL 30-30 per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	1.0938	2.1876	3.2814	4.3752	0.3646
0.00350	0.00350	0.5468	1.0938	1.6507	2.1876	0.1823
0.00175	0.00175	0.2736	0.5472	0.8208	1.0944	0.0912

DILUTION RATES FOR PERM-X™ UL 30-30 FOR A 1:4 DILUTION

Mix 1 part PERM-X™ UL 30-30 with 4 parts Suitable Mineral Oil: Apply as follows:						
Pounds of A.I. Per Acre		Application Rates Fl Oz Per Minute At Vehicle Speeds				Fl Oz Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	5.3847	10.7694	16.1541	21.5388	1.7949
0.00350	0.00350	2.6925	5.3850	8.0775	10.7700	0.8975
0.00175	0.00175	1.3464	2.6928	4.0932	5.3856	0.4488

DILUTION RATES FOR PERM-X™ UL 30-30 FOR A 1:8 DILUTION

Mix 1 part PERM-X™ UL 30-30 with 8 parts Suitable Mineral Oil: Apply as follows:						
Pounds of A.I. Per Acre		Application Rates Fl Oz Per Minute At Vehicle Speeds				Fl Oz Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	9.5457	19.0914	28.6371	38.1828	3.1819
0.00350	0.00350	4.7727	9.5454	14.3181	19.0908	1.5909
0.00175	0.00175	2.3862	4.7730	7.1595	9.5460	0.7955

DILUTION RATES FOR PERM-X™ UL 30-30 FOR A 1:2 DILUTION

Mix 1 part PERM-X™ UL 30-30 with 2 parts Suitable Mineral Oil: Apply as follows:						
Pounds of A.I. Per Acre		Application Rates Fl Oz Per Minute At Vehicle Speeds				Fl Oz Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	3.2814	6.5628	9.8442	13.1256	1.0938
0.00350	0.00350	1.6407	3.2814	4.9221	6.5628	0.5469
0.00175	0.00175	0.8205	1.6410	2.4615	3.2820	0.2735

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE AND SPILL PROCEDURES: Store upright at room temperatures. Do not expose to extreme temperatures. In case of spill or leakage, ventilate the area, wear chemical resistant gloves, and footwear. Retrieve and filter the liquid in some manner and use as directed on this label, or "soak-up" the liquid with absorbent material such as sawdust, soil, fuller's earth, etc. and dispose of the resulting chemical waste as follows.

PESTICIDE DISPOSAL: Wastes resulting from a spill or use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPDSAL: Non-refillable container. Do not reuse or refill this container. Clean container promptly after emptying. **Containers 5 gallons or less – Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with mineral oil (or other solvent used when diluting the product) and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities. **Containers larger than 5 gallons – Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with mineral oil (or other solvent used when diluting the product). Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved state and local authorities. **Refillable 275 Gallon Stainless Steel Tote:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full of mineral oil or other suitable oil diluents. Agitate vigorously or recirculate mineral oil with pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Once triple rinsed, recycle if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Central Garden & Pet Company, 1501 East Woodfield Road, 200W, Schaumburg, Illinois 60173
NOTE: This specimen label is for informational purposes only. All uses may not be approved in all states. See product labeling for use directions.
Perm-X is a trademark of Wellmark International. © 2020 Wellmark International.
VEC 20-009

Perm-X UL 30-30

Safety Data Sheet

Date of issue: 12/14/2015 Revision date: 03/24/2020 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : Perm-X UL 30-30

Synonyms : 100208981; 100208982; 100208983; 100208984; 100510353; EPA Reg. No.: 89459-44

1.2. Recommended use and restrictions on use

Recommended use : Insecticide.

Restrictions on use : Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors or fumes. Do NOT take internally. Keep out of reach of children.

1.3. Supplier

Central Garden & Pet Company
1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173 - United States

www.centralmosquitocontrol.com

1.4. Emergency telephone number

Emergency number : 1-800-248-7763
1-800-424-9300 - CHEMTREC
1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral) Category 4	Harmful if swallowed
Acute toxicity (inhalation) Category 4	Harmful if inhaled
Skin sensitization, Category 1	May cause an allergic skin reaction
Specific target organ toxicity (single exposure) Category 1	Causes damage to organs
Aspiration hazard Category 1	May be fatal if swallowed and enters airways

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

GHS07 GHS08

Signal word (GHS US) : Danger

Hazard statements (GHS US) : Harmful if swallowed or if inhaled
May be fatal if swallowed and enters airways
May cause an allergic skin reaction
Causes damage to organs (nervous system)

Precautionary statements (GHS US) : Do not breathe dust/fume/gas/mist/vapours/spray.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center or doctor.
If on skin: Wash with plenty of water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If exposed: Call a poison center/doctor.
Call a poison center or doctor if you feel unwell.
Rinse mouth.
Do NOT induce vomiting.
If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container to in accordance with local/regional/national/international regulations.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : This product is extremely toxic to aquatic organisms, including fish and invertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Permethrin	(CAS-No.) 52645-53-1	30
Piperonyl butoxide	(CAS-No.) 51-03-6	30
Petroleum distillates, hydrotreated (mild) heavy paraffinic and hydrotreated (mild) light paraffinic	(CAS-No.) 64742-54-7 and 64742-55-8	38.81
Non-hazardous and/or does not meet criteria for classification	(CAS-No.) N/A	Balance

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Call a physician immediately. Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Harmful if inhaled. Permethrin affects nervous system. Symptoms of overexposure to permethrin include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity.

Symptoms/effects after skin contact : May cause an allergic reaction in individuals with a sensitivity to Piperonyl butoxide.

Symptoms/effects after ingestion : Harmful if swallowed. Permethrin effects the nervous system. Aspiration Hazard - may be fatal if swallowed and enters airways.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Avoid heavy hose streams.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Do not allow fire fighting water to escape into waterways or sewers. Evacuate area. Move containers away from the fire area if this can be done without risk. Ventilate closed spaces before entering. Do not breathe gas/fumes/vapor/spray.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: Exposure controls/personal protection.

Emergency procedures : Do NOT wash away into sewer. Avoid release to the environment. Evacuate unnecessary personnel. Stop leak if safe to do so. Ventilate area. Wear appropriate personal protective equipment, avoid direct contact.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb spills with an inert material, clay granules or other inert absorbent material and put in container for disposal. Do not flush to sewer or allow to enter waterways. Wear appropriate personal protective equipment, avoid direct contact.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool. Avoid excess heat. Keep container tightly closed. Keep only in original container. Avoid extreme temperatures. Do not store near heat or open flame.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Petroleum distillates, hydrotreated (mild) heavy paraffinic and hydrotreated (mild) light paraffinic (64742-54-7 and 64742-55-8)		
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
ACGIH	ACGIH STEL (mg/m³)	10 mg/m³

8.2. Appropriate engineering controls

Appropriate engineering controls : Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

See product label for specific PPE instructions.

Hand protection:

Wear chemical resistant gloves. Barrier laminate, nitrile rubber, neoprene rubber or Viton are recommended.

Eye protection:

Safety glasses

Skin and body protection:

Wear long-sleeved shirt and long pants, and shoes plus socks.

Respiratory protection:

In case of insufficient ventilation, use NIOSH approved respiratory protection. Mixers and loaders supporting aerial applications to forests must wear at least a NIOSH-approved respirator with: A dust/mist filter with MSHA/NIOSH approval number prefix TC-21C, or any R, P, or HE filter.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear amber liquid
Color	:	Amber
Odor	:	Slight solvent and licorice
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	127 °C (260 °F)
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Not applicable
Vapor pressure	:	< 1 mmHg (torr) @ 3.9 °C (39 °F)
Relative vapor density at 20 °C	:	No data available
Relative density	:	1.0012
Solubility	:	Insoluble
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	18.5 cP @ 40 °C (104 °F)
Explosion limits	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerization will not occur.

10.4. Conditions to avoid

Avoid extreme temperatures. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposes upon heating to produce toxic vapors/gases which may include oxides of carbon and nitrogen, hydrogen chloride and/or aldehydes.

Perm-X UL 30-30
Safety Data Sheet

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Permethrin (52645-53-1)	
LD50 oral rat	500 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	2.65 mg/l/4h

Piperonyl butoxide (51-03-6)	
LD50 oral rat	4300 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5 mg/l/4h

GHS-US Properties	Classification
Acute toxicity (oral)	Harmful if swallowed.
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Harmful if inhaled.
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Causes damage to organs.
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	May be fatal if swallowed and enters airways.

Potential health effects

Inhalation

Acute : Harmful if inhaled. Permethrin affects nervous system. Symptoms of overexposure to permethrin include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity.

Skin

Acute : May cause an allergic skin reaction in individuals with a sensitivity to piperonyl butoxide.

Eye

Acute : Under normal conditions of use, no health effects are expected.

Ingestion

Acute : Aspiration hazard - small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema. Harmful if ingested. Permethrin affects nervous system. Symptoms of overexposure to permethrin include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity.

Mutagenicity : Permethrin was not mutagenic in a battery of in vitro and in vivo tests. Piperonyl butoxide was not mutagenic in a battery of tests.

Carcinogenicity : Permethrin is not classified as carcinogen by NTP, IARC and OSHA. Piperonyl butoxide is not classified as carcinogen by NTP, IARC and OSHA.

Reproductive Effects : Permethrin does not cause birth defects or adverse effects on reproduction. Piperonyl butoxide did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits.

SECTION 12: Ecological information

12.1. Toxicity

Permethrin (52645-53-1)	
LC50 Acute fish 1	0.00079 mg/l (Exposure time: 96h - Blue gill)
LC50 Acute fish 2	0.0022 mg/l (Exposure time: 96h - Atlantic silverside)
LC50 Acute crustacea 1	0.000019 mg/l (Exposure time: 96h - Mysid shrimp)
LC50 Acute crustacea 2	0.0001 mg/l (Hexagenia bilineuta)
EC50 Daphnia 1	0.00043 mg/l (48 h, Daphnia magna, Literature study)
NOEC Chronic fish 1	0.0003 mg/l (Fathead minnow)
NOEC Chronic fish 2	0.00083 mg/l (Sheepshead minnow)

Drexel

Surf-Ac® 820

Non-ionic Surfactant

PRINCIPAL FUNCTIONING AGENTS:

Alcohol ethoxylate, alkylphenol ethoxylate.....	80.0%

CONSTITUENTS INEFFECTIVE AS

SPRAY ADJUVANT:	20.0%
TOTAL:	100.0%

Ingredients exempt from the requirements of a tolerance under 40 CFR 180.

KEEP OUT OF REACH OF CHILDREN

WARNING

See FIRST AID Below

Read Entire Label Before Using This Product

Shake Well Before Use (Recirculate Contents Before Use)

WA Reg. No. 19713-70002 **Net Content:_____**

PRECAUTIONARY STATEMENTS

Hazards To Humans And Domestic Animals

WARNING: Causes skin and eye irritation. Harmful if swallowed or if inhaled. Do not get on skin, in eyes or on clothing. Do not eat, drink or smoke when using this product. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Take off contaminated clothing and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear protective gloves, long-sleeved shirt, long pants and shoes plus socks.

FIRST AID

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- If skin irritation occurs, get medical advice.

IF IN EYES:
- Rinse cautiously with water for 15 to 20 minutes.
- Remove contact lenses, if present and easy to do so. Continue rinsing.
- If eye irritation persists, get medical attention.

IF SWALLOWED:
- Call a poison control center or doctor if you feel unwell.
- Rinse mouth.

IF INHALED:
- Remove person to fresh air and keep comfortable for breathing.
- Call a poison control center or doctor if you feel unwell.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call CHEMTREC at 1-800-424-9300 for emergency.

ENVIRONMENTAL HAZARDS

Do not contaminate water sources by cleaning of equipment or disposal of washwater.

USE INFORMATION

SURF-AC 820 is a general purpose non-ionic surfactant of the alcohol ethoxylate, alkylphenol ethoxylate type surface active agents. It can be used with most insecticides, fungicides, herbicides, acaricides, defoliants, desiccants and wettable powders to improve performance of the active spray ingredient by giving them more uniform distribution and better wetting of the plant surface.

DIRECTIONS FOR USE

Always read and follow the label of the pesticide(s) and additive(s) to be used with this product. Always refer to the pesticide and additive label(s) for additional directions or precautions. Follow the most restrictive label.

Applications	This Product per 100 Gallons of Mix
Insecticides	3 to 8 fluid ounces
Fungicides	3 to 8 fluid ounces
Herbicides	1 to 2 pints
Acaricides	3 to 8 fluid ounces
Defoliants	1 to 2 pints
Desiccants	1 to 2 pints
Wettable powders	1 to 2 pints

Variations in conditions of use can cause some variation in the amount of this product required. The minimum required to give a smooth, uniform coverage usually gives the most effective results. Not for aquatic use.

MIXING INSTRUCTIONS

For wettable powders and water-soluble materials, add this product in water before adding pesticide to spray tank. For emulsifiable products, add this product after a good emulsion is formed.

Manufactured By:
Drexel Chemical Company
P.O. BOX 13327, MEMPHIS, TN 38113-0327
SINCE 1972
Tel. No. (901) 774-4370

SURF-AC and the DREXEL logo are registered trademarks of Drexel Chemical Company.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PRODUCT STORAGE:

Store in original container. Keep container closed in storage. Do not allow water to be introduced.

PRODUCT DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Do not reuse empty container. Triple rinse (or equivelent) during mixing and loading. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler, visit the ACRC web page at www.acrecycle.org. Decontaminated containers may also be disposed of in a sanitary landfill.

WARRANTY—CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

To the extent consistent with applicable law, in no case shall Manufacturer or Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. To the extent consistent with applicable laws, the foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

Drexel

SAFETY DATA SHEET

Drexel SURF-AC 820

Section 1: Material Identification

Product Name: Drexel Surf-AC 820

GHS product identifier: 80% non-ionic surfactant

Company:
Drexel Chemical Company
1700 Channel Avenue
Memphis, TN 38106

Recommended use: Surfactant, wetting agent, spreader

Recommended restrictions: None available

Synonyms: Non-ionic surfactant

Emergency Telephone Number:

ChemTrec
Tel: 1-800-424-9300

Drexel Chemical Company
901-774-4370

Section 2: Hazard Identification

GHS classification:

Health hazards:

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Acute toxicity	Category 4

GHS label elements:

Signal word: Warning

Hazard statement:
Causes eye irritation
Causes mild skin irritation
Harmful if swallowed

Precautionary statement:

Prevention: Wash thoroughly after handling

Do not eat, drink or smoke when using this product
Wear eye protection, face protection, protective clothing, protective gloves

Response: If skin irritation occurs get medical advice/attention. **IF IN EYES:** rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical advice/attention. **IF ON SKIN OR CLOTHING:** Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. **IF SWALLOWED:** Call poison center or doctor/physician if you feel unwell.

Storage: Store in closed container

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations

Specific hazards: None available

Section 3: Composition Information

Components	CAS No.	Percent
Alcohol ethoxylate/ Alkylphenol ethoxylate	68002-97-1 9016-45-9	80.00
Inerts	Proprietary	20.00

Section 4: First-Aid measures

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Call poison control center or doctor for treatment advice.

Skin Contact: Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse.

Inhalation: Move person to fresh air; If not breathing call 911 and give artificial respiration. Call poison control center or doctor for treatment advice.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Section 5: Fire Fighting Measures

Suitable extinguishing media Water Spray, Foam solution, CO_2

Specific hazards arising from the chemical Can be dangerous when exposed to extreme heat and flame. Do not breathe mist/vapors/spray.

Protective equipment and precautions for firefighters Assure self-contained breathing apparatus is worn. Fight fire from upwind. Prevent runoff if possible.

Section 6: Accidental Release Measures

Personal Precautions: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Use

appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment: Stop the flow of material, if this is without risk. Collect and dispose of spillage as indicated in section 13. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up: Pick up spills with absorbent material and place in suitable properly labeled containers.

Section 7: Handling and Storage

Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Handle in accordance with good industrial hygiene and safety procedures

Storage: Store in a dry place. Store in original container. Do not store near food, foodstuffs, drugs or potable water supplies.

Section 8: Exposure Controls/ Personal Protection

Occupational exposure limits:

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations

Personal protective equipment:

Eye/Face Protection: Use chemical goggles

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR") or Polyvinyl chloride ("PVC" or "vinyl").

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material.

Section 9: Physical and Chemical Properties

Physical state:	Liquid
Color:	Golden to amber
Form:	Liquid
Odor:	Slight alcohol
Odor threshold:	Not available
pH:	4.0 – 7.0
Melting/freezing point:	<32°F

Boiling point:	212°F
Flash point:	175-180°F
Evaporation rate:	Not available
Flammability:	Not available
Flammability limits in air, lower:	Not available
Flammability limits in air, upper:	Not available
Vapor pressure:	Not available
Vapor density:	Not available
Relative density:	1.02 – 1.08 g/mL
Solubility:	complete in water
Octanol/water coefficient:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	200-300cP

Section 10: Stability and Reactivity

Chemical stability/instability:	Stable at typical use temperatures
Conditions to avoid:	Avoid extreme temperatures and open flames
Incompatible materials:	Avoid contact with: Strong oxidizers
Possibility of hazardous reactions:	Will not occur
Hazardous decomposition products:	Carbon monoxide and asphyxiants

Section 11: Toxicological Information

Toxicology data:

Components:	**Test results:**
Alcohol ethoxylate (68002-97-1) and Alkylphenol ethoxylate (9016-45-9)	Acute oral LD50(rat): >1300mg/kg Acute dermal LD50(rabbit): 2g/kg

Routes of exposure:	Skin contact. Eye contact. Ingestion.
Acute effects:	Mild skin irritation. Eye irritation. Harmful if swallowed.
Sensitization:	No data available
Chronic effects:	No data available
Carcinogenicity:	No data available
Mutagenicity:	Non-mutagenic for bacteria and/or yeast
Reproductive effects:	No data available
Tetragenicity:	No data available
Epidemiology:	No data available
Skin corrosion/irritation:	Causes mild skin irritation
Serious eye damage/eye irritation:	Causes eye irritation
Specific target organ toxicity single exposure:	Not classified
Specific target organ toxicity repeated exposure:	Not classified
Other information:	Not available

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

ES OPCO USA LLC

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

☑ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

10800 Pecan Park Blvd Suite 300

Requester's name and address (optional)

6 City, state, and ZIP code

Austin, TX 78750

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

8	4	–	3	6	8	9	5	3	1

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here | Signature of U.S. person ▶ [signature] Date ▶ 9/10/2020

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

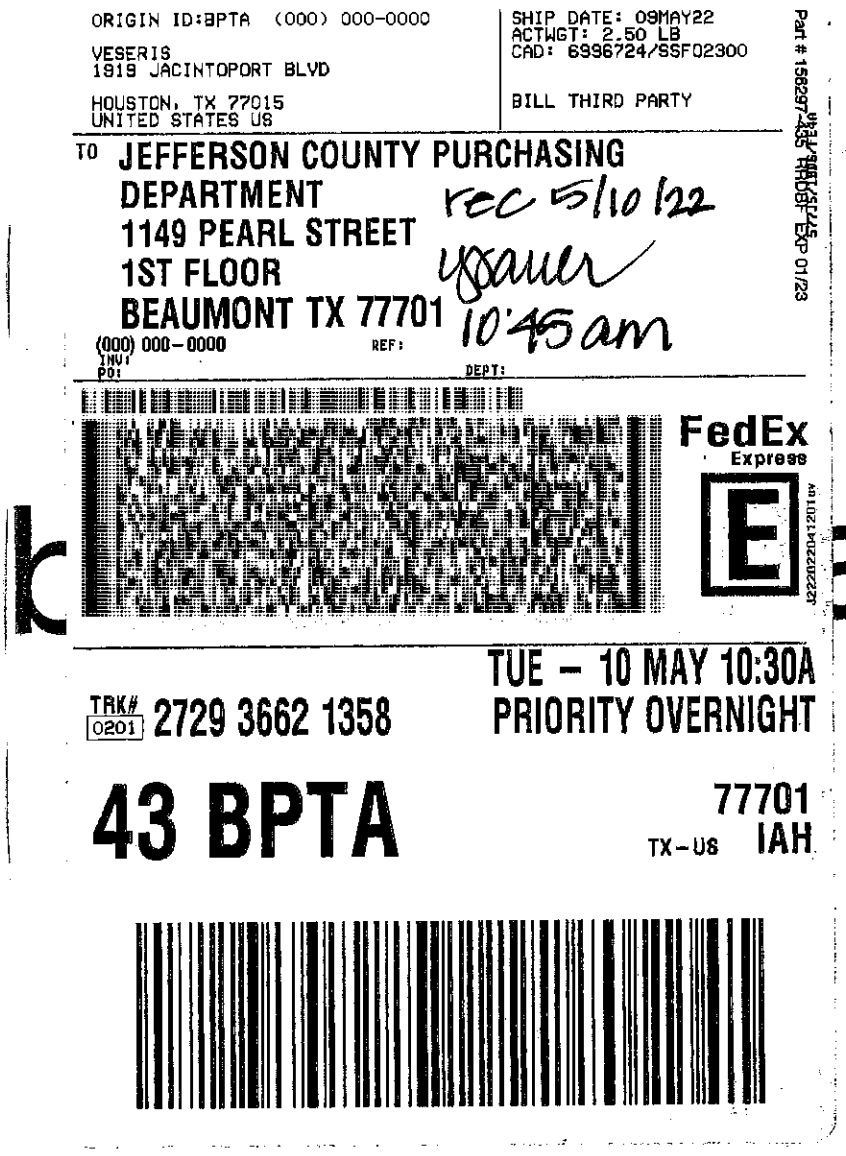
Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*



ORIGIN ID:BPTA (000) 000-0000

VESERIS
1919 JACINTOPORT BLVD

HOUSTON, TX 77015
UNITED STATES US

SHIP DATE: 09MAY22
ACTWGT: 2.50 LB
CAD: 6996724/SSF02300

BILL THIRD PARTY

Part # 156297-435 HARBF EXP 01/23

TO JEFFERSON COUNTY PURCHASING
DEPARTMENT
1149 PEARL STREET
1ST FLOOR
BEAUMONT TX 77701

rec 5/10/22
Yasmin
10:45 am

(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

TUE - 10 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 2729 3662 1358

43 BPTA

77701
TX-US IAH

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street, 1st Floor, Beaumont, TX 77701 409-835-8593 Fax 409-835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

April 12, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchas **IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, an County Mosquito Control District.** Specifications for this project may be obtained from https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and three (3) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District**
BID NO:	**IFB 22-023/YS**
DUE DATE/TIME:	**11:00 AM CT, Wednesday, May 11, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these requirements should be directed to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provisions of services. Individuals requiring special accommodations are requested to contact our office at 409-835-8593 to make arrangements no later than seven (7) calendar days prior to the submittal deadline. Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

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Bid Submissions:

Bidder is responsible for submitting: One (1) original and three (3) bid copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to see if addenda or additional instructions have been posted. Failure to return all required forms could result in a response being declared as non-responsive. https://www.co.jefferson.tx.us/Purchasing/

Instructions to Bidders

1. Bid Submission

Bids must be submitted in complete original form by mail or messenger to the following address:

Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Late bids will not be accepted and will be returned unopened to the bidder.

All bids submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

Bidder shall submit bid in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the Bid Number, Bid Name, Bid Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Bidder is responsible for submitting:

- **One (1) Original Bid Copy and (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.**

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

https://www.co.jefferson.tx.us/Purchasing/

DEADLINE FOR QUESTIONS:

The deadline for asking questions in writing or requesting additional information (in writing or in person) is 5:00 pm, Thursday, April 28, 2022.

2. Bid Submissions During Time of Inclement Weather, Disaster, or Emergency

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3. Courthouse Security

Bidders are advised that all visitors to the Courthouse must pass through Security. **Bidders planning to hand deliver bids must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal.** Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures recommended by the CDC within its facilities. Visitors to the courthouse will be required to wear a mask within the courthouse.

Bidders are strongly urged to plan accordingly.

4. Preparation of Bids

The bid shall be legibly printed in ink or typed.

The County requests that bid submissions NOT be bound by staples or glued spines.

If a unit price or extension already entered is to be altered, it shall be crossed out and initialed in ink by the bidder.

The bid shall be legally signed and shall include the complete address of the bidder.

Jefferson County is exempt from Federal and State Sales Taxes, and such taxes shall not be included in bid prices.

5. Signatures

All bids, notifications, claims, and statements must be signed by an individual authorized to bind the bidder. The individual signing certifies, under penalty of perjury, that he or she has the legal authorization to bind the bidder.

6. County Holidays – 2021:

January 18, 2021	Martin Luther King, Jr. Day	Monday
February 15, 2021	President's Day	Monday
April 2, 2021	Good Friday	Friday
May 31, 2021	Memorial Day	Monday
July 5, 2021	Independence Day	Monday
September 6, 2021	Labor Day	Monday
November 11, 2021	Veteran's Day	Thursday
November 25 & 26, 2021	Thanksgiving	Thursday & Friday
December 23 & 24, 2021	Christmas	Thursday & Friday
December 31, 2021	New Year's	Friday

7. Rejection or Withdrawal

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within 90 days after opening date.

8. Emergency/Declared Disaster Requirements

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

9. Award

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group,

whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial nonconformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment. In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

10. Contract

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

11. Waiver of Subrogation

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

12. Fiscal Funding

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

13. Bid Results

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

14. Changes and Addenda to Bid Documents

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

15. Specifications

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate.

All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

16. Delivery

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

17. Interpretation of Bid and/or Contract Documents

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

18. Currency

Prices calculated by the bidder shall be stated in U.S. dollars.

19. Pricing

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

20. Notice to Proceed/Purchase Order

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

21. Certification

By signing the offer section of the Offer and Acceptance page, bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The bidder hereby certifies that the individual signing the bid is an authorized agent for the bidder and has the authority to bind the bidder to the contract.

22. Definitions

"County" – Jefferson County, Texas.

"Contractor" – The bidder whose proposal is accepted by Jefferson County.

23. Minority-Women Business Enterprise Participation

It is the desire of Jefferson County to increase the participation of Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

General Conditions of Bidding and Terms of Contract

By execution of this document, the vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. Bidding

1.1 Bids. All bids must be submitted on the bid form furnished in this package.

1.2 Authorized Signatures. The bid must be executed personally by the vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the vendor shall accompany the bid to become a valid bid.

1.3 Late Bids. Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 Withdrawal of Bids Prior to Bid Opening. A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 Withdrawal of Bids after Bid Opening. Bidder agrees that its offer may not be withdrawn or cancelled by the vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 Bid Amounts. Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 Exceptions and/or Substitutions. All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 Alternates. The Invitation for Bid and/or specifications may expressly allow bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 Descriptions. Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 Bid Alterations. Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed hy the signer of the bid, guaranteeing authenticity.

1.11 Tax Exempt Status. Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 Quantities. Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 Bid Award. Award of contract shall be made to the most responsible, responsive bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 Silence of Specifications for Complete Units. All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 Addenda. Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 General Bid Bond/Surety Requirements. Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 General Insurance Requirements. Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 Responsiveness. A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 Responsible Standing of Bidder. To be considered for award, bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 Confidential/Proprietary Information

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 Public Bid Opening. Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. Performance

2.1 Design, Strength, and Quality. Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 Age and Manufacture. All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 Delivery Location. All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 a.m. to 4:00 p.m., Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 Delivery Schedule. Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 Delivery Charges. All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 Installation Charges. All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 Operating Instructions and Training. Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 Storage. Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 Compliance with Federal, State, County, and Local Laws. Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA. The bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 Patents and Copyrights. The successful vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 Samples, Demonstrations and Testing. At Jefferson County's request and direction, bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the bidder/vendor.

2.13 Acceptability. All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 Maintenance. Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 Material Safety Data Sheets. Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 Evaluation. Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. Purchase Orders and Payment

3.1 Purchase Orders. A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 Invoices. All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 Prompt Payment. In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful bidder(s) is required to pay subcontractors within ten (10) days after the successful bidder receives payment from the County.

3.4 Funding. Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. Contract

4.1 Contract Definition. The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful bidder and Jefferson County.

4.2 Change Order. No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 Price Re-determination. A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 Termination. Jefferson County reserves the right to terminate the contract for default if the bidder breached any of the terms therein, including warranties of bidder or if the bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies

which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the bidder in default.

4.5 Conflict of Interest. Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 Injuries or Damages Resulting from Negligence. Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 Interest by Public Officials. No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 Warranty. The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.9 Uniform Commercial Code. The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.10 Venue. This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.11 Sale, Assignment, or Transfer of Contract. The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.12 Silence of Specifications. The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

Federal Emergency Management Agency (FEMA)
MANDATED CONTRACT PROVISIONS

1. REMEDIES

a. Standard. Contracts for more than the simplified acquisition threshold, currently set at $250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. See 2 C.F.R. Part 200, Appendix II(A).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

2. TERMINATION FOR CAUSE AND CONVENIENCE

a. Standard. All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity, including the manner by which it will be affected and the basis for settlement. See 2 C.F.R. Part 200, Appendix II(B).

b. Applicability. This requirement applies to all FEMA grant and co-operative agreement programs.

3. EQUAL EMPLOYMENT OPPORTUNITY

If applicable, exact language below in subsection 3.d is required.

a. Standard. Except as otherwise provided under 41 C.F.R. Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. §60- 1.4(b), in accordance with Executive Order 11246, Equal Employment Opportunity (30 Fed. Reg. 12319, 12935, 3 C.F.R. Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, Amending Executive Order 11246 Relating to Equal Employment Opportunity, and implementing regulations at 41 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See 2 C.F.R. Part 200, Appendix II(C).

b. Key Definitions.

> **i. Federally Assisted Construction Contract.** The regulation at 41 C.F.R. § 60-1.3 defines a "federally assisted construction contract" as any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.
>
> **ii. Construction Work.** The regulation at 41 C.F.R. § 60-1.3 defines "construction work" as the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

c. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

d. Required Language. The regulation at 41 C.F.R. Part 60-1.4(b) requires the insertion of the following contract clause.

During the performance of this contract, the contractor agrees as follows:

participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24,1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

4. DAVIS-BACON ACT

a. Standard. All prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction). See 2 C.F.R. Part 200, Appendix II(D). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week.

b. Applicability. The Davis-Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Non-profit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It DOES NOT apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must do the following:

i. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

ii. Additionally, pursuant 2 C.F.R. Part 200, Appendix II(D), contracts subject to the Davis-Bacon Act, must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). The Copeland Anti-Kickback Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA.

iii. Include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction").

COMPLIANCE WITH THE DAVIS-BACON ACT:

a. All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) and the requirements of 29C.F.R.pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable.

b. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.

c. Additionally, contractors are required to pay wages not less than once a week.

5. COPELAND ANTI-KICKBACK ACT

a. Standard. Recipient and subrecipient contracts must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

b. Applicability. This requirement applies to all contracts for construction or repair work above $2,000 in situations where the Davis-Bacon Act also applies. It DOES NOT apply to the FEMA Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). Each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA. Additionally, in accordance with the regulation, each contractor and subcontractor must furnish each week a statement with respect to the wages paid each of its employees engaged in work covered by the Copeland Anti-Kickback Act and the Davis Bacon Act during the preceding weekly payroll period. The report shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work.

COMPLIANCE WITH THE COPELAND "ANTI-KICKBACK ACT":

a. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

b. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. §5.12."

6. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

a. Standard. Where applicable (see 40 U.S.C. §§ 3701-3708), all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II(E). Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Further, no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous.

b. Applicability. This requirement applies to all FEMA contracts awarded by the non-federal entity in excess of $100,000 under grant and cooperative agreement programs that involve the employment of mechanics or laborers. It is applicable to construction work. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open
market, or contracts for transportation or transmission of intelligence.

The regulation at 29 C.F.R. § 5.5(b) provides contract clause language concerning compliance with the Contract Work Hours and Safety Standards Act. FEMA suggests including the following contract clause: Compliance with the Contract Work Hours and Safety Standards Act.

> **(1) Overtime requirements.** No contractor or subcontractor contracting for any Part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
>
> **(2) Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
>
> **(3) Withholding for unpaid wages and liquidated damages.** Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
>
> **(4) Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

7. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

a. Standard. If the FEMA award meets the definition of "funding agreement" under 37C.F.R. § 401.2(a) and the non-Federal entity wishes to enter into a contract with a small business firm or non-profit organization regarding the substitution of parties, assignment or performance of experimental,
developmental, or research work under that "funding agreement," the non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA. See 2 C.F.R. Part 200, Appendix II(F).

b. Applicability. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

c. Funding Agreements Definition. The regulation at 37 C.F.R. § 401.2(a) defines "funding agreement" as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

8. CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

a. Standard. If applicable, contracts must contain a provision that requires the contractor to agree to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). Violations must be reported to FEMA and the Regional Office of the Environmental Protection Agency. See 2 C.F.R. Part 200, Appendix II(G).

b. Applicability. This requirement applies to contracts awarded by a non-Federal entity of amounts in excess of $150,000 under a federal grant.

CLEAN AIR ACT:

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

2. The contractor agrees to report each violation to Jefferson County and understands and agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT:

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

2. The contractor agrees to report each violation to Jefferson County agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

9. DEBARMENT AND SUSPENSION

a. Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

c. Requirements.

i. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. See 2

C.F.R. Part 200, Appendix II(H); and 2 C.F.R. § 200.213. A contract award must not be made to parties listed in the SAM Exclusions. SAM Exclusions is the list maintained by the General Services Administration that contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. SAM exclusions can be accessed at www.sam.gov. See 2 C.F.R. § 180.530.

ii. In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. This includes parties that receive Federal funding indirectly, such as contractors to recipients and subrecipients. The key to the exclusion is whether there is a "covered transaction," which is any non-procurement transaction (unless excepted) at either a "primary" or "secondary" tier. Although "covered transactions" do not include contracts awarded by the Federal Government for purposes of the non-procurement common rule and DHS's implementing regulations, it does include some contracts awarded by recipients and subrecipients.

iii. Specifically, a covered transaction includes the following contracts for goods or services:

1. The contract is awarded by a recipient or subrecipient in the amount of at least $25,000.

2. The contract requires the approval of FEMA, regardless of amount.

3. The contract is for federally-required audit services.

4. A subcontract is also a covered transaction if it is awarded by the contractor of a recipient or subrecipient and requires either the approval of FEMA or is in excess of $25,000.

The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified.

SUSPENSION AND DEBARMENT:

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by the County. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the County, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

10. BYRD ANTI-LOBBYING AMENDMENT

a. Standard. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. FEMA's regulation at 44 C.F.R. Part 18 implements the requirements of 31 U.S.C. § 1352 and provides, in Appendix A to Part 18, a copy of the certification that is required to be completed by each entity as described in 31 U.S.C. § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the Federal awarding agency.

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs. Contractors that apply or bid for a contract of $100,000 or more under a federal grant must file the required certification. See 2 C.F.R.Part 200, Appendix II(I); 31 U.S.C. § 1352; and 44 C.F.R. Part 18.
Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward tbe certification(s) to the awarding agency.

c. Required Certification.

If applicable, contractors must sign and submit to the non-Federal entity the **"Certification Regarding Lobbying" Form** included within these bid specifications.

11. PROCUREMENT OF RECOVERED MATERIALS

a. Standard. A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. See 2 C.F.R. Part 200, Appendix II(J); and 2 C.F.R. §200.322.

b. Applicability. This requirement applies to all contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.

c. Requirements. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired hy the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

1. Competitively within a timeframe providing for compliance with the contract performance schedule;

2. Meeting contract performance requirements; or

3. At a reasonable price.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:
https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Although FEMA does not currently require additional provisions, FEMA recommends the following:

1. ACCESS TO RECORDS

a. Standard. All recipients, subrecipients, successors, transferees, and assignees must acknowledge and agree to comply with applicable provisions governing DHS access to records, accounts, documents, information, facilities, and staff. Recipients must give DHS/FEMA access to, and the right to examine and copy, records, accounts, and other documents and sources of information related to the federal financial assistance award and permit access to facilities, personnel, and other individuals and information as may be necessary, as required by DHS regulations and other applicable laws or program guidance. See DHS Standard Terms and Conditions: Version 8.1 (2018). Additionally, Section 1225 of the Disaster Recovery Reform Act of 2018 prohibits FEMA from providing reimbursement to any state, local, tribal, or territorial government, or private non-profit for activities made pursuant to a contract that purports to prohibit audits or internal reviews by the FEMA administrator or Comptroller General.

ACCESS TO RECORDS:

The following access to records requirements apply to this contract:

(1)The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

(2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.

(4) In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

2. CHANGES

a. Standard. To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

b. Applicability. FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

3. DHS SEAL, LOGO, AND FLAGS

a. Standard. Recipients must obtain permission prior to using the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials. See DHS Standard Terms and Conditions: Version 8.1 (2018).

b. Applicability. FEMA recommends that all non-Federal entities place in their contracts a provision that a contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

"The contractor sball not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval."

4. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

a. Standard. The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

b. Applicability. FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

c. "This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

5. NO OBLIGATION BY FEDERAL GOVERNMENT

a. Standard. FEMA is not a party to any transaction between the recipient and its contractor. FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

6. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

a. Standard. Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

Special Requirements/Instructions

The following requirements and instructions **supersede** General Requirements where applicable.

1. Bid Requirement

Each bidder shall ensure that required parts of the bid are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Bidder is responsible for submitting:

One (1) Original Bid Copy and three (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

All bids shall be tightly sealed in an opaque envelope or box and plainly marked "SEALED BID."

The outside of the envelope or box shall also include: Bid Number, Bid Name, Bid Due Date, Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB. All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

2. Vendor Registration: SAM (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

Bidders are strongly encouraged to review their firm's SAM (System for Award Management) status prior to Bid Submission.

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission)

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission) – CONTINUED

FORM 1295 Exemptions:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law? The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement. A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and o any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

Upon entering into a contract or professional agreement, the Jefferson County Purchasing Department will submit a request to the Vendor to both:

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department.

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

4. Multiple Vendor Award

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

5. Delivery

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

6. Payment

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to: Jefferson County Auditing Department, Attention: Accounts Payable, 1149 Pearl Street, 7th floor, Beaumont, TX 77701.

7. Usage Reports

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases

to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

8. Insurance

The contractor (including any and all subcontractors as defined in Section 9.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation	Statutory Coverage (See Section 9 Below)

9. Workers' Compensation Insurance

9.1 Definitions:

9.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

9.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

9.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

9.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

9.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – refer to Section 8 above.

9.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

9.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

9.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

9.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

9.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

9.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

9.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

9.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

9.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

9.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

9.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

9.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

9.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

9.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

9.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

9.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

9.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs 9.1. – 9.7., with the certificates of coverage to be provided to the person for whom they are providing services.

9.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements

will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

9.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

Minimum Specifications

The following requirements and specifications **supersede** General Requirements where applicable. Contact Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us, regarding any questions or comments. Please reference bid number IFB 22-023/YS.

Scope

Vendor shall provide Insecticides, Herbicides, Spray Adjuvants, and Adulticides for the Jefferson County Mosquito Control District subject to the terms and conditions stated for an initial period **beginning on or about date of award.**

Bidders shall attach to bid form, a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Prices quoted shall be F.O.B. Jefferson County Mosquito Control District, Jefferson County Airport, 1st Street, Nederland, TX. Bidder bears freight charges. All prices must be written in ink or typewritten.

Quote unit prices extended to lump sum prices. The basis of the award will be the unit prices quoted. The County reserves the right to increase or decrease the quantity purchased based on weather conditions and availability of funds.

The County reserves the right to make the award to one (1) successful bidder or per line item.

Purchase orders for insecticides, herbicides, adjuvants, and adulticides will be released to the successful bidder(s) **on an as-needed basis. MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Refer questions of a commercial nature to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us; and questions of a technical nature to Denise Wheeler, Director, Jefferson County Mosquito Control, wheeler@co.jefferson.tx.us.

A price re-determination may be considered by Jefferson County only at the twelve (12) month and twenty-four (24) month anniversary dates of the contract. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or rejeet any/all requests for price re-determination as it deems to be in the best interest of the County.

Approximate Annual Usage

No promise is made or implied for quantities that will be purchased. Orders will be placed on an **as-needed basis** for the duration of the contract. Purchase Orders will be released to the successful bidder(s) as required. **MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Contract

This bid, when properly accepted by Jefferson County Commissioners' Court, shall constitute a contract equally binding between the successful bidder and Jefferson County. No different or additional terms will become a part of this contract.

The brand name references are for description only, and are not intended to exclude other herbicides or adjuvants of equal quality. Bidders desiring to substitute items may do so provided brand name is **indicated on Bid Form.** Change of container size may disqualify bid. Dilution ratio will be a factor in award of chemicals.

Bidders shall attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Item	Description
1	**MSMA herbicide** – to contain 6.00 lb. MSMA (Mono-sodium Acid Methanearsonate) plus surfactant per gallon
2	**Tordon 101** – to contain 10.2% 4-amino3,5,6-trichloropicolinic acid (picloram), tri-isopropanolomine salt 39.6% 2,4-Dichlorophenoxyacetric acid, tri-isopropanolomiane salt.
3	**Roundup herbicide or equivalent** – to contain 41.0% by weight Isopropylamine Salt of Glyphosate
4	**Rodeo herbicide or equivalent** – to contain 53.5% by weight Isopropylamine Salt of Glyphosate
5	**Nalco Trol II or equivalent** – water soluble spray drift control agent
6	**Aqua-King or equivalent** – product must be a non-ionic aquatic surfactant approved for use in the State of Texas, contain 90% active ingredient (excluding alcohols, fatty acids, oils ethylene glycol or diethylene glycol), a minimum of 80% surfactant load, possess an HLB (hydrophilic to lipophilic balance) ratio of 12 to 17, a maximum of 10% isopropyl alcohol, have a flash point greater than 200 degrees F., and contain an anti-foaming agent that will provide instantaneous foam breakdown when agitation ceases.
7	**Malathion insecticide** – concentrate to contain a minimum of 9.9 lb. of malathion per gallon (96.5% by weight active ingredient). Product offered must have current approval in Texas for both aerial and ground ULV application against adult mosquitoes. Bulk shipments only.
8	**Bio Mist 3-15 ULV** - ACTIVE INGREDIENTS Permethrin (3-phenoxyphenyl) methyl (+/-) cis, trans3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate.....3.0% Piperonyl Butoxide*.....15.0% OTHER INGREDIENTS**..... 82.0% 100.0% Contains 0.222 pounds of Permethrin and 1.113 pounds of PBO per gallon Contains petroleum distillate *Ordered as 275 gallon containers. **Successful bidder will deliver full containers and pick up empty containers at no additional charge.
9	**Envion 30/30 insecticide or equivalent** - water compatible concentrate in 2.52 lb. Permethrin (30.0% by weight) and 2.52 lb. Piperonyl Butoxide (30.0% by weight) per gallon. Product offered must have current approval in Texas for aerial and ground ULV application against adult mosquitoes.

Bidder Information Form

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.

Bidder's Company/Business Name: Nutrien Solutions

Bidder's TAX ID Number: 04-3769161

Contact Person: Kevin Evans **Title:** VM Sales Specialist

Phone Number (with area code): 832-328-4734

Alternate Phone Number if available (with area code): 337-200-1407

Fax Number (with area code): 281-590-5043

Email Address: kevin.evans@nutrien.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

13622 E. Hardy Rd
Address
Houston, Texas 77039
City, State, Zip Code

Bidder: Complete & Return this Form with Offer.

OFFER AND ACCEPTANCE FORM

OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer. We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

Nutrien Solutions
Company Name

13622 E. Hardy Rd.
Address

Houston Texas 77039
City State Zip

Signature of Person Authorized to Sign

Kevin Evans
Printed Name

VM Sales Specialist
Title

For clarification of this offer, contact:

Kevin Evans
Name

832-328-4734 281-590-5043
Phone Fax

kevin.evans@nutrien.com
E-mail

<u>Bidder</u>: Complete & Return this Form with Offer.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. Contract Term: One (1) year from date of award with an option to renew for four (4) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

Countersigned:

Jeff R. Branick
County Judge

Date

Attest:

Laurie Leister
County Clerk

Bidder: Complete & Return this Form with Offer.

Bid Form

Item	Est Qty. (Gal.)	Description	Brand bid	MSDS Labels Attached	Price per Gallon	Total Price
1	700	MSMA Herbicide – 2.5 gal. container	Target 6+	Yes	$ 32.23	$ 22,561.00
2	700	Tordon 101 Herbicide or equivalent – 2.5 gal. container	Tordon K	Yes	$ 61.00	$ 42,700.00
3	700	Roundup Herbicide or equivalent – 2.5 gal. container	Ranger Pro	Yes	$ 36.58	$ 25,606.00
4	100	Rodeo Herbicide or equivalent – 2.5 gal. container	Rodeo	Yes	$ 31.60	$ 3,160.00
5	100	Nalco Trol II or equivalent – 2.5 gal. (or smaller) container			$ no bid	$ no bid
6	400	Aqua-King Surfactant or equivalent – 2.5 gal. (or smaller) container	Aqua King	Yes	$ 41.00	$ 16,400
7	20,000	Malathion Insecticide – **bulk shipment only**			$ no bid	$ no bid
8	1,100	Bio Mist 3-15 ULV – 275 gal containers			$ no bid	$ no bid
9	600	Envion 30/30 insecticide – 2.5 gal. containers			$ no bid	$ no bid

Bidders must attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Acknowledgment of Addenda (if any):

Addendum 1 _____ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

Bidder: Complete & Return this Form with Offer.

Vendor References Form

Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

THIS FORM MUST BE RETURNED WITH YOUR BID.

REFERENCE ONE

Government/Company Name: City of Alexandria

Address: PO BOX 71, Alexandria, LA 71309

Contact Person and Title: Casey Barnes/Purchasing

Phone: 318-619-3415 Fax: 318-441-6190

Email Address: casey.barnes@cityofalex.com Contract Period: Casey Barnes

Scope of Work: Herbicide Supplier

REFERENCE TWO

Government/Company Name: Jackson County Drainage District #1

Address: 2066 Hwy 111 South, Edna, Texas 77957

Contact Person and Title: Charles Givens/Manager

Phone: 361-782-6189 Fax: 361-782-5401

Email Address: janet@jccwdd.com Contract Period: 3/1/22 - 3/1/23

Scope of Work: Herbicide Supplier

REFERENCE THREE

Government/Company Name: Angleton Drainage District

Address: 1123 Jamison Rd., Angleton, TX 77515

Contact Person and Title: Karen Gibson/ Office Manager

Phone: 979-849-2414 Fax: 979-849-8160

Email Address: add2469@att.net Contract Period: 3/15/22 - 3/15/23

Scope of Work: Herbicide Supplier

Bidder: Complete & Return this Form with Offer.

Signature Page

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

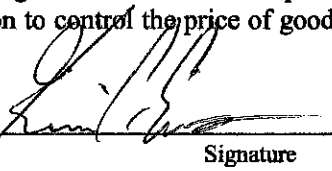
Would bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions?.....**Yes** [X] **No** [ ]

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Nutrien Solutions
Bidder (Entity Name)


Signature

13622 E. Hardy Rd.
Street & Mailing Address

Kevin Evans
Print Name

Houston, Texas 77039
City, State & Zip

5/10/2022
Date Signed

832-328-4734
Telephone Number

281-590-5043
Fax Number

kevin.evans@nutrien.com
E-mail Address

<u>Bidder</u>: Complete & Return this Form with Offer.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Kevin Evans VM Sales Specialist

Name and Title of Contractor's Authorized Official *(Please Print)*

5/10/2022

Date

Bidder: Complete & Return this Form with Offer.

Conflict of Interest Questionnaire

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Nutrien Solutions

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

_____

Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☒ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☒ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☒ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4 _____ 5/10/2022

Signature of vendor doing business with the governmental entity — Date

Adopted 8/7/2015

Bidder: Complete & Return this Form with Offer.

Local Government Officer

Conflicts Disclosure Statement – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

Note: This Form is for Office Use Only.

Good Faith Effort (GFE) Determination Checklist

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .

☐ Yes ☐ No 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?

☐ Yes ☐ No 2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☐ Yes ☐ No 3. **Provide** HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☐ Yes ☐ No 4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders?

☐ Yes ☐ No 5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?

☐ Yes ☐ No 6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid. If necessary, please use a separate sheet to answer the above questions.

Kevin Evans
Printed Name of Authorized Representative

Signature

VM Sales Manager
Title

5/10/2022
Date

Bidder: Complete & Return this Form with Offer.

Notice of Intent (NOI) to Subcontract with

Historically Underutilized Business (HUB)

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: Nutrien Solutions HUB: p Yes p No

Address: 13622 E. Hardy Rd. (Street) Houston (City) TX (State) 77039 (Zip)

Phone (with area code): 832-328-4734 Fax (with area code): 281-590-5043

Project Title & No.: Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticide for Jefferson Co Mosquito Control Dist. #IFB 22-023/YS

Prime Contract Amount: $

HUB Subcontractor Name:

HUB Status (Gender & Ethnicity):

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: (Street) (City) (State) (Zip)

Phone (with area code): Fax (with area code):

Proposed Subcontract Amount: $ Percentage of Prime Contract: %

Description of Subcontract Work to be Performed:

Kevin Evans	[signature]	5/10/2022
Printed Name of Contractor Representative	Signature of Representative	Date
Printed Name of HUB	Signature of Representative	Date

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

HUB SUBCONTRACTOR DISCLOSURE

PART I: Continuation Sheet **(Duplicate as Needed)**

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☒ HUBs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☒ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that bidder is the apparent low bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

<u>Bidder</u>: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Kevin Evans

Title: VM Sales Specialist

Signature: _____

Date: 5/10/2022

E-mail address: kevin.evans@nutrien.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): Wes Flower

Title: Branch Manager

Date: 5/5/2022

E-mail address: wesley.flower@nutrien.com

Bidder: Complete & Return this Form with Offer.

Residence Certification/Tax Form

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Nonresident bidder" refers to a person who is not a resident.

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☒ I certify that Nutrien Solutons [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	04-3769161
Company Name submitting bid/proposal:	Nutrien Solutions
Mailing address:	13622 E. Hardy Rd., Houston, Texas 77039
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

Bidder: Complete & Return this Form with Offer.

House Bill 89 Verification

I, Kevin Evans, the undersigned representative of (company or business name) Nutrien Solutions (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and

2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

_____
Signature of Company Representative

5/10/2022
Date

On this 10th day of May, 2022, personally appeared

_____, the above named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

_____
Notary Signature

_____
Date

Bidder: Complete & Return this Form with Offer.

Senate Bill 252 Certification

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

Nutrien Solutions
Company Name

IFB 22-023/YS
IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

Bidder: Complete & Return this Form with Offer.

Bid Affidavit

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF_____ COUNTY OF_____

BEFORE ME, the undersigned authority, a Notary Public in and for the State of _____,

on this day personally appeared Kevin Evans (name), who

after being by me duly sworn, did depose and say:

"I, Kevin Evans (name) am a duly authorized officer of/agent

for Nutrien Solutions (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Nutrien Solutions (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of bidder: Nutrien Solutions, 13622 E. Hardy Rd., Houston, Texas 77039

Fax: 281-590-5043 Telephone# 832-328-4734

by: Kevin Evans (print name) Title: VM Sales Specialist

Signature: _____

SUBSCRIBED AND SWORN to before me by the above-named

_____ on

this the _____ day of_____, 20___.

_____

Notary Public in and for

the State of _____

Bidder Shall Return Completed Form with Offer.

TARGET® 6 Plus

MSMA Plus Surfactant for Postemergence Weed Control in Cotton, Golf Courses, Sod Farms and Highway Rights of Way

ACTIVE INGREDIENT:	
Monosodium acid methanearsonate* (MSMA)	48.30%
OTHER INGREDIENTS:	51.70%
TOTAL:	100.00%

Total arsenic (as elemental) all in water soluble form 22.30%

***Product contains 6.0 lbs MSMA per gallon**

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical information.

SEE PRODUCT LABEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

FOR CHEMICAL SPILL, LEAK, FIRE OR EXPOSURE CALL TOLL FREE: **1-800-424-9300**

AGRICULTURAL CHEMICAL DO NOT SHIP OR STORE WITH FOODS, FEEDS, DRUGS, OR CLOTHING

EPA Reg. No.: 42519-3

EPA Est. No.: 42519-ISR-1

Net contents: 2.5 Gallons

LUXEMBOURG

Manufactured for:

LUXEMBOURG-PAMOL, INC.

3647 Willowbend Boulevard, Suite 810

Houston, TX 77054, U.S.A.,Tel. 877-343-4239

MADE IN ISRAEL

5003-4/130206_1/11

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Do not apply this product through any type of irrigation system. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. In addition, do not apply this product in a manner that results in spray (or dust) drift that could cause an adverse effect to people or any other non-target organism or site. Only protected handlers may be in the area during application.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- coveralls
- chemical-resistant gloves Category A, such as butyl rubber ≥ 14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils
- shoes and socks
- protective eyewear
- chemical-resistant headgear for overhead exposure

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The Worker Protection Standard applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep children and domestic animals off treated areas until this material has been washed into the soil. The area being treated must be vacated by unprotected persons.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Open dumping is prohibited. Do not store this product near fertilizers, seeds, insecticides, or fungicides. Do not store near heat or open flame. Freezing point of this product is approximately -5°F. If stored below freezing point, warm to 50°F and agitate thoroughly before using. Containers should not be stacked more than six (6) high. Reclose all partially used containers by thoroughly tightening screw cap. Opened, partially used pesticides should be stored in original labeled containers when possible. When transfer to another container is necessary because of leakage or damage, carefully mark, and identify contents of the new container. Absorb any spills with a suitable clay absorbent and dispose of as indicated under "Pesticide Disposal." For safety and prevention of unauthorized use, all pesticides should be stored in locked facilities.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Nonrefillable Container: Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying.

Container size: for 5 gallons or less, triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed. Avoid breathing spray mist. Avoid contact with skin, eyes, and clothing. In cases of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation occurs.

Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators and other handlers must wear:

- long sleeved shirt and long pants
- chemical-resistant gloves Category A, such as butyl rubber ≥ 14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils
- shoes and socks
- protective eyewear
- chemical-resistant apron when cleaning equipment, mixing or loading

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.
See engineering controls statement for further instructions.

Engineering Controls Statement:

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(60)].

User Safety Recommendations

User should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. Do not apply when weather conditions favor drift from target area.

PRODUCT INFORMATION

Target® 6 Plus is a postemergence herbicide for use in cotton, golf courses, sod farms and highway rights of way. Target® 6 Plus contains a surfactant (wetting agent) in proper ratio for best results. It is not necessary to add additional surfactant to the spray tank. Local conditions and recommendations vary; consult an agricultural experiment station or extension service weed specialist for recommendations in your area.
A partial list of weeds controlled with Target® 6 Plus includes: barnyardgrass, brachiaria *spp.*, chickweed, cocklebur, crabgrass, dallisgrass, goosegrass, johnsongrass, nutsedge, pigweed, puncture vine, sandbur.

Note to Users: Do not apply this product in Florida except on cotton in the counties listed in the cotton use section of the label. Aerial application is prohibited, except when applying to cotton.

MIXING INSTRUCTIONS

Fill the spray tank with half the required amount of water and with pump or agitator operating, add the specified amount of Target® 6 Plus, continue filling the tank with the balance of water and mix thoroughly.
Do not store spray solution in tank overnight. Clean application equipment thoroughly after use by flushing with water in a safe place.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.
The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1) The distance of the outer most nozzles on the boom must not exceed three-fourth the length of the wingspan or rotor.
2) Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they shall be observed.
The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

Information on droplet size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling droplet size

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom length

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

Application height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind

Drift potential is lowest between speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive areas

This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive area).

APPLICATION METHODS

Target® 6 Plus should be applied with a low-pressure, properly calibrated sprayer having satisfactory pumping and bypass action. ADJUST NOZZLES TO KEEP SPRAY OFF COTTON FOLIAGE AND IN A MANNER TO ALLOW MAXIMUM COVERAGE OF WEEDS. Adequate coverage is very important for effective weed control. Apply during warm weather and when weeds are in an active stage of growth.

COTTON (Postemergent Use Only)

Target® 6 Plus is useful as a directed postemergence spray for control of the weeds listed above. Mix Target® 6 Plus at the rate of $2^2/_3$ pints in 40 gallons of water for application as a DIRECTED broadcast spray to one acre when weeds are small. For band application in 40-inch rows, apply 1 gallon of above diluted spray solution per inch of band width per acre of cotton. Only 1 application at 2 lbs a.i./acre is allowed per season, except when a salvage operation is needed. Keep spray off cotton foliage.

If a salvage operation is needed (i.e., if pigweed escapes the first application), then a second or repeat application at 2 lbs a.i./acre is allowed. A second or repeat application, if needed, should be timed about 1 to 3 weeks after the first application. Apply only as a salvage operation when cotton is 3 inches high, but no later than 6 inches high or early square, whichever occurs first. Preference should be given to directed spray. In order to minimize injury, the second application should be made as a directed spray when possible.

Slight burning and a reddish discoloration of cotton foliage may occasionally be seen following the treatment; however cotton plants will develop normally and yield will not be affected.

DO NOT apply within 50 feet of permanent water bodies or aquatic habitat, including, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, and estuaries.

DO NOT feed treated foliage to livestock or graze treated areas.

DO NOT make more than two (2) applications per season.

DO NOT apply more than a total of 4 Lbs a.i./acre per season.

DO NOT apply pre-plant to Cotton.

DO NOT apply in Florida except on cotton grown in the following counties: Calhoun, Columbia, Escambria, Hamilton, Holmes, Jackson, Jefferson, Okaloosa, Santa Rosa, Suwannee, Walton, and Washington counties.

NON-CROP

Target® 6 Plus is effective in controlling the above listed weeds and many similar weeds on golf courses, sod farms and highways. Not for use in Florida.

GOLF COURSES

Target® 6 Plus can be used for selective control of bahiagrass, barnyardgrass, chickweed, smooth and large crabgrass, dallisgrass, nutsedge, sandbur and wood sorrel with little or no injury to well-established, actively-growing turf grasses. Mow turf grass to height of 1 to 1½ inches before treatment.

For newly constructed golf courses only one broadcast application is allowed. For all other applications to golf courses, only spot treatments (100 square feet maximum per spot) are allowed. A spot treatment must not exceed 25% of total golf course acreage per year.

Mix 1 fluid ounce (2 tablespoons) of Target® 6 Plus in 1 to 2½ gallons of water for application to an area of 1,000 square feet (100 square feet per spot). Established bermudagrass and zoysiagrass, mix 1 to 2 fluid ounces (2 to 4 tablespoons) of Target® 6 Plus in 1 to 2½ gallons of water for application to an area of 1,000 square feet (100 square feet per spot). Application should be uniform and thorough to adequately wet all undesirable plants.

Make applications during warm weather when temperature is between 80 and 90°F. **DO NOT** water turf for at least 24 hours after application. Turf grasses may be temporarily discolored. Bermudagrass, bluegrasses and zoysiagrass have shown tolerance to properly applied Target® 6 Plus. Injury may result if applied to bent grasses and fescues. **DO NOT** apply to St. Augustinegrass, carpetgrass, centipede grass or to dichondra. **DO NOT** reseed until 2 weeks after last application.

DO NOT treat on golf courses in Florida.

SOD FARMS

Target® 6 Plus can be used for selective control of bahiagrass, barnyardgrass, chickweed, smooth and large crabgrass, dallisgrass, nutsedge, sandbur and wood sorrel with little or no injury to well-established, actively-growing turf grasses. Mow turf grass to height of 1 to 1½ inches before treatment. Mix 1 fluid ounce (2 tablespoons) of Target® 6 Plus in 1 to 2½ gallons of water for application to an area of 1,000 square feet. Established bermudagrass and zoysiagrass, mix 1 to 2 fluid ounces (2 to 4 tablespoons) of Target® 6 Plus in 1 to 2½ gallons of water for application to an area of 1,000 square feet. Application should be uniform and thorough to adequately wet all undesirable plants. A second application may be made, if necessary. Only 2 broadcast applications are allowed per season.

Make applications during warm weather when temperature is between 80 and 90°F. **DO NOT** water turf for at least 24 hours after application. Turf grasses may be temporarily discolored. Bermudagrass, bluegrasses and zoysiagrass have shown tolerance to properly applied Target® 6 Plus. Injury may result if applied to bent grasses and fescues. **DO NOT** apply to St. Augustinegrass, carpetgrass, centipede grass or to dichondra. **DO NOT** reseed until 2 weeks after last application.

DO NOT apply within 25 feet of permanent water bodies or aquatic habitat, including, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, and estuaries.
DO NOT treat sod farms in Florida.

HIGHWAY RIGHTS OF WAY

Only 2 broadcast applications are allowed per season. Do not apply within 100 feet of permanent water bodies or aquatic habitat, including, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, and estuaries.

Application should be made when weeds are small and conditions are favorable for good weed growth. Mix this product at a rate of 2½ to 6 pints per 40 to 50 gallons of water per acre. For 1,000 square feet use 1 to 2 fluid ounces in 5 gallons of water. Spray undesirable vegetation thoroughly to point of run-off. Adequate coverage and complete wetting of foliage is important for effective control. One additional application may be necessary if regrowth occurs.

DO NOT apply the second treatment prior to 10 days after the first treatment.
DO NOT apply with hose-end applicators.
DO NOT use on highway rights of way in Florida.

WARRANTY - CONDITION OF SALE

OUR INSTRUCTIONS FOR USE of this product are based upon field use and tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

To the extent consistent with applicable law, in no case shall Luxembourg-Pamol, Inc. or the Seller be liable for consequential, special, or indirect damages resulting from the use of this product when such use and/or handling is not in strict accordance with directions given herewith. To the extent consistent with applicable law, the foregoing is a condition of sale by Luxembourg-Pamol, Inc. and is accepted as such by the Buyer.

Target® is a registered trademark of Luxembourg

Manufactured by Luxembourg Industries Ltd.
Made in Israel

5003-4/130206_10/11

TARGET® 6 Plus

MSMA Plus Surfactant for Postemergence Weed Control in Cotton, Golf Courses, Sod Farms and Highway Rights of Way

ACTIVE INGREDIENT:	
Monosodium acid methanearsonate* (MSMA)	48.30%
OTHER INGREDIENTS:	51.70%
TOTAL:	100.00%

Total arsenic (as elemental) all in water soluble form 22.30%
***Product contains 6.0 lbs MSMA per gallon**

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical information.

SEE PRODUCT LABEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

FOR CHEMICAL SPILL, LEAK, FIRE OR EXPOSURE CALL TOLL FREE: **1-800-424-9300**
AGRICULTURAL CHEMICAL DO NOT SHIP OR STORE WITH FOODS, FEEDS, DRUGS, OR CLOTHING

EPA Reg. No.: 42519-3
EPA Est. No.: 42519-ISR-1

Net contents: 2.5 Gallons

LUXEMBOURG

Manufactured for:
LUXEMBOURG-PAMOL, INC.
3647 Willowbend Boulevard, Suite 810
Houston, TX 77054, U.S.A., Tel. 877-343-4239

MADE IN ISRAEL

5003-4/130206_11/11

TARGET® 6 Plus

MSMA Plus Surfactant for Postemergence Weed Control in Cotton, Golf Courses, Sod Farms and Highway Rights of Way

ACTIVE INGREDIENT:	
Monosodium acid methanearsonate* (MSMA)	48.30%
OTHER INGREDIENTS:	51.70%
TOTAL:	100.00%

Total arsenic (as elemental) all in water soluble form 22.30%

***Product contains 6.0 lbs MSMA per gallon**

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical information.

SEE PRODUCT LABEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

FOR CHEMICAL SPILL, LEAK, FIRE OR EXPOSURE CALL TOLL FREE: **1-800-424-9300**

AGRICULTURAL CHEMICAL DO NOT SHIP OR STORE WITH FOODS, FEEDS, DRUGS, OR CLOTHING

EPA Reg. No.: 42519-3

EPA Est. No.: 42519-ISR-1

Net contents: 2.5 Gallons

LUXEMBOURG

Manufactured for:

LUXEMBOURG-PAMOL, INC.

3647 Willowbend Boulevard, Suite 810

Houston, TX 77054, U.S.A., Tel. 877-343-4239

MADE IN ISRAEL

5003-4/130206_1/11

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Do not apply this product through any type of irrigation system. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. In addition, do not apply this product in a manner that results in spray (or dust) drift that could cause an adverse effect to people or any other non-target organism or site. Only protected handlers may be in the area during application.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- coveralls
- chemical-resistant gloves Category A, such as butyl rubber ≥ 14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils
- shoes and socks
- protective eyewear
- chemical-resistant headgear for overhead exposure

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The Worker Protection Standard applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep children and domestic animals off treated areas until this material has been washed into the soil. The area being treated must be vacated by unprotected persons.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Open dumping is prohibited. Do not store this product near fertilizers, seeds, insecticides, or fungicides. Do not store near heat or open flame. Freezing point of this product is approximately -5°F. If stored below freezing point, warm to 50°F and agitate thoroughly before using. Containers should not be stacked more than six (6) high. Reclose all partially used containers by thoroughly tightening screw cap. Opened, partially used pesticides should be stored in original labeled containers when possible. When transfer to another container is necessary because of leakage or damage, carefully mark, and identify contents of the new container. Absorb any spills with a suitable clay absorbent and dispose of as indicated under "Pesticide Disposal." For safety and prevention of unauthorized use, all pesticides should be stored in locked facilities.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Nonrefillable Container: Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying.

Container size: for 5 gallons or less, triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed. Avoid breathing spray mist. Avoid contact with skin, eyes, and clothing. In cases of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation occurs.

Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators and other handlers must wear:

- long sleeved shirt and long pants
- chemical-resistant gloves Category A, such as butyl rubber ≥ 14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils
- shoes and socks
- protective eyewear
- chemical-resistant apron when cleaning equipment, mixing or loading

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.
See engineering controls statement for further instructions.

Engineering Controls Statement:

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(60)].

User Safety Recommendations

User should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. Do not apply when weather conditions favor drift from target area.

PRODUCT INFORMATION

Target® 6 Plus is a postemergence herbicide for use in cotton, golf courses, sod farms and highway rights of way. Target® 6 Plus contains a surfactant (wetting agent) in proper ratio for best results. It is not necessary to add additional surfactant to the spray tank. Local conditions and recommendations vary; consult an agricultural experiment station or extension service weed specialist for recommendations in your area.
A partial list of weeds controlled with Target® 6 Plus includes: barnyardgrass, brachiaria *spp.*, chickweed, cocklebur, crabgrass, dallisgrass, goosegrass, johnsongrass, nutsedge, pigweed, puncture vine, sandbur.

Note to Users: Do not apply this product in Florida except on cotton in the counties listed in the cotton use section of the label. Aerial application is prohibited, except when applying to cotton.

MIXING INSTRUCTIONS

Fill the spray tank with half the required amount of water and with pump or agitator operating, add the specified amount of Target® 6 Plus, continue filling the tank with the balance of water and mix thoroughly.
Do not store spray solution in tank overnight. Clean application equipment thoroughly after use by flushing with water in a safe place.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.
The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1) The distance of the outer most nozzles on the boom must not exceed three-fourth the length of the wingspan or rotor.
2) Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they shall be observed.
The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

Information on droplet size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling droplet size

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom length

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

Application height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind

Drift potential is lowest between speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive areas

This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive area).

APPLICATION METHODS

Target® 6 Plus should be applied with a low-pressure, properly calibrated sprayer having satisfactory pumping and bypass action. ADJUST NOZZLES TO KEEP SPRAY OFF COTTON FOLIAGE AND IN A MANNER TO ALLOW MAXIMUM COVERAGE OF WEEDS. Adequate coverage is very important for effective weed control. Apply during warm weather and when weeds are in an active stage of growth.

COTTON (Postemergent Use Only)

Target® 6 Plus is useful as a directed postemergence spray for control of the weeds listed above. Mix Target® 6 Plus at the rate of $2^2/_3$ pints in 40 gallons of water for application as a DIRECTED broadcast spray to one acre when weeds are small. For band application in 40-inch rows, apply 1 gallon of above diluted spray solution per inch of band width per acre of cotton. Only 1 application at 2 lbs a.i./acre is allowed per season, except when a salvage operation is needed. Keep spray off cotton foliage.

If a salvage operation is needed (i.e., if pigweed escapes the first application), then a second or repeat application at 2 lbs a.i./acre is allowed. A second or repeat application, if needed, should be timed about 1 to 3 weeks after the first application. Apply only as a salvage operation when cotton is 3 inches high, but no later than 6 inches high or early square, whichever occurs first. Preference should be given to directed spray. In order to minimize injury, the second application should be made as a directed spray when possible.

Slight burning and a reddish discoloration of cotton foliage may occasionally be seen following the treatment; however cotton plants will develop normally and yield will not be affected.

DO NOT apply within 50 feet of permanent water bodies or aquatic habitat, including, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, and estuaries.

DO NOT feed treated foliage to livestock or graze treated areas.

DO NOT make more than two (2) applications per season.

DO NOT apply more than a total of 4 Lbs a.i./acre per season.

DO NOT apply pre-plant to Cotton.

DO NOT apply in Florida except on cotton grown in the following counties: Calhoun, Columbia, Escambria, Hamilton, Holmes, Jackson, Jefferson, Okaloosa, Santa Rosa, Suwannee, Walton, and Washington counties.

NON-CROP

Target® 6 Plus is effective in controlling the above listed weeds and many similar weeds on golf courses, sod farms and highways. Not for use in Florida.

GOLF COURSES

Target® 6 Plus can be used for selective control of bahiagrass, barnyardgrass, chickweed, smooth and large crabgrass, dallisgrass, nutsedge, sandbur and wood sorrel with little or no injury to well-established, actively-growing turf grasses. Mow turf grass to height of 1 to 1½ inches before treatment.

For newly constructed golf courses only one broadcast application is allowed. For all other applications to golf courses, only spot treatments (100 square feet maximum per spot) are allowed. A spot treatment must not exceed 25% of total golf course acreage per year.

Mix 1 fluid ounce (2 tablespoons) of Target® 6 Plus in 1 to 2½ gallons of water for application to an area of 1,000 square feet (100 square feet per spot). Established bermudagrass and zoysiagrass, mix 1 to 2 fluid ounces (2 to 4 tablespoons) of Target® 6 Plus in 1 to 2½ gallons of water for application to an area of 1,000 square feet (100 square feet per spot). Application should be uniform and thorough to adequately wet all undesirable plants.

Make applications during warm weather when temperature is between 80 and 90°F. **DO NOT** water turf for at least 24 hours after application. Turf grasses may be temporarily discolored. Bermudagrass, bluegrasses and zoysiagrass have shown tolerance to properly applied Target® 6 Plus. Injury may result if applied to bent grasses and fescues. **DO NOT** apply to St. Augustinegrass, carpetgrass, centipede grass or to dichondra. **DO NOT** reseed until 2 weeks after last application.

DO NOT treat on golf courses in Florida.

SOD FARMS

Target® 6 Plus can be used for selective control of bahiagrass, barnyardgrass, chickweed, smooth and large crabgrass, dallisgrass, nutsedge, sandbur and wood sorrel with little or no injury to well-established, actively-growing turf grasses. Mow turf grass to height of 1 to 1½ inches before treatment. Mix 1 fluid ounce (2 tablespoons) of Target® 6 Plus in 1 to 2½ gallons of water for application to an area of 1,000 square feet. Established bermudagrass and zoysiagrass, mix 1 to 2 fluid ounces (2 to 4 tablespoons) of Target® 6 Plus in 1 to 2½ gallons of water for application to an area of 1,000 square feet. Application should be uniform and thorough to adequately wet all undesirable plants. A second application may be made, if necessary. Only 2 broadcast applications are allowed per season.

Make applications during warm weather when temperature is between 80 and 90°F. **DO NOT** water turf for at least 24 hours after application. Turf grasses may be temporarily discolored. Bermudagrass, bluegrasses and zoysiagrass have shown tolerance to properly applied Target® 6 Plus. Injury may result if applied to bent grasses and fescues. **DO NOT** apply to St. Augustinegrass, carpetgrass, centipede grass or to dichondra. **DO NOT** reseed until 2 weeks after last application.

DO NOT apply within 25 feet of permanent water bodies or aquatic habitat, including, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, and estuaries.
DO NOT treat sod farms in Florida.

HIGHWAY RIGHTS OF WAY

Only 2 broadcast applications are allowed per season. Do not apply within 100 feet of permanent water bodies or aquatic habitat, including, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, and estuaries.

Application should be made when weeds are small and conditions are favorable for good weed growth. Mix this product at a rate of 2½ to 6 pints per 40 to 50 gallons of water per acre. For 1,000 square feet use 1 to 2 fluid ounces in 5 gallons of water. Spray undesirable vegetation thoroughly to point of run-off. Adequate coverage and complete wetting of foliage is important for effective control. One additional application may be necessary if regrowth occurs.

DO NOT apply the second treatment prior to 10 days after the first treatment.
DO NOT apply with hose-end applicators.
DO NOT use on highway rights of way in Florida.

WARRANTY - CONDITION OF SALE

OUR INSTRUCTIONS FOR USE of this product are based upon field use and tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

To the extent consistent with applicable law, in no case shall Luxembourg-Pamol, Inc. or the Seller be liable for consequential, special, or indirect damages resulting from the use of this product when such use and/or handling is not in strict accordance with directions given herewith. To the extent consistent with applicable law, the foregoing is a condition of sale by Luxembourg-Pamol, Inc. and is accepted as such by the Buyer.

Target® is a registered trademark of Luxembourg

Manufactured by Luxembourg Industries Ltd.
Made in Israel

5003-4/130206_10/11

LUXEMBOURG

SAFETY DATA SHEET

Issue date: 31/05/2015

1. Identification of the substance or mixture and of the supplier

Product:	**MSMA 48.3% SL**
Commercial product name:	**Target® 6 Plus**
Chemical name:	Monosodium acid methanearsonate
EPA registration number:	42519-3
Recommended use:	Herbicide
Supplier:	Luxembourg-Pamol, Inc. 3647 Willowbend Boulevard, Suite 810 Houston, TX 77054, USA Tel: 877-343-4239
Manufacture:	Luxembourg Industries Ltd. 27 Hamered St., Tel Aviv, 6812509 ISRAEL
Emergency phone number:	+972 3 796 4300
For USA Only:	1-800-424-9300

* Target® is a registered trademark of Luxembourg

2. Hazards identification

Classification of the product (two classifications are presented: a. according to Global Harmonized System of Classification and Labelling of Chemicals (GHS, *fifth revised edition, 2013*) and b. according to OSHA HCS 2012, 29 C.F.R. § 1910.1200

a. ACCORDING TO GHS

Hazard classification:	Acute toxicity, Oral	Category 5
	Acute toxicity, Inhalation (mist)	Category 4
	Hazardous to the aquatic environment	
	Acute hazard	Category 3
	Long term hazard	Category 3

Label elements: Pictogram: Signal word: Warning

Hazard statement(s):	H303	May be harmful if swallowed.
	H332	Harmful if inhaled.
	H412	Harmful to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention:	P261	Avoid breathing mist.

LUXEMBOURG-PAMOL, INC.
3647 Willowbend Boulevard, Suite 810, Houston, TX 77054, U.S.A. PHONE: (713) 661-8800, PHONE: (877) 343-4239, E-mail: main@luxpam.com

	P271	Use only outdoors or in a well-ventilated area.
	P273	Avoid release to the environment.
Response:	P312	Call a POISON CENTER/doctor/physician if you feel unwell.
	P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Storage:	No storage statements required.	
Disposal:	P501	Dispose of contents/container in accordance with national/ international regulations.

b. ACCORDING TO OSHA HCS 2012, 29 C.F.R. § 1910.1200

Hazard(s) identification: Acute toxicity, Inhalation (mist) Category 4

Hazard statement: Harmful if inhaled

Signal word: Warning

Pictogram: Exclamation mark

Precautionary statements:

Prevention: Avoid breathing mists.
Use only outdoors or in a well-ventilated area.

Response: If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor/physician if you feel unwell.

Storage: No storage statements.

Disposal: No disposal statements.

Hazards Not Otherwise Classified (HNOC): Not known.

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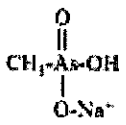
3. Information on ingredients contributing to hazard

Common name: MSMA, Monosodium methanearsonate

Chemical family: Organo-arsenic compounds

Chemical formula: CH_4AsO_3Na

Structural formula:



CAS No.: 2163-80-6

Content: 46.9-49.7%, 720 g/L

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4. First-aid measures

Ingestion: Call a poison control center or doctor immediately for treatment advice.
Have person sip a glass of water if able to swallow.
Do not induce vomiting unless told to do so by a poison control center or doctor.
Do not give anything by mouth to an unconscious person.

Inhalation: Move person to fresh air.
If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
Call a poison control center or doctor for further treatment advice.

Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes.
Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
Call a poison control center or doctor for treatment advice.

Skin: Take off contaminated clothing.
Rinse skin immediately with plenty of water for 15-20 minutes.
Call a poison control center or doctor for treatment advice.

Most important symptoms and effects, both acute and delayed:

Although the organic (methylated) pentavalent compounds (arsonates) incur the least hazard of the arsenicals, it is prudent to manage cases of arsenical pesticide ingestion as though all are highly toxic.

Effects associated with acute MSMA exposure:
Gastrointestinal (GI) adverse effects predominate, with vomiting, abdominal pain and rice-water or bloody diarrhea being the most common. Other GI effects include inflammation, vesicle formation and eventual sloughing of the mucosa in the mouth, pharynx and esophagus.

Symptoms related to the central nervous system may begin with headache, dizziness, drowsiness and confusion.

Effects associated with chronic exposure to MSMA:
Chronic exposure to MSMA is unlikely when handling according to label directions.

Indication of any immediate medical attention and special treatment needed.

If ingested, gastric lavage may be indicated. Literature recommendations for arsenic poisoning calls for chelation therapy with BAL or d-penicillamine. Persons with sensitivity to penicillins may suffer an allergic reaction. BAL is recommended for persons allergic to penicillin.

5. Fire-fighting measures

Suitable extinguishing media: Dry chemical or carbon dioxide (CO_2), do not use water or foam, as this may spread product.

Specific hazards arising from the chemical: Reducing agents may release arsine gas.

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Special protective equipment and precautions for fire-fighters: Wear chemical protective clothing and self-contained breathing apparatus (SCBA) with positive pressure.

6. Accidental release measures

Personal precautions, protective equipment: Use personal protective equipment. Avoid breathing mist. Ensure adequate ventilation.

Environmental precautions: Do not apply directly to water. Do not discharge into drains/surface waters/groundwater. Do not contaminate water by cleaning of equipment or disposal waste. Do not contaminate waters used for domestic purposes, or by wildlife, including aquatic life, or for irrigation.

Methods and materials for containment and cleaning up: Stop leak if possible. Contain spilled product with an inert diking material, such as sand. Cover the spill area with a 1:1 mixture of vermiculite and solid calcium oxide (the amount of the mixture should be at least double the size of the spill). Place reclaimed product in a closed and properly labeled waste drum. Store drum in separate area until proper disposal. Flush residue with water.

7. Handling and storage

Precautions for safe handling: Wear suitable protective clothing. Avoid contact with skin and eyes. Do not breathe mist. Avoid formation of aerosols. Provide appropriate exhaust ventilation. Wash hands and exposed skin thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Store in a cool place. Keep container tightly closed in a dry and well ventilated place. Damaged or leaking containers which cannot be used immediately should be transferred to suitable sound containers and properly marked. Incompatibility: Heavy metal salts may cause precipitation. Mild corrosive to steel. May react with reducing agents such as aluminum, zinc, sodium borohydride, sulfur dioxide.

8. Exposure controls / personal protection

Occupational exposure limits: **Exposure limits for organic arsenic compounds**

OSHA PEL-TWA, (as As):
0.5 mg/m^3

OSHA California/PEL-TWA, (as As):
0.2 mg/m^3

ACGIH (2015) TLV-TWA:
Not established

Appropriate engineering controls:	Provide exhaust ventilation or other engineering controls. Wash hands before breaks and at the end of the workday.
Personal protective equipment:	Long sleeve shirt, long pants, boots, chemical resistant gloves, dust or mist respirator, and protective eyewear.

9. Physical and chemical properties

Appearance:	Clear liquid
Color:	Colourless to yellow
Odor:	Odourless
Odor threshold:	Not relevant
pH:	5-7
Freezing point:	-25 to -15°C
Boiling point:	Not available
Evaporation rate:	Not available
Flash point:	> 100°C
Flammability:	Not flammable
Upper/lower flammability or explosive limits:	Not relevant
Vapour pressure (25°C):	$<1x10^{-5}$ Pa (MAA)
Vapour density:	Not available
Relative density:	Not available
Bulk density (20°C):	1.3-1.7 g/mL
Solubility in water (25°C):	104 g/100 mL (MSMA 100%)
Partition coefficient n-octanol/water (23°C):	Not relevant
Ignition temperature:	Not relevant
Decomposition temperature:	Not available
Viscosity (25°C):	27.7 cps (MSMA 51%)

10. Stability and reactivity

Reactivity:	Heavy metal salts may cause precipitation. Mildly corrosive to steel. May react with reducing agents such as aluminum, zinc, sodium borohydride, sulfur dioxide.
Chemical stability:	Stable under normal temperatures and pressure.
Possibility of hazardous reactions:	Not available.
Conditions to avoid:	Not available.
Incompatible materials:	Reducing agents such as aluminum, zinc, sodium borohydride, sulfur dioxide.
Hazardous decomposition products:	Reducing agents may release arsine gas.

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11. Toxicological information

Acute toxicity

Oral LD_{50} (rat):	2833 mg/kg
Dermal LD_{50} (rabbit):	>2000 mg/kg
Inhalation LC_{50} (1h, rat):	10.8 mg/L
Inhalation LC_{50} (4h, rat):	2.2 mg/L

Skin corrosion/irritation

Skin irritation (rabbit): Not a primary irritant

Serious eye damage/irritation

Eye irritation (rabbit): Not a primary irritant

Respiratory or skin sensitization

Dermal sensitization (guinea pig): Not a contact sensitizer

Germ cell mutagenicity: Not mutagenic

Carcinogenicity: MSMA is not a carcinogen. It did not cause tumors in any of the carcinogenicity studies that were conducted.

NTP: Not listed
OSHA: Not listed
IARC: Not listed

Reproductive toxicity: Not available

STOT* single exposure: Not available

STOT repeated exposure: Not available

Aspiration hazard: Not available

*Specific Target Organ Toxicity

12. Ecological information

Ecotoxicity: (MSMA 51%)

Birds:

Northern bobwhite LD_{50}:	834 mg/kg
Northern bobwhite LC_{50} (5d):	3269 mg/L
Mallard LC_{50} (5d):	>5620 mg/L

Fish:

Bluegill sunfish LC_{50} (96 h): > 93 mg/L

Crustacean:

Daphnia pulex LC_{50} (48 h): 82.85 mg/L

Aquatic plants:

Lemna gibba E_rC_{50} (14 days): 145.9 mg /L

Bees:

Apis mellifera LD_{50} (48hr, contact): 68 µg/bee

Persistence and degradability: Not readily biodegradable

Bioaccumulative potential: No bioaccumulative potential (the product is hydrophilic, BCF less than 1X)

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Mobility in soil:	Not available
Other adverse effects:	Not available

13. Disposal considerations

According to FIFRA: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

14. Transport information

Not regulated for transportation.

15. Regulatory information

This data sheet complies with the requirements of the Global Harmonized System of Classification and Labelling of chemicals (GHS, *fifth revised edition, 2013*) and the Occupational Safety and Health Standards HCS 2012, 29 C.F.R. § 1910.1200 (OSHA).

According to FIFRA: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION
Harmful if swallowed.
Harmful if absorbed through skin.
Causes moderate eye irritation.

TSCA Inventory: This product is exempt from TSCA inventory listing requirements as it is solely for FIFRA regulated use.

16. Other information

The information contained herein is applicable solely to the indicated product, and does not relate to any other use of this product as described. Its use is intended by persons having technical skill and at their own discretion and risk. The information has been developed from sources reliable. This information is furnished without warranty, expressed or implied, including the warranties of merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Issue date: 28/05/2015 (EA, LS,ME)
Version: 4
Replace version: 3 from 15/04/2015

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Specimen Label

RESTRICTED USE PESTICIDE
May Injure (Phytotoxic) Susceptible, Non-Target Plants. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Commercial certified applicators must also ensure that all persons involved in these activities are informed of the precautionary statements.

Dow AgroSciences™

Tordon® K

Specialty Herbicide

For control of annual and perennial broadleaf weeds, woody plants, and vines on forest planting sites and non-crop areas including industrial manufacturing sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides, railroads, and wildlife openings in forest and non-crop areas

Not for sale, distribution or use in Nassau and Suffolk Counties in New York State

Active Ingredient:
picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt 24.4%
Other Ingredients 75.6%
Total Ingredients 100.0%

Acid Equivalent:
picloram: 4-amino-3,5,6-trichloropicolinic acid - 21.1% - 2 lb/gal

EPA Reg. No. 62719-17

Keep Out of Reach of Children

CAUTION

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to label booklet for Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Causes Moderate Eye Irritation

Avoid contact with eyes or clothing. Prolonged or frequent repeated skin contact may cause allergic skin reactions in some individuals.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves (> 14 mils) such as butyl, natural rubber, neoprene or nitrile rubber
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the WPS (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This pesticide is toxic to some plants at very low concentrations. Non-target plants may be adversely affected if pesticide is allowed to drift from areas of application. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not contaminate water used for irrigation or domestic purposes by cleaning of equipment or disposal of wastes. Do not allow runoff or spray to contaminate wells, irrigation ditches or any body of water used for irrigation or domestic purposes. Do not make application when circumstances favor movement from treatment site.

Picloram is a chemical which can travel (seep or leach) through soil and under certain conditions has the potential to contaminate groundwater which may be used for irrigation and drinking purposes. Users are advised not to apply picloram where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow **or** to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and

substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

An aquifer is defined as "an underground, saturated, permeable, geologic formation capable of producing significant quantities of water to a well or spring. It is the ability of the saturated zone, or portion of that zone, to yield water which makes it an aquifer" (American Chemical Society, 1983).

This chemical can contaminate surface water through spray drift. Under some conditions, picloram may also have a high potential for runoff into surface water (primarily via dissolution in runoff water). These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

This product is not intended for manufacturing or formulating.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves (>14 mils) such as butyl, natural, neoprene or nitrile rubber
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: Do not enter or allow worker entry into treated areas until sprays have dried, unless applicator and other handler PPE is worn.

Storage and Disposal

Do not contaminate water, food, fertilizer or feed by storage or disposal. Open dumping is prohibited.
Pesticide Storage: Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.
Pesticide Disposal: Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to applicable Federal, state or local procedures.

Nonrefillable containers 5 gallons or less:
Container Disposal: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers larger than 5 gallons:
Container Reuse: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions,worn-out threads and closure devices. Check for leaks after refilling and before transporting. If the container cannot be refilled, follow cleaning instructions for nonrefillable containers.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Nonrefillable containers larger than 5 gallons:
Container Disposal: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

General Information

Tordon® K herbicide is recommended for control of unwanted susceptible annual and perennial broadleaf weeds, woody plants, and vines on forest planting sites and non-crop areas including industrial manufacturing sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides, railroads, and wildlife openings in forest and non-crop areas.

General Use Precautions

Not for sale, distribution or use in Nassau and Suffolk Counties in New York State

Use this product only as specified on this label.

Do not rotate food or feed crops on treated land if they are not registered for use with picloram until an adequately sensitive bioassay or chemical test shows that no detectable picloram is present in the soil.

Do not move treated soil to other areas or use it to grow plants if they are not registered for use with picloram until an adequate sensitive bioassay or chemical test shows that no detectable picloram is present in the soil.

Do not spray if the loss of forage legumes cannot be tolerated. Tordon K may injure or kill legumes. New legume seedlings may not grow within 2 years following application of this herbicide.

Do not transfer livestock from treated grazing areas onto sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated grass pasture. Otherwise, urine may contain enough picloram to cause injury to sensitive broadleaf plants.

Do not use manure from animals grazing treated areas on land used for growing broadleaf crops, ornamentals, orchards or other susceptible, desirable plants. Manure may contain enough picloram to cause injury to susceptible plants.

Do not use grass or hay from treated areas for composting or mulching of susceptible broadleaf plants.

Do not apply this product through a mist blower.

Be sure that use of this product conforms to all applicable regulations.

Observe any special use and application restrictions and limitations, including method of application and permissible areas of use as promulgated by state authorities.

Maximum Use Rates:

Non-cropland Areas: Total use of Tordon K, including retreatments or spot treatments, must not exceed 1.0 lb a.i. picloram (2 quarts) per acre per annual growing season on rights-of-way and other non-crop areas. On forest sites, no more than 1.0 lb a.i. picloram (2 quarts) per acre may be applied within a period of 2 annual growing seasons.
Rangeland and Permanent Grass Pastures: For control of noxious or invasive weeds as defined by federal, state, or local authorities, do not apply more than 1.0 lb active ingredient (2 quarts of Tordon K) per acre per annual growing season as a broadcast treatment. Spot treatments may be applied at the equivalent broadcast rate of up to 1.0 lb active ingredient (2 quarts) per acre.
For control of other broadleaf weeds and woody plants, do not apply more than 0.5 lb active ingredient (1 quart of Tordon K) per acre per annual growing season. Spot treatments may be applied at an equivalent broadcast rate of up to 1.0 lb active ingredient (2 quarts) per acre per annual growing season, but not more than 50% of an acre may be treated. Repeat treatments may be applied as necessary, but total use must not exceed the maximum amount specified.

Do not make application when circumstances favor movement from treatment site.

Do not contaminate water intended for irrigation or domestic purposes. To avoid injury to crops or other desirable plants, do not treat or allow spray drift or runoff to fall onto banks or bottoms of irrigation ditches, either dry or containing water, or other channels that carry water that may be used for irrigation or domestic purposes. Do not apply to snow or frozen ground.

Do not apply or otherwise permit Tordon K or sprays containing Tordon K to contact crops or other desirable broadleaf plants, including but not limited to alfalfa, beans, cotton, grapes, melons, peas, potatoes, safflower, soybeans, sugar beets, sunflower, tobacco, tomatoes, and other vegetable crops, flowers, fruit plants, ornamentals or shade trees.

Tordon K may not be applied on residential or commercial lawns or near ornamental trees and shrubs. Untreated trees can occasionally be affected by root uptake of herbicide through movement into the top soil or by excretion of the product from the roots of nearby treated trees. Do not apply Tordon K within the root zone of desirable trees unless such injury can be tolerated.

Conifer planting intervals vary. Pines planted sooner than six months after treatment with Tordon K may be injured in the South or west of the Cascade Mountains. Other conifers, west of the Cascade Mountains, may be injured if planted sooner than 8 to 9 months after treatment. For all conifers, the waiting period between treatment and planting should be 11 to 12 months in the area between the Cascade and Rocky Mountains and 8 to 9 months in the lake States and Northeastern U.S.

Precautions for Avoiding Spray Drift

- Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors.
- Determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.
- Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.
- Apply only when the wind speed is 2-10 mph at the application site.

Additional requirements for aerial applications:
- The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter
- Do not release spray at a height greater than 10 feet above the crop canopy
- Do not make applications into temperature inversions

Additional requirements for ground boom application:
- Do not apply with a nozzle height greater than 4 feet above the crop canopy.

Applications should be made only when there is little or no hazard from spray drift. Very small quantities of spray, which may not be visible, may seriously injure susceptible plants. Do not spray when wind is blowing toward susceptible crops or ornamental plants near enough to be injured.

It is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movement, lapse conditions, or temperature inversions (stable air). If the smoke layers or indicates a potential for hazardous spray drift, do not spray.

For aerial application on rights-of-way or other areas near susceptible crops, use Nalco-Trol drift control additive as recommended by the manufacturer or apply through a Micro-Foil or Thru-Valve boom or use an equivalent drift control system. Thickened sprays prepared by using high viscosity invert systems or other drift control additives or systems may be utilized if drift control is comparable to that obtained with Nalco-Trol or the Thru-Valve boom. If a spray thickening agent is used, follow all use recommendations and precautions on the product label. Do not use a thickening agent with the Micro-foil boom, or other systems that cannot accommodate thick sprays.

Ground Equipment: With ground equipment, spray drift can be reduced by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; by using spray pressures no greater than are required to obtain adequate plant coverage; by using large droplet-producing nozzle tips; and by spraying when wind velocity is low. Do not apply with hollow cone-type insecticide or other nozzles that produce a fine-droplet spray.

High Volume Leaf-Stem Treatment: Spray drift can be reduced by using spray pressures no greater than are required to obtain adequate plant coverage and spraying no higher than brush tops. Avoid excessive pressures that result in formation of fine spray mists. Nalco-Trol thickening agent or equivalent may be used to reduce spray drift.

Aerial Application: Avoid spray drift at the application site. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. Users are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

1. The distance of the outer most operating nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory.** [This information is advisory in nature and does not supersede mandatory label requirements.]

Aerial Drift Reduction Advisory

Information On Droplet Size
The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size
- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produced larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

Wind: Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature And Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Plants Controlled by Tordon K

Annual and Perennial Broadleaf Weeds:

artichoke thistle
absinth wormwood
bouncingbet
broom snakeweed
burroweed
bursage
Canada thistle
chicory
clover
fleabane
field bindweed
goldenrod
horsenettle
knapweeds
larkspurs
leafy spurge
locoweed
lupines
milkweeds
musk thistle
rush skeletonweed
Russian thistle
sowthistle
starthistles
tansy ragwort
toadflax
wild carrot
wild parsnip

Woody Plants and Vines:

aspen
blackberries
buttonbush
cactus species
catclaw acacia
cedar
chaparral species
dogwood
Douglas fir
firs
fringed sagebrush
gorse
guava
gums
haw
hemlock
hickory
java plum
lantana
liveoak
locust
maple
mesquite
oak
persimmon
pine
poison oak
poplars
rabbitbrush
salmonberry
sassafras
sourwood
spruce
sumac
trumpetcreeper
willows
juniper

Application

Use Tordon K at rates of 1/4 to 2 quarts per acre to control broadleaf weeds, woody plants, and vines. Tordon K Herbicide may be tank mixed with Garlon® 4 Herbicide, Garlon 3A Herbicide, 2,4-D amines or low-volatile esters, Envert 171 and Weedone 2,4-DP to control mixed plant species. When tank mixing, observe all precautions, directions, and limitations on each product label. In all cases use the amounts specified in enough spray volume to give thorough and uniform coverage of the plants to be controlled.

To Prepare Water-Based Sprays Containing Tordon K
Add the total required amount of water to the spray tank. When using Nalco-Trol drift control additive, add at rates specified on its container while using continuous agitation. Next, add the required amount of Tordon K. If a tank mixture of herbicides is to be used, add the required amount of Garlon 4 Herbicide or Garlon 3A Herbicide, 2,4-D 3.8 lb/gal amine or low volatile ester, or Weedone 2,4-DP. Use of a non-ionic agricultural surfactant, such as Ortho X-77, Triton AG-98, or Tronic, is recommended for all applications. When using surfactants, follow the use directions and precautions listed on the surfactant manufacturer's label. Use the higher recommended concentrations of surfactant in the spray mixture when applying lower spray volumes per acre. Continuous agitation should be maintained while mixing the spray.

Observe all use precautions listed on this label.

High Volume Leaf-Stem Treatment
Use Tordon K at the rate of 1/2 to 4 quarts in enough water to make 100 gallons of spray to control vines and other woody plants. To control additional species, mix 1/2 to 1 quart of Tordon K with 1 to 3 quarts of Garlon 4 Herbicide or 1 to 4 quarts of Garlon 3A Herbicide, or 4 to 8 quarts of 3.8 lb/gal 2,4-D amine or low volatile ester in 100 gallons of spray mixture.

Apply after the foliage is well developed and in a manner to give thorough spray coverage. Wet all leaves, stems, and root collars. For hard-to-kill species such as hickory and oak, wet the soil around the root collar. The amount of spray mixture per acre will vary with plant size and density; however, total use of Tordon K, including total cumulative use with other picloram-containing products, must not exceed maximum application rates specified on this label.

Spot Treatment of Broadleaf Weeds
Use 1/4 to 4 quarts of Tordon K in 100 gallons of water and spray weed foliage uniformly. In tank mix combinations, use 1/4 to 1 quart Tordon K with 1 to 2 quarts of Garlon 4 Herbicide or 1 to 3 quarts of Garlon 3A Herbicide or with 1 to 2 quarts of 2,4-D 3.8 lb/gal amine or low volatile ester or with 2/3 to 1 1/3 quarts of 5.6 lb/gal 2,4-D low volatile ester. The amount of spray mixture per acre will vary with plant size and density; however, total use of Tordon K, including total cumulative use with other picloram-containing products, must not exceed maximum application rates specified on this label.

Broadcast Ground or Aerial Foliage Treatment
To obtain adequate plant coverage, it is recommended that ground applications of Tordon K be made in 15 or more gallons of total spray mixture per acre. For aerial applications, use of 5 to 20 gallons per acre of spray mixture is recommended. Use higher spray volumes where plants are tall, where the vegetation to be treated is dense, or where difficult to control species are present.

Broadleaf Annual and Perennial Weed and Woody Vine Control
Use Tordon K at rates of 1/4 to 2 quarts per acre. Apply to problem weeds and vines any time after growth begins in the spring before full bloom and late in summer or fall. Rates to control several broadleaf weeds are shown in the table below.

Weed Species	Rates of Tordon K Per Treated Acre
Yellow Starthistle, Scotch Thistle, Musk Thistle, Ox-eye Daisy	1/4 to 1/2 quart
Artichoke Thistle, Diffuse Knapweed, Spotted Knapweed, Henbane, Buffalobur, Lupines, Locoweeds, Broom Snakeweed	1/2 to 1 quart
Pricklypear and Cholla cactus, Burroweed, Plains Larkspur	1 to 2 quarts
Canada Thistle, Rush Skeletonweed, Russian Knapweed, Dalmatian Toadflax, White Horsenettle	2 quarts
Tall Larkspur, Leafy Spurge, Field Bindweed, Poison Oak	2 quarts

In tank mix combinations, use 1/4 to 1 quart Tordon K per acre with 1 to 3 quarts of Garlon 4 Herbicide or 1 to 4 quarts of Garlon 3A Herbicide or with 1 to 2 quarts of 3.8 lb/gal 2,4-D amine or low volatile ester or with 2/3 to 1 1/3 quarts of 5.6 lb/gal 2,4-D low volatile ester.

Woody Plant Control
Rates to control several woody plants are shown in the table below.

Plant Species	Rates of Tordon K Per Treated Acre
Rabbitbrush, Mesquite	1/2 to 1 quart
Catclaw Acacia	1 to 2 quarts
Pinyon, Juniper, Chaparral, Gorse, Willows, Poplars, Douglas Fir, Cedars	1 to 2 quarts
Gamble Oak, Liveoak, Poison Oak	2 quarts

For difficult-to-control woody species such as balsam fir, black or Sitka spruce, gums, hickory, maple, oaks, and sourwood use 2 quarts of Tordon K per acre with 2 to 5 quarts of Garlon 4 Herbicide or 4 to 8 quarts of Garlon 3A Herbicide or with 6 to 8 quarts of 3.8 lb/gal 2,4-D low volatile ester, or with 4 to 5 1/3 quarts of 5.6 lb/gal 2,4-D low volatile ester. To control maple, conifers and root-suckering species such as sassafras, sumac, black locust, persimmon, salmonberry, blackberry and western dewberry, apply a mixture of 1 1/2 to 2 quarts of Tordon K per acre plus 3 to 5 quarts of Garlon 4 Herbicide or 4 to 8 quarts of Garlon 3A Herbicide or plus 4 to 10 quarts of 3.8 lb/gal 2,4-D low volatile ester or Weedone 2,4-DP, or plus 2 2/3 to 6 2/3 quarts of 5.6 lb/gal 2,4-D low volatile ester.

Broadcast Cut Stubble Treatment
To prevent re-sprouting of susceptible woody species after mowing or hand cutting on non-crop areas and rights-of-way, use Tordon K Herbicide at the the maximum allowable rate in 25 or more gallons of a water spray mixture. Best results may be obtained when applications are made before or during periods of active root growth. Applications should not be made when the soil is frozen or covered by snow or standing water. It is recommended that applications be made soon after cutting, before sprouting of woody species has occurred.

Invert Emulsions
Tordon K can be applied as an invert emulsion tank mix combination spray with Envert 171 Woody Plant Herbicide or other approved invert agent. Consult label directions for Envert 171 Woody Plant Herbicide or invert agent to determine recommended use.

Use of Tordon K with an invert agent results in a thick invert water-in-oil spray emulsion designed to minimize spray drift. Such an emulsion may be formed in a single tank (Batch Mixing) or flash inverted (Flash Mixing). For specific instructions, see invert agent or Envert 171 label.

Where root-suckering species such as sumac, sassafras, locust and black gum predominate, mix 3 gallons of Envert 171 plus 1 1/2 quarts Tordon K with 9 gallons of water for each acre to be sprayed.

Where harder-to-control species such as red maple, elm or oaks are present, mix 5 to 6 gallons of Envert 171 plus 1 to 2 quarts of Tordon K with 15 to 18 gallons of water for each acre to be sprayed.

Broadcast Treatments for Forest Site Preparation (Not for Conifer Release)

For broadcast applications apply the specified rate of Tordon K in a total spray volume of 5 to 25 gallons per acre by air or 10 to 100 gallons per acre by ground. Use spray volumes sufficient to provide thorough coverage of treated foliage. Use application systems designed to prevent spray drift to off-target sites. Nozzles or additives that produce larger droplets may require higher spray volumes to provide adequate coverage.

Southern States (Alabama, Arkansas, Delaware, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia): To control susceptible woody plants and broadleaf weeds, apply Tordon K at a rate of 2 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 2 quarts per acre of Tordon K in tank mix combination with 2 to 4 quarts of Garlon 4 herbicide. Where grass control is desired, Tordon K, alone or in combination with Garlon 4 herbicide, may be tank mixed with 1 to 4 quarts per acre of Accord or Roundup herbicides, or 8 to 16 fluid ounces per acre of Arsenal Applicator's Concentrate herbicide. Susceptible woody plants, broadleaf weeds and grasses may also be controlled using a tank mix of 2 quarts per acre of Tordon K with 3 to 5 quarts per acre of Accord or Roundup herbicides, or 16 to 24 fluid ounces of Arsenal Applicator's Concentrate. When applying tank mixes, follow use directions and precautions on each product label.

In Western, Northeastern, North Central and Lake States (States Not Listed Above As Southern States): To control susceptible woody plants and broadleaf weeds, apply Tordon K at a rate of 1 to 2 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 1 to 2 quarts per acre of Tordon K in tank mix combination with 1.5 to 3 quarts per acre of Garlon 4 herbicide. Where grass control is also desired, Tordon K, alone or in tank mix combination with Garlon 4, may be applied with 1 to 3 quarts per acre of Accord or Roundup herbicide, 2 to 4 ounces per acre of Oust, a combination of Accord (or Roundup) plus Oust at the rates listed, or 8 to 16 fluid ounces of Arsenal Applicator's Concentrate. When applying tank mixes, follow the use directions and precautions on each product label.

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

Warranty Disclaimer

To the extent permitted by law, Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extente permitted by law, all such risks shall be assumed by the buyer.

Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer and Inherent Risks of Use and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of the Seller or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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Label Code: D02-112-025
Replaces Label Code D02-112-024
LOES Number: 010-00095

EPA accepted 03/31/09

Revisions:
1. Remove picloram training statement

Dow AgroSciences

SAFETY DATA SHEET

DOW AGROSCIENCES LLC

Product name: TORDON™ K Herbicide

Issue Date: 05/14/2015
Print Date: 06/09/2015

DOW AGROSCIENCES LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: TORDON™ K Herbicide

Recommended use of the chemical and restrictions on use
Identified uses: End use herbicide product

COMPANY IDENTIFICATION
DOW AGROSCIENCES LLC
9330 ZIONSVILLE RD
INDIANAPOLIS IN 46268-1053
UNITED STATES

Customer Information Number: 800-992-5994
info@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-992-5994
Local Emergency Contact: 352-323-3500

2. HAZARDS IDENTIFICATION

Hazard classification
This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.
Flammable liquids - Category 4
Skin sensitisation - Category 1

Label elements
Hazard pictograms

Signal word: **WARNING!**

Hazards
Combustible liquid.
May cause an allergic skin reaction.

Precautionary statements

Prevention
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage
Store in a well-ventilated place. Keep cool.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Picloram Potassium Salt	2545-60-0	24.4%
Potassium hydroxide	1310-58-3	2.2%
Balance	Not available	73.4%

4. FIRST AID MEASURES

Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

Skin contact: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be available in work area.

Eye contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

Unsuitable extinguishing media: no data available

Special hazards arising from the substance or mixture
Hazardous combustion products: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn. If exposed to fire from another source and water is evaporated, exposure to high temperatures may cause toxic fumes.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers,

boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Refer to section 7, Handling, for additional precautionary measures. No smoking in area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep out of reach of children. Keep away from heat, sparks and flame. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Use with adequate ventilation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Potassium hydroxide	ACGIH	C	2 mg/m3

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquid.
Color	Brown
Odor	mild, sweet
Odor Threshold	No test data available
pH	7.23 (aqueous 10% slurry)
Melting point/range	Not applicable
Freezing point	No test data available
Boiling point (760 mmHg)	100 °C (212 °F)
Flash point	**closed cup** 88 °C (190 °F) *Setaflash Closed Cup ASTM D3828*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	22 mmHg at 20 °C (68 °F) Approx.
Relative Vapor Density (air = 1)	1.14
Relative Density (water = 1)	1.16 at 20 °C (68 °F) / 20 °C *NAPM 2A.00*
Water solubility	water solution
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available

Dynamic Viscosity	< 5 mPa.s at 25.4 °C (77.7 °F)
Kinematic Viscosity	3.88 cSt at 20 °C (68 °F)
Explosive properties	No *EEC A14*
Oxidizing properties	No significant increase (>5C) in temperature.
Liquid Density	1.163 g/cm3 at 20 °C (68 °F) *Digital density meter*
Molecular weight	no data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Thermally stable at typical use temperatures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with: Oxidizers. Strong acids.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Nitrogen oxides. Toxic gases are released during decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Very low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

As product:
LD50, Rat, male and female, > 5,000 mg/kg

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product:
LD50, Rabbit, > 5,000 mg/kg

Acute inhalation toxicity

No adverse effects are anticipated from single exposure to mist. Based on the available data, narcotic effects were not observed. Based on the available data, respiratory irritation was not observed.

As product:
LC50, Rat, male and female, 4 Hour, Aerosol, > 8.11 mg/l

Skin corrosion/Irritation
Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
May cause moderate eye irritation.
Corneal injury is unlikely.

Sensitization
Has caused allergic skin reactions when tested in guinea pigs.
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
For the active ingredient(s):
Repeated exposure did not produce systemic toxicity when applied to the skin of rabbits.

Carcinogenicity
For similar active ingredient(s). Picloram acid. Did not cause cancer in laboratory animals.

Teratogenicity

For the active ingredient(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
For similar active ingredient(s). Picloram acid. In animal studies, did not interfere with reproduction.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 26 mg/l

Acute toxicity to aquatic invertebrates
EC50, eastern oyster (Crassostrea virginica), flow-through test, 48 Hour, 18 - 32 mg/l

Acute toxicity to algae/aquatic plants
EC50, Skeletonema costatum, static test, 120 Hour, 14 mg/l

EC50, diatom Navicula sp., Biomass, 3.9 mg/l

Toxicity to Above Ground Organisms
Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

dietary LC50, Anas platyrhynchos (Mallard duck), > 10000mg/kg diet.

dietary LC50, Colinus virginianus (Bobwhite quail), 8 d, > 10000mg/kg diet.

contact LD50, Apis mellifera (bees), 24 Hour, > 20micrograms/bee

Toxicity to soil-dwelling organisms
LC50, Eisenia fetida (earthworms), 14 d, > 2,388.89 mg/kg

Persistence and degradability

Picloram Potassium Salt

Biodegradability: For similar active ingredient(s). Picloram. Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Biodegradation may occur under aerobic conditions (in the presence of oxygen). Surface photodegradation is expected with exposure to sunlight.
Biodegradation under aerobic laboratory conditions is below detectable limits (BOD20 or BOD28/ThOD < 2.5%).

Theoretical Oxygen Demand: 0.86 mg/mg

Chemical Oxygen Demand: 0.64 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
20 d	0 %

Potassium hydroxide

Biodegradability: Biodegradation is not applicable.

Balance

Biodegradability: No relevant data found.

Bioaccumulative potential

Picloram Potassium Salt

Bioaccumulation: For similar active ingredient(s). Picloram. Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is very high (Koc between 0 and 50).

Potassium hydroxide

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Balance

Bioaccumulation: No relevant data found.

Mobility in soil

Picloram Potassium Salt

For similar active ingredient(s).
Picloram.
Potential for mobility in soil is very high (Koc between 0 and 50).

Potassium hydroxide

No data available for assessment due to technical difficulties with testing.

Balance

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Combustible liquid, n.o.s.(Picloram Potassium Salt Mixture)
UN number	NA 1993
Class	CBL
Packing group	III
Reportable Quantity	Potassium hydroxide

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Picloram Potassium Salt Mixture)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Picloram Potassium Salt Mixture
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(Picloram Potassium Salt Mixture)
UN number	UN 3082
Class	9
Packing group	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Fire Hazard
Acute Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
This product contains the following substances which are subject to CERCLA Section 103 reporting requirements and which are listed in 40 CFR 302.4.

Components	**CASRN**	**RQ**
Potassium hydroxide	1310-58-3	1000 lbs RQ

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Pennsylvania (Worker and Community Right-To-KnowAct): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Components	CASRN
Potassium hydroxide	1310-58-3

Pennsylvania (Worker and Community Right-To-KnowAct): Pennsylvania Special Hazardous Substances List:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

United States TSCA Inventory (TSCA)
This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

Federal Insecticide, Fungicide and Rodenticide Act
EPA Registration Number: 62719-017
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Causes moderate eye irritation
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

16. OTHER INFORMATION

Hazard Rating System
NFPA

Health	Fire	Reactivity
1	2	0

Revision
Identification Number: 101201631 / A211 / Issue Date: 05/14/2015 / Version: 4.0
DAS Code: XRM-4713
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling limit

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW AGROSCIENCES LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

ATTENTION:

This specimen label is provided for general information only.

- This pesticide product may not yet be available or approved for sale or use in your area.
- It is your responsibility to follow all Federal, state and local laws and regulations regarding the use of pesticides.
- Before using any pesticide, be sure the intended use is approved in your state or locality.
- Your state or locality may require additional precautions and instructions for use of this product that are not included here.
- Monsanto does not guarantee the completeness or accuracy of this specimen label. The information found in this label may differ from the information found on the product label. You must have the EPA approved labeling with you at the time of use and must read and follow all label directions.
- You should not base any use of a similar product on the precautions, instructions for use or other information you find here.
- Always follow the precautions and instructions for use on the label of the pesticide you are using.

21225H2-13

Ranger PRO® Herbicide

Ranger PRO herbicide is a complete broad-spectrum postemergence professional herbicide for industrial, turf and ornamental weed control.

Complete Directions for Use

EPA Reg. No. 524-517 2010-1

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION IS LIKELY TO RESULT.

Read the entire label before using this product.

Use only according to label instructions.

Not all products listed in this label are registered for use in California. Check the registration status of each product in California before using.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

1.0 INGREDIENTS

ACTIVE INGREDIENT:	
*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	41.0%
OTHER INGREDIENTS (including surfactant):	59.0%
	100.0%

*Contains 480 grams per liter or 4 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per liter or 3 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, **CALL TOLL-FREE, 1-800-332-3111.**

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL ASSISTANCE, **CALL COLLECT, DAY OR NIGHT, (314)-694-4000.**

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES EYE IRRITATION.

Avoid contact with eyes or clothing.

FIRST AID: Call a poison control center or doctor for treatment advice.	
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. • Remove contact lenses if present after the first 5 minutes then continue rinsing eye.

- Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
- You may also contact **(314) 694-4000**, collect day or night, for emergency medical treatment information.
- This product is identified as **Ranger PRO® herbicide, EPA Registration No. 524-517.**

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

3.2 Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

3.3 Physical or Chemical Hazards

Mix, store and apply spray solutions of this product using only stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling or Fact Sheets. Supplemental labeling can be found on the Internet at www.agrian.com, www.cdms.net or www.greenbook.net websites or obtained by contacting your Authorized Monsanto Retailer or Monsanto Company Representative.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is: coveralls, chemical resistant gloves greater than 14 mils in thickness composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber, shoes plus socks.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (40 CFR Part 170) for agricultural pesticides. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried.

4.0 STORAGE AND DISPOSAL

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container, including rinsate, by application in accordance with label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable Federal, State and local procedures.

See container label for container handling and disposal instructions and for refilling limitations.

5.0 PRODUCT INFORMATION

Product Description: This product is a postemergence, systemic herbicide with no residual soil activity. It gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid containing surfactant and no additional surfactant is needed or recommended. It may be applied through standard equipment after dilution and mixing with water or other carriers according to label instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts. Effects are visible on most annual weeds within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. See the "WEEDS CONTROLLED" sections of this label for specific weed rates.

Always use the higher product application rate in the range when weed growth is heavy or dense, or when weeds are growing in an undisturbed (non-cultivated) area. Reduced weed control may result from treating weeds with disease or insect damage, weeds heavily covered with dust, or weeds under poor growing conditions.

Mode of Action in Plants: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed or cut, and have not been allowed to regrow to the appropriate stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, ensure spray coverage is uniform and complete. Do not spray foliage to the point of runoff.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or rootstocks of perennials will not be affected by the herbicide and will continue to grow.

Maximum Application Rates: The maximum application or use rates stated throughout this label are given in units of volume (fluid ounces or quarts) of this product per acre. However, the maximum allowed application rates apply to this product combined with the use of any and all other herbicides containing the active ingredient glyphosate, whether applied separately or as tank mixtures, on a basis of total pounds of glyphosate (acid equivalents) per acre. If more than one glyphosate-containing product is applied to the same site within the same year, you must ensure that the total use of glyphosate (pounds acid equivalents) does not exceed the maximum allowed. The combined total of all treatments must not exceed 10.6 quarts of this product (10.6 pounds of glyphosate acid) per acre per year. See the "INGREDIENTS" section of this label for necessary product information.

ATTENTION

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) that are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

5.1 Weed Resistance Management

GROUP	9	HERBICIDE

Glyphosate, the active ingredient in this product, is a Group 9 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural or mechanical practices.

To minimize the occurrence of glyphosate resistant biotypes observe the following good weed management practices:

- Scout your application site before and after herbicide applications.
- Control weeds early when they are relatively small.
- Incorporate other herbicides and cultural or mechanical practices as part of your weed control system where appropriate.
- Utilize the label rate for the most difficult weed in the site. Avoid tank-mixtures with other herbicides that reduce this product's efficacy (through antagonism) or tank mixtures which encourage rates of this product below the labeled amounts.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from site to site to minimize spread of weed seed.
- Use new commercial seed as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product on a particular weed to your Monsanto representative, local retailer, or county extension agent.

5.2 Management for Glyphosate Resistant Weed Biotypes

NOTE: Appropriate testing is critical in order to confirm weed resistance to glyphosate. Contact your Monsanto representative to determine if resistance has been confirmed to any particular weed biotype in your area. Control instructions for biotypes confirmed as resistant to glyphosate are made available on separately published supplemental

labeling or Fact Sheets for this product and may be obtained from your local retailer or Monsanto representative.

Since the occurrence of new glyphosate resistant weeds cannot be determined until after product use and scientific confirmation, Monsanto Company is not responsible for any losses that may result from the failure of this product to control glyphosate resistant weed biotypes.

The following good weed management practices are encouraged to reduce the spread of confirmed glyphosate resistant biotypes:

- If a naturally occurring resistant biotype is present at your site, this product may be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices may also be used as appropriate.
- Scout treated sites after herbicide applications and control escapes of resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving sites known to contain resistant biotypes.

6.0 MIXING

Mix, store and apply spray solutions of this product using only clean stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.

Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations.

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of clean water. Add the labeled amount of this product near the end of the filling process and mix gently (well). During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

6.2 Tank Mixtures

This product does not provide residual weed control. This product may be tank-mixed with other herbicides to provide residual weed control, a broader weed control spectrum or an alternate mode of action. Always read and follow label directions for all products in the tank mixture. Use according to the most restrictive precautionary statements for each product in the mixture. Any labeled rate of this product may be used in a tank mix.

When this label describes a tank mixture with a generic active ingredient such as diuron, 2,4-D or dicamba, the user is responsible for ensuring the mixture product label allows the specific application.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly listed in this label. Mixing this product with herbicides or other materials not identified on this label may result in reduced performance.

6.3 Tank Mixing Procedure

When tank mixing, read and carefully observe label directions, cautionary statements and all information on the labels of all products used. Add the tank-mix product to the tank as directed by the label. Maintain agitation and add the labeled amount of this product.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation may be required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50-mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance. Ensure that the specific tank mixture product is registered for application at the desired site.

Refer to the "Tank Mixtures" section for additional precautions.

6.4 Mixing Percent Solutions

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

Desired Volume	Amount of Ranger PRO Herbicide					
	1/2%	1%	1-1/2%	2%	5%	10%
1 gal	2/3 oz	1-1/3 oz	2 oz	2-2/3 oz	6-1/2 oz	13 oz
25 gal	1 pt	1 qt	1-1/2 qt	2 qt	5 qt	10 qt
100 gal	2 qt	1 gal	1-1/2 gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

For use in backpack, knapsack or pump-up sprayers, it is suggested that the labeled amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.5 Surfactants

Nonionic surfactants which are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, use 0.5 percent surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 70 percent active ingredient or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70 percent active ingredient. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

6.6 Colorants or Dyes

Approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilution. Use colorants or dyes according to the manufacturer's instructions.

6.7 Drift Control Additives

Drift reduction additives may be used with all equipment types, except wiper applicators, and sponge bars. When a drift reduction additive is used, read and carefully observe precautionary statements and all other information appearing on the additive label. The use of drift reduction additives can affect spray coverage which may result in reduced performance.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

SPRAY DRIFT MANAGEMENT

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE VEGETATION.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and/or the grower is responsible for considering all these factors when making decisions.

7.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Avoid direct application to any body of water.

Use the labeled rates of this herbicide in 3 to 25 gallons of water per acre.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the air stream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application—To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Aircraft Maintenance

PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. The maintenance of an

organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion. To prevent corrosion of exposed parts, thoroughly wash aircraft after each day of spraying to remove residues of this product accumulated during spraying or from spills. Landing gear is most susceptible.

AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

Importance of droplet size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see the **Wind**, **Temperature and Humidity**, and **Temperature Inversion** sections of this label).

Controlling droplet size

- **Volume:** Use high flow-rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressures labeled for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow-rates are needed, use higher flow-rate nozzles instead of increasing pressure.
- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the air stream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom Length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application Height:** Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance increases, with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 miles per hour. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 miles per hour due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

This product must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

7.2 Ground Broadcast Equipment

Apply the labeled rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified in this label or in separate supplemental labeling or Fact Sheets published by Monsanto. As density of weeds increases, increase spray volume within the labeled range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat-fan nozzles. Check for even distribution of spray droplets.

7.3 Backpack or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, ensure spray coverage is uniform and complete. Do not spray to the point of runoff. Use coarse sprays only.

Refer to the "Annual Weeds" instructions or "WEEDS CONTROLLED" section for specific rates and restrictions.

7.4 Selective Equipment

This product may be diluted with water and applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars, to listed weeds growing in any site specified on this label.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION. Contact of this product with desirable vegetation may result in unwanted plant damage or destruction.

Recirculating Spray

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

Adjust application equipment used above desired vegetation to the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation is likely to result in discoloration, stunting or destruction.

Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Shielded and Hooded Applicators

A shielded or hooded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide. Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE **WITH** DESIRABLE VEGETATION.

Wiper Applicators and Sponge Bars

A wiper or sponge applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 miles per hour. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced product performance may result from the use of solutions held in storage. Clean wiper parts immediately after using this product by thoroughly flushing with water.

For Rope or Sponge Wick Applicators: Solutions ranging from 33 to 75 percent of this product in water may be used.

For Panel Applicators and Pressure-Feed Systems: Solutions ranging from 33 to 100 percent of this product in water may be used.

When applied as directed, this product CONTROLS the following weeds:

Corn, volunteer	Sicklepod
Panicum, Texas	Spanishneedles
Rye, common	Starbur, bristly
Shattercane	

When applied as directed, this product SUPPRESSES the following weeds:

Beggarweed, Florida	Ragweed, common
Bermudagrass	Ragweed, giant
Dogbane, hemp	Smutgrass
Dogfennel	Sunflower
Guineagrass	Thistle, Canada
Johnsongrass	Thistle, musk
Milkweed	Vaseygrass
Nightshade, silverleaf	Velvetleaf
Pigweed, redroot	

7.5 Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the undiluted concentrate of other products when using injection systems unless specifically directed.

7.6 CDA Equipment

The rate of this product applied per acre by controlled droplet application (CDA) equipment must not be less than the amount directed in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

CDA equipment produces a spray pattern that is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other tissue of desirable vegetation, as damage or destruction is likely to result.

8.0 SITE AND USE INSTRUCTIONS

Detailed instructions follow alphabetically, by site.

Unless otherwise specified on this label or in separate supplemental labeling or Fact Sheets published by Monsanto, applications may be made to control any weeds listed in the annual, perennial and woody brush tables. Also refer to the "Selective Equipment" section.

8.1 Cut Stump

Cut stump treatments may be made on any site listed on this label. This product will control many types of woody brush and tree species. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50- to 100-percent solution of this product to the freshly-cut surface **immediately after** cutting. Delays in application may result in reduced performance. For best results, make applications during periods of active growth and full leaf expansion.

DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

8.2 Forestry Site Preparation

This product is labeled for the control or partial control of woody brush, trees and herbaceous weeds in forestry sites and for use in preparing or establishing wildlife openings within these sites and maintaining logging roads.

This product is labeled for use in site preparation prior to planting any tree species, including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites.

Use higher rates of this product within the labeled range for control or partial control of woody brush, trees and hard-to-control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Increase rates within the labeled range for control of perennial herbaceous weeds any time after emergence and before seedheads, flowers or berries appear.

Use the lower rates of this product within the labeled range for control of annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to the foliage of actively growing annual herbaceous weeds any time after emergence.

This product has no herbicidal or residual activity in the soil. Where repeat applications are necessary, do not exceed 10.6 quarts of this product per acre per year.

TANK MIXTURES: Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Use according to the most restrictive precautionary statements for each product in the mixture.

NOTE: For forestry site preparation, make sure the tank-mix product is approved for use prior to planting the desired species. Observe planting interval restrictions.

Any labeled rate of this product may be used in a tank mix with the following products for forestry site preparation.

Arsenal Applicators Concentrate	Garlon 3A
Chopper	Garlon 4
Chopper Gen2	Oust XP
Escort	

For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher labeled tank mixture rates.

Do not apply this product as an over-the-top broadcast spray for forestry conifer or hardwood release unless otherwise directed on this label or in separately published Monsanto supplemental labeling or Fact Sheets.

8.3 Non-Crop Areas and Industrial Sites

This product may be used in non-crop areas, airports, apartment complexes, commercial sites, ditch banks, driveways, dry ditches, dry canals, fencerows, forestry sites, golf courses, greenhouses, industrial sites, landscape areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parks, parking areas, petroleum tank farms and pumping installations, railroads, recreational areas, residential areas, rights-of-way, roadsides, schools, shadehouses, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, and wildlife management sites.

This product may also be used in non-food crop sites, Christmas tree farms, plant nurseries, sod or turf seed farms.

Unless otherwise specified, applications may be made to control any weeds listed in the "WEEDS CONTROLLED" section of this label.

Weed Control, Trim-and-Edge, Bare Ground

This product may be used in non-crop and non-food crop areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around objects in non-crop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

TANK MIXTURES: This product may be tank mixed with the following products provided that the specific product is labeled for application at the use site. Refer to the individual product labels for approved sites and application rates.

Arsenal	Pendulum WDG
Barricade 65WG	Plateau
Clarity	Princep DF
diuron	Princep Liquid
Endurance	Ronstar 50 WSP
Escort	Sahara
Garlon 3A	simazine
Garlon 4	Surflan
Karmex	Telar
Krovar I DF	Vanquish
Oust XP	2,4-D
Pendulum 3.3 EC	

This product plus dicamba tank mixtures may not be applied by air in California.

When applied as a tank mixture for bare ground, this product provides control of the emerged annual weeds and control or partial control of emerged perennial weeds, woody brush and trees.

For control or partial control of the following perennial weeds, apply 1 to 2 quarts of this product plus 2 to 8 ounces of Oust XP per acre.

Bahiagrass	Fescue, tall
Bermudagrass	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Quackgrass
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Chemical Mowing - Perennials

This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 8 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, quackgrass or reed canarygrass covers. Use 6 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in 10 to 40 gallons of spray solution per acre.

Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

Chemical Mowing - Annuals

For growth suppression of some annual grasses, annual ryegrass, wild barley and wild oats growing in coarse turf on roadsides or other industrial areas, apply 4 to 5 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Make applications when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments may cause injury to the desired grasses.

***Bromus* Species and Medusahead in Pastures and Rangelands**

***Bromus* species.** This product may be used to treat downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) and cheatgrass (*Bromus secalinus*) found in industrial, rangeland and pasture sites. Apply 8 to 16 fluid ounces of this product per acre on a broadcast basis.

For best results, coincide treatment with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Make applications to the same site each year until seed

banks are depleted and the desirable perennial grasses can become reestablished on the site.

Medusahead. To treat medusahead, apply 16 fluid ounces of this product per acre as soon as plants are actively growing, and prior to the 4-leaf stage. Applications may be made in the fall or spring.

Applications to brome and medusahead may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For applications using ground equipment, apply in 10 to 20 gallons of water per acre. When applied as directed in this label, there are no grazing restrictions.

Dormant Turfgrass

This product may be used to control or suppress many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass turf. Treat only when turf is dormant and prior to spring green-up.

Apply 8 to 64 fluid ounces of this product per acre. Apply the labeled rates in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

Treatments in excess of 16 fluid ounces per acre may result in injury or delayed green-up in highly maintained areas, golf courses and lawns. DO NOT apply tank mixtures of this product plus Oust XP in highly maintained turfgrass areas. For further uses, refer to the "Railroads" section of this label, which gives rates for dormant bermudagrass treatment and the "Roadsides" section of this label, which gives rates for dormant bermudagrass and bahiagrass treatments.

Actively Growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. DO NOT apply more than 16 fluid ounces of this product per acre in highly maintained turfgrass areas. DO NOT apply tank mixtures of this product plus Oust XP in highly maintained turfgrass areas. For further uses, refer to the "Roadsides" section of this label, which gives rates for actively growing bermudagrass treatments. Use only in areas where some temporary injury or discoloration can be tolerated.

Turfgrass Renovation, Seed, or Sod Production

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses like bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques such as vertical mowing, coring or slicing for 7 days after application to allow translocation into underground plant parts.

Desirable turfgrasses may be planted following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

If application rates total 3 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 3 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

8.4 Habitat Management

Habitat Restoration and Management

This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad-spectrum vegetation control requirements. Spot treatments can be made to selectively remove unwanted plants for habitat management and enhancement.

Wildlife Food Plots

This product may be used as a site preparation treatment prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage to allow translocation into underground plant parts.

8.5 Injection and Frill (Woody Brush and Trees)

This product may be used to control or partially control woody brush and trees by injection or frill applications. Apply this product using suitable equipment that must penetrate into the living tissue. Apply the equivalent of 1/25 fluid ounce (1 ml) of this product per each 2 to 3 inches of trunk diameter at breast height (DBH). This is best achieved by applying a 50 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff to occur from frilled or cut areas in species that exude sap freely. In these species, make the frill or cuts at an oblique angle to produce a cupping effect and use a 100 percent concentration of this product. For best results, make application during periods of active growth and after full leaf expansion.

8.6 Ornamentals, Plant Nurseries, and Christmas Trees

Post-Directed and Trim-and-Edge

This product may be used prior to the planting of and as a post-directed spray around established woody ornamental species, arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce and yew, growing in plant nurseries, on Christmas tree farms, or on other non-food tree production sites. This product may also be used to trim and edge around trees, buildings, sidewalks and roads, potted plants and other objects in a nursery setting.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. THIS PRODUCT IS NOT LABELED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES. Care must be exercised to avoid contact of spray, drift or mist with foliage or bark of established ornamental species.

Site Preparation

This product may be used prior to planting any ornamental, nursery or Christmas tree species.

Wiper Applications

This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established eucalyptus or poplar trees. See the "Selective Equipment" section of this label for further information about the proper use of wiper applicators.

Greenhouse/Shadehouse

This product may be used to control weeds growing in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

8.7 Parks, Recreational and Residential Areas

This product may be used in parks, recreational and residential areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around trees, fences, and paths, around buildings, sidewalks, and other objects in these areas. This product may be used for spot treatment of unwanted vegetation. This product may be used to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

All of the instructions in the "Non-Crop Areas and Industrial Sites" section apply to park and recreational areas.

8.8 Railroads

All of the instructions in the "Non-Crop Areas and Industrial Sites" section apply to railroads.

Bare Ground, Ballast and Shoulders, Crossings, and Spot Treatment

This product may be used to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used, as weeds emerge, to maintain bare ground. This product may be used to control tall-growing weeds to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way. For crossing applications, up to 80 gallons of spray solution per acre may be used.

This product may be tank mixed with the following products provided that the specific product is registered for ballast, shoulder, spot, bare ground and crossing treatments:

Arsenal	Krovar I DF
Clarity	Oust XP
diuron	Sahara
Escort	Spike
Garlon 3A	Telar
Garlon 4	Vanquish
Hyvar X	2,4-D

Brush Control

This product may be used to control woody brush and trees on railroad rights-of-way. Apply 4 to 10 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Up to 80 gallons of spray solution per acre may be used. Apply a 3/4- to 2-percent solution of this product when using high-volume spray-to-wet applications. Apply a 5- to 10-percent solution of this product when using low-volume directed sprays

for spot treatment. This product may be mixed with the following products for enhanced control of woody brush and trees:

Arsenal	Garlon 4
Escort	Tordon K
Garlon 3A	

Bermudagrass Release

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 1 to 3 pints of this product in up to 80 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Oust XP. If tank-mixed, use no more than 1 to 3 pints of this product with 1 to 2 ounces of Oust XP per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust XP label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Blackberry	Johnsongrass
Bluestem, silver	Poorjoe
Broomsedge	Raspberry
Dallisgrass	Trumpetcreeper
Dewberry	Vaseygrass
Dock, curly	Vervain, blue
Dogfennel	

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Do not make repeat applications in the same season since severe injury may occur.

8.9 Roadsides

All of the instructions in the "Non-Crop Areas and Industrial Sites" section apply to roadsides.

Shoulder Treatments

This product may be used on road shoulders. It may be applied with boom sprayers, shielded boom sprayers, high-volume off-center nozzles, hand-held equipment, and similar equipment.

Guardrails and Other Obstacles to Mowing

This product may be used to control weeds growing under guardrails and around signposts and other objects along the roadside.

Spot Treatment

This product may be used as a spot treatment to control unwanted vegetation growing along roadsides.

Tank Mixtures

This product may be tank-mixed with the following products for shoulder, guardrail, spot and bare ground treatments provided that the specific product is registered for use on such sites. Read and carefully observe label directions, cautionary statements and all information on the labels of all products used.

Clarity	Princep DF
diuron	Princep Liquid
Endurance	Ronstar 50 WSP
Escort	Sahara
Krovar I DF	simazine
Oust XP	Surflan
Outrider®	Telar
Pendulum 3.3 EC	Vanquish
Pendulum WDG	2,4-D

See the "Tank Mixtures" section of this label for tank-mixing instructions.

Release of Bermudagrass or Bahiagrass

Dormant Applications

This product may be used to control or partially control many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. Treat only when turf is dormant and prior to spring green-up. This product may also be tank-mixed with Outrider or Oust XP for residual control. Tank mixtures of this product with Oust XP may delay green-up.

For best results on winter annuals, treat when plants are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is at or beyond the 4- to 6-leaf stage.

Apply 8 to 64 fluid ounces of this product in a tank mixture with 3/4 to 1-1/3 ounces Outrider herbicide per acre. Read and follow all label directions for Outrider herbicide.

Apply 8 to 64 fluid ounces of this product per acre alone or in a tank mixture with 1/4 to 1 ounce per acre of Oust XP. Apply the labeled rates in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in green-up and minimize injury, add no more than 1 ounce of Oust XP per acre on bermudagrass and no more than 1/2 ounce of Oust XP per acre on bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

Actively Growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 1 to 3 pints of this product in 10 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

This product may be tank mixed with Outrider for control or partial control of Johnsongrass and other weeds listed in the Outrider label. Use 8 to 32 fluid ounces of this product with 3/4 to 1-1/3 ounces of Outrider. Use the higher rates of both products for control of perennial weeds or annual weeds greater than 6 inches in height.

This product may be tank mixed with Oust XP. If tank-mixed, use no more than 1 to 2 pints of this product with 1 to 2 ounces of Oust XP per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust XP label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Bluestem, silver	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Trumpetcreeper
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season causes severe injury.

Actively Growing Bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 6 fluid ounces of this product in 10 to 40 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 4 fluid ounces of this product per acre, followed by an application of 2 to 4 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

This product may be used for control or partial control of Johnsongrass and other weeds listed on the Outrider label in actively growing bahiagrass. Apply 1-1/2 to 4-3/4 ounces of this product with 0.75 to 1.33 ounces of Outrider per acre. Use the higher rates for control of perennial weeds or annual weeds greater than 6 inches in height. Use only on well-established bahiagrass.

A tank mixture of this product plus Oust XP may be used. Apply 6 fluid ounces of this product plus 1/4 ounce of Oust XP per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

8.10 Utility Sites

This product is labeled for use along electrical power, pipeline and telephone rights-of-way, and in other sites associated with these rights-of-way, substations, roadsides, railroads or similar rights-of-way that run in conjunction with utilities.

This product may be used in utility sites and substations for bare ground, trim-and-edge, spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

This product is also labeled for use in preparing or establishing wildlife openings within these sites, maintaining access roads and for side trimming along utility rights-of-way.

Tank Mixtures

Tank mixtures of this product may be used to increase the spectrum of control for herbaceous weeds, woody brush and trees provided that the specific product is registered for application to the desired site. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Use according to the most restrictive precautionary statements for each product in the mixture. Any labeled rate of this product may be used in a tank mix.

For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher labeled rates.

TANK MIXTURES: This product may be tank mixed with the following products for use in utility sites, provided that the specific product used is labeled for use on these sites. Refer to the individual product labels for approved sites and application rates.

Arsenal	Outrider
atrazine[1]	pendimethalin[1]
Barricade 65WG	Plateau
dicamba[1]	Ronstar 50 WP
diuron[1]	Sahara
Endurance	simazine[1]
Escort	Surflan AS
Escort XP	Surflan WDG
Garlon 3A[2]	Telar DF
Garlon 4[3]	Transline
Krenite	Vanquish
Krovar I DF	Velpar DF
Oust	Velpar L
Oust XP	2,4-D [1]

[1] Tank mixtures with product containing this generic active ingredient may be made provided the specific product is labeled for application at the use site.

[2] Ensure that Garlon 3A is thoroughly mixed with water according to label directions before adding this product. Have spray mixture agitating at the time this product is added to avoid spray incompatibility problems.

[3] For side trimming treatments, use this product alone or in a tank mixture with Garlon 4.

Bare Ground and Trim-and-Edge

This product may be used in utility sites and substations for bare ground, trim-and-edge around objects, spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

This product may be tank mixed with the following products. Refer to these products' labels for approved non-crop sites and application rates.

Arsenal	Plateau
Banvel	Princep DF
Barricade 65WG	Princep Liquid
diuron	Ronstar 50 WP
Endurance	Sahara
Escort	simazine
Garlon 3A	Surflan

9.0 WEEDS CONTROLLED

Always use the higher rate of this product per acre within the labeled range when weed growth is heavy or dense or weeds are growing in an undisturbed (non-cultivated) area.

Reduced results may occur when treating weeds heavily covered with dust. For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

For low-volume directed spray applications, use a 5- to 10-percent solution of this product for control or partial control of annual weeds, perennial weeds, or woody brush and trees. Spray coverage must be uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the plant is important for best results. To ensure adequate spray coverage, spray both sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple resprouts.

Refer to the following label sections for labeled rates for the control of annual and perennial weeds and woody brush and trees. For difficult to control perennial weeds and woody brush and trees, where plants are growing under stressed conditions, or where infestations are dense, this product may be used at 5 to 10 quarts per acre for enhanced results.

9.1 Annual Weeds

Use 1 quart per acre if weeds are less than 6 inches in height or runner length and 1.5 quarts to 4 quarts per acre if weeds are over 6 inches in height or runner length or when weeds are growing under stressed conditions.

For spray-to-wet applications, apply a 1/2-percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or for smaller weeds growing under stressed conditions, use a 1- to 2-percent solution. Use the higher rate for tough-to-control species or for weeds over 24 inches tall.

WEED SPECIES

Anoda, spurred	Medusahead*
Barley*	Morningglory (*Ipomoea spp*)
Barley, little*	Mustard, blue*
Barnyardgrass*	Mustard, tansy*
Bassia, fivehook	Mustard, tumble*
Bittercress*	Mustard, wild*
Bluegrass, annual*	Nightshade, black*
Bluegrass, bulbous*	Oats
Brome, downy*	Panicum, browntop*
Brome, Japanese*	Panicum, fall*
Buttercup*	Panicum, Texas*
Castorbean	Pennycress, field*
Cheatgrass*	Pepperweed, Virginia*
Cheeseweed (*Malva parviflora*)	Pigweed*
Chervil*	Puncturevine
Chickweed*	Purslane, common
Cocklebur*	Pusley, Florida
Copperleaf, hophornbeam	Ragweed, common*
Copperleaf, Virginia	Ragweed, giant
Coreopis, plains/tickseed*	Rice, red
Corn*	Rocket, London*
Crabgrass*	Rocket, yellow
Cupgrass, woolly*	Rye*
Dwarfdandelion*	Ryegrass*
Eclipta*	Sandbur, field*
Falsedandelion*	Sesbania, hemp
Falseflax, smallseed*	Shattercane*
Fiddleneck	Shepherd's-purse*
Filaree	Sicklepod
Fleabane, annual*	Signalgrass, broadleaf*
Fleabane, hairy (*Conyza bonariensis*)*	Smartweed, ladysthumb*
	Smartweed, Pennsylvania*
Fleabane, rough*	Sorghum, grain (milo)*
Foxtail*	Sowthistle, annual
Foxtail, Carolina*	Spanishneedles
Geranium, Carolina	Speedwell, corn*
Goatgrass, jointed*	Speedwell, purslane*
Goosegrass	Sprangletop*
Groundsel, common*	Spurge, annual
Henbit	Spurge, prostrate*
Horseweed/Marestail (*Conyza canadensis*)	Spurry, umbrella*
	Starthistle, yellow
Itchgrass*	Stinkgrass*
Johnsongrass, seedling	Sunflower*
Junglerice	Teaweed/Prickly sida
Knotweed	Thistle, Russian
Kochia	Velvetleaf
Lamb's-quarters*	Wheat*
Lettuce, prickly*	Wild oats*
Mannagrass, eastern*	Witchgrass*
Mayweed	

*When using field broadcast equipment (aerial applications or boom sprayers using flat-fan nozzles) these species will be controlled or partially controlled using 1 pint of this product per acre. Applications must be made using 3 to 10 gallons of carrier volume per acre. Use nozzles that ensure thorough coverage of foliage and treat when weeds are in an early growth stage.

9.2 Perennial Weeds

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). For non-flowering plants, best results are obtained when the plants reach a mature stage of growth. In many situations, treatments are required prior to these growth stages. Under these conditions, use the higher application rate within the labeled range.

Use a 2-percent solution on tough-to-control perennials like bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment. When using hand-held equipment for low-volume directed spot treatments, apply a 5- to 10-percent solution of this product.

Allow 7 or more days after application before tillage.

Weed Species	Rate (QT/A)	Hand-Held % Solution
Alfalfa*	1	2
Alligatorweed*	4	1.5
Anise (fennel)	2 - 4	1 - 2
Artichoke, Jerusalem	3 - 5	2
Bahiagrass	3 - 5	2

Weed Species	Rate (QT/A)	Hand-Held % Solution
Beachgrass, European (*Ammophila arenaria*)	—	5
Bentgrass*	1.5	2
Bermudagrass	5	2
Bermudagrass, water (knotgrass)	1.5	2
Bindweed, field	4 - 5	2
Bluegrass, Kentucky	2	2
Blueweed, Texas	4 - 5	2
Brackenfern	3 - 4	1 - 1.5
Bromegrass, smooth	2	2
Bursage, woolly-leaf	—	2
Canarygrass, reed	2 - 3	2
Cattail	3 - 5	2
Clover, red, white	3 - 5	2
Cogongrass	3 - 5	2
Dallisgrass	3 - 5	2
Dandelion	3 - 5	2
Dock, curly	3 - 5	2
Dogbane, hemp	4	2
Fescue (except tall)	3 - 5	2
Fescue, tall	1 - 3	2
Guineagrass	3	1
Hemlock, poison	2 - 4	1 - 2
Horsenettle	3 - 5	2
Horseradish	4	2
Iceplant	2	1.5 - 2
Ivy, German	2 - 4	1 - 2
Johnsongrass	2 - 3	1
Kikuyugrass	2 - 3	2
Knapweed	4	2
Lantana	—	1 - 1.25
Lespedeza	3 - 5	2
Milkweed, common	3	2
Muhly, wirestem	2	2
Mullein, common	3 - 5	2
Napiergrass	3 - 5	2
Nightshade, silverleaf	2	2
Nutsedge; purple, yellow	3	1 - 2
Orchardgrass	2	2
Pampasgrass	3 - 5	1.5 - 2
Paragrass	3 - 5	2
Pepperweed, perennial	4	2
Phragmites*	3 - 5	1 - 2
Quackgrass	2 - 3	2
Redvine*	2	2
Reed, giant	4 - 5	2
Ryagress, perennial	2 - 3	1
Smartweed, swamp	3 - 5	2
Spurge, leafy*	—	2
Sweet potato, wild*	—	2
Thistle, artichoke	2 - 3	1 - 2
Thistle, Canada	2 - 3	2
Timothy	2 - 3	2
Torpedograss*	4 - 5	2
Trumpetcreeper*	2 - 3	2
Vaseygrass	3 - 5	2
Velvetgrass	3 - 5	2
Wheatgrass, western	2 - 3	2

*Partial control

9.3 Woody Brush and Trees

Apply this product after full leaf expansion, unless otherwise directed in this label or separate supplemental label or Fact Sheet published by Monsanto. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment. When using hand-held equipment for low-volume directed-spray spot treatments, apply a 5- to 10-percent solution of this product.

Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Weed Species	Broadcast Rate (QT/A)	Hand-Held Spray-to-Wet % Solution
Alder	3 - 4	1 - 1.5
Ash*	2 - 5	1 - 2
Aspen, quaking	2 - 3	1 - 1.5
Bearclover (Bearmat)*	2 - 5	1 - 2
Beech*	2 - 5	1 - 2
Birch	2	1
Blackberry	3 - 4	1 - 1.5
Blackgum*	2 - 5	1 - 2
Bracken	2 - 5	1 - 2
Broom; French, Scotch	2 - 5	1.5 - 2
Buckwheat, California*	2 - 4	1 - 2
Cascara*	2 - 5	1 - 2
Catsclaw*	—	1 - 1.5
Ceanothus*	2 - 5	1 - 2
Chamise*	2 - 5	1
Cherry; bitter, black, pin	2 - 3	1 - 1.5
Coyotebrush	3 - 4	1.5 - 2
Creeper, Virginia	2 - 5	1 - 2
Deerweed	2 - 5	1
Dogwood*	2 - 5	1 - 2
Elderberry	2	1
Elm*	2 - 5	1 - 2
Eucalyptus	—	2
Flower, monkey flower*	2 - 4	1 - 2
Gorse*	2 - 5	1 - 2
Hasardia*	2 - 4	1 - 2
Hawthorn	2 - 3	1 - 1.5
Hazel	2	1
Hickory*	2 - 5	1 - 2
Honeysuckle	3 - 4	1 - 1.5
Hornbeam, American*	2 - 5	1 - 2
Ivy, poison	4 - 5	2
Kudzu	4	2
Locust, black*	2 - 4	1 - 2
Madrone resprouts*	—	2
Manzanita*	2 - 5	1 - 2
Maple, red*	2 - 4	1 - 1.5
Maple, sugar	—	1 - 1.5
Maple, vine*	2 - 5	1 - 2
Oak; black, white*	2 - 4	1 - 2
Oak, post	3 - 4	1 - 1.5
Oak; northern pin	2 - 4	1 - 1.5
Oak, poison	4 - 5	2
Oak, scrub*	2 - 4	1 - 1.5
Oak, southern red	2 - 3	1 - 1.5
Olive, Russian*	2 - 5	1 - 2
Peppertree, Brazilian (Florida holly)*	2 - 5	1 - 2
Persimmon*	2 - 5	1 - 2
Pine	2 - 5	1 - 2
Poplar, yellow*	2 - 5	1 - 2
Redbud, eastern	2 - 5	1 - 2
Rose, multiflora	2	1
Sage, black	2 - 4	1
Sage, white*	2 - 4	1 - 2

Weed Species	Broadcast Rate (QT/A)	Hand-Held Spray-to-Wet % Solution
Sage brush, California	2 - 4	1
Salmonberry	2	1
Saltcedar*	2 - 5	1 - 2
Sassafras*	2 - 5	1 - 2
Sourwood*	2 - 5	1 - 2
Sumac, laurel, poison, smooth, sugarbush, winged *	2 - 4	1 - 2
Sweetgum	2 - 3	1 -1 .5
Swordfern*	2 - 5	1 - 2
Tallowtree, Chinese	—	1
Tanoak resprouts*	—	2
Thimbleberry	2	1
Tobacco, tree*	2 - 4	1 - 2
Toyon*	-	2
Trumpetcreeper	2 - 3	1 - 1.5
Waxmyrtle, southern*	2 - 5	1 - 2
Willow	3	1
Yerba Santa, California*	—	2

*Partial control

10.0 LIMIT OF WARRANTY AND LIABILITY

Monsanto Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations statad herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Outrider, Ranger PRO, Ranger PRO and Design and Monsanto and Vine Design are registered trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

This product is protected by U.S. Patent Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-517

In case of an emergency involving this product, or for medical assistance, Call Collect, day or night, (314) 694-4000.

Packed For:
MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI, 63167 U.S.A.
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012510

MONSANTO

ATENCIÓN:

Esta etiqueta de muestra se entrega únicamente para información general.

- Este producto pesticida puede no estar todavía disponible o aprobado para la venta o utilización en su localidad.
- Usted tiene la responsabilidad de cumplir todas las leyes federales, estatales y locales, así como todas las reglamentaciones relativas a la utilización de pesticidas.
- Antes de utilizar un pesticida, asegúrese de que esté aprobado en su estado o localidad.
- Su estado o localidad puede exigir precauciones adicionales e instrucciones para la utilización de este producto que no están incluidas aquí.
- Monsanto no garantiza el lo completo ni la certeza de esta etiqueta de la espécimen. La información encontró en esta etiqueta puede diferir de la información encontró en la etiqueta del producto. Usted debe tener consigo la etiqueta aprobada por la agencia EPA cuando utilice el producto y debe leer y respetar todas las instrucciones en la etiqueta.
- No debe basarse sobre las precauciones, las instrucciones de utilización y cualquier otra información en esta etiqueta para utilizar algún otro producto similar.
- Siempre siga las precauciones y las instrucciones para el uso en la etiqueta del pesticida que usted utiliza.

Ranger PRO® Herbicida

El herbicida Ranger PRO es un herbicida profesional completo de postemergencia y de amplia efectividad, para el control de malezas en zonas industriales, céspedes y ornamentales.

Instrucciones completas para el uso

Registro en la EPA Nº 524-517 2010-1

EVITE EL CONTACTO DEL HERBICIDA CON EL FOLLAJE, TALLOS, RAICES NO LEÑOSAS EXPUESTAS O FRUTOS EXPUESTOS DE LAS COSECHAS, PLANTAS Y ARBOLES DESEABLES. EN CASO CONTRARIO ES PROBABLE QUE SUFRAN GRAVES DAÑOS O SEAN DESTRUIDOS TOTALMENTE.

Antes de usar este producto, lea la etiqueta en su totalidad.

Uselo solamente de acuerdo con las instrucciones de la etiqueta.

No todos los productos recomendados en esta etiqueta han sido registrados para su uso en California. Verifique el estado de registro de cada producto en California antes de utilizarlo.

Antes de comprar o usar el producto, lea "LIMITES EN LA GARANTIA Y EN LA RESPONSABILIDAD" en la última sección de la etiqueta. Si las condiciones son inaceptables para usted, devuelva el producto inmediatamente sin abrir el recipiente.

ESTE ES UN PRODUCTO PARA USARSE TAL Y COMO ESTA PREPARADO. MONSANTO NO LO HA DISEÑADO NI LO HA REGISTRADO PARA QUE SEA REFORMULADO. VEA LA ETIQUETA DEL ENVASE INDIVIDUAL PARA ENTERARSE DE LAS LIMITACIONES DE REEMPAQUE.

1.0 INGREDIENTES

INGREDIENTE ACTIVO:	
*Glifosato, N-(fosfonometil)glicina, en forma de su sal de isopropilamina	41.0%
OTROS INGREDIENTES (incluyendo surfactante):	59.0%
	100.0%

*Contiene 480 gramos por litre o 4 libras por galón americano del ingrediente activo glifosato, en forma de su sal de isopropilamina. Equivalente a 356 gramos por litro o 3 libras por galón americano del ácido, glifosato.

Este producto está protegido por la patente de los Estados Unidos Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No se han otorgado licencias bajo ninguna patente que no sea de los Estados Unidos.

2.0 TELEFONOS IMPORTANTES

PARA INFORMACION SOBRE EL PRODUCTO O AYUDA PARA UTILIZAR ESTE PRODUCTO,
LLAME GRATIS AL, 1-800-332-3111.

EN CASO DE QUE SE PRESENTE UNA EMERGENCIA RELACIONADA CON ESTE PRODUCTO, O PARA OBTENER AYUDA MEDICA, **LLAME POR COBRAR A CUALQUIER HORA DEL DIA O DE LA NOCHE, AL TELEFONO, (314)-694-4000.**

3.0 ADVERTENCIAS

3.1 Riesgos para seres humanos y animales domésticos

Manténgase fuera del alcance de los niños.

¡PRECAUCION!

IRRITA LOS OJOS.

Evite el contacto con los ojos y con la ropa.

PRIMEROS AUXILIOS: Llame al centro de envenenamientos o a un médico para que le indique el tratamiento.	
SI ENTRA EN CONTACTO CON LOS OJOS	• Mantenga abiertos los ojos y enjuague lenta y cuidadosamente con agua durante 15 a 20 minutos. • Si usa lentes de contacto, quíteselos después de los primeros 5 minutos, y continúe enjuagando los ojos.

- Tenga a mano el envase o la etiqueta del producto cuando llame al centro de envenenamientos o al médico, o cuando vaya a procurarse tratamiento.
- También puede llamar por cobrar al teléfono **(314) 694-4000**, las 24 horas, para obtener información sobre el tratamiento médico de urgencia.
- Este producto está identificado como **herbicida Ranger PRO®, Registro de la EPA Nº 524-517.**

ANIMALES DOMESTICOS: Este producto se considera relativamente no tóxico para los perros y otros animales domésticos; sin embargo, la ingestión de este producto o de grandes cantidades de vegetación recientemente tratada puede resultar en una irritación gastrointestinal temporal (vómito, diarrea, cólico, etc.). Si se observan dichos síntomas, dé al animal suficiente cantidad de líquidos para evitar la deshidratación. Si los síntomas continúan por más de 24 horas, llame al veterinario.

Equipo de protección personal (PPE)

Las personas que aplican o manejan este producto deben usar: camisas de manga larga, así como pantalones largos, zapatos y calcetín. Siga las instrucciones del fabricante para limpiar y mantener el equipo de protección personal. En caso de no tener dichas instrucciones para piezas lavables, use detergente y agua muy caliente. Mantenga y lave el equipo de protección personal separado de las demás piezas a levarse.

Deseche le ropa y otros matariales absorbentes que se hayan empapado o se encuentren muy contaminados con el concentrado de este producto. No los vuelva a utilizar.

En los casos en los cuales el personal encargado de manejar el producto lo hece en ambientes cerrados, cabinas cerradas o aviones, de manera tal que se cumplan los requisitos listados en "Worker Protection Standard (WPS) for agricultural pesticides" (Normas para la Protección de los Trabajadores que trabajan con pesticidas usados en la agricultura) [40 CFR 170.240 (d) (4-6)], los requisitos para el equipo de protección personal del trabajador pueden ser reducidos o modificados de acuerdo a lo que se especifica en las normas WPS.

Recomendaciones de seguridad para el usuario

El usuario debe:

- Lavarse las manos antes de comer, beber, mascar goma, usar tabaco o de usar el servicio higiénico.
- Quitarse la ropa inmediatamenta en caso de que el pesticida entre dentro de ésta. Luego debe lavarse muy bien y ponerse ropa limpia.

3.2 Riesgos al medio ambiente

No aplique directamente al agua, en áreas donde el agua superficial esté presente o en áreas donde haya mareas altas y bajas por debajo del nivel medio de mareas altas. No contamine el agua cuando lave los equipos ni cuando elimine las aguas de lavado de los mismos.

3.3 Riesgos de orden físico o químico

Para mezclar, almacenar y aplicar la solución de este producto, se deben usar solamente envases de acero inoxidable, fibra de vidrio, plástico o envases de acero recubiertos internamente con plástico.

NO MEZCLE, ALMACENE O APLIQUE ESTE PRODUCTO O SUS SOLUCIONES PARA ROCIAR EN RECIPIENTES O TANQUES ROCIADORES DE ACERO GALVANIZADO O DE ACERO NO RECUBIERTO (EXCEPTO SI ES ACERO INOXIDABLE). Este producto o la solución para rociar reaccionan con el material de dichos recipientes y tanques, lo cual produce hidrógeno, que puede formar una mezcla de gases altamente combustibles. Si esta mezcla de gases entra en contacto con llamas, chispas, el soplete de un soldador, un cigarrillo encendido o cualquier otra fuente de encendido, puede inflamarse o explotar y causar heridas graves a personas.

INSTRUCCIONES PARA EL USO

El uso de este producto de cualquier manera que sea inconsistente con las instrucciones dadas en la etiqueta es una violación de las leyes federales. Este producto sólo puede utilizarse de acuerdo con las indicaciones sobre el modo de empleo que figuran en esta etiqueta o en las etiquetas o fichas técnicas adicionales de Monsanto publicadas por separado. Puede consultar las etiquetas adicionales en Internet en *www.agrian.com, www.cdms.net* o *www.greenbook.net*, o bien puede solicitarlas a su vendedor minorista autorizado de Monsanto o a su representante de Monsanto Company.

No aplique este producto de alguna manera que entre en contacto con los trabajadores u otras personas, ya sea directamente o por medio de alguna corriente de aire. Solamente las personas que los manipulen y que usen equipo protector podrán estar en el área durante su aplicación. Para verificar requisitos específicos de su tribu o estado, consulte con la agencia responsable de la regulación del uso de pesticidas.

Requisitos para el uso en la agricultura

Use este producto siguiendo estrictamente las instrucciones de la etiqueta y de acuerdo con "Worker Protection Standard", 40 CFR Sección 170. Estas normas contienen los requisitos para proteger a los trabajadores agrícolas en haciendas, bosques, viveros e invernaderos, así como a aquellos trabajadores que manejan pesticidas usados en la agricultura. Las normas contienen los requisitos para entrenar, descontaminar, para dar aviso y para asistencia de emergencia. También contienen instrucciones específicas y excepciones que tienen que ver con el contenido de esta etiqueta en lo relacionado con el equipo para la protección personal (PPE) e intervalos de entrada restringida. Los requisitos mencionados en esta sección se aplican únicamente a los usos de este producto que están regulados por las Normas para la Protección de los Trabajadoras (WPS).

No entre ni permita la entrada de personal al área tratada durante el intervalo de entrada restringida (REI) de 4 horas.

El equipo de protección personal (PPE) permitido por el Estándar de Protección al Trabajador (WPS) necesario para una entrada prematura a lugares tratados y que implique el contacto con cualquier cosa que haya sido tratada como plantas, suelo o agua, es: overoles /monos, guantes resistentes a los productos químicos de más de 14 mil de espesor, fabricados con materiales como caucho (goma) butílico, caucho natural, neopreno o caucho nitrilo, zapatos y calcetines.

Requisitos para usos no agrícolas

Los requisitos en esta sección son para los usos de este producto que NO están cubiertos por WPS (40 CFR Sección 170) para el uso de pesticidas en la agricultura. Las regulaciones del WPS se aplican cuando el producto se usa para obtener productos agrícolas en haciendas, bosques, viveros o invernaderos.

Mantenga a las personas y a los animales domésticos fuera del área trateda hasta que la solución rociada se haya secado.

4.0 ALMACENAMIENTO Y DESECHO

Son fundamentales el almacenamiento y la eliminación adecuados de los pesticidas para evitar la exposición de las personas y el medio ambiente como consecuencia de pérdidas y derrames del producto, excedentes o desechos y actos de vandalismo. No permita que este producto contamine el agua, los alimentos de las personas y animales o las semillas por medio del almacenamiento y la eliminación.

ALMACENAMIENTO DEL PESTICIDA: Guarde los pesticidas lejos de los alimentos para personas, los alimentos para mascotas, los alimentos para animales, las semillas, los fertilizantes y los materiales de uso veterinario. Mantenga el envase bien cerrado para evitar derramamientos y contaminación.

ELIMINACION DEL PESTICIDA: Para evitar desechos, use todo el material contenido es este envase, incluyendo los residuos del enjuague, aplicándolo según las indicaciones de la etiqueta. Si no es posible evitar los desechos, ofrezca el producto restante a una planta de eliminación de desechos o a un pregrama de eliminación de pesticidas. Estos programas suelen ser manejados por gobiernos estatales o locales o por la industria. Todos los desechos deben seguir los procedimientos federales, estatales y locales aplicables.

Consulte la etiqueta del envase para las instrucciones sobra la manipulación y eliminación y las limitaciones de relleno del mismo.

5.0 INFORMACION GENERAL

Descripción del producto: Este producto es un herbicida sistémico de aplicación post-emergencia foliar, sin actividad residual en el suelo. Controla un amplio espectro de malezas anuales, malezas perennes, matorrales leñosos y árboles. Está formulado como un líquido soluble en agua que contiene surfactante y no es necesario ni se recomienda el agregado de otro surfactante. Puede aplicarse utilizando equipos convencionales después de su dilución y mezclado con agua o con otros medios de transporte según las instrucciones de la etiqueta.

Aparición de los síntomas: Este producto se mueve dentro de la planta desde el punto de aplicación sobre el follaje hasta las raíces. Los efectos visibles incluyen que la planta se marchite y se vuelva amarilla de forma gradual, hasta que su parte exterior se torne completamente color café; mientras tanto, las partes de la planta que están bajo tierra se deterioran completamente. Los efectos visibles en la mayoría de las malezas anuales se pueden apreciar entre los 2 y los 4 días después de la aplicación, pero en la mayoría de las malezas perennes es posible que no se observen hasta después de 7 días o más. El frío extremo o el cielo muy nublado después de la aplicación pueden retardar la actividad del producto y hacer que el efecto visual se demore.

Etapa de malezas: Las malezas anuales son más fáciles de controlar cuando son pequeñas. Para lograr el mejor control de la mayoría de las malezas perennes, el tratamiento debe realizarse en las últimas etapas de crecimiento, cerca de su etapa de madurez. Vea en las secciones "MALEZAS CONTROLADAS" de esta etiqueta las proporciones específicas para cada tipo de maleza.

Aplique siempre la mayor cantidad de producto dentro del rango indicado cuando las malezas son muy densas o cuando crecen en áreas no tocadas (no cultivadas). Puede haber una disminución de los resultados cuando se traten malezas afectadas por enfermedades o dañadas por los insectos, malezas cubiertas con mucho polvo o malezas en malas condiciones de crecimiento.

Modo de acción en las plantas: El ingrediente activo de este producto inhibe una enzima hallada sólo en las plantas y microorganismos que es esencial para la formación de aminoácidos específicos.

Prácticas culturales: Se podrá observar una reducción en el efecto si se aplica el producto a malezas anuales o perennes que hayan sido segadas, que hayan servido de alimento para animales o hayan sido cortadas, y que no hubiesen crecido nuevamente hasta el nivel recomendado para el tratamiento.

Resistencia a la lluvia: La lluvia torrencial poco después de la aplicación lavará el producto del follaje y se requerirá una nueva aplicación para obtener un control adecuado.

Cobertura de la pulverización: Para obtaner mejores resultados, la cobertura del rocío debe ser completa y uniforme. No rocíe el follaje hasta el punto de escurrimiento.

No actividad en el suelo: Las malezas deben haber emergido en el momento de la aplicación para poder ser controladas por este producto. Las malezas que germinen de semillas después de la aplicación no serán controladas. Las plantas no emergidas con rizomas o raíces subterráneas de malezas perennes no conectadas no se verán afectadas por el herbicida y continuarán creciendo.

Cantidades de aplicación máximas: Las cantidades de aplicación o uso máximas especificadas en esta etiqueta están expresadas en unidades de volumen (onzas fluidas o cuartos de galón) de este producto por acre. No obstante, las dosis máximas de aplicación permitidas corresponden al uso de este producto en combinación con otros herbicidas que contienen glifosato como principio activo, tanto si son aplicados como mezclas de tanque o por separado, en función de las libras totales de glifosato (libras de ácido equivalente) por acre. Si se aplica más de un producto que contiene glifosato al mismo sitio dentro del mismo año, debe asegurarse de que el uso total de glifosato (libras de ácido equivalente) no exceda el máximo permitido. El total combinado de todos los tratamientos no debe exceder 10.6 cuartos de galón de este producto (10.6 libras de ácido glifosato) por acre por año. Vea en la sección "INGREDIENTES" de esta etiqueta información importante sobre el producto.

ATENCION

EVITE EL CONTACTO DEL HERBICIDA CON EL FOLLAJE, TALLOS, RAICES NO LEÑOSAS EXPUESTAS O FRUTOS EXPUESTOS DE LAS COSECHAS, PLANTAS Y ARBOLES DESEABLES. EN CASO CONTRARIO ES PROBABLE QUE SUFRAN GRAVES DAÑOS O SEAN DESTRUIDOS TOTALMENTE.

EVITE EL ACARRREO. CUANDO EL PRODUCTO SE APLIQUE, SE DEBE TENER MUCHO CUIDADO PARA PREVENIR EL DAÑO A PLANTAS Y CULTIVOS DESEABLES.

No permita que la solución del herbicida se nebulice, gotee, sea acarreada o salpique sobre la vegetación deseable. Una cantidad pequeña puede ser suficiente para causar daños graves o destruir las cosechas, plantas u otras áreas que no se desea tratar. La probabilidad de que ocurran daños por el uso de este producto aumenta cuando hay muchas ráfagas de viento, a medida que aumenta la velocidad del viento, cuando la velocidad del viento cambia constantemonte o cuando existen otras condiciones meteorológicas que favorecen la dispersión del rociado. Cuando se esté aplicando el producto con un rociador, evite la combinación de presiones y tipos de boquilla que puedan dar como resultado salpicaduras o partículas finas (niebla), que tienen muchas probabilidades de que el producto sea acarreado. EVITE LA APLICACION A ALTA VELOCIDAD O PRESION EXCESIVAS.

NOTA: El uso de este producto de cualquier manera contraria a las indicaciones contenidas en esta etiqueta, puede resultar en lesiones a personas, animales o cosechas o pueden ocurrir otras consecuencias no deseadas.

5.1 Gestión de resistencia de malezas

GRUPO	9	HERBICIDA

El glifosato, el principio activo de este producto, es un herbicida del grupo 9 según el sistema de clasificación de efecto de la Weed Science Society of America. Todas las poblaciones de malezas pueden contener plantas naturalmente resistentes a los herbicidas del grupo 9. Las especies de malezas resistentes a los herbicidas del grupo 9 pueden tratarse con buenos resultados utilizando herbicidas de otro grupo o adoptando otras prácticas culturales o mecánicas.

Para reducir al mínimo la incidencia de biotipos resistentes al glifosato, siga las siguientes recomendaciones generales con respecto a la gestión de malezas:

- Haga un reconocimiento del sitio de la aplicación antes y después de haber aplicado herbicidas.
- Comience a controlar las malezas cuanto antes, cuando sean todavía relativamente pequeñas.
- Donde sea apropiado, incorpore otros herbicidas y prácticas culturales o mecánicas como parte del sistema de control de malezas.
- Utilice la cantidad indicada en la etiqueta para las malezas más difíciles de controlar en el sitio. Evite las mezclas de tanque con otros herbicidas que reducen la eficacia de este producto (por antagonismo) o las recomendaciones de mezclas de tanque que alientan la utilización de cantidades de este producto inferiores a las recomendaciones de la etiqueta.
- Controle las malezas omitidas e impida que echen semilla.
- Limpie los equipos antes de trasladarse de un sitio a otro para reducir al mínimo la propagación de semillas de malezas.
- Utilice semillas comerciales nuevas con la menor cantidad posible de semillas de malezas.
- Informe todo incidente por falta de rendimiento reiterado de este producto en una maleza determinada al representante de Monsanto, vendedor minorista de su localidad o agente de extensión del condado.

5.2 Recomendaciones de gestión de biotipos de malezas resistentes al glifosato

NOTA: Es fundamental realizar las pruebas adecuadas para confirmar la resistencia de la maleza al glifosato. Póngase en contacto con su representante de Monsanto para determinar si se confirmó la resistencia de algún biotipo de maleza en particular en su región. Las recomendaciones de control para biotipos confirmados como resistentes al glifosato se dan a conocer con la publicación de etiquetas o fichas técnicas complementarias para este producto y puede solicitarlas al vendedor minorista o a su representante de Monsanto.

Debido a que no es posible determinar la existencia de nuevas malezas resistentes al glifosato hasta que se haya utilizado el producto y se cuente con la confirmación científica correspondiente, Monsanto Company no será responsable de ninguna pérdida que pudiera tener lugar en el caso de que este producto no lograra controlar de forma eficaz los biotipos de malezas resistentes al glifosato.

Siga las prácticas correctas de gestión de malezas para reducir la propagación de biotipos resistentes al glifosato confirmados:

- Si en su zona existe naturalmente un biotipo resistente, para lograr su control puede mezclar este producto en un tanque o aplicarlo secuencialmente con un herbicida debidamente etiquetado con efecto diferente.
- También se pueden utilizar prácticas de control culturales y mecánicas según corresponda.
- Haga un reconocimiento de los lugares tratados después de las aplicaciones de herbicida y controle las omisiones de biotipos resistentes antes de que echen semilla.
- Limpie minuciosamente los equipos antes de abandonar los lugares que se saben que contienen biotipos resistentes.

6.0 MEZCLA

Para mezclar, almacenar y aplicar la solución de este producto, se deben usar solamente envases de acero inoxidable, fibra de vidrio, plástico o envases de acero recubiertos internamente con plástico.

NO MEZCLE, ALMACENE NI APLIQUE ESTE PRODUCTO NI SOLUCIONES PARA ROCIAR DE ESTE PRODUCTO EN ENVASES DE ACERO GALVANIZADO O ACERO NO REVESTIDO (SALVO ACERO INOXIDABLE) NI EN TANQUES DE ROCIO.

Proceda con precaución para evitar el reflujo del líquido a la fuente de transporte. Utilice dispositivos antirreflujo cuando así lo requieran las reglamentaciones estatales o locales.

Limpie las piezas del rociador inmediatamente después de su utilización lavándolas bien con agua.

NOTA: PUEDE OCURRIR UNA DISMINUCION DE LOS RESULTADOS SI SE UTILIZA AGUA QUE CONTENGA TIERRA, TAL COMO AGUA CON BARRO VISIBLE O AGUA DE CHARCAS O ACEQUIAS QUE NO ESTE CLARA.

6.1 Mezcla con agua

Este producto se mezcla fácilmente con agua. La solución para rociar se debe mezclar de la siguiente forma: Ponga la cantidad correcta de agua limpia en el tanque en el cual se va a preparar la mezcla. Agregue la cantidad recomendada de este producto cuando ya está cerca de completarse el llenado con agua y mezcle con cuidado (bien). Es posible que durante la mezcla y rocío, la solución produzca espuma. Para evitar o minimizar la formación de espuma, evite el uso de agitadores mecánicos, cierre las tuberías de derivación y de retorno en el fondo del tanque, y si es necesario, use compuestos aprobados para evitar la formación de espuma o para eliminar la espuma ya formada.

6.2 Mezclas de tanque

Este producto no proporciona control de malezas residuales. Este producto puede mezclarse en un tanque con otros herbicidas para lograr el control de malezas residuales, un espectro de control de malezas más amplio o un efecto alternativo. Lea y siga siempre las indicaciones de las etiquetas de todos los productos utilizados en la mezcla. Use conforme a las precauciones más restrictivas. Para la mezcla en tanque, puede utilizarse cualquier cantidad de este producto que se encuentre dentro del rango indicado en la etiqueta.

Cuando esta etiqueta indique una mezcla de tanque con un ingrediente activo genérico como diurón, 2,4-D o dicamba, el usuario será responsable de asegurarse de que la etiqueta del producto de mezcla permita la aplicación específica.

El comprador y todos los usuarios serán responsables de cualquier pérdida o daño que pudiera ocurrir como consecuencia del uso o manipulación de mezclas de este producto con herbicidas u otros materiales que no estén expresamente recomendados en esta etiqueta. La mezcla de este producto con herbicidas u otros materiales no recomendados en esta etiqueta puede dar como resultado una reducción en su rendimiento.

6.3 Procedimiento para mezclas de tanque

Cuando haga mezclas de tanque, lea y siga cuidadosamente las instrucciones de la etiqueta, las precauciones y toda la información contenida en las etiquetas de todos los productos utilizados. Agregue el producto al tanque de mezcla según las instrucciones de la etiqueta. Agite continuamente y agregue la cantidad indicada en la etiqueta de este producto

Agite continuamente hasta usar totalmente el contenido del tanque. Si se deja que la mezcla para rociar se asiente, agite bien para que la mezcla vuelva a estar en suspensión antes de continuar con el rociado.

A fin de minimizar la formación de espuma, mantenga las tuberías de retorno lo más cerca del fondo del tanque. El tamaño del cernidor en la boquilla o de los cernidores en las tuberías no debe ser menor al número 50.

Siempre determine previamente la compatibilidad de la mezcla de este producto, que viene en tanque rotulado, con agua como vehículo, mezclando cantidades pequeñas proporcionales con anticipación. Asegúrese de que la mezcla en tanque específica esté registrada para su aplicación en el área deseada.

Refiérase a la sección "Mezclas de tanque" para ver las precauciones adicionales.

6.4 Mezcla de soluciones en porcentaje

Prepare la cantidad deseada de la solución para rociar, mezclando las proporciones de este producto con agua, según se muestra en la siguiente tabla:

Solución para rociar

Volumen deseado	Cantidad de Ranger PRO herbicida					
	1/2%	1%	1-1/2%	2%	5%	10%
1 gal	2/3 oz	1-1/3 oz	2 oz	2-2/3 oz	6-1/2 oz	13 oz
25 gal	1 pt	1 qt	1-1/2 qt	2 qt	5 qt	10 qt
100 gal	2 qt	1 gal	1-1/2 gal	2 gal	5 gal	10 gal

2 cucharadas = 1 onza fluida

Cuando se usen rociadores tipo mochila, o para bombeo, se recomienda que la cantidad indicada en la etiqueta de este producto se mezcle con agua en un envase grande. Llene el rociador con la solución mezclada.

6.5 Surfactante

Se pueden emplear surfactantes no iónicos cuyo rótulo indique que pueden usarse con herbicidas. No reduzca las dosis de este producto cuando agregue surfactante. Cuando agregue surfactante adicional, use una concentración de surfactante de 0,5 por ciento (2 cuartos de galón por cada 100 galones de solución de recío) cuando utilice surfactantos que contengan por lo menos 70 por ciento de ingrediente activo, o una concentración de surfactante de 1 por ciento (4 cuartos de galón por cada 100 galones de solución de rocío) en el caso de aquellos surfactantes que contengan menos de 70 por ciento de ingrediente activo. Lea y cumpla cuidadosamente con las precauciones y toda la información adicional que aparezca en el rótulo del surfactante.

6.6 Colorantes o tinturas

A este producto se le pueden agregar colorantes o tinturas para marcar, que sean aprobados para uso agrícola. Los colorantes o tinturas utilizados en las soluciones en aerosol de este producto pueden reducir su rendimiento, especialmente a bajas concentraciones del producto o a bajas diluciones. Para usar los colorantes y tinturas siga las instrucciones del fabricante.

6.7 Aditivos para controlar el acarreo del producto

Se pueden utilizar aditivos para el control de la deriva en todos los tipos de equipo, a excepción de aplicadores por frotación y barras de esponja. Cuando se use un aditivo para el control de la deriva, lea y cumpla cuidadosamente con las declaraciones preventivas y toda la información adicional que aparezca en la etiqueta del aditivo. El uso de aditivos para el control de la deriva puede afectar la cobertura del rocío, lo que puede dar como resultado una reducción en el rendimiento.

7.0 EQUIPOS Y TECNICAS PARA LA APLICACION

No use ningún sistema de irrigación para aplicar este producto.

APLIQUE ESTAS SOLUCIONES PARA ROCIAR UTILIZANDO EQUIPOS DEBIDAMENTE MANTENIDOS Y CALIBRADOS QUE SEAN CAPACES DE ROCIAR EL VOLUMEN DESEADO.

MANEJO DE LA DERIVA POR ROCIADO

EVITE LA DERIVA. DEBE USARSE EXTREMO CUIDADO EN LA APLICACION DE ESTE PRODUCTO PARA EVITAR DAÑOS A LA VEGETACION DESEADA.

No permita que la solución del herbicida empañe, gotee, se derive o salpique sobre la vegetación deseada, ya que minúsculas cantidades de este producto pueden causar daños graves o destrucción del cultivo, plantas u otras áreas que no se pretendía tratar.

Es la responsabilidad del aplicador evitar la deriva por rocío en el lugar de aplicación. La interacción de varios factores relacionados con el clima y el equipo determina la posibilidad de deriva por rocío. El aplicador y/o el cultivador son responsables de considerar todos estos factores al tomar decisiones.

7.1 Equipo aéreo

NO APLIQUE ESTE PRODUCTO CON EQUIPOS AEREOS EXCEPTO BAJO LAS CONDICIONES QUE SE ESPECIFICAN EN ESTA ETIQUETA.

PARA LA APLICACION AEREA EN CALIFORNIA, CONSULTE LA ETIQUETA EN EL SUPLEMENTO FEDERAL PARA APLICACIONES AEREAS EN DICHO ESTADO, PARA CONOCER LAS INSTRUCCIONES, RESTRICCIONES Y REQUISITOS ESPECIFICOS.

PARA EVITAR DAÑAR LA VEGETACION DESEADA ADJUNTA, SE DEBEN MANTENER ZONAS TAMPON ADECUADAS.

Evite la aplicación directa sebre cualquier cuerpo de agua.

Use las proporciones recomendadas de este producto con 3 a 25 galones de agua por acre.

Los rociadores gruesos tianen menos probabilidades de producir deriva; por lo tanto, no utilice boquillas o configuraciones de boquilla que apliquen el producto en forma de gotitas finas. No incline las boquillas hacia adelante en el flujo de aire y no aumente el volumen de rocío aumentando la presión de la boquilla. Pueden usarse aditivos para el control de la deriva. Cuando se use un aditivo para el control de la deriva, lea y cumpla cuidadosamente con las declaraciones preventivas y toda la información adicional que aparezca en la etiqueta del aditivo.

Asegúrese de que la aplicación sea uniforme—A fin de evitar que queden áreas sin tratar, que la aplicación no sea uniforme o que las aplicaciones se traslapen, se deben usar marcadores adecuados.

Mantenimiento de aviones

EL CONTACTO PROLONGADO DE ESTE PRODUCTO CON PARTES DE ACERO QUE NO ESTA RECUBIERTO CON ALGUN TIPO DE PROTECCION, PUEDE DAR COMO RESULTADO LA CORROSION Y POSIBLEMENTE QUE LAS PARTES FALLEN. Es posible prevenir la corrosión recubriendo las partes con pintura orgánica, que cumpla con las especificaciones aero-espaciales MIL-C-38413. Al final de cada día de trabajo, para evitar la corrosión de las partes expuestas, lave muy bien el avión a fin de remover los residuos de este producto que se acumulan durante el rocío o por derramamientos. Las partes del tren de aterrizaje son extremadamente susceptibles.

MANEJO DE LA DERIVA POR ROCIADD AÉREO

Deben seguirse los siguientes raquerimientos de manejo de la deriva para evitar el movimiento de ésta fuera de objetivo en aplicaciones aéreas a campos de cultivo agrícola.

1. La distancia del pulverizador más externo en la barra distribuidora no debe exceder 3/4 del largo de la envergadura o rotor.
2. Los pulverizadores deban siempre apuntar hacia atrás, paralelos a la corriente de aire, nunca hacia abajo más de45 grados. En los estados con reglamentos más estrictos, éstos deben observarse.

Importancia del tamaño de la gotita

La forma más eficaz de reducir la posibilidad de deriva es la aplicación de gotitas grandes. La mejor estrategia de manejo de la deriva es la aplicación de las gotitas más grandes que provean suficiente cobertura y control. La aplicación de gotitas más grandes reduce la posibilidad de deriva, pero no la evitará si las aplicaciones se realizan inadecuadamenta o bajo condiciones ambientales desfavorables (vea las secciones de **Viento, Temperatura y humedad, e Inversiones de temperatura** en esta etiqueta).

Control del tamaño de la gotita

- **Volumen:** Use pulverizadores de velocidad de flujo alta para aplicar el mayor volumen de rociado práctico. Los pulverizadores con mayores velocidades de flujo producen gotitas más grandes.
- **Presión:** Use las presiones de rocío más bajas recomendadas para la boquilla. La presión más alta reduce el tamaño de la gotita y no mejora la penetración del todo. Cuando sean necesarias velocidades de flujo mayores, use la boquillacon velocidad de flujo mayor en lugar de aumentar la presión.
- **Número de pulverizadores:** Use el número mínimo de pulverizadores que provean cobertura uniforme.
- **Orientación del pulverizador:** Oriente los pulverizadores de modo que el rocío sea liberado hacia atrás, paralelo a la corriente de aire, produzca gotitas más grandes que en otras orientaciones. Una deflexión significativa de la horizontal reducirá el tamaño de la gotita y aumentará la posibilidad de deriva.
- **Tipo de pulverizador:** Use un tipo de pulverizador que esté diseñado para la aplicación prevista. Con la mayoría de los tipos de pulverizadores, los ángulos de rociado más angostos producen gotitas más grandes. Considere el uso de pulverizadores de deriva baja. Los pulverizadores de flujo sólido orientados hacia atrás producen gotitas más grandes que otros tipos de pulverizador.
- **Largo de la barra distribuidora:** Para algunos tipos de uso, la reducción del largo efectivo de la barra distribuidora a menos de 3/4 de la envergadura o el largo del rotor puede reducir más la deriva sin reducir el ancho de la hilera (pasada).
- **Altura de la aplicación:** Las aplicaciones no deben realizarse a una altura mayor que 10 pies por encima de la copa de las plantas más grandes, a menos que se requiera mayor altura por razones de seguridad del aeroplano. La realización de las aplicaciones a la menor altura que sea segura reduce la exposición de las gotitas a la evaporación y el viento.

Ajuste de la hilera (pasada)

Cuando las aplicaciones se lleven a cabo con viento lateral, la banda de aspersión se desplazará a favor del viento. Por ello, en los extremos con o contra el viento del campo, el aplicador debe compensar este desplazamiento ajustando la trayectoria del aeroplano contraria al viento. La distancia de ajuste de la hilera debe aumentar, cuando aumenta la posibilidad de deriva (mayor viento, gotitas más pequeñas, etc.).

Viento

La posibilidad de deriva es menor con velocidades del viento entre 2 y 10 mph. Sin embargo, muchos factores, incluyendo el tamaño de las gotitas y al tipo de equipo determinan la posibilidad de deriva a una velocidad determinada. Debe evitarse la aplicación menos de 2 mph debido a la dirección variable del viento y la posibilidad alta de inversión. NOTA: El torreno local puede influir en los patrones de viento. Cada aplicador debe conocer los patrones (vientos) locales y cómo éstos afectan la deriva.

Temperatura y humedad

Cuando se realizan aplicaciones con humedad relativa baja, fije el equipo para que produzca gotitas más grandes para compensar por la evaporación. La evaporación de gotitas es más grave cuando las condiciones son calurosas y secas.

Inversiones de temperatura

No deben realizarse aplicaciones durante una inversión de temperatura debido a que la posibilidad de deriva es alta. Las inversiones de temperatura rostringen la mezcla de aire vertical, lo que causa que pequeñas gotitas suspendidas permanezcan en una nube concentrada. Este nube puede moverse en direcciones no predecibles debido a los vientos variables leves que son comunes durante las inversiones. Las inversiones de tamperatura están caracterizadas por temperaturas en aumento cen altitud y son comunes en las noches con cebertura de nubes limitada y poco o ningún viento. Comienzan a formarse cuando se mete el sol y a menudo continúan en la mañana. Su presencia puede indicarse por neblina en el suelo; sin embargo, si la neblina no está presente, las inversiones también pueden identificarse por el movimiento del humo desde una fuente del suelo o por el generador de humo de un aeroplano. El humo en capas que se mueve lateralmente en una nube concentrada (bajo condiciones de poco viento) indica una inversión, mientras que el humo que se mueve hacia arriba y se disipa rápidamente indica buena mezcla de aire vertical.

Áreas sensibles

Este producto sólo se debe aplicar cuando la posibilidad de deriva hacia zonas adyacentes susceptibles (como por ejemplo, áreas residenciales, masas de agua, hábitat conocido de especies amenazadas o en peligro de extinción, cultivos que no sean el objetivo) sea mínima, (como por ejemplo, cuando el viento sople lejos de las ároas susceptibles).

7.2 Equipo de aplicación terrestre

Use las proporciones indicadas en la etiquete de este producto con 3 a 40 galones de agua por acre para aplicaciones al voleo, a menos que se indique de otra manera en esta etiqueta en otras etiquetas o fichas técnicas complementarias publicadas por Monsanto. A medida que la densidad de las malezas aumenta, el volumen de rocío se

debe aumentar también para conseguir una cobertura completa, pero siempre dentro de los límites indicados en la etiqueta. A fin de evitar un rocío muy fino, seleccione la boquilla cuidadosamente. Para obtener mejores resultados con equipo a nivel del terreno, use boquillas tipo abanico plano. Asegúrese de que las gotas del rocío se distribuyan uniformemente.

7.3 Mochila o equipo de alto volumenn

Aplique el producto al follaje de la vegetación que se desea controlar. En aplicaciones de rocío para mojar, la cobertura del follaje debe ser completa y uniforme. No rocíe hasta el punto de escurrimiento. Use rociadores gruesos solamento.

Refiérase a las instrucciones "Malezas anuales" de la sección "MALEZAS CONTROLADAS" para ver las proporciones y restricciones específicas.

7.4 Equipo especializado

Este producto puede ser diluido con agua y aplicado usando rociadores de recirculación, aplicadores con pantalla, rociadores con capucha, aplicadores por frotación o barras de esponja, sobre las malezas indicadas que crecen en cualquier lugar indicado en esta etiqueta.

EVITE EL CONTACTO DEL HERBICIDA CON LA VEGETACION DESEABLE. El contacto con este producto con la vegetación deseable, podría resultar en daños o en una destrucción de la planta.

Recirculación del rocío

Los rociadores de recirculación dirigen la solución hacia los tipos de malezas que crecen sobre vegetación deseable, mientras que la solución que no ha sido interceptada por las malezas se recoge y se retorna al tanque para volverla a usar.

Los aplicadores utilizados por encima de la vegetación deseable deben ser calibrados de tal manera que el rocío o el punto de contacto más bajo esté por lo menos a 2 pulgadas arriba de la vegetación deseable. Gotas, niebla, espuma o salpicaduras del herbicida en contacto con la vegetación deseable pueden causar con mucha probabilidad descoloración, atrofia o destrucción.

Se obtienen mejores resultados cuando una mayor cantidad de la maleza entra en contacto con el herbicida. Las malezas que no entran en contacto con la solución herbicida no serán afectadas. Esto puede ocurrir en lugares donde las malezas están muy concentradas, cuando la infestación es grave o donde la altura de las malezas es variada, lo que no permite que todas sean tocadas por el herbicida. En estos casos puede hacerse necesario repetir el tratamiento.

Aplicadores con pantalla y con capucha

Los rociadores con pantalla o con capucha aplican la solución del herbicida directamente sobre las malezas, al mismo tiempo que protegen la vegetación deseable, para que no sea tocada por el herbicida. Use boquillas que aseguren un recubrimiento uniforme en toda el área tratada. En los rociadores con pantalla, mantenga las pantallas debidamente colocadas a fin de proteger la vegetación que no se desee destruir. SE DEBE TENER MUCHO CUIDADO PARA EVITAR EL CONTACTO DEL HERBICIDA CON LA VEGETACION DESEABLE.

Aplicadores por frotación y barras de esponja

Los aplicadores por frotación o de esponja aplican la solución del herbicida frotando las malezas con un material absorbente que contenga la solución del herbicida. El equipo debe ser diseñado, mantenido y operado de manera que la solución del herbicida no haga contacto con la vegetación deseable. Opere este equipo a velocidades inferiores a las 5 millas por hora. En áreas donde la infestación es grave, se puede mejorar la eficacia reduciendo la velocidad, así se asegura que el frotador esté siempre adecuadamente saturado con la solución del herbicida. Se obtienen mejores resultados si se aplica 2 veces en direcciones opuestas.

Evite fugas o goteos sobre la vegetación deseable. Ajuste la altura de los aplicadores a fin de asegurar un contacto adecuado con las malezas. Mantenga limpias las superficies de frotación. Tenga prosente que en terrenos inclinados, el herbicida puede migrar causando goteos en la parte baja y el secado de las mechas en la parte superior del aplicador por frotación.

No use aplicadores por frotación cuando las malezas estén mojadas.

Mezcle solamente la cantidad de solución que se usará durante el período de un día, debido a que el uso de sobras de días anteriores puede dar como resultado un efecto menos eficiente. Inmediatamente daspués de usar este producto, lave bien el aplicador usando bastante agua.

Para aplicadores de cordón o de mecha de esponja—Puede emplearse soluciones que oscilan entre 33 al 75 por ciento de este producto en agua.

Para aplicadores de panel y sistemas de alimentación a presión—Se pueden usar soluciones que oscilan entre 33 al 100 por ciento de este producto con agua.

Cuando se aplica de acuerdo a las recomendaciones, este producto CONTROLA las siguientes malezas:

Corn, volunteer
Panicum, Texas
Rye, common
Shattercane
Sicklepod
Spanishneedles
Starbur, bristly

Cuando se aplice de acuerdo a las recomendaciones, este producto SUPRIME las siguientes malezas:

Beggarweed, Florida
Bermudagrass
Dogbane, hemp
Dogfennel
Guineagrass
Johnsongrass
Milkweed
Nightshede, silverleaf
Pigweed, redroot
Ragweed, common
Ragweed, giant
Smutgrass
Sunflower
Thistle, Caneda
Thistle, musk
Vaseygrass
Velvetleaf

7.5 Sistemas por inyección

Este producto puede usarse con sistemas de rocío por inyección, ya sean aéreos o a nivel del terreno. Puede usarse como concentrado líquido o diluido antes de la inyección en el chorro de rocío. No mezcle este producto con concentraciones de otros productos sin diluir cuando use los sistemas por inyección salvo que se recomiende específicamente.

7.6 Equipo de aplicación por goteo controlado

La proporción de este producto aplicado por acre usando el equipo de aplicación por goteo controlado no debe ser menor que la cantidad indicada en esta etiqueta cuando se usa equipo convencional para aplicaciones al voleo. Cuando se usa el equipo aplicador por goteo controlado montado en un vehículo, use de 2 a 15 galones de agua por acre.

Los equipos de goteo controlado producen un rociado que es difícil de ver. Se debe tener especial cuidado para evitar que el rociado o el acarreo entre en contacto con el follaje o cualquier otra parte verde de la vegetación que no se quiere tratar, ya que en caso contrario, es probable que ésta sea dañada o destruida.

8.0 RECOMENDACIONES SEGUN AREAS Y USO

A continuación aparecen las instrucciones detalladas para cada área.

A menos que se especifique lo contrario en esta etiqueta o en otras etiquetas o fichas técnicas complementarias publicadas por Monsanto, pueden hacerse aplicaciones para controlar las malezas indicadas en las tablas de malezas anuales, peronnes y materrales leñosos. Vea también la sección "EQUIPO SELECTIVO".

8.1 Troncos cortados

El tratamiento de troncos cortados puede hacerse en cualquier área listada en esta etiqueta. Este producto controla muchas especies de matorrales leñosos y árboles. Aplique este producto usando equipo adecuado para garantizar la cobertura completa del cámbium. Corte los árboles o sus brotes cerca de la superficie del suelo. Aplique una solución de este producto del 50 al 100 por ciento a la superficie recién cortada, inmediatamente después del corte. Demorar la aplicación puede reducir la eficacia del producto. Para obtener mejores resultados, la aplicación deberá hacerse durante los períodos de crecimiento activo y expansión completa de las hojas.

NO HAGA LAS APLICACIONES SOBRE TRONCOS CORTADOS CUANDO LAS RAICES DE LOS MATORRALES LEÑOSOS O ARBOLES DESEABLES PUEDEN ESTAR INJERTADAS A LAS RAICES DE LOS TRONCOS CORTADOS. Algunos brotes, tallos o árbolas pueden compartir el mismo sistema radicular. Árboles que están contiguos, que tienen la misma edad, altura y separación pueden indicar raíces compartidas. Cuando se trata a uno o más árboles que tienen raíces en común, tanto si están injertados como si comparten el sistema radicular, es probable que se produzca un daño en los brotes/árboles no tratados.

8.2 Preparación del lugar para forestación

Este producte puede ser utilizado para controlar o controlar parcialmente malezas leñosas, árboles y malezas herbáceas en forestacionas, y preparar o crear claros para la vida silvestre en estos lugares y para mantoner los caminos de las explotaciones forestales.

Este producte puede ser utiizado para preparar el lugar antes de plantar cualquier especie de árbol, como árboles de Navidad, eucaliptos, cultivos de árboles híbridos y viveros dedicados a la silvicultura

Utilice proporciones más concentradas de este producto dentro de los márgenes recomendados para controlar o controlar parcialmente malezas leñosas, árboles y malezas herbáceas perennes difíciles de controlar. Para obtener resultados óptimos, aplique este producto a árboles y arbustos leñosos en crecimiento activo después de la expansión completa de las hojas y antes de que éstas adquieran color otoñal y se caigan. Incremente la concentración dentro del margen recomendado para controlar malezas herbáceas perennes en cualquier momento después de la emergencia y antes de que aparezcan inflorescencias, flores o bayas.

Utilice proporciones menos concentradas de este producto dentro del margen recomendado para controlar malezas herbáceas anuales y malezas herbáceas perennes en crecimiento activo después de que aparezcan inflorescencias, flores o bayas. Aplique

al follaje de malezas herbáceas anuales en crecimiento activo en cualquier momento después de la emergencia.

Este producto carece de actividad herbicida o residual en la tierra. Si es necesario repetir las aplicaciones, no exceda los 10,6 cuartos de galón de este producto por acre por año.

MEZCLAS PARA TANQUE: Se pueden emplear mezclas de tanque con este producto para aumentar el espectro de la vegetación controlada. Antes de preparar una mezcla de tanque, lea y siga al pie de la letra las instrucciones, las advertencias de precaución y toda la información en las etiquetas de todos los productos utilizados. Use la mezcla conforme a las advertencias de precaución más estrictas indicadas para cada producto en la mezcla.

NOTA: Para la preparación de sitios de forestación, asegúrese de que el producto para mezclar en tanque esté aprobado antes de plantar las especies deseadas. Respete las restricciones del intervalo de plantación.

Todas las proporciones recomendadas de este producto se pueden utilizar en una mezcla de tanque con los siguientes productos para la preparación de sitios de forestación.

Arsenal Applicators Concentrate	Garlon 3A
Chopper	Garlon 4
Chopper Gen2	Oust XP
Escort	

Para controlar malezas herbáceas, utilice las proporciones de menor concentración recomendadas para la mezcla de tanque. Para controlar grupos densos o difíciles de arbustos leñosos y árboles, utilice las proporciones de mayor concentración recomendadas en mezcla de tanque.

No aplique este producto para aplicaciones al voleo en la parte superior de coníferas para forestación o árboles de madera dura a menos que se indique lo contrario en esta etiqueta o en otras etiquetas o fichas técnicas complementarias publicadas por Monsanto.

8.3 Areas generales y áreas industriales

Este producto puede ser utilizado en áreas no cultivables como aeropuertos, conjuntos de apartamentos, sitios comerciales, orillas de acequias, caminos de entrada de automóviles, acequias secas, canales secos, filas de vallas, áreas de forestación, campos de golf, invernaderos, zonas industriales, áreas de paisaje, depósitos de madera, zonas de manufactura, solares municipales, zonas naturales, complejos de oficinas, cultivos ornamentales, parques, áreas de estacionamiento, zonas con tanques de petróleo e instalaciones de bombeo, vías de ferrocarril, áreas recreativas, áreas residenciales, derechos de paso, bordes de carreteras, escuelas, umbráculos, complejos deportivos, áreas de almacenamiento, subestaciones, zonas de césped, zonas de servicios públicos, zonas de almacenes, otras áreas públicas y zonas en la que se realiza gestión de vida silvestre.

También se puede utilizar este producto en áreas de cultivos no alimenticios, como granjas de árboles de Navidad, criaderos de plantas y granjas de césped o para semillas de césped.

A menos que se especifique lo contrario, pueden realizarse aplicaciones para controlar las malezas indicadas en la sección "MALEZAS CONTROLADAS" de esta etiqueta.

Control general de malezas, recortado de bordes y suelo limpio de malezas

Este producto puede utilizarse en áreas no cultivables y de cultivos no alimenticios. Puede aplicarse con cualquiera de los equipos descritos en este libreto. Puede usarse para el recortado de bordes alrededor de objetos en áreas no cultivables, para tratamiento localizado de vegetación no deseable y para eliminar las malezas no deseables que crecen en cuadros de arbustos establecidos y plantaciones ornamentales. Este producto puede usarse antes de plantar un área con plantas ornamentales, flores, césped (tepes o semillas), o antes de colocar asfalto o de comenzar un proyecto de construcción.

Pueden hacerse aplicaciones repetidas de este producto, a medida que emergen las malezas, para mantener el suelo limpio de malezas.

MEZCLAS DE TANQUE: Este producto se puede mezclar en un tanque con los siguientes productos, siempre que éstos estén aprobados para el área de uso deseada. Consulte las etiquetas de estos productos para informarse sobre las áreas de uso y las dosis de aplicación aprobadas.

Arsenal	Karmex	Ronstar 50 WSP
Barricade 65WG	Krovar I DF	Sahara
Clarity	Oust XP	simazine
diuron	Pendulum 3.3 EC	Surflan
Endurance	Pendulum WDG	Telar
Escort	Plateau	Vanquish
Garlon 3A	Princep DF	2,4-D
Garlon 4	Princep Liquid	

Este producto más las mezclas en tanque de dicamba no se pueden aplicar por rocío aéreo en California.

Cuando se aplica como mezcla de tanque para mantener el suelo limpio de malezas, este producto proporciona control sobre las malezas anuales emergidas y control o control parcial sobre las malezas perennes emergidas, matorrales leñosos y árboles.

Para controlar o controlar parcialmente las malezas perennes siguientes, aplique 1 a 2 cuartos de galón de este producto más 2 a 8 onzas de Oust XP por acre.

Bahiagrass	Fescue, tall
Bermudagrass	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Quackgrass
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Segador químico - Plantas perennes

Este producto suprime las hierbas perennes mencionadas en esta sección para servir como substituto del sageo. Use 8 onzas fluidas de este producto por acre cuando trate extensiones de tall fescue (*Festuca arundinacea*), fine fescue (*Festuca rubra*), orchardgrass (*Dactylis glomerata*), quackgrass (*Elytrigia repens*) o reed canarygrass (*Phalaris arundinacea*). Use 6 onzas fluidas de este producto por acre cuando trate Kentucky bluegrass. Aplique el tratamiento en 10 a 40 galones de solución para rociar por acre.

Uselo solamente en áreas en las que puede tolerarse un daño o decoloración temporal de las hierbas perennes.

Segador químico - Plantas anuales

Para suprimir el crecimiento de algunas hierbas anuales, tales como el ballico, la cebada silvestre y la avena loca anuales que crecen en céspedes agrestes al borde de las carreteras u otras áreas industriales, aplique de 4 a 5 onzas fluidas de este producto en 10 a 40 galones de solución de rocío por acre. Las aplicaciones se deben realizar cuando las hierbas anuales crezcan activamente y antes de que las semillas se encuentren en la etapa de "boot" del desarrollo. Los tratamientos pueden perjudicar a las hierbas deseadas.

Especie *Bromus* y Medusahead en pasturas y praderas

Especie *Bromus*. Este producto puede ser utilizado para tratar downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) y cheatgrass (*Bromus secalinus*) que se encuentran en lugares industriales, pasturas y praderas. Aplique por difusión, 8 a 16 onzas fluidas de este producto por acre.

Para obtener mejores resultados, el tratamiento debe coincidir con la emergencia temprana del epicótilo de las plantas más maduras. Demorar la aplicación hasta esta etapa del desarrollo maximizará la emergencia de otros brotes de malezas de pastos. Las aplicaciones se deben hacer todos los años sobre el mismo lugar hasta que se agoten los bancos de semilla y se puedan restablecer en el lugar los pastos perennes deseados.

Medusahead. Para tratar medusahead, aplique 16 onzas fluidas de este producto por acre, tan pronto como las plantas se encuentren en desarrollo activo y antes de la etapa de 4 hojas. Las aplicaciones se pueden hacer en el otoño o en la primavera.

Las aplicaciones sobre *Bromus* y sobre medusahead se pueden hacer utilizando equipo de pulverización terrestre o aéreo. Las aplicaciones aéreas para estos usos se pueden hacer utilizando equipos para aeronaves de ala fija o para helicóptero. Para aplicaciones aéreas, diluya en 2 a 10 galones de agua por acre. Para aplicaciones utilizando equipo terrestre, diluya en 10 a 20 galones de agua por acre. Cuando se aplica de acuerdo a las instrucciones de esta etiqueta, no hay restricciones al pastoreo.

Césped latente (durmiente)

Este producto puede usarse para controlar o suprimir muchas malezas anuales de invierno y tall fescue para el alivio eficaz de céspedes de bermudagrass y bahiagrass latentes. Trate solamente cuando el césped esté latente y antes de reverdecer en la primavera.

Aplique de 8 a 64 onzas fluidas de este producto por acre. Aplique las dosis recomendadas en 10 a 40 galones de agua por acre. Utilícelo sólo en áreas donde bermudagrass o bahiagrass sean coberturas de terreno convenientes y donde pueda tolerarse algún daño temporal o descoloración.

Los tratamientos en exceso de 16 onzas fluidas por acre pueden dañar o retrasar el reverdecer en las áreas donde se hace mucho mantenimiento, como campos de golf y jardines. NO aplique mezclas de tanque de este producto más Oust XP en áreas de césped donde se hace mucho mantenimiento. Para otros usos, vea la sección "Vías de ferrocarril" de esta etiqueta, que proporciona dosis para el tratamiento de bermudagrass latente y la sección "Bordes de las carreteras" de esta etiqueta, que proporciona dosis para tratamientos de bermudagrass y bahiagrass latentes.

Bermudagrass de crecimiento activo

Este producto puede emplearse para controlar total o parcialmente muchas malezas anuales y peronnes a fin de obtener una distribución eficaz de bermudagrass de crecimiento activo. NO aplique más de 16 onzas fluidas de este producto por acre en áreas de céspedes de alto mantenimiento. NO aplique mezclas de tanque de este producto más Oust en áreas de céspedes de alto mantenimiento. Para otros usos, vea la sección "BORDES DE LAS CARRETERAS" de esta etiqueta, que proporciona dosis para tratamientos de bermudagrass de crecimiento activo. Utilícelo sólo en áreas donde puede tolerarse algún daño temporal o descoloración.

Renovación del césped, producción de semillas o tepes

Este producto controla la mayoría de la vegetación existente antes de la renovación del césped o de establecer céspedes cultivados para semilla o tepes. Para un control máximo de la vegetación existente, demore la siembra o cobertura de césped a fin de determinar si las partes de la planta que quedaron bajo tierra vuelven a crecer. Cuando sea necesario repetir el tratamiento, permita que las plantas se desarrollen lo suficiente antes de volver a tratar. Para controlar más eficientemente las hierbas de estación caliente, como bermudagrass, se debe aplicar este producto en el verano o en el otoño.

En lugares donde la vegetación existente esté creciendo y el césped esté bajo un programa de siega, aplique este producto después de omitir por lo menos un corte del césped para permitir un crecimiento suficiente a fin de que el rociado sea interceptado por las plantas.

No remueva la tierra ni las partes de la planta que estén bajo tierra antes del tratamiento. La labranza o las técnicas de renovación como corte vertical, perforación o rebanado deben esperar 7 días después de la aplicación a fin de permitir la absorción adecuada en las partes de la planta que estén bajo tierra.

Pueden plantarse los céspedes convenientes siguiendo los procedimientos anteriormente mencionados.

Puede utilizarse equipo de mano para el tratamiento en sitio de vegetación no deseada que crezca en el césped existente. Puede utilizarse equipo de difusión o de mano para controlar los restos de tepes u otra vegetación no deseada después de cosechar el tepe.

Si las dosis de aplicación ascienden a 3 qt (cuartos de galón) por acre o menos, no se requiere un período de espera entre el tratamiento y la alimentación o pastoreo del ganado. Si la dosis es mayor de 3 qt por acre, retire el ganado doméstico antes de la aplicación y espere 8 semanas después de la aplicación antes de pastorear o cosechar.

8.4 Manejo de hábitats

Restauración y mantenimiento de hábitats

Este producto puede ser usado para controlar la vegetación exótica y otras plantas indeseables en áreas de manejo de hábitats y en áreas naturales, incluyendo pastizales y refugios para la fauna silvestre. Pueden hacerse aplicaciones para permitir la recuperación de las especies de plantas nativas, antes de plantar dichas especies nativas deseables, y para otros requisitos similares de control de la vegetación de amplia efectividad. A fin de eliminar selectivamente ciertas plantas indeseables, se pueden hacer aplicaciones en puntos específicos para controlar y mejorar al hábitat.

Sitios donde se siembran alimentos para la fauna silvestre

Este producto puede ser usado para preparar el terreno donde se desea sembrar alimentos para la fauna silvestre. Cualquier especie de alimento para la fauna silvestre puede ser sembrada después de aplicar este producto, o también se puede permitir que las especies nativas vuelvan a poblar el área. Si hace falta labrar para preparar el terreno antes de sembrar las semillas, espere 7 días después de aplicar este producto antes de arar a fin de permitir la absorción adecuada en las partes de la planta que estén bajo tierra.

8.5 Inyección y chorro (matorrales leñosos y árboles)

Este producto puede aplicarse por inyección o chorro para el control total o parcial de matorrales leñosos y árboles. Aplique este producto usando equipo adecuado, que debe ser capaz de penetrar en el tejido viviente. Aplique el equivalente a 1/25 onza fluida (1 mL) de este producto por cada 2 ó 3 pulgadas de diámetro del tronco a la altura del pecho (DBH en inglés). La mejor forma de hacerlo es aplicando una solución del 50 al 100 por ciento, este producto, con un chorro continuo alrededor del árbol o en cortes espaciados uniformemente alrededor del árbol y por debajo del nivel de las ramas. A medida que el diámetro del árbol aumenta, se obtienen mejores resultados con el chorro continuo alrededor del árbol o en cortes espaciados muy cerca entre sí alrededor del árbol. Evite las aplicaciones que permiten el escurrimiento de material cuando se chorrea alrededor del árbol o sobre los cortes en árboles que tienen la facilidad de exudar savia de los cortes. En especies de este tipo, haga los cortes de manera oblicua a fin de producir el efecto de copa y use el producto sin diluir. Para obtener mejores resultados, la aplicación debe tener lugar durante períodos de crecimiento activo y expansión completa de las hojas. En especies de este tipo, haga los cortes de manera oblicua a fin de producir el efecto de copa y use el producto sin diluir. Para obtener mejores resultados, la aplicación debe tener lugar durante períodos de crecimiento activo y expansión completa de las hojas.

8.6 Plantas ornamentales, viveros y árboles de Navidad

Post-dirigido y recortado de bordes

Este producto puede ser utilizado antes como un rocío post-dirigido alrededor de especies ornamentales leñosas establecidas, como arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce y yew, que crecen en viveros, en granjas de árboles de Navidad o en otros sitios de producción de árboles no alimenticios. Este producto también puede ser utilizado para recortado de bordes alrededor de árboles, edificios, aceras y carreteras, plantas en macetas y otros objetos de viveros.

Las plantas deseables pueden ser protegidas de la solución usando pantallas o cubriéndolas con cartón o con algún otro material impermeable. ESTE PRODUCTO NO SE RECOMIENDA PARA ROCIARSE DESDE ARRIBA SOBRE PLANTAS ORNAMENTALES Y ÁRBOLES DE NAVIDAD. Se debe tener mucho cuidado para que el rocío, acarreo o vapor de este producto no hagan contacto con el follaje o la corteza de las especies ornamentales establecidas.

Preparación del terreno

Este producto puede ser usado antes de planter cualquier tipo de planta ornamental, de vivero o árboles de Navidad.

Aplicadores por frotación

Este producto se puede usar mediante aplicadores de mecha de esponja u otro tipo de aplicadores por frotación adecuados, para controlar total o parcialmente la vegetación indeseable alrededor de eucaliptos o álamos. Consulte la sección "Equipo especializado" de este rótulo para obtener mayor información sobre el uso adecuado de los aplicadores por frotación.

Invernaderos/cobertizos

Este producto puede ser usado para controlar las malezas que estén creciendo en o alrededor de los invernaderos y cobertizos. No debe haber vegetación que no se quiera destruir y los equipos de ventilación deben estar apagados.

8.7 Parques, áreas recreativas y residenciales

Este producto puede usarse en parques, áreas recreativas y residenciales. Puede aplicarse con cualquiera de los equipos descritos en este libreto. Puede usarse para el recortado de bordes alrededor de árboles, vallas, caminos, alrededor de edificios, aceras y otros objetos en estas áreas. Puede usarse para tratamiento localizado de vegetación no deseable y para eliminar las malezas no deseables que crecen en cuadros de arbustos establecidos y plantaciones ornamentales. Este producto puede usarse antes de plantar un área con plantas ornamentales, flores, césped (tepes o semillas), o antes de colocar asfalto o de comenzar un proyecto de construcción.

Todas las instrucciones de la sección "Áreas no cultivadas y áreas industriales" son válidas para los parques y áreas recreativas.

8.8 Vías de ferrocarril

Todas las instrucciones de la sección "Áreas no cultivadas y áreas industriales" son válidas para las vías de ferrocarril.

Suelo vacío, balastos y bordes, cruces y tratamiento localizado

Este producto puede ser usado para mantener el suelo limpio de malezas en balastos y berdes de las vías de ferrocarril. Pueden hacerse aplicaciones repetidas de este producto, a medida que emergen las malezas, para mantener el suelo limpio de malezas. Este producto puede usarse para controlar las malezes altas y mejorar la línea visual en los cruces de ferrocarril y reducir la necesidad de segar a lo largo de las servidumbres de vía. Para aplicaciones en los crucos, pueden usarse hasta 80 galones de solución para rociar por acre.

Este producto puede mezclarse en tanque con los siguientes productos para tratamiento de belastos, bordes, tratamientos localizados, suelo limpio de malezas y cruces:

Arsenal	Krovar I DF
Clarity	Oust XP
diuron	Sahara
Escort	Spike
Garlon 3A	Telar
Garlon 4	Vanquish
Hyvar X	2,4-D

Control de matorrales

Este producto puede ser usado para controlar matorrales leñosos y árboles en las servidumbres de vía. Aplique de 4 a 10 cuartos de galón de este producto por acre para aplicaciones diseminadas, usando boquillas tipo aguilón o sin aguilón. Pueden usarse hasta 80 galones de solución para rociar por acre. Aplique una solución de 3/4 a 2 por ciento de este producto cuando haga aplicaciones de rociado para mojar a gran escala. Aplique una solución de 5 a 10 por ciento de este producto cuando haga aplicaciones de rociado dirigido a pequeña escala para tratamientos localizados. Este producto puede ser mezclado con los siguientes productos para un mejor control de los matorrales leñosos y árboles:

Arsenal	Garlon 4
Escort	Tordon K
Garlon 3A	

Mantenimiento del Bermudagrass

Este producto puede ser usado para controlar o controlar parcialmento muchas malezas anuales y perennes para el mantenimiento eficaz de bermudagrass que esté creciendo activamente. Aplique de 1 a 3 pintas de este producto en un máximo de 80 galones de solución para rociar por acre. Para tratar malezas anuales que tengan menos de 6 pulgadas de altura (o el largo de los tallos), use las proporciones más bajas. Use la proporción más alta a medida que las malezas aumenten de tamaño o cuando estén cerca de la floración o de la formación de semillas. Estas proporciones también controlan parcialmente las siguientes especies perennes:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

Este producto puede ser mezclado con Oust XP. Si se mezcla en tanques, no use más de 1 a 3 pintas de este producto con 1 a 2 onzas de Oust XP por acre. Para tratar malezas anuales listadas en esta etiqueta en la etiqueta de Oust XP, que tengan menos de 6 pulgadas de altura (o el largo de los tallos), use las proporciones más bajas de cada producto. Use la proporción más alta a medida que las malezas aumenten de tamaño o cuando estén cerca de la floración o de la formación de semillas. Estas proporciones también controlan parcialmente las siguientes especies perennes:

Bahiagrass	Fescue, tall
Blackberry	Johnsongrass
Bluestem, silver	Poorjoe
Broomsedge	Raspberry
Dallisgrass	Trumpetcreeper
Dewberry	Vaseygrass
Dock, curly	Vervain, blue
Dogfennel	

Úselo solamente en bermudagrass que esté bien establecido. Como resultado del tratamiento, el bermudagrass puede sufrir deterioro, pero volverá a crecer si se riega. No se recomienda repetir el tratamiento en la misma estación, ya que esto puede ocasionar daños graves al bermudagrass.

8.9 Bordes de las Carreteras

Todas las instrucciones de la sección "Áreas no cultivadas y áreas industriales" son válidas para bordes de las carreteras.

Tratamiento de bordes

Este producto puede ser usado en los bordes de las carreteras. Puede aplicarse con rociadores de aguilón, rociadores de aguilón con pantalla, boquillas descentradas de gran volumen, equipo de mano y equipos similares.

Barandas y otros obstáculos para la siega

Este producto puede ser usado para controler las malezas que crecen debajo de las barandas y alrededor de la señalización y otros objetos en los bordes de las carreteras.

Tratamiento localizado

Este producto puede ser usado como tratamiento localizado para controlar la vegetación indeseable que crece a lo largo de los bordes de las carreteras.

Mezclas de tanque

Este producto puede mezclarse en tanque con los siguientes productos para tratamientos de bordes, barandas, localizados y de suelo vacío siempre y cuando dichos preductos estén aprobados para su uso en dichos sitios. Lea y siga con cuidado las indicaciones, declaraciones preventivas y toda la demás información incluida en las etiquetas de los productos utilizados:

Clarity	Princep DF
diuron	Princep Liquid
Endurance	Ronstar 50 WSP
Escort	Sahara
Krovar I DF	simazine
Oust XP	Surflan
Outrider®	Telar
Pendulum 3.3 EC	Vanquish
Pendulum WDG	2,4-D

Vea las instrucciones generales para mezclas de tanque en la sección "Mezclas de tanques" de esta etiqueta.

Mantenimiento del Bermudagrass y Bahiagrass

Aplicaciones cuando estén latentes (durmientes)

Este producto puede usarse para controlar o controlar parcialmente muchas malezas anuales de invierno y tall fescue para el alivio eficaz de bermudagrass y bahiagrass latentes. Trate solamente cuando el césped esté latente y antes de su reverdecer primaveral. Este producto puede mezclarse en tanque con el herbicida Outrider o Oust XP para el control residual. Las mezclas de tanque de este producto con Oust XP pueden retrasar el reverdecer.

Para obtener mejores resultados con malezas anuales de invierno, haga el tratamiento cuando las plantas estén en una etapa temprana de su crecimiento (menos de 6 pulgadas de altura) después de que la mayoría haya germinado. Para obtener mejores resultados con tall fescue, haga el tratamiento cuando el fescue esté en o después de su etapa de 4 a 6 hojas.

Aplique de 8 a 64 onzas de este producto en una mezcla de tanque con 3/4 a 1-1/3 de onza de herbicida Outrider per acre. Lea y siga todas las instrucciones de la etiqueta del herbicida Outrider.

Aplique de 8 a 64 onzas fluidas de este producto por acre, solo o en mezcla de tanque con 1/4 a 1 onza de Oust XP por acre. Aplique las proporciones recomendadas en 10 a 40 galones de agua por acre. Uselo solamente en áreas donde el bermudagrass o bahiagrass son deseables y en las que puede tolerarse un poco de daño o decoloración. Para evitar que el reverdecer se retarde y para minimizar el daño, no agregue más de 1 onza de Oust XP por acre sobre bermudagrass y no más de 1/2 onzas de Oust XP por acre sobre bahiagrass, y evite el tratamiento cuando estas hierbas se encuentren en estado semilatente.

Bermudagrass que esté creciendo activamente

Este producto puede ser usado para controlar total o parcialmente muchas malezas anuales y perennes para el mantenimiento eficaz de bermudagrass que esté creciendo activamente. Aplique de 1 a 3 pintas de este producto en 10 a 40 galones de solución para rociar por acre. Para tratar malezas anuales que tengan menos de 6 pulgadas de altura (o el largo de los tallos), use las preporciones más bajas. Use la proporción más alta a medida que las malezas aumenten de tamaño o cuando estén cerca de la floración o de la formación de semillas. Estas proporciones también contrelan parcialmente las siguientes especies perennes:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

Este producto puede ser mezclado en tanque con el Outrider para el control o el control parcial de *Sorghum halepense* (Johnsongrass) y otras malas hierbas indicadas en la etiqueta del Outrider. Use de 8 a 32 onzas de este producto con 3/4 a 1-1/3 onzas de Outrider. Utilice las proporciones más altas de ambos productos para el control de malas hierbas perennes o anuales que tengan una altura superior a 6 pulgadas.

Este producto puede ser mezclado con Oust XP. Si se mezcla en tanques, no use más de 1 a 2 pintas de este producto con 1 a 2 onzas de Oust XP por acre. Para tratar malezas anuales listadas en este etiqueta y en las etiqueta de Oust XP, que tengan menos de 6 pulgadas de altura (o el largo de los tallos), use las proporciones más bajas de cada producto. Use la proporción más alta a medida que las malezas aumenten de tamaño o cuando estén cerca de la floración o de la formación de semillas. Estas proporciones también controlan parcialmente las siguientes especies perennes:

Bahiagrass	Fescue, tall
Bluestem, silver	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Trumpetcreeper
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Úselo solamente en bermudagrass que esté bien establecido. Como resultado del tratamiento, el bermudagrass puede sufrir deterioro, pero volverá a crecer si se riega. No se recomienda repetir el tratamiento con la mezcla de tanque en la misma estación, ya que esto puede ocasionar daños graves al bermudagrass.

Bahiagrass que esté creciendo activamente

Para suprimir el crecimiento vegetativo y la inhibición de la formación de semillas de bahiagrass durente aproximadamente 45 días, aplique 6 onzas fluidas de este producto en 10 a 40 galones de agua per acre. Aplique de 1 a 2 semanas después de reverdecer completo o después de cortar a una altura uniforme de 3 a 4 pulgadas. Esta aplicación debe ser hecha antes de le emergencia de las semillas.

Para la supresión durante un máximo de 120 días, aplique 4 onzas fluidas de este producto por acre, y a continuación una aplicación de 2 a 4 onzas fluidas por acre unos 45 días más tarde. No haga más de 2 aplicaciones al año.

Este producto se puede utilizar para el control o el control parcial de Sorghum halepense (Johnsongrass) y otras malas hierbas indicadas en la etiqueta de Outrider, en Paspalum notatun (bahiagrass) en crecimiento activo. Aplique de 1-1/2 a 4-3/4 onzas de este producto con 0.75 a 1.33 onzas de Outrider por acre. Utilice las proporciones más altas para el control de malas hierbas perennes o anuales que tengan una altura superior a 6 pulgadas. Utilice sólo en Paspalum notatum (bahiagrass) bien establecido.

Utilice las mezclas del tanque de este producto con Oust XP. Aplique 6 onzas fluidas de este producto con 0.25 onzas de Oust XP por acre, 1 a 2 semanas después de la primera siega de la primavera. Haga solamente 1 aplicación al año.

8.10 Sitos de servicios públicos

Este producto puede ser utilizado junto a derechos de paso para alimentación eléctrica, conductos y teléfonos y en otros lugares asociados con estes derechos de paso, como subestaciones, bordes de carreteras, líneas de ferrocarril o derechos de paso similares para servicios públicos.

Este producto puede ser utilizado en áreas de servicios públicos y subestaciones para el mantenimiento del suelo limpio de malezas, el recortado de bordes y el tratamiento localizado de vegetación no deseable, así como para eliminar las malezas no deseables que crecen en cuadros de arbustos establecidos o plantaciones ornamentales. Este producto puede ser utilizado antes de plantar un área de servicios públicos con plantas ornamentales, flores y césped (panes de césped o semillas) o antes de comenzar un proyecto de construcción.

Pueden hacerse aplicaciones repetidas de este producto, a medida que emergen las malezas, para mantener el suelo limpio de malezas.

Este producto también puede ser utilizado para preparar o establecer zonas de reserva de vida silvestre dentro de estos sitios, manteniendo los caminos de acceso y para el recorte lateral a lo largo de los derechos de paso.

Mezclas de tanque

Se pueden emplear mezclas de tanque con este producto para aumentar el espectro de control de malezas herbáceas, arbustos leñosos y árboles, siempre que el producto específico esté registrado para su aplicación en el terreno deseado. Antes de preparar una mezcla de tanque, lea y siga al pie de la letra las instrucciones, las advertencias de precaución y toda la información en las etiquetas de todos los productos utilizados. Use la mezcla conforme a las advertencias de precaución más estrictas indicadas para cada producto en la mezcla. Pueden utilizarse en mezclas de tanque todas las proporciones recomendadas de este producto.

Para controlar malezas herbáceas, utilice las proporciones de menor concentración recomendadas para la mezcla de tanque. Para controlar grupos densos o difíciles de arbustos leñosos y árboles, utilice las proporciones de mayor concentración recomendadas.

MEZCLAS DE TANQUE: Esto producto se puede mezclar en tanque con los siguientes productos para su uso en áreas de servicios públicos, siempre y cuando los productos

estén aprobados para su uso en dichos sitios. Refiérase a las etiquetas de cada producto para los sitios y proporciones de aplicación aprobados.

Arsenal	Outrider
atrazine[1]	pendimethalin[1]
Barricade 65WG	Plateau
dicamba[1]	Ronstar 50 WP
diuron[1]	Sahara
Endurance	simazine[1]
Escort	Surflan AS
Escort XP	Surflan WDG
Garlon 3A[2]	Telar DF
Garlon 4[3]	Transline
Krenite	Vanquish
Krovar I DF	Velpar DF
Oust	Velpar L
Oust XP	2,4-D[1]

1 Pueden realizarse mezclas en tanque con productos que contienen este ingrediente activo genérico siempre y cuando dichos productos esté aprobados para su aplicación en el lugar deseado.

2 Antes de agregar este producto, asegúrese de haber mezclado completamente Garlon 3A con agua, conforme a las instrucciones de la etiqueta. Para evitar problemas de incompatibilidad de rocío, agite la mezcla del rocío en el momento en que se agregue este producto.

3 Para tratamientos de recorte lateral, usé este producto solo o en una mezcla en tanque con Garlon 4.

Tierra desprovista de vegetación y podas y bordes

Este producto se puede utilizar en sitios de servicios públicos y subestaciones para terreno desprovisto de vegetación y para objetos con bordes recortados, para tratamiento localizado de vegetación no daseable y para eliminar las malezas no deseables que crecan an cuadros de arbustos establecidos y plantaciones ornamentales. Este producto puede usarse antes de plantar un área con plantas ornamentales, flores, césped (tepes o semillas), o antes de colocar asfalto o de comenzar un proyecto de construcción.

Pueden hacerse aplicaciones repetidas de este producto, a medida que emergen las malazas, para mantener el suelo limpio de malezas.

Este producto se puede mezclar en tanqué con los siguientes productos. Consulte en las etiquetas de astos productos los lugares aprobados para emplearlos en el establecimiento no cultivados y las proporciones de aplicación.

Arsenal	Plateau
Banvel	Princep DF
Barricade 65WG	Princep Liquid
diuron	Ronstar 50 WP
Endurance	Sahara
Escort	simazine
Garlon 3A	Surflan

9.0 TIPOS DE MALEZAS CONTROLADAS

Use siempre la proporción más alta de este producto por acre, dentro de las proporciones recomendadas, cuando las malezas son densas o cuando crecen en un área no tocada (no cultivada).

Puede haber una disminución de los resultados cuando se traten malezas cubiertas con mucho polvo. Para las malezas que han sido segadas, pastadas o cortadas, permita que vuelvan a crecer antes del tratamiento.

Cuando realice aplicaciones de rocío dirigido a pequeña escala, utilice una solución de 5 a 10 por ciento de este producto para el control total o parcial de malezas anuales, malezas perennes o matorrales leñosos y árboles. La cobertura del rocío debe ser uniforme y tomar contacto con al menos el 50 por ciento del follaje. La cobertura de la mitad superior de la planta es importante para obtener resultados óptimos. Para asagurar la cobertura del rocío adecuada, rocíe ambos lados de los matorrales leñosos y de los árboles grandas o altos, cuando el follaje es espeso y denso o cuando hay varios rebrotes.

Vea las secciones siguientes para las proporciones recomendadas para el control de malezas, matorrales leñosos y árboles anuales y parennes. Para las malezas, matorrales leñosos y árboles difíciles de controlar, donde las plantas cracen en condiciones de estrés, o donde la infestación es densa, pueden usarse 5 a 10 cuartos de galón por acre de este producto para obtener mejores resultados.

9.1 Malezas anuales

Use 1 cuarto de galón por acre si las malezas tienen menos de 6 pulgadas de altura o largo de los tallos y 1.5 cuartos a 4 cuartos de galón por acre si las malezas tienen más de 6 pulgadas de altura o largo de los tallos o cuando las malezas crecen en condiciones de estrés.

Para aplicaciones de rociado para mojar, aplique una solución de 1/2 por ciento de este producto a las malezas que tengan menos de 6 pulgadas de altura o largo de los tallos. Haga la aplicación antes de la formación de semillas para la hierba, o la formación de yemas para las malezas de hoja ancha. Para las malezas anuales que tienen más de 6 pulgadas de altura o las malezas más pequeñas que crecen en condiciones de estrés, use una solución del 1 al 2 por ciento. Use la dosis más alta para las especies difíciles de controlar o las malezas de más de 24 pulgadas de altura.

ESPECIES DE MALEZAS

Anoda, spurred	Medusahead*
Barley*	Morningglory (*Ipomoea spp*)
Barley, little*	Mustard, blue*
Barnyardgrass*	Mustard, tansy*
Bassia, fivehook	Mustard, tumble*
Bittercress*	Mustard, wild*
Bluegrass, annual*	Nightshade, black*
Bluegrass, bulbous*	Oats
Brome, downy*	Pancium, browntop*
Brome, Japanese*	Pancium, fall*
Buttercup*	Pancium, Texas*
Castorbean	Pennycress, field*
Cheatgrass*	Pepperweed, Virginia*
Cheeseweed (*Malva parviflora*)	Pigweed*
Chervil*	Puncturevine
Chickweed*	Purslane, common
Cocklebur*	Pusley, Florida
Copperleaf, hophombeam	Ragweed, common*
Copperleaf, Virginia	Ragweed, giant
Coreopis, plains/tickseed*	Rice, red
Corn*	Rockat, London*
Crabgrass*	Rocket, yellow
Cupgrass, woolly*	Rye*
Dwarfdandelion*	Ryegrass*
Eclipta*	Sandbur, field*
Falsedandelion*	Sesbania, hemp
Falseflax, smallseed*	Shattercana*
Fiddleneck	Shepherd's-purse*
Filaree	Sicklepod
Fleabane, annual*	Signalgrass, broadleaf*
Fleabane, hairy	Smartweed, ladysthumb*
(*Conyza bonariensis*)*	Smartweed, Pennsylvania*
Fleabane, rough*	Sorghum, grain (milo)*
Foxtail*	Sowthistle, annual
Foxtail, Carolina*	Spanishneedles
Geranium, Carolina	Speedwell, corn*
Goatgrass, jointed*	Speedwell, purslane*
Goosegrass	Sprangletop*
Groundsel, common*	Spurge, annual
Henbit	Spurge, prostrate*
Horseweed/Marestail	Spurge, spotted*
(*Conyza canadensis*)	Spurry, umbrella*
Itchgrass*	Starthistle, yellow
Johnsongrass, seedling	Stinkgrass*
Junglerice	Sunflower*
Knotweed	Teaweed/Prickly sida
Kochia	Thistle, Russian
Lamb's-quarters*	Velvetleaf
Lettuce, prickly*	Wheat*
Mannagrass, eastern*	Wild oats*
Mayweed	Witchgrass*

*Cuando use equipos de aplicación diseminada a nivel del terreno (aplicaciones aéreas o rociadores de aguilón con boquillas tipo abanico plano), estas especias serán controladas o controladas parcialmente con 1 pinta de este producto por acre. Las aplicaciones deben hacerse usando de 3 a 10 galones de volumen por acre. Use boquillas que garanticen una cobertura completa del follaje y haga el tratamiento cuando las malezas estén en su etapa temprana de crecimiento.

9.2 Malezas perennes

Los mejores resultados se obtienen cuando las malezas perennes son tratadas una vez que han alcanzado la etapa reproductiva de su crecimiento (inicio de las semillas para hierbas y formación de yemas para malezas de hoja ancha). Para las plantas sin flores, los mejores resultados sa obtienen cuando las plantas alcanzan el estado de madurez. En muchos casos, se requiere el tratamiento antes de estas etapas del crecimiento. En astos casos, use la proporción más alta dentro de las proporciones recomendadas.

Use una solución del 2 por ciento en malezas perennes difíciles de controlar como pasto bermudagrass, dock, field bindweed, hemp dogbane, milkweed y Canada thistle.

Asegúrese de que la cobertura sea a fondo cuando emplee tratamientos de rociado para mojar con equipo de mano. Cuando se utilice equipo manual para tratamientos puntuales localizados de bajo volumen, aplique una solución de 5 a 10 por ciento de este producto.

Espere 7 días o más después de la aplicación antes de labrar.

Especies de malezas	Proporción (cuartos por acre)	% de solución de mano
Alfalfa*	1	2
Alligatorweed*	4	1.5
Anise (fennel)	2 - 4	1 - 2
Artichoke, Jerusalem	3 - 5	2
Bahiagrass	3 - 5	2
Beachgrass, European (*Ammophila arenaria*)	—	5
Bentgrass*	1.5	2
Bermudagrass	5	2
Bermudagrass, water (knotgrass)	1.5	2
Bindweed, field	4 - 5	2
Bluegrass, Kentucky	2	2
Blueweed, Texas	4 - 5	2
Brackenfern	3 - 4	1 - 1.5
Bromegrass, smooth	2	2
Bursage, woolly-leaf	—	2
Canarygrass, reed	2 - 3	2
Cattail	3 - 5	2
Clover, red, white	3 - 5	2
Cogongrass	3 - 5	2
Dallisgrass	3 - 5	2
Dandelion	3 - 5	2
Dock, curly	3 - 5	2
Dogbane, hemp	4	2
Fescue (except tall)	3 - 5	2
Fescue, tall	1 - 3	2
Guineagrass	3	1
Hemlock, poison	2 - 4	1 - 2
Horsenettle	3 - 5	2
Horseradish	4	2
Iceplant	2	1.5 - 2
Ivy, German	2 - 4	1 - 2
Johnsongrass	2 - 3	1
Kikuyugrass	2 - 3	2
Knapweed	4	2
Lantana	—	1 - 1.25
Lespedeza	3 - 5	2
Milkweed, common	3	2
Muhly, wirestem	2	2
Mullein, common	3 - 5	2
Napiergrass	3 - 5	2
Nightshade, silverleaf	2	2
Nutsedge, purple, yellow	3	1 - 2
Orchardgrass	2	2
Pampasgrass	3 - 5	1.5 - 2
Paragrass	3 - 5	2
Pepperweed, perennial	4	2
Phragmites*	3 - 5	1 - 2
Quackgrass	2 - 3	2
Redvine*	2	2
Reed, giant	4 - 5	2
Ryegrass, perennial	2 - 3	1
Smartweed, swamp	3 - 5	2
Spurge, leafy*	—	2
Sweet potato, wild*	—	2
Thistle, artichoke	2 - 3	1 - 2
Thistle, Canada	2 - 3	2
Timothy	2 - 3	2
Torpedograss*	4 - 5	2
Trumpetcreeper*	2 - 3	2
Vaseygrass	3 - 5	2
Velvetgrass	3 - 5	2
Wheatgrass, western	2 - 3	2

*Control parcial

9.3 Matorrales leñosos y árboles

Aplique este producto después de la formación completa de hojas, a menos que se indique lo contrario en esta etiqueta o en otras etiquetas o fichas técnicas complementarias publicadas por Monsanto. Para las plantas más grandes y/o donde la densidad de la vegetación sea alta, use la proporción más alta. En las plantas enredaderas que han alcanzado el estado leñoso de crecimiento, use las proporciones más altas. Los mejores resultados se obtienen cuando se aplica a finales del verano o en el otoño, después de la formación de frutos.

En zonas áridas, se obtienen mejores resultados cuando se aplica en la primavera o a principios del verano cuando las especies que crecen como matorrales tienen alto contenido de humedad y florecen.

Cuando haga tratamientos de rociado para mojar con equipos de mano, asegúrese de que la cobertura sea total. Cuando use equipos de mano para tratamientos localizados con rociado dirigido de poco volumen, aplique una solución del 5 al 10 por ciento de este producto.

Es posible que los síntomas no aparezcan antes de las heladas o del envejecimiento con tratamientos de otoño.

Permita que pasen 7 o más días después de la aplicación antes de labrar, segar o remover. Es posible que se necesite repetir el tratamiento para tratar plantas que emergen de partes enterradas o de semillas. Un poco de colorido otoñal es aceptable en plantas indeseables que pierden las hojas en el otoño, siempre y cuando no hayan sufrido mayor pérdida de hojas. Si la aplicación de otoño se realiza después de que hayan ocurrido heladas, es posible que se obtengan resultados deficientes.

Especies de malezas	Proporción (cuartos por acre)	% de solución de mano de rociado para mojar
Alder	3 - 4	1 - 1.5
Ash*	2 - 5	1 - 2
Aspen, quaking	2 - 3	1 - 1.5
Bearclover (Bearmat)*	2 - 5	1 - 2
Beech*	2 - 5	1 - 2
Birch	2	1
Blackberry	3 - 4	1 - 1.5
Blackgum*	2 - 5	1 - 2
Bracken	2 - 5	1 - 2
Broom, French, Scotch	2 - 5	1.5 - 2
Buckwheat, California*	2 - 4	1 - 2
Cascara*	2 - 5	1 - 2
Catsclaw*	—	1 - 1.5
Ceanothus*	2 - 5	1 - 2
Chamise*	2 - 5	1
Cherry, bitter, black, pin	2 - 3	1 - 1.5
Coyotebrush	3 - 4	1.5 - 2
Creeper, Virginia	2 - 5	1 - 2
Deerweed	2 - 5	1
Dogwood*	2 - 5	1 - 2
Elderberry	2	1
Elm*	2 - 5	1 - 2
Eucalyptus	—	2
Flower, monkey flower*	2 - 4	1 - 2
Gorse*	2 - 5	1 - 2
Hasardia*	2 - 4	1 - 2
Hawthorn	2 - 3	1 - 1.5
Hazel	2	1
Hickory*	2 - 5	1 - 2
Honeysuckle	3 - 4	1 - 1.5
Hornbeam, American*	2 - 5	1 - 2
Ivy, poison	4 - 5	2
Kudzu	4	2
Locust, black*	2 - 4	1 - 2
Madrone resprouts*	—	2
Manzanita*	2 - 5	1 - 2
Maple, red*	2 - 4	1 - 1.5
Maple, sugar	—	1-1.5
Maple, vine*	2 - 5	1 - 2
Oak, black, white*	2 - 4	1 - 2
Oak, post	3 - 4	1 - 1.5
Oak, northern pin	2 - 4	1 - 1.5
Oak, poison	4 - 5	2
Oak, scrub*	2 - 4	1 - 1.5

Especies de malezas	Proporción (cuartos por acre)	% de solución de mano de rociado para mojar
Oak, southern red	2 - 3	1 - 1.5
Olive, Russian*	2 - 5	1 - 2
Peppertree, Brazilian (Florida holly)*	2 - 5	1 - 2
Persimmon*	2 - 5	1 - 2
Pine	2 - 5	1 - 2
Poplar, yellow*	2 - 5	1 - 2
Redbud, eastern	2 - 5	1 - 2
Rose, multiflora	2	1
Sage, black	2 - 4	1
Sage, white*	2 - 4	1 - 2
Sage brush, California	2 - 4	1
Salmonberry	2	1
Saltcedar*	2 - 5	1 - 2
Sassafras*	2 - 5	1 - 2
Sourwood*	2 - 5	1 - 2
Sumac, laurel, poison, smooth, sugarbush, winged *	2 - 4	1 - 2
Sweetgum	2 - 3	1 -1 .5
Swordfern*	2 - 5	1 - 2
Tallowtree, Chinese	—	1
Tanoak resprouts*	—	2
Thimbleberry	2	1
Tobacco, tree*	2 - 4	1 - 2
Toyon*	—	2
Trumpetcreeper	2 - 3	1 - 1.5
Waxmyrtle, southern*	2 - 5	1 - 2
Willow	3	1
Yerba Santa, California*	—	2

*Control parcial

10.0 LIMITES EN LA GARANTIA Y EN LA RESPONSABILIDAD

Monsanto Compañía garantiza que este producto concuerda con la descripción química de la etiqueta y es razonablemente adecuado para los propósitos descritos en el libreto titulado Instrucciones Completas para el Uso ("Instrucciones") cuando se usa de acuerdo con dichas Instrucciones y las condiciones que allí se detallan. SEGUN LO ESTABLECIDO EN LA LEY VIGENTE, NO SE HACE NINGUNA OTRA GARANTIA EXPRESA O IMPLICITA ACERCA DE LA IDONEIDAD PARA UN USO PARTICULAR O COMERCIABILIDAD. Esta garantía está sujeta también a las condiciones y limitaciones que aquí se indican.

El comprador y todos los usuarios deberán reportar con prontitud a esta Compañía acerca de cualquier reclamo que se base en un contrato, negligencia, estricta responsabilidad, y otros actos ilícitos.

Según lo establecido en la ley vigente, el comprador y todos los usuarios son responsables por todas las pérdidas o daños que resultasen por el uso o manipulación en condiciones que estén más allá del control de esta Compañía, incluyendo pero no limitándose a: incompatibilidad con productos que no sean los señalados en las Instrucciones, aplicación o contacto con vegetación que no se quiera destruir, condiciones climáticas inusuales, condiciones de clima que estén fuera de los límites que se consideran normales en el lugar de la aplicación y para el período de tiempo en el cual se aplica, así como condiciones de clima que estén fuera de los límites indicados en las Instrucciones, aplicaciones que no estén explícitamente aconsejadas en las Instrucciones, condiciones de humedad que estén fuera de los límites establecidos en las Instrucciones, o la presencia de productos en la tierra o sobre ella, en las plantas o en la vegetación que se está tratando, diferentes a los indicados en las Instrucciones.

Monsanto Compañía no garantiza ninguno de los productos reformulados o reempacados de este producto, excepto de acuerdo a los requisitos de la administración de esta Compañía y con el permiso escrito expreso de esta Compañía.

SEGUN LO ESTABLECIDO EN LA LEY VIGENTE, LA UNICA Y EXCLUSIVA COMPENSACION AL USUARIO O COMPRADOR Y EL LIMITE DE RESPONSABILIDAD DE ESTA COMPAÑIA O DE CUALQUIER OTRO VENDEDOR POR CUALQUIER PERDIDA O POR TODAS LAS PERDIDAS, PERJUICIOS O DAÑOS QUE RESULTASEN DEL USO O MANEJO DE ESTE PRODUCTO (INCLUYENDO RECLAMOS QUE SE BASEN EN UN CONTRATO, NEGLIGENCIA, ESTRICTA RESPONSABILIDAD Y OTROS ACTOS ILICITOS) SERA EL PRECIO PAGADO POR EL USUARIO O EL COMPRADOR POR LA CANTIDAD INVOLUCRADA DE ESTE PRODUCTO, O A ELECCION DE ESTA COMPAÑIA O DE OTRO VENDEDOR, EL REEMPLAZO DE DICHA CANTIDAD, O SI NO SE OBTUVO MEDIANTE COMPRA SE REEMPLAZARA DICHA CANTIDAD DEL PRODUCTO. EN NINGUN CASO ESTA COMPAÑIA U OTRO VENDEDOR SERAN RESPONSABLES POR DAÑOS INCIDENTALES, CONSECUENTES O ESPECIALES.

En el momento de abrir y usar el producto, se asume que el comprador y todos los usuarios han aceptado las condiciones de los LIMITES EN LA GARANTIA Y EN LA RESPONSABILIDAD que no pueden variar por medio de ningún acuerdo verbal o escrito. Si las condiciones son inaceptables, devuelva el producto inmediatamente sin abrir el recipiente.

Outrider, Ranger PRO, Ranger PRO y el diseño, y el diseño de Monsanto y el Vine son marcas comerciales de la empresa Monsanto Technology LLC. Todas las otras marcas registradas son la propiedad de sus dueños respectivos.

Este producto está protegido por la patente de los Estados Unidos Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No se han otorgado licencias bajo ninguna patente que no sea de los Estados Unidos.

Registro en la EPA Nº 524-517

En caso de que se presente una emergencia relacionada con este producto, o para la ayuda médica, llame por cobrar a cualquier hora del día o de la noche, al teléfono (314) 694-4000.

Empacado Para:
MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI, 63167 U.S.A.
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102909

MONSANTO

SAFETY DATA SHEET

RANGER PRO® HERBICIDE

Version 1.0 / USA
102000037601

Revision Date: 08/06/2020
Print Date: 08/17/2020

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	RANGER PRO® HERBICIDE
Product code (UVP)	86775093
SDS Number	102000037601
EPA Registration No.	524-517

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Herbicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer Environmental Science A division of Bayer CropScience LP 500 Centregreen Way, Suite 400 Cary, NC 27513 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Acute toxicity(Inhalation): Category 4

Labelling in accordance with regulation HCS 29CFR §1910.1200

Signal word: Warning

Hazard statements
Harmful if inhaled.

Precautionary statements
Avoid breathing mist/ vapours/ spray.
Use only outdoors or in a well-ventilated area.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Isopropylamine salt of glyphosate	38641-94-0	41.0
Surfactant blend (proprietary)		>=5.0 – <=10.0

The specific chemical identity and/or concentration range is being withheld because it is trade secret information.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice — When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation — Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact — Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

Eye contact — Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion — Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms — To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Risks — This product is not a cholinesterase inhibitor.

Treatment	Treatment with atropine and oximes is not indicated. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Oxides of phosphorus

Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	does not flash
Auto-ignition temperature	No data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Explosivity	Not explosive

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Use personal protective equipment. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt).

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in original container. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in a place accessible by authorized persons only. Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode. Protect from freezing. Partial crystallization may occur on prolonged storage below the minimum storage temperature. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No known occupational limit values.

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton) Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Eye protection	Use tightly sealed goggles and face protection.
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	Liquid, clear
Colour	light yellow to amber
Odour	sweet
Odour Threshold	No data available
pH	4.4 - 5.0 (8 %) (23 °C) (deionized water)
Melting point/range	No data available
Boiling Point	No data available
Flash point	does not flash
Flammability	No data available
Auto-ignition temperature	No data available
Minimum ignition energy	Not applicable
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	Not applicable
Lower explosion limit	Not applicable
Vapour pressure	No significant volatility.

Evaporation rate	No data available
Relative vapour density	No data available
Relative density	1.162 (20 °C)
Density	1.17 g/cm³ (20 °C)
Water solubility	completely miscible
Partition coefficient: n-octanol/water	Glyphosate: log Pow: -3.2
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	Not explosive
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Galvanised steel, Unlined mild steel
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Skin contact, Eye contact, Inhalation
Immediate Effects	
Eye	May cause eye irritation.
Skin	Not expected to produce significant adverse effects when recommended use instructions are followed.
Ingestion	Not expected to produce significant adverse effects when recommended use instructions are followed.

Inhalation	May be harmful if inhaled.

Information on toxicological effects

Acute oral toxicity	LD50 (Rat) 5,108 mg/kg Test conducted with a similar formulation.
Acute inhalation toxicity	LC50 (Rat) 2.9 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (Rat) > 5,000 mg/kg Test conducted with a similar formulation. No deaths
Skin corrosion/irritation	No skin irritation (Rabbit) Test conducted with a similar formulation.
Serious eye damage/eye irritation	Slight irritant effect - does not require labelling. (Rabbit) Test conducted with a similar formulation.
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test Test conducted with a similar formulation.

Assessment STOT Specific target organ toxicity – single exposure

Glyphosate: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Glyphosate did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Glyphosate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Glyphosate was not carcinogenic in lifetime feeding studies in rats and mice.
Important comment to IARC Listing:, Our expert opinion is that classification as a carcinogen is not warranted.

ACGIH

None.

NTP

None.

IARC

Isopropylamine salt of glyphosate	38641-94-0	Overall evaluation: 2A

OSHA

None.

Assessment toxicity to reproduction

Glyphosate did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Glyphosate did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

The toxicological data refer to a similar formulation.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 5.4 mg/l static test; Exposure time: 96 h Test conducted with a similar formulation.
Chronic toxicity to fish	Oncorhynchus mykiss (rainbow trout) flow-through test NOEC: >= 9.63 mg/l The value mentioned relates to the active ingredient glyphosate.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 11 mg/l static test; Exposure time: 48 h Test conducted with a similar formulation.
Chronic toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 12.5 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient glyphosate.
Toxicity to aquatic plants	EbC50 (Raphidocelis subcapitata (freshwater green alga)) 12.4 mg/l static test; Exposure time: 72 h Test conducted with a similar formulation. NOEC (Raphidocelis subcapitata (freshwater green alga)) 6.3 mg/l static test; Exposure time: 72 h Test conducted with a similar formulation.
Biodegradability	Glyphosate: Not rapidly biodegradable
Koc	Glyphosate: Koc: 6920
Bioaccumulation	Glyphosate: Does not bioaccumulate.
Mobility in soil	Glyphosate: Immobile in soil

Results of PBT and vPvB assessment

PBT and vPvB assessment	Glyphosate: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological	No further ecological information is available.

information

Environmental precautions	Apply this product as specified on the label. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Retain and dispose of contaminated wash water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Do not contaminate water, food, or feed by disposal. Follow all local/regional/national/international regulations.
Contaminated packaging	Follow advice on product label and/or leaflet. Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

Freight Classification:	COMPOUNDS, TREE OR WEED KILLING, N.O.I. other than poison, HAVING A DENSITY OF 20 LBS OR GREATER PER CUBIC FOOT

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 524-517

SAFETY DATA SHEET

US Federal Regulations
TSCA list

Water	7732-18-5
Polyethylene glycol	25322-68-3

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No export notification needs to be made.
SARA Title III - Section 302 - Notification and Information
Not applicable.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.

US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Polyethylene glycol	25322-68-3	MN

Environmental
CERCLA
None.
Clean Water Section 307(a)(1)
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

EPA/FIFRA Information:
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Causes eye irritation.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act

SAFETY DATA SHEET

EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Instability - 1 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 1 Physical Hazard - 1 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

Revision Date: 08/06/2020

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

Specimen Label

GLYPHOSATE	GROUP	9	HERBICIDE

CORTEVA™ agriscience

Rodeo®

HERBICIDE

® ™ Trademarks of Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners

For control of annual and perennial weeds and woody plants in natural and production (plantations), forests for site preparation, mid-rotation release treatments, timber stand improvement activities, noncrop sites including industrial sites, rights-of-way (including roadsides, electric utility and communication transmission lines, pipelines, railroads, airports), irrigation and drainage ditches, canals, reservoirs, natural areas (including wildlife management areas, wildlife openings, wildlife habitats and refuges, parks and recreational areas, campgrounds, trailheads and trails), rangeland, and in and around aquatic sites and wetlands; also for perennial grass release, and grass growth suppression and grazed areas on these sites.

Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees, because severe injury or destruction may result.

Active Ingredient:	
glyphosate† N-(phosphonomethyl)glycine, isopropylamine salt	53.8%
Other Ingredients	46.2%
Total	100.0%

†Contains 5.4 lb per gallon glyphosate, isopropylamine salt (4 lb per gallon glyphosate acid).

Precautionary Statements

Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-324

Keep Out of Reach of Children

CAUTION

Harmful If Inhaled • Avoid breathing spray mist. Remove contaminated clothing and wash before reuse. Wash thoroughly with soap and water after handling.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

First Aid

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants. This oxygen loss can cause fish suffocation.

In case of leak or spill, soak up and remove to a landfill.

Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

Do not mix, store or apply this product or spray solutions of this product in galvanized steel or unlined steel (except stainless steel) containers or spray tanks. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas, which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

This is an end-use product. Dow AgroSciences does not intend and has not registered it for reformulation.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried.

Storage and Disposal

Do not contaminate water, food, feed or seed by storage or disposal.
Pesticide Storage: Store above 10°F (-12°C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and roll or shake container or recirculate in mini-bulk containers to mix well before using.
Pesticide Disposal: Wastes resulting from use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures.

Nonrefillable containers 5 gallons or less:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable containers larger than 5 gallons:
Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable containers 5 gallons or larger:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Product Information

This product is a broad spectrum, systemic, postemergent herbicide with no soil residual activity. It is intended for control of annual and perennial weeds and woody plants and brush. It is formulated as a water soluble liquid.

Time to Symptoms: The active ingredient in this product moves through the plant from the point of foliage contact to and into the root system. Visible effects are a gradual wilting and yellowing of the plant that advances to complete browning of above ground growth and deterioration of underground plant parts. Visible effects on most annual weeds occur within two to four days, but on most perennial weeds visible effects may not occur for seven days or more. Extremely cool or cloudy weather following treatment may slow the activity of this product and delay development of visual symptoms.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the annual, perennial and woody brush and trees rate tables for specific weeds. Always use the higher rate within the rate range for heavy or dense weed growth or when weeds are growing in an undisturbed (noncultivated) area. When treating weeds with disease or insect damage, weeds heavily covered with dust, or weeds under poor growing conditions, reduced weed control may result.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the specified stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash off this product from the foliage and a repeat application up to the labled rate may be required for adequate control.

Spray Coverage: For best results, spray coverage should be uniform and complete.

Mode of Action: The active ingredient in this product inhibits an enzyme. This enzyme is found only in plants and microorganisms that are essential to forming specific amino acids.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or rootstocks of perennials will not be affected by the herbicide and will continue to grow.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Maximum Application Rates: The maximum application rates specified in this label are given in units of volume, either fluid ounces, pints or quarts, of this product per acre. The maximum allowed application rates apply to this product combined with the use of any and all other glyphosate- or sulfosate-containing herbicides, either applied separately or in a tank mix, on the basis of total pounds of glyphosate (acid equivalents) per acre. If more than one glyphosate- or sulfosate-containing product is applied to the same site within the same year, ensure that the total of pounds acid equivalent glyphosate does not exceed the maximum allowed.

Do not apply more than 8 quarts of this product (8 lb glyphosate acid) per acre per year for all use sites listed on this label.

IMPORTANT: When using this product, unless otherwise specified, mix with a surfactant, such as a nonionic surfactant containing 80% or greater active ingredient. For conifer release (pine release) use only surfactants that are approved for conifer release and specified on the surfactant label as safe for use in conifer release (pine release). Use of this product without surfactant will result in reduced herbicide performance. Ammonium sulfate, drift control additives, or dyes and colorants may be used. See Mixing Directions and the surfactant manufacturer's label for more information.

Grazing Restrictions: This product may be used to treat undesirable vegetation in utility rights-of-way that pass through pastures, rangeland, and forestry sites that are being grazed. For tank mix applications, comply with all restrictions appearing on the tank mix product label.

Except for lactating dairy animals there are no grazing restrictions following the labeled applications of this product.

For lactating dairy animals there are no grazing restrictions for the following labeled applications of this product:
- Where the spray can be directed onto undesirable woody brush and trees, including in handgun spray to wet or low volume directed spray treatments.
- For tree injection of frill applications and for cut stump treatments.

For broadcast applications, observe the following restrictions for lactating dairy animals:
- For application rates between 4.5 and 7.5 quarts per acre, no more than 15 percent of the available grazing area may be treated.
- For application rates less than 4.5 quarts per acre, no more than 25 percent of the available grazing area may be treated.

These restrictions do not apply to pastures, rangeland or forestry sites outside of utility rights-of-way.

Herbicide Resistance Management

Glyphosate, the active ingredient in this product, is a group 9 herbicide (inhibitor of EPSP synthase). Some naturally occurring weed biotypes that are tolerant (resistant) to glyphosate may exist due to genetic variability in a weed population. Where resistant biotypes exist, the repeated use

of herbicides with the same mode of action can lead to the selection for resistant weeds. Certain agronomic practices reduce the likelihood that resistant weed populations will develop, and can be utilized to manage weed resistance once it occurs.

To delay the selection for glyphosate resistant weeds, use the following practices:

- Scout fields before and after application to detect weed escapes or shifts in weed species.
- Start with a clean field by applying a burndown herbicide or by tillage.
- Control weeds early when they are small.
- Add other herbicides, including a selective and/or a residual herbicide, and cultural practices, including tillage or crop rotation, where appropriate.
- Use the application rate for the most difficult to control weed in the field. Do not tank mix with other herbicides that reduce this product's efficacy through antagonism or with ones that encourage application rates of this product below those specified on this label.
- Control weed escapes and prevent weeds from setting seeds.
- In situations where resistant weeds are a problem, before moving from one site to another, clean equipment to minimize the spread of weed seeds or plant parts.
- Use new commercial seed that is as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product against a particular weed species to the local retailer, county extension agent, or Dow AgroSciences representative.

The following good agronomic practices are recommended to reduce the spread of confirmed glyphosate-resistant biotypes:

- Tank mix this product or apply it sequentially with an appropriately labeled herbicide with a different mode of action to achieve control if a naturally occurring resistant biotype is present in the site.
- Cultural and mechanical control practices, including crop rotation or tillage, may also be used.
- To control weed escapes, including resistant biotypes, before they set seed, scout treated sites after applying this product.
- Thoroughly clean equipment before leaving any site known to contain resistant biotypes.

Because the presence of glyphosate resistance in weed populations is difficult to detect prior to use, Dow AgroSciences accepts no liability for any losses that may result from the failure of this product to control glyphosate-resistant weeds.

Attention

Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees, because severe injury or destruction may result.

AVOID DRIFT. Use extreme care when applying this product to prevent injury to desirable plants and crops.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing, or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. **Avoid applying at excessive speed or pressure.**

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory.

Aerial Drift Reduction Advisory
This section is advisory in nature and does not supersede the mandatory label requirements.

Importance of Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent adverse effects from drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows product larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. Use the lower spray pressures for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance must increase with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply this product when wind speed is below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Do not apply this product during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: Apply this pesticide only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Mixing Directions

Use only clean, stainless steel, fiberglass, plastic or plastic-lined steel containers to mix, store and apply spray solutions of this product. Do not mix, store or apply this product or spray solutions of this product in galvanized steel or unlined steel, except stainless steel, containers or spray tanks.

Eliminate any risk of siphoning the contents of the tank mix back into the carrier source while mixing. Use approved anti-back-siphoning devices where required by state or local regulations.

Note: Reduced results may occur if water containing soil is used, including visibly muddy water or water from ponds and ditches that is not clear.

Rodeo – Alone
This product mixes readily with water. Mix spray solutions of this product as follows:

1. Fill the mixing or spray tank with the required amount of clean water.
2. Add the specified amount of this product and nonionic surfactant near the end of the filling process and mix well.
3. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foaming, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

Rodeo – Tank Mix
This product does not provide residual weed control. For residual weed control or an alternate mode of action, tank mix this product with other herbicides. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture..

Under certain conditions, at certain growth stages, and/or under other circumstances, some tank mix products have the potential to cause injury. Read all labels for products used in the tank mix prior to using them to determine the potential for crop injury.

Tank mixing with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or injury. Do not use these products in applications with this product unless otherwise noted in this label. To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified in this labeling. Mixing this product with herbicides or other materials not specified on this label may result in reduced performance.

The user is responsible for ensuring that the specific application being made is included on the label of the product used in the tank mix when a tank mixture with a generic active ingredient, including 2,4-D, atrazine, dicamba, diuron, or pendimethalin, is used.

Read all individual product labels for all products in the tank mix and observe all precautions and restrictions on the label. Use according to the most restrictive directions for each product in the tank mix. Always predetermine the compatibility of all tank mix products, together in the carrier, by mixing small proportional quantities in advance of mixing and applying them to the use site. Add the tank mix product to the tank as directed by the label. Maintain agitation and add the required amount of this product.

Maintain good agitation at all times until the contents in the tank are sprayed. If the mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying resumes. Keep the bypass line on or near the bottom of the tank to minimize foaming. The screen size in the nozzle or line strainers must be no finer than 50 mesh.

Note: If tank mixing with Garlon® 3A herbicide, ensure that Garlon 3A is well mixed with at least 75 percent of the total spray volume before adding this product to the spray tank to avoid incompatibility.

Hand-Held Sprayers
Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Concentration (percent)	Amount of this Product for Desired Volume:		
	1 gal	25 gal	100 gal
0.5	2/3 fl oz	1 pt	2 qt
0.75	1 fl oz	1 1/2 pt	3 qt
1	1 1/3 fl oz	1 qt	1 gal
1.5	2 fl oz	1 1/2 qt	1 1/2 gal
2	2 2/3 fl oz	2 qt	2 gal
3.75	5 fl oz	3 3/4 qt	3 3/4 gal
5	6 1/2 fl oz	1 1/4 gal	5 gal
10	13 fl oz	2 1/2 gal	10 gal

Nonionic Surfactant
When using this product, unless otherwise specified, mix with a surfactant, including a nonionic surfactant containing 80% or more active ingredient. For conifer release (pine release), use only surfactants that are approved for conifer release and specified on the surfactant label as safe for use in conifer release. Using this product without surfactant will result in reduced herbicide performance.

Colorants or Dyes
Agriculturally-approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's directions.

Drift Control Additives
Drift control additives may be used with all equipment types except wiper applicators, sponge bars and CDA equipment. When a drift control additive is used, it is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture..

Application Equipment and Application Methods

Chemigation: Do not apply this product through any type of irrigation system.

Apply spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes.

This product may be applied with the following application equipment and application methods.

Aerial Application
Equipment: Fixed wing and helicopter

Do not apply this product using aerial spray equipment except under conditions as specified within this label.

Avoid drift. Do not apply when winds are gusty or under any other condition which favors drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, maintain appropriate buffer zones.

Do not directly apply to any body of water.

Use the specified rates of this herbicide in 3 to 25 gallons of water per acre unless otherwise specified on this label. Refer to the specific use directions of this label for volumes and application rates.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. A drift control additive may be used. When a drift control additive is used, carefully read and observe the precautionary statements and all other information specified on the additive label.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Aerial Application Restrictions in California Only

AVOID DRIFT: Do not apply when winds are gusty or under any other condition which favors drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

Do not aerially apply this product in a tank mix with dicamba in California.

Make aerial applications with helicopter only. To ensure uniform application, avoid streaking, uneven, or overlapped application, and use appropriate marking devices.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after budbreak and before total leaf drop, and/or near other desirable vegetation or annual crops:

- Do not apply this product using aerial equipment in residential areas.
- Do not apply within 100 feet of all desirable vegetation or crop(s).
- If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
- Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of the 500-foot minimum buffer.
- Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

Use only coarse sprays to minimize drift. Do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure above the manufacturer's directions.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. Prolonged exposure of this product to uncoated steel surfaces may result in corrosion and possible failure of the part. Landing gear is most susceptible. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

ADDITIONAL LIMITATIONS FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY

Always read and follow the label directions and precautionary statements for all products used in the aerial application.
The following information applies only from February 15 through March 31 within the following boundaries of Fresno County, California:
North: Fresno County line
South: Fresno County line
East: State Highway 99 West

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

Written Directions

Written directions MUST be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. These written directions MUST state the proximity of surrounding crops and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial Applicator Training and Equipment

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

Applications at Night – Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

To report known or suspected misuse of this product, call 1-800-332-3111.

For additional information on the proper aerial application of this product in Fresno County, call 916-784-1718.

Aquatic and Noncrop Sites

When this product is applied under the conditions described, it controls or partially controls the labeled weeds growing in the following industrial, recreational, and public areas or other similar sites.

Aquatic sites includes all bodies of fresh and brackish water that may be flowing, nonflowing, or transient-including lakes, rivers, streams, ponds, seeps, irrigation and drainage ditches, canals, reservoirs, estuaries and similar sites.

If aquatic sites are present in the noncrop area and are part of the intended treatment, read and observe the following directions:

- This product does not control plants that are completely submerged or have a majority of their foliage under water.
- There is no restriction on the use of treated water for irrigation, recreation, or domestic purposes.
- Consult local and state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.
- To make aquatic applications around and within 1/2 mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after the application. The water intake may be turned on prior to 48 hours if the glyphosate level in the intake water is below 0.7 parts per million as determined by laboratory analysis. These aquatic applications may be made only in those cases where there are alternative water sources or holding ponds that would permit the turning off of an active potable water intake for a minimum period of 48 hours after the application.

Restrictions:

- Do not apply this product within 1/2 mile upstream of an active potable water intake in flowing water (i.e., river stream, etc.), or within 1/2 mile of an active potable water intake in a standing body of water, such as a lake, pond, or reservoir.

Ground Application

Equipment: Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Use the specified rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified on this label. As density of weeds increases, increase the spray volume within the rate range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

Hand-Held and High-Volume Including Backpack Application

Equipment: Knapsack and backpack sprayers, pump up pressure sprayers, handguns, hand wands, mistblowers, lances, and other hand-held and motorized spray equipment used to direct the spray onto weed foliage. **Note:** This product is not registered in Arizona or California for use in mistblowers.

Apply to foliage of vegetation to be controlled. Do not spray to the point of runoff for applications made on a spray to wet basis. Use coarse sprays only. For best results, cover the top half of the plant and at least half of the total foliage. To ensure adequate spray coverage, spray both sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple sprouts.

High Volume Sprays: Prepare a 3/4 to 2 percent solution of this product in water, add a nonionic surfactant and apply to foliage of vegetation to be controlled. For specific rates of application and instructions for control of various annual and perennial weeds, see the Weeds Controlled section.

Make applications on a spray to wet basis with uniform and complete spray coverage. Do not spray to point of runoff.

Low Volume Directed Sprays: This product may be used as a 5 to 10 percent solution in low volume directed sprays for spot treatment of trees and brush. This treatment method is most effective in areas where there is a low density of undesirable trees or brush. If a straight stream nozzle is used, start the application at the top of the targeted vegetation and spray from top to bottom in a lateral zigzag motion. Ensure that at least 50 percent of the leaves are contacted by the spray solution. For flat fan and cone nozzles and with hand-directed mist blowers, mist the application over the foliage of the targeted vegetation. Treat small, open-branched trees only from one side. If the foliage is thick or there are multiple root sprouts, apply from several sides to ensure adequate spray coverage. Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table.

Spray Solution:

Desired Volume	Amount of This Product								
	0.5	0.75	1	1.25	1.5	2	5	8	10
1 gal	2/3 fl oz	1 fl oz	1 1/3 fl oz	1 2/3 fl oz	2 fl oz	2 2/3 fl oz	6 1/2 fl oz	10 1/4 fl oz	13 fl oz
25 gal	1 pt	1 1/2 pt	1 qt	1 1/4 qt	1 1/2 qt	2 qt	1 1/4 gal	2 gal	2 1/2 gal
100 gal	2 qt	3 qt	1 gal	1 1/4 gal	1 1/2 gal	2 gal	5 gal	8 gal	10 gal

2 Tablespoons = 1 fl oz

For best results when using knapsack sprayers, mix the specified amount of product with water in a larger container. Fill the knapsack sprayer with the solution and add the correct amount of surfactant.

Selective Equipment

Equipment: Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Do not contact desirable vegetation with herbicide. Droplets, mist, foam, or splatter of the herbicide settling on desirable vegetation is likely to result in discoloration, stunting or destruction.

Better results are obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when the height of weeds varies so that not all weeds are contacted. If this occurs, repeat treatment up to the labled rate may be necessary.

Shielded and Hooded Applicators: A shielded or hooded applicator directs the herbicide solution onto weeds while shielding desirable vegetation from the herbicide. Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. **Exercise extreme care to avoid contact of the herbicide with desirable vegetation.**

Wiper Applicators: Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation.

Adjust wiper applicators used over the top of desirable vegetation so that the wiper contact point is at least 2 inches above the desirable vegetation. Better results are obtained when more of the weed is exposed to the herbicide solution. Weeds should be a minimum of 6 inches above the desirable vegetation. Adjust the applicator height to ensure adequate contact with weeds as weeds not contacted by the herbicide solution will not be affected. Poor contact may occur when weeds are growing in dense clumps, in severe weed infestations, or when weed height varies dramatically. If this occurs, repeat treatment up to the labeled rate may be necessary.

Operate this equipment at ground speeds no more than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions.

Droplets, mist, foam, or splatter of the herbicide settling onto desirable vegetation may result in discoloration, stunting or destruction. Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that on sloping ground the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a one-day period as reduced activity may result from use of leftover solutions. Clean wiper parts by thoroughly flushing with water immediately after using this product.

For best results, use a nonionic surfactant at a rate of 10 percent by volume of total herbicide solution for all wiper applications.
Rope or Sponge Wick Applicators: Use solutions of 33 to 75 percent of this product in water.
Panel Applicator: Use solutions of 33 to 100 percent of this product in water.

Injection Systems
Equipment: Aerial or ground injection sprayers.

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

Controlled Droplet Applicator (CDA)
Equipment: Hand-held or boom-mounted applicators that produce a spray consisting of a narrow range of droplet sizes.

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount specified on this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fl oz per minute and a walking speed of 1.5 mph (1 1/2 pints of product per acre). For control of perennial weeds, apply a 20 to 40 percent solution of this product at a flow rate of 2 fl oz per minute and a walking speed of 0.75 mph (3 to 6 pints of product per acre).

CDA equipment produces a spray pattern that is not easily visible. Exercise extreme care to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation as damage or destruction may result.

Use Sites

Use this product in noncrop areas, including airports, apartment complexes, aquatic sites, Christmas tree farms, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, driveways, dry ditches, dry canals, fencerows, golf courses, greenhouses, habitat management, industrial areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parking areas, parks, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, recreation areas, utility rights-of-way, roadsides, shadehouses, sod or turf seed farms, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, wildlife habitat management areas, and in grazed areas on these sites.

Aquatic Sites

This product may be applied to emerged weeds in all bodies of fresh and brackish water that may be flowing, nonflowing or transient including lakes, rivers, streams, ponds, estuaries, rice levees, seeps, irrigation and drainage ditches, canals, reservoirs, wastewater treatment facilities, wildlife habitat restoration and management areas and similar sites.

If aquatic sites are present in the noncrop area and are part of the intended treatment, read and observe the following directions:

- This product does not control plants that are completely submerged or have a majority of their foliage under water.
- There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.
- Consult local and state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.
- To make aquatic applications around and within 1/2 mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after the application. The water intake may be turned on prior to 48 hours if the glyphosate level in the intake water is below 0.7 parts per million as determined by laboratory analysis. These aquatic applications may be made **only** in those cases where there are alternative water sources or holding ponds which would permit the turning off of an active potable water intake for a minimum period of 48 hours after the application.
- For treatments after draw down of water or in dry ditches, allow 7 days or more after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds.
- Floating mats of vegetation may require retreatment up to the labeled rate. Avoid wash off of sprayed foliage by spray boat or recreational boat backwash or by rainfall within 6 hours of application. Do not re-treat within 24 hours following the initial treatment.
- Applications made to moving bodies of water must be made while traveling upstream to prevent concentration of this herbicide in water. When making any bankside applications, do not overlap more than 1 foot into open water. Do not spray in bodies of water where weeds do not exist. The maximum application rate of 7 1/2 pints per acre must not be exceeded in any single broadcast application that is being made over water.
- When emerged infestations require treatment of the total surface area of impounded water, treating the area in strips may avoid oxygen depletion due to decaying vegetation. Oxygen depletion may result in fish kill.

Restrictions:
- Do not apply this product directly to water within 1/2 mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.), or within 1/2 mile of an active potable water intake in a standing body of water, such as a lake, pond or reservoir. This restriction does not apply to intermittent inadvertent overspray of water in terrestrial use sites.

Wetland Sites

This product may be applied to undesirable vegetation in and around water (aquatic areas) and wetlands found in forestry, utility rights-of-way sites or other site listed on the label, including where these sites are adjacent to or surrounding domestic water supply reservoirs, supply streams, lakes and ponds.

If wetland sites are present, read and observe the following directions:

- There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.
- Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat in such areas.

Restrictions:
- Do not apply this product directly to water within 1/2 mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.), or within 1/2 mile of an active potable water intake in a standing body of water, such as a lake, pond or reservoir. This restriction does not apply to intermittent inadvertent overspray of water in terrestrial use sites.
- Do not spray open bodies of water where woody brush, trees and herbaceous weeds do not exist. Do not apply more than 3 3/4 quarts per acre in a single over water broadcast application except in stream crossings in utility right-of-way or where applications will result in less than 20 percent of the total water area being treated. In either of these locations, any specified rate may be applied:

Christmas Tree Plantations

Broadcast Application (Oregon and Washington Only)
Broadcast apply this product over the established Christmas tree species Douglas fir (*Pseudotsuga menziesii*), fir species (*Abies* spp.), and pine species (*Pinus* spp.) (except eastern white, loblolly, longleaf, shortleaf, slash), and spruce species (*Picea* spp.). Use 1 quart of this product per acre in 5 to 30 gallons of water per acre. For best results, add up to 10 fl oz of Entry II surfactant per acre. If using a different surfactant, follow the manufacturer's directions for use and ensure conifer safety has been adequately tested for that surfactant. Apply after trees have completed at least a full growing season since planting or transplanting.

Apply only in the fall after the formation of the final conifer resting buds or in the spring prior to initial bud swell. Final resting buds must be fully hardened and in the dormant stage. Applying this product at any other time may result in unacceptable injury to the Christmas trees. Avoid spray pattern overlap as injury may occur.

In some areas, 1 to 2 quarts of this product per acre may be used. Consult your local representative for specific use instructions if rates greater than 1 quart per acre are required.

For best results, do not use drift control additives as they may increase injury to Christmas trees.

Precautions:
- Ensure that adequate buffers are maintained to prevent drift onto nearby desirable crops or vegetation.

Restrictions:
- **Preharvest Interval:** Do not apply within 1 full year prior to tree harvest.

Cut Stump

Treat cut stumps in any noncrop site listed on this label. This product will control regrowth of freshly cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, make applications during periods of active growth and full leaf expansion.

When used according to directions for cut stump application, this product will control, partially control or suppress most woody brush and tree species, some of which are listed below:

Common Name	Scientific Name
alder	*Alnus* spp.
coyotebrush[1]	*Baccharis pilularis*
dogwood[1]	*Cornus* spp.
eucalyptus	*Eucalyptus* spp.
hickory[1]	*Carya* spp.
madrone, Pacific	*Arbutus menziesii*
maple[1]	*Acer* spp.
oak	*Quercus* spp.
peppertree, Brazilian	*Schinus terebinthifolius*
Australian-pine,	*Casuarina equisetifolia*
poplar[1]	*Populus* spp.
reed, giant	*Arundo donax*
saltcedar	*Tamarix ramosissima*
sweetgum[1]	*Liquidambar styraciflua*
sycamore[1]	*Platanus occidentalis*
tan oak	*Lithocarpus densiflorus*
willow	*Salix* spp.

[1]Do not use this product on these species in the state of California.

Precautions:
- Adjacent trees that are of a similar age, height and spacing may indicate shared roots.
- Injury is likely to occur to non-treated stems or trees when one tree or more that shares a common root is treated.

Restrictions:
- Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Some sprouts, stems, or trees may share the same root system.

Injection and Frill (Woody Brush and Trees)

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment that penetrates into the living tissue. Apply the equivalent of 1 mL of this product per each two to three inches of trunk diameter at breast height (DBH). This is best achieved by applying 50 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Do not make any applications that allow runoff to occur from frilled or cut areas in species that exude sap freely. In species such as this, make frill or cuts at an oblique angle to produce a cupping effect and use a 100 percent undiluted concentration of this product. For best results, apply during periods of active growth and full leaf expansion.

This product controls the following woody species:

Common Name	Scientific Name
oak	*Quercus* spp.
poplar	*Populus spp.*
sweetgum	*Liquidambar styraciflua*
sycamore	*Platanus occidentalis*

This product suppresses the following woody species:

Common Name	Scientific Name
blackgum[1]	*Nyssa sylvatica*
dogwood	*Cornus* spp.
hickory	*Carya* spp.
maple, red	*Acer rubrum*

[1]Do not use this product on these species in the state of California.

Forestry Site Preparation

This product is for the control or partial control of woody brush, trees, and herbaceous weeds in forestry. This product is also for use in preparing or establishing wildlife openings within these sites and maintaining logging roads.

In forestry sites, use this product in site preparation prior to planting any tree species including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites. Unless otherwise specified, make applications of this product for control or partial control of herbaceous weeds, woody brush and trees listed in the Weeds Controlled section.

Application Rates

Method of Application	Rate	Spray Volume (gal/acre)
Broadcast		
aerial	1.5 - 7.5 qt/acre	5 - 30
ground		10 - 60
Spray to Wet		
handgun, backpack	0.75 - 2%	spray to wet
mistblower	by volume	
Low Volume Directed Spray[1]		
handgun, backpack	5 - 10%	partial coverage
mistblower	by volume	

[1] For low volume directed spray applications, coverage should be uniform with at least 50% of the foliage contacted. For best results, coverage of the top one-half of the plant, including the growing tip, is important (over the top and down coverage) To ensure adequate spray coverage, spray all sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple sense or tall sprouts.

Use a higher rate in the rate range for control or partial control of woody brush, trees and hard to control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before leaf drop. Use increased rates within the rate range to control perennial herbaceous weeds from emergence up to the appearance of seedheads, flowers or berries. Use a lower rate in the rate range to control annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to foliage of actively growing annual herbaceous weeds anytime after emergence.

This product has no herbicidal or residual activity in the soil. Where repeat applications up to the labled rate are necessary, do not apply more than 8 quarts of product per acre per year.

Tank Mixes

This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled. When tank mixing, read and observe applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Note: For forestry site preparation, make sure the tank mix product is approved for use prior to planting the desired species. Observe planting interval restrictions.

Any specified rate of this product may be used in a tank mix with the following products for forestry site preparation:

Product
Milestone VM
Garlon 3A
Garlon 4
Arsenal Applicators Concentrate
Escort
Chopper
Oust XP
Arsenal Applicators Concentrate
Arsenal Applicators Concentrate

For control of herbaceous weeds, use the lower specified tank mixture rates. For control of dense stands or difficult to control woody brush and trees, use the higher specified rates.

Aerial Application
Aerially apply this product by helicopter only in forestry sites. See Aerial Application in Application Equipment and Application Methods for more details.

Ground Application
Apply this product using suitable ground equipment for broadcast applications in forestry sites. See Ground Application in Application Equipment and Application Methods for more details. Unless otherwise specified, apply the specified rates of this product as a broadcast spray in sufficient spray volume to provide complete and uniform coverage of plant foliage. Check for even distribution throughout the spray pattern.

Hand-Held and Backpack Application
Apply this product using handgun and backpack equipment in forestry sites. See Hand-Held and Backpack Application in Application Equipment and Application Methods for more details. For spray to wet applications, coverage should be uniform and complete, but not to the point of runoff.

This product may be used for low volume directed sprays for spot treatment of trees and brush. It is most effective in areas where there is a low density of undesirable trees or brush. For flat fan and cone nozzles, spray the foliage of the targeted vegetation. Small, open branched trees need only be treated from one side. If the foliage is thick or there are multiple root sprouts, apply from several sides to ensure adequate spray coverage.

Forestry Conifer and Hardwood Release

Directed Sprays and Selective Equipment
Apply this product as a directed spray or with selective equipment in forestry conifer and hardwood sites, including Christmas tree plantations and silvicultural nurseries. A surfactant must be used with this product. Use only surfactants approved for conifer release and specified on the surfactant label as safe for use in conifer release (pine release). Using this product without a surfactant will result in reduced herbicide performance. See Mixing Directions and Application Equipment and Application Methods sections.

Avoid contact of spray drift, mist or drips with foliage, green bark or non-woody surface roots of desirable plant species.

Tank Mixes: When tank mixing, read and observe applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture.

Broadcast Application Outside Area of Southeastern United States
Apply this product as a broadcast application for release of Douglas fir (*Pseudotsuga menziesii*), fir (*Abies* species), hemlock (*Tsuga* species), pines (*Pinus* species) (includes all species except loblolly, longleaf, shortleaf, or slash), and California redwood (*Sequoia* species) outside the area of the southeastern United States. Apply this product as a broadcast application only after formation of final conifer resting buds in the fall or prior to initial bud swelling in the spring. Note: Except where specified, make broadcast applications of this product only where conifers have been established for more than one year.

Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher labeled rate is applied. Damage can be accentuated if applications are made when conifers are actively growing, are under stress from drought, flood water, improper planting, insects, animal damage or diseases.

Apply 3/4 to 1 1/2 quarts per acre as a broadcast spray. Apply 3/4 to 1 1/8 quarts of this product per acre to release Douglas fir, pine and spruce species at the end of the first growing season (except California). Ensure all conifers are well hardened off.

A surfactant must be used with this product for optimum weed control. Use only surfactants approved for use in over the top release applications. Using this product without a surfactant will result in reduced herbicide performance. For best results, do not use a surfactant for release of hemlock species or California redwood. In mixed conifer stands, injury to these species may result if a surfactant is used. See Mixing Directions and Application Equipment and Application Methods sections.

For release of Douglas fir, a nonionic surfactant for over the top foliar spray may be used. To avoid possible conifer injury, use nonionic surfactants at 2 fl oz per acre at elevations above 1500 feet, or 1 fl oz per acre in the coastal range or at elevations below 1500 feet. Using a higher rate of surfactant may result in unacceptable conifer injury. Ensure the nonionic surfactant has been adequately tested for safety to Douglas fir before using.

Tank Mixes with Oust XP: Apply 3/4 to 1 1/2 quarts of this product with the labeled rate of Oust XP per acre to release jack pine and white. Use the labeled rate of Oust XP per acre with this product to release white pine. Make applications to actively growing weeds as a broadcast spray over the top of established conifers. Make applications after formation of conifer resting buds in the late summer or fall.

Tank Mixes with Arsenal Applicators Concentrate: Apply 3/4 to 1 1/8 quarts of this product with the labeled rate of Arsenal Applicators Concentrate per acre to release Douglas fir. Apply 1 1/2 quarts of this product with the labeled rate of Arsenal Applicators Concentrate per acre to release balsam fir and red spruce.

In **Maine** and **New Hampshire**, apply up to 2 1/4 quarts of this product per acre to control or suppress difficult to control hardwood species. For the release of red pine, balsam fir, red spruce, white spruce, Norway spruce, and black spruce with dense tough to control brush, and where maples make up a large component of the undesirable trees, this product may be tank mixed with the labeled rate of Arsenal Applicators Concentrate and the labeled rate of Oust XP per acre. Apply this mix as a broadcast spray.

Broadcast Application in Southeastern United States
Apply this product as a broadcast application for release of loblolly pine (*Pinus taeda*), eastern white pine (*Pinus strobus*), shortleaf pine (*Pinus echinata*), slash pine (*Pinus elliottii*), Virginia pine (*Pinus virginiana*), and longleaf pine (*Pinus palustris*) in the southeastern United States.

Apply 1 1/8 to 1 7/8 quarts of this product per acre as a broadcast spray during late summer or early fall after the conifers have hardened off. For applications at the end of the first growing season, use 3/4 quart of this product alone or in a tank mix.

Tank Mixes with Arsenal Applicators Concentrate: For conifer release, apply 3/4 to 1 1/2 quarts of this product with the labeled rate of Arsenal Applicators Concentrate per acre as a broadcast spray. Use only on conifer species that are labeled for over the top spray for both products. Use the higher specified rates for dense tough to control wood brush and trees.

Herbaceous Release
When applied as directed, this product plus listed residual herbicides provide postemergence control of the annual weeds and control or suppression of the perennial weeds listed in this label, and residual control of the weeds listed in the residual herbicide label. Make applications to actively growing weeds as a broadcast spray over the top of labeled conifers.

Use a surfactant labeled for use in over the top herbaceous release applications. Using this product without a surfactant will result in reduced herbicide performance. See Mixing Directions and Application Equipment and Application Methods sections on this label.

Weed control may be reduced if spray solution water volumes exceed 25 gallons per acre for these treatments.

Tank Mixes with Oust XP: Apply 12 to 18 fl oz of this product with the labeled rate of Oust XP per acre to release loblolly pines. Apply 9 to 12 fl oz of this product with the labled rate of Oust XP per acre to release slash pines.

Tank Mix with Atrazine: Apply 3/4 quarts of this product with 4 lb ai of atrazine per acre to release Douglas fir. Apply only over Douglas fir that has been established for at least one full growing season. Apply in the early spring, usually mid-March through early April. Injury will occur if applications are made after bud swell in the spring. For this use, do not add surfactant to the tank mix.

In **Maine** and **New Hampshire**, for release of red pine, balsam fir, red spruce, white spruce, Norway spruce, and black spruce with heavy grass and herbaceous weeds infesting the site, up to 2 1/4 quarts of this product per acre may be tank mixed with the labled rate of Oust XP to control grass, herbaceous weeds and woody brush. Apply this mix as a broadcast spray.

Mid-Rotation Conifer Release and Spot Treatments for Crop Tree Release and Timber Stand Improvement

This product is applied as a ground broadcast or directed spray application for mid-rotation release applications under the canopy of pines (and other conifers) and hardwoods. Make applications using application techniques that prevent or minimize direct contact to the foliage of crop trees (including in stands of pine, other conifers, or hardwood). This may be accomplished using directed sprays and ground equipment with nozzles oriented to target only undesirable understory vegetation below the crop tree canopy. This product is applied as a spot, individual plant treatment for woody and herbaceous weeds (see Hand-Held and Backpack Application in Application Equipment and Application Methods section). When making spot applications, do not allow spray to contact the foliage of desirable crop trees.

Broadcast Application for Control of Undesirable Competitive Vegetation in Larch (*Larix* spp.) Plantations in Maine

Apply this product to control or reduce competition from undesirable vegetation in Larch (*Larix* spp.) plantations in the state of Maine.

Application Timing
Apply only after lignification has occurred in 50% or more of the current year's terminal growth.

Application Directions
Broadcast Spray: Use 1 to 3 quarts of this product per acre. Apply in a total spray volume of 10 to 60 gallons per acre using ground equipment or 5 to 15 gallons per acre if applied aerially. Up to 30 fl oz of Entry II surfactant may be added.

Directed Sprays: This product may be applied as a directed spray for competitive release of larch. Avoid contact of spray drift, mist or drips with foliage, green bark or non-woody surface roots of desirable plants. See Application Equipment and Application Methods of the product label.

Injury to larch may occur, especially where spray patterns overlap or higher labeled rates of this product or surfactant were applied. Damage can be accentuated if application is made when larch is actively growing or is under stress. Make applications only if some level of injury to larch is acceptable.

Noncrop Areas and Industrial Sites

See the rate tables in the Annual Weeds, Perennial Weeds, and Woody Brush and Trees sections for specific application rates. This product has no herbicidal or residual activity in the soil. Where repeat applications up to the labeled rate are necessary, do not apply more than 8 quarts of this product per acre per year.

Use a higher rate in the rate range for control or partial control of woody brush, trees, and hard to control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Use increased rates within the rate range for difficult to control species, where dense stands occur, or where conditions for control are not ideal and to control perennial herbaceous weeds from emergence up to the appearance of seedheads, flowers or berries. Use a lower rate in the rate range to control annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to foliage of actively growing annual herbaceous weeds anytime after emergence.

Tank Mixing for Noncrop Areas
This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled. When tank mixing, read and observe applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Maintain good agitation at all times during the mixing process and application. Ensure that the tank mix product(s) is well mixed with the spray solution before adding this product. Mix only the amount of spray solution that will be used during the same day. Reduced weed control may result if a tank mixture is allowed to stand overnight. If the spray mix is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

Weed Control, Trim and Edge, and Bare Ground
This product may be used in general noncrop and non-food areas. It may be applied with any application equipment described in this label. This product may be used to trim and edge around objects in noncrop sites, for spot treatment of unwanted vegetation, and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

To maintain bare ground, repeated applications up to the labeled rate of this product may be used.

This product provides control of emerged annual weeds and control or partial control of emerged perennial weeds, woody brush and trees when applied in a tank mix to bare ground.

Turfgrass Renovation, Seed or Sod Production

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. When repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm season turfgrass, including bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at last one regular mowing to allow sufficient grown for good interception of the spray.

Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques, including vertical mowing, coring, or slicing, for seven days after application to allow translocation into underground plant parts.

Desirable turfgrass may be planed following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

Do not feed or graze turfgrass grown for seed or sod production for eight weeks following application.

Ornamentals and Plant Nurseries

Post-Direct and Trim and Edge
This product may be used as a post-directed spray around established woody ornamental species, including arborvitae, azalea, boxwood, crabapple, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, provet, pine, spruce and yew. This product may also be used to trim and edge around trees, buildings, sidewalks and roads, potted plants and other objects in a nursery setting.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. Do not use this product for any over the top broadcast spray in ornamentals. Exercise care to avoid contact of spray, drift or mist with foliage or green bark of established ornamental species.

Site Preparation
This product may be used prior to planting any ornamental, nursery or Christmas tree species.

Greenhouse/Shadehouse
This product may be used to control weeds growing in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

Wildlife Habitat Management

This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Apply to allow recovery of native plant species, prior to planting desirable native species, and for broad spectrum vegetation control. Apply spot treatments to selectively remove unwanted plants for habitat enhancement.

Wildlife Food Plots
This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tilling to allow translocation into underground plant parts.

Hollow Stem Injection

Apply this product to control giant knotweed (*Polygonum sachalinense*), Japanese knotweed (*Polygonum cuspidatum*), or other invasive knotweeds using individual stem treatment. Use a hand-held injection device that delivers the specified amount of this product into these hollow stem plants.

Make a hole through both sides of the stem about 6 inches above the ground, just below a node, using an awl or other pointed tool. Inject 5 mL of undiluted product directly into this hole in the hollow stem. Treat each stem of the knotweed plant.

Restrictions:
- Do not apply more than a total of 8 quarts of this product per acre for all treatments combined. At 5 mL per stem, 7.5 quarts will treat approximately 1420 stems per acre.

Parks, Recreational and Residential Areas

Use this product in parks, recreational and residential areas. Apply it with any application equipment described in this label. Use this product to trim and edge around trees, fences, paths, around buildings, sidewalks, and other objects in these areas. This product may be used for spot treatment of unwanted vegetation, eliminate unwanted weeds growing in established shrub beds or ornamental plantings, and prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

All of the label instructions apply to park and recreational areas.

Railroads

All of the instructions in the Noncrop Areas and Industrial Sites and Roadside sections apply to railroads.

Bare Ground, Ballast and Shoulders, Crossings, and Spot Treatment
Use this product to maintain bare ground on railroad ballast and shoulders. Repeat applications up to the labled rate of this product may be used as weeds emerge to maintain bare ground. Use this product to control tall growing weeds to improve line of sight at railroad crossings and reduce the need for mowing along rights-of-way.

Brush Control
Apply 3 to 8 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Applications up to 80 gallons of spray solution per acre may be used. Apply a 3/4 to 1.5 percent solution of this product when using high volume spray to wet applications. Apply a 5 to 10 percent solution of this product when using low volume directed sprays for spot treatment.

Roadsides

All of the instructions in the Noncrop Areas and Industrial Sites and Railroads sections apply to roadsides.

Shoulder Treatments
Use this product on road shoulders. Apply it with boom sprayers, shielded boom sprayers, high volume off-center nozzles, OC nozzle clusters, manifold nozzle systems, hand-held equipment, and similar equipment, and under-deck mowing plus herbicide systems.

Guardrails and Other Obstacles to Mowing
Use this product to control weeds growing under guardrails and around signposts and other objects along the roadside.

Spot Treatment
Use this product as a spot treatment to control unwanted vegetation growing along roadsides.

Tank Mixes: This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. Follow applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Chemical Mowing
Perennials: This product suppresses perennial grasses listed in this section to serve as a substitute for mowing. Use 4.5 fl oz of this product per acre when treating Kentucky bluegrass, tall fescue, fine fescue, orchardgrass, or quackgrass. Apply 12 fl oz of this product per acre when treating bermudagrass. Apply 4.5 to 8 fl oz of this product per acre when treating bahiagrass. Use the higher labled rates when grass is under heat stress. Apply 3 pints of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre.

Annuals: For growth suppression of some annual grasses, including annual ryegrass, wild barley and wild oats growing in coarse turfgrass on roadsides or other industrial areas, apply 3 to 3.75 fl oz of this product in 10 to 40 gallons of spray solution per acre. Apply when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments may cause injury to the desired grasses.

Release of Dormant Bermudagrass or Bahiagrass
Apply 6 to 48 fl oz of this product per acre in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable groundcovers and where some temporary injury or discoloration can be tolerated. Treatments of more than 12 fl oz per acre may result in injury or delayed greenup in highly maintained areas, including golf courses and lawns.

For best results on winter annuals, treat when weeds are in an early growth stage (less than 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is in or beyond the 4- to 6-leaf stage.

Tank Mixes: This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. When tank mixing, read and follow all applicable use directions, precautions, and limitation on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Actively Growing Bermudagrass
Use this product to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Use only in areas where some temporary injury or discoloration can be tolerated. Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season are not recommended because severe injury may occur.

Apply up to 2.25 pints of this product in 10 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds less than 6 inches in height (or runner length). Use the higher labled rate as weeds increase in size or as they approach flower or seedhead formation.

Actively Growing Bahiagrass
For suppression of vegetable growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4.5 fl oz of this product in 10 to 40 gallons of water per acre. Apply one to two weeks after full greenup or after mowing to a uniform height of 3 to 4 inches. Make this application prior to seedhead emergence. For suppression up to 120 days, apply 3 fl oz of this product per acre, followed by an application of 1.5 to 3 fl oz per acre about 45 days later. Make no more than two applications per year.

Tank Mixes: This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. When tank mixing, read and follow all applicable use directions, precautions, and limitation on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Utility Sites

Use this product for control of brush, tree, and weed control and side trimming in areas including electrical power, pipeline and telephone rights-of-ways, and other sites associated with these rights-of-ways including substations, roadsides, and railroads. This product may be applied with any application equipment or method described on this label unless specifically prohibited.

Tank Mixes: This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. When tank mixing, read and follow all applicable use directions, precautions, and limitation on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Rangelands

Use this product to control or suppress many annual weeds growing in perennial cool and warm season grass rangelands. Preventing weed seed production is critical to the successful control of annual grassy weeds invading these perennial grass sites. Eliminate most of the viable seeds with follow up applications in sequential years. Delay grazing of treated areas to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

***Bromus*:** Use this product to control or suppress downy brome/ cheatgrass (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*), cheat (*Bromus secalinus*), cereal rye, and jointed goatgrass. Apply 6 to 12 fl oz of this product per acre as a broadcast treatment.

For best results, coincide treatments with early seedhead emergence of the most mature plants. Delaying the application until this growth stage maximizes the emergence of other weedy grass flushes. Make applications to the same site each year until seed banks are depleted and the desirable perennial grasses become established on the site.

Medusahead: Apply 12 fl oz of this product per acre to control or suppress medusahead at the 3-leaf stage when plants are actively growing. Delaying applications beyond this stage results in reduced or unacceptable control. Repeat applications in subsequent years to eliminate the seed bank before reestablishing desirable perennial grasses. Apply in the fall or spring.

Apply by ground or air. Make aerial applications for these uses with fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For ground applications, apply in at least 10 to 20 gallons of water per acre.

Spot Treatment and Wiper Application
Apply this product in rangeland, pastures, or industrial sites as a spot treatment or over the top of desirable grasses using wiper applicators to control tall weeds. See Wiper Application section for specific instructions. Make repeat applications up to the labeled rate in the same area at 30-day intervals.

The entire site or any portion of it may be treated when using 2.25 quarts or less of this product per acre for spot treatments or wiper applications. No more than 10 percent of the total site may be treated at any one time when using more than 2.25 quarts of this product per acre for spot treatments or wiper applications. To achieve maximum performance, remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting for feed.

Pastures

Type of Pastures: Bahiagrass, bermudagrass, bluegrass, brome, fescue, orchardgrass, ryegrass, timothy, wheatgrass, alfalfa, clover

Spot Treatment and Wiper Application
This product may be applied as a spot treatment or as a wiper application. Make applications in the same area at 30-day intervals. See Wiper Application section for specific instructions.

Precautions:
- For spot treatment and wiper applications, the entire field or any portion of it may be treated when using a rate of 2.25 quarts or less per acre.
- To achieve maximum performance, remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

Restrictions:
- Do not treat more than 10 percent of any acre at one time if applying more than 2.25 quarts per acre as a spot treatment or wiper application.

Preplant, Preemergence, and Pasture Renovation
Apply this product prior to planting or emergence of forage grasses and legumes. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

Precautions:
- If the application rates total 2.25 quarts or less per acre, there is no waiting period between treatment and feeding or livestock grazing is required.
- If the application rates total more than 2.25 quarts per acre, remove domestic livestock before application and wait eight weeks after application before grazing or harvesting.

Restrictions:
- Crops listed for treatment in this label may be planted into the treated area at any time. Wait 30 days between application and planting for all other crops.

Bamboo

Use this product on roadside rights-of way to control or suppress bamboo. Use the higher rate in the rate range for dense stands and larger plants. Mow or cut bamboo and allow it to resprout to have sufficient foliage in order for the spray solution to completely cover the foliage. Optimum control or suppression of bamboo is achieved when this product is applied between August and October (prior to frost). One application of this product plus a surfactant will not eradicate bamboo. Several mowings and applications are required to completely control bamboo.

Apply the specified rate plus a surfactant (1/4 to 1/2% v/v), such as a nonionic surfactant containing 80% active ingredient or more. Using this product without a surfactant results in reduced performance.

Application Method	Rate	Spray Volume (gal/acre)
ground broadcast	1.5 – 7.5 qt/acre	10 - 60
handgun spray to wet	0.75 – 2%	spray to wet
handgun or backpack low volume directed spray	4 – 10%	spray to cover

Restrictions:
- Do not apply more than a total of 8 quarts of this product per acre per year.

Annual Weeds, Perennial Weeds, and Woody Brush and Trees

Annual Weeds

Apply 24 fl oz of this product per acre if weeds are less than 6 inches in height or runner length. Use 1.25 to 3 quarts of this product per acre if weeds are more than 6 inches in height or runner length or when weeds are growing under stressed conditions. Use a higher rate in the rate range for tough to control species regardless of the size of the weed at the time of application. Treat tough to control weeds when they are relatively small. Tank mix this product with only those products that are labeled for application at the target site. Refer to the label of the tank mix partner for use sites and application rates.

Apply a 0.4 percent solution of this product as a spray to wet application to weeds less than 6 inches in height or runner length. Use a 0.7 to 1.5 percent solution for annual weeds more than 6 inches tall or for smaller weeds growing under stressed conditions. Use the higher concentration for tough to control species or for weeds more than 24 inches tall. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds.

Use a 4 to 7 percent solution of this product for low volume directed spray applications. Spray coverage should be uniform with at least 50 percent of the foliage contacted. For best results, cover the top one-half of the plant. To ensure adequate spray coverage, spray both sides of large or tall weeds when foliage is thick and dense or where there are multiple sprouts.

Common Name	Scientific Name
anoda, spurred	*Anoda cristata*
balsamapple[1]	*Momordica charantia*
barley	*Hordeum vulgare*
barnyardgrass	*Echinochloa crus-galli*
bassia, fivehook	*Bassia hyssopifolia*
bittercress	*Cardamine* spp.
bluegrass, annual	*Poa annua*
bluegrass, bulbous	*Poa bulbosa*
brome, downy/cheatgrass	*Bromus tectorum*
brome, Japanese	*Bromus japonicus*
buttercup	*Ranunculus spp.*
Carolina foxtail	*Alopecurus carolinianus*
Carolina geranium	*Geranium carolinianum*
castorbean	*Ricinus communis*
chamomile, mayweed	*Anthemis cotula*
cheat	*Bromus secalinus*
chervil	*Anthriscus cerefolium*
chickweed	*Cerastium vulgatum*
cocklebur, common	*Xanthium strumarium*
coreopsis, plains	*Coreopsis tinctoria*
corn, volunteer	*Zea mays*
crabgrass	*Digitaria* spp.
dwarfdandelion, Virginia	*Krigia virginica*
eastern mannagrass	*Glyceria* spp.
eclipta	*Eclipta prostrata*
falsedandelion	*Pyrrhopappus carolinianus*
falseflax, smallseed	*Camelina microcarpa*
fiddleneck	*Amsinckia* spp.
field pennycress	*Thlaspi arvense*
fleabane, annual	*Erigeron annuus*
fleabane, hairy	*Conyza bonariensis*
fleabane, rough	*Erigeron strigosus*
Florida pusley	*Richardia scabra*
foxtail	*Setaria* spp.
goatgrass, jointed	*Aegilops cylindrica*
goosegrass	*Eleusine indica*
groundsel, common	*Senecio vulgaris*
henbit	*Lamium amplexicaule*
horseweed/marestail	*Conyza canadensis*
itchgrass	*Rottboellia cochinchinensis*
johnsongrass	*Sorghum halepense*
junglerice	*Echinochloa colona*
knotweed	*Polygonum* spp.
kochia[2]	*Kochia scoparia*
lambsquarters, common	*Chenopodium album*
mallow, little	*Malva parviflora*
medusahead	*Taeniatherum caput-medusae*
morningglory	*Ipomoea* spp.
mustard, blue	*Chorispora tenella*
mustard, tumble	*Sisymbrium altissimum*
mustard, wild	*Sinapis arvensis*
oats, wild	*Avena fatua*
panicum, fall	*Panicum dichotomiflorum*
pigweed, redroot	*Amaranthus retroflexus*
pigweed, smooth	*Amaranthus hybridus*
prickly lettuce	*Lactuca serriola*
puncturevine	*Tribulus terrestris*
purslane, common	*Portulaca oleracea*
ragweed, common	*Ambrosia artemisiifolia*
ragweed, giant	*Ambrosia trifida*
rocket, London	*Sisymbrium irio*
Russian-thistle	*Salsola tragus*
rye, cereal	*Secale cereale*
ryegrass, Italian[3]	*Lolium perenne*
sandbur, field	*Cenchrus spinifex*
sesbania, hemp	*Sesbania herbacea*
shattercane	*Sorghum bicolor*
shepherd's-purse	*Capsella bursa-pastoris*
sicklepod	*Senna obtusifolia*
signalgrass, broadleaf	*Urochloa platyphylla*
smartweed, Pennsylvania	*Polygonum pensylvanicum*
sowthistle, annual	*Sonchus oleraceus*
Spanishneedles[3]	*Bidens bipinnata*
speedwell, corn	*Veronica arvensis*
speedwell, purslane	*Veronica peregrina*
sprangletop	*Leptochloa* spp.
spurge, annual	*Chamaesyce* spp.
spurge, prostrate	*Chamaesyce humistrata*
spurge, spotted	*Chamaesyce maculata*
spurry, umbrella	*Holosteum umbellatum*
stinkgrass	*Eragrostis cilianensis*
sunflower, common	*Helianthus annuus*
tansymustard, pinnate	*Descurainia pinnata*
teaweed/sida, prickly	*Sida spinosa*
Texas panicum	*Panicum* spp.

Common Name (Cont.)	Scientific Name
velvetleaf	*Abutilon theophrasti*
Virginia pepperweed	*Lepidium virginicum*
wheat	*Triticum aestivum*
witchgrass	*Panicum capillare*
woolly cupgrass	*Eriochloa villosa*
yellow rocket	*Barbarea vulgaris*

[1]Apply with hand-held equipment only.
[2]Do not treat kochia in the button stage.
[3]Apply 3 pints of product per acre.

Perennial Weeds

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). Best results are obtained when non-flowering plants are treated when they reach a mature stage of growth. In many situations, applications are required prior to these growth stages. Under these conditions, use a higher rate in the rate range.

When using spray to wet treatments with hand-held equipment, ensure thorough coverage of the plant. For best results, use a 1.5 percent solution on harder to control perennials including bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

Use a 4 to 7 percent solution of this product in low volume directed spray applications. Spray coverage should be uniform with at least 50 percent of the foliage contacted. For best results, cover the top one-half of the plant. To ensure adequate spray coverage, spray both sides of large or tall weeds when foliage is thick and dense or where there are multiple sprouts.

Allow 7 days or more after application before tillage.

Common Name	Scientific Name
alfalfa	*Medicago sativa*
alligatorweed[1]	*Alternanthera philoxeroides*
anise/fennel	*Foeniculum vulgare*
artichoke, Jerusalem	*Helianthus tuberosus*
bahiagrass	*Paspalum notatum*
beachgrass, European	*Ammophila arenaria*
bentgrass	*Agrostis* spp.
bermudagrass	*Cynodon dactylon*
bindweed, field	*Convolvulus arvensis*
bluegrass, Kentucky	*Poa pratensis*
blueweed, Texas	*Helianthus ciliaris*
brackenfern	*Pteridium aquilinum*
brome, smooth	*Bromus inermis*
bursage, woollyleaf	*Ambrosia grayi*
canarygrass, reed	*Phalaris arundinacea*
cattail	*Typha* spp.
clover, red	*Trifolium pratense*
clover, white	*Trifolium repens*
cogongrass	*Imperata clylindrica*
cordgrass-	*Spartina spp.*
cutgrass, giant[1]	*Zizaniopsis milliacea*
dallisgrass	*Paspalum dilatatum*
dandelion	*Taraxacum officinale*
dock, curly	*Rumex crispus*
dogbane, hemp	*Apocynum cannabinum*
fescue	*Festuca* spp.
fescue, tall	*Lolium arundinaceum*
German ivy	*Senecio mikanioides*
guineagrass	*Urochloa maxima*
horsenettle	*Solanum carolinense*
horseradish	*Armoracia rusticana*
iceplant, crystalline	*Mesembryanthemum crystallinum*
johnsongrass-	*Sorghum halepense*
kikuyugrass	*Pennisetum clandestinum*
knapweed, Russian	*Acroptilon repens*
lantana, largeleaf-	*Lantana camara*
lespedeza, common	*Kummerowia striata*
lespedeza, sericea-	*Lespedeza cuneata*
loosestrife, purple	*Lythrum salicaria*
lotus, American	*Nelumbo lutea*
maidencane	*Panicum hemitomon*
milkweed	*Asclepias* spp.
muhly, wirestem	*Muhlenbergia frondosa*
mullein, common	*Verbascum thapsus*
napiergrass	*Pennisetum purpureum*
nightshade, silverleaf	*Solanum elaeagnifolium*
nutsedge, purple	*Cyperus rotundus*
nutsedge, yellow	*Cyperus esculentus*
orchardgrass	*Dactylis glomerata*
pampasgrass	*Cortaderia selloana*
paragrass	*Urochloa mutica*
phragmites[2]	*Phragmites* spp.
poison-hemlock	*Conium maculatum*
quackgrass	*Elymus repens*
redvine	*Brunnichia ovata*
reed, giant	*Arundo donax*
ryegrass, perennial	*Lolium perenne*
smartweed, swamp	*Polygonum amphibium*
sowthistle, perennial	*Sonchus arvensis*
spatterdock	*Nuphar lutea*
starthistle, yellow-	*Centaurea solstitialis*
sweet potato, wild[1]	*Ipomoea pandurata*
thistle, artichoke	*Cynara cardunculus*
thistle, Canada	*Cirsium arvense*
timothy	*Phleum pratense*
torpedograss[1]-	*Panicum repens*
trumpetcreeper	*Campsis radicans*
tules, common	*Scirpus acutus*
vaseygrass	*Paspalum urvillei*
velvetgrass	*Holcus* spp.
water fern[3]	*Salvinia spp*
waterhyacinth	*Eichornia crassipes*
waterlettuce	*Pistia stratiotes*
waterprimrose	*Ludwigia* spp.
wheatgrass, western	*Pascopyrum smithii*

[1] Partial control.
[2] Partial control In southeastern states.
[3]Not for use in California

Woody Brush and Trees

Apply this product after full leaf expansion unless otherwise directed. Use the higher labeled rate for larger plants and/or dense areas of growth. On vines, use the higher labled rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring or early summer when brush species are at high moisture content and are flowering.

Ensure thorough coverage when using hand-held equipment.

See Low Volume Directed Spray Application section of label. Spray coverage should be uniform with at least 50 percent of the foliage contacted. For best results, cover the top half to 2/3 of the plant foliage. Spray both sides of large or tall woody brush and trees to ensure adequate spray coverage when foliage is thick and dense or where there are multiple sprouts. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow seven days or more after application before tillage, mowing or removal. Repeat treatments up to the labeled rate may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Note: If brush has been mowed or tilled, or trees have been cut, do not treat until regrowth has reached the specified stage of growth.

This product will control, partially control, or suppress the following woody brush and trees.

Common Name	Scientific Name
alder	*Alnus* spp.
ash[1]	*Fraxinus* spp.
aspen, quaking	*Populus tremuloides*
bearclover, bearmat	*Ceanothus prostratus*
beach	*Fagus* spp.
birch	*Betula* spp.
bittercherry	*Prunus emarginata*
blackberry	*Rubus* spp.
blackgum	*Nyssa sylvatica*
blue gum, Tasmanian	*Eucalyptus globulus*
brackenfern	*Pteridium aquilinum*
broom, French	*Genista monspessulana*
broom, Scotch	*Cytisus scoparius*
buckwheat, California[1]	*Eriogonum fasciculatum*
cascara[1]	*Frangula purshiana*
catclaw-vine[1]	*Macfadyena unguis-cati*
ceanothus	*Ceanothus* spp.
chamise	*Adenostoma fasciculatum*
cherry	*Prunus* spp.
cherry, black	*Prunus serotina*
cherry, pin	*Prunus pensylvanica*
copperleaf, hophornbeam	*Acalypha ostryifolia*
coyotebrush	*Baccharis pilularis*
deer vetch	*Lotus unifoliolatus*
dewberry, southern	*Rubus trivialis*
dogwood	*Cornus* spp.
elderberry	*Sambucus nigra*
elm[1]	*Ulmus* spp.
gorse	*Ulex europaeus*
hasardia[1]	*Haplopappus squamosus*
hawthorn	*Crataegus* spp.
hazel	*Corylus* spp.
hickory	*Carya* spp.
holly, Florida	*Schinus terebinthifolius*

Common Name (Cont.)	Scientific Name
honeysuckle	*Lonicera* spp.
hornbeam, American	*Carpinus caroliniana*
kudzu	*Pueraria montana*
locust, black[1]	*Robinia pseudoacacia*
madrone, Pacific	*Arbutus menziesii*
manzanita	*Arctostaphylos* spp.
maple	*Acer* spp.
maple, red[1]	*Acer rubrum*
maple, sugar	*Acer saccharum*
maple, vine[1]	*Acer circinatum*
monkeyflower[1]	*Mimulus guttatus*
oak	*Quercus* spp.
oak, black[1]	*Quercus kellogia*
oak, pin	*Quercus palustris*
oak, post	*Quercus stellata*
oak, red	*Quercus rubra*
oak, southern red	*Quercus falcata*
oak, white[1]	*Quercus alba*
peppertree, Brazilian	*Schinus terebinthifolius*
persimmon[1]	*Diospyros* spp.
pine	*Pknus* spp.
poison-ivy, eastern	*Toxicodendron radicans*
poison-oak	*Toxicodendron* spp.
poison-sumac[1]	*Toxicodendron vernix*
prunus	*Prunus* spp.
raspberry	*Rubus* spp.
redbud, eastern-	*Cercis canadensis*
rose, multiflora-	*Rosa multiflora*
Russian-olive	*Elaeagnus angustifolia*
sage,: black, white	*Salvia* spp.
sagebrush, California	*Artemisia californica*
salmonberry	*Rubus spectabilis*
saltcedar[1]	*Tamarix ramosissima*
saltbush, sea myrtle	*Baccharis halimifolia*
sassafras-	*Sassafras albidum*
sourwood[1]	*Oxydendrum arboreum*
sumac, smooth[1]	*Rhus glabra*
sumac, dwarf[1]	*Rhus copallinum*
sweetgum-	*Liquidambar styraciflua*
swordfern[1]	*Polystichum munitum*
tallowtree, Chinese-	*Triadica sebifera*
oak, tanbark resprouts	*Lithocarpus densiflorus*
thimbleberry, western	*Rubus parviflorus*
tobacco, tree[1]	*Nicotiana glauca*
trumpetcreeper-	*Campsis radicans*
Virginia-creeper[1]	*Parthenocissus quinquefolia*
waxmyrtle, southern[1]	*Myrica cerifera*
willow-	*Salix* spp.
yellow-poplar [1]	*Liriodendron tulipifera*
yerba santa	*Eriodictyon californicum*

[1]Partial control

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, to the extent permitted by law, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT PERMITTED BY LAW, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

(1) Refund of purchase price paid by buyer or user for product bought, or
(2) Replacement of amount of product used.

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or Limitation of Remedies in any manner.

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Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

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LOES number: 010-01471

EPA accepted 11/27/18

Revisions

1. Updated the trademark line to read, "® ™ Trademarks of Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners"
2. Add "Caution" to the Precautionary Statements and combine the statements into one paragraph.
3. Under Rainfastness – revised sentence to read, "Heavy rainfall soon... repeat application up to the labeled rate may be required.
4. Revised 2nd paragraph of Directed Sprays to read, "Injury to larch may occur especially where spray patterns overlap or higher labeled rates of this..."
5. Removed rates and application method from table of Tank Mix Partners for Forestry Sites.
6. Broadcast Applications Outside Areas of Southeastern United States revised to read, "...overlap or the higher labeled rate is applied."
7. Chemical Mowing revised sentence to read, "Repeat applications of the tank mix in the same season are not recommended because severe injury may occur."
8. Add missing table for Hand Held Sprayers to sub-label B
9. Add following statements to Wiper Applications: "Rope or Sponge Wick applications: Use solutions of 33 to 75 percent of this product in water." "Panel Applications: Use solutions of 33 to 100 percent of this product in water."
10. Correct typo under "Hollow Stem Injection" "Do not apply more than a total of 7.5 quarts of this product..."
11. Update Mode of Action banner to reflect provisions in PR Notice 2017-01.

Dow AgroSciences

SAFETY DATA SHEET

DOW AGROSCIENCES LLC

Product name: RODEO Herbicide

Issue Date: 11/10/2015
Print Date: 11/10/2015

DOW AGROSCIENCES LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: RODEO Herbicide

Recommended use of the chemical and restrictions on use
Identified uses: End use herbicide product

COMPANY IDENTIFICATION
DOW AGROSCIENCES LLC
9330 ZIONSVILLE RD
INDIANAPOLIS IN 46268-1053
UNITED STATES

Customer Information Number: 800-992-5994
info@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-992-5994
Local Emergency Contact: 352-323-3500

2. HAZARDS IDENTIFICATION

Hazard classification
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Mixture
This product is a mixture.

Component	CASRN	Concentration
Glyphosate IPA salt	38641-94-0	53.75%

Isopropylamine	75-31-0	5.8%
Balance	Not available	40.45%

4. FIRST AID MEASURES

Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Straight or direct water streams may not be effective to extinguish fire. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn. Container may vent and/or rupture due to fire. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. May produce flash fire. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Refer to section 7, Handling, for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep away from heat, sparks and flame. No smoking, open flames or sources of ignition in handling and storage area. Electrically bond and ground all containers and equipment before transfer or use of material. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Containers, even those that have been emptied,

can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Never use air pressure for transferring product. Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation.

Conditions for safe storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Do not store in: Carbon steel. Galvanized containers. Steel. Flammable mixtures may exist within the vapor space of containers at room temperature. Store in a dry place. Store in original container. Do not store near food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Isopropylamine	ACGIH	TWA	5 ppm
	ACGIH	STEL	10 ppm
	OSHA Z-1	TWA	12 mg/m3 5 ppm

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquid.
Color	Yellow
Odor	Odorless
Odor Threshold	No data available
pH	4.8 *pH Electrode*
Melting point/range	Not applicable
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	**closed cup** > 93 °C (> 199 °F) *Setaflash Closed Cup ASTM D3828* none below boiling point
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.21 at 22 °C (72 °F) / 4 °C *Pyknometer*
Water solubility	Soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	none below 400 degC
Decomposition temperature	No test data available
Dynamic Viscosity	64.6 mPa.s at 20 °C (68 °F)
Kinematic Viscosity	53.4 mm2/s at 20 °C (68 °F)
Explosive properties	No
Oxidizing properties	No significant increase (>5C) in temperature.
Liquid Density	1.20 g/cm3 at 20 °C (68 °F) *Digital density meter*
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Thermally stable at recommended temperatures and pressures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Active ingredient decomposes at elevated temperatures. Avoid static discharge.

Incompatible materials: Heat produced by the reaction with water will cause vaporization. Flammable hydrogen may be generated from contact with metals such as:

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product:
LD50, Rat, male and female, > 5,000 mg/kg

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product:
LD50, Rabbit, male and female, > 5,000 mg/kg

Acute inhalation toxicity
No adverse effects are anticipated from single exposure to mist. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

As product:
LC50, Rat, male and female, 4 Hour, dust/mist, > 6.37 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
For similar active ingredient(s).
Glyphosate.
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.
For the minor component(s):
In animals, effects have been reported on the following organs after inhalation:
Eye.
Respiratory tract.

Carcinogenicity
For similar material(s): Glyphosate. Did not cause cancer in laboratory animals. Weight of evidence evaluation of epidemiology studies supports no association between glyphosate exposure and cancer.

Teratogenicity
For similar active ingredient(s). Glyphosate. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Reproductive toxicity
For similar active ingredient(s). Glyphosate. In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity
For the active ingredient(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative in some cases and positive in other cases.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Carcinogenicity

Component	**List**	**Classification**
Glyphosate IPA salt	IARC	Group 2A: Probably carcinogenic to humans

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 2,500 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 918 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 127 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to Above Ground Organisms
Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

oral LD50, Colinus virginianus (Bobwhite quail), > 2000mg/kg bodyweight.

contact LD50, Apis mellifera (bees), > 100µg/bee

oral LD50, Apis mellifera (bees), > 100µg/bee

Persistence and degradability

Glyphosate IPA salt

Biodegradability: For similar active ingredient(s). Glyphosate. Biodegradation may occur under aerobic conditions (in the presence of oxygen).

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 0.115 d
Method: Estimated.

Isopropylamine

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Pass
Biodegradation: 70 - 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 3.53 mg/mg

Chemical Oxygen Demand: 1,300 - 1,975 mg/g

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	18.3 %
10 d	54 %
20 d	59 %

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 3.26 Hour
Method: Estimated.

Balance

Biodegradability: No relevant data found.

Bioaccumulative potential

Bioaccumulation: For similar active ingredient(s). Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Mobility in soil

For similar active ingredient(s).
Expected to be relatively immobile in soil (Koc > 5000).

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Chronic Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Pennsylvania (Worker and Community Right-To-KnowAct): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Components	**CASRN**
Isopropylamine	75-31-0

Pennsylvania (Worker and Community Right-To-KnowAct): Pennsylvania Special Hazardous Substances List:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

United States TSCA Inventory (TSCA)
This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

Federal Insecticide, Fungicide and Rodenticide Act
EPA Registration Number: 62719-324
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Harmful if inhaled

16. OTHER INFORMATION

Hazard Rating System
NFPA

Health	Fire	Reactivity
1	2	0

Revision
Identification Number: 101188488 / A211 / Issue Date: 11/10/2015 / Version: 4.0
DAS Code: NAF-552
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW AGROSCIENCES LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

WINFIELD™
AQUA-KING PLUS®

Spreader-Activator with Buffering Agents

Aqua-King Plus® is a 95% active, low foaming spreader activator with buffering agents, formulated for use with aquatic herbicide applications.

Principal Functioning Agents:
Nonylphenol polyethylene glycol ether, free fatty acids, organic phosphatic acids, dimethylpolysiloxane 95%
Constituents ineffective as an adjuvant 5%
Total 100%
*All ingredients are exempt from tolerance under 40 CFR 180.

KEEP OUT OF REACH OF CHILDREN

WARNING

Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation. Harmful if swallowed.

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

PRECAUTIONARY STATEMENTS

Wash hands thoroughly after handling. Wear protective gloves and eye and face protection. Avoid breathing mist or spray. Use only outdoors in a well-ventilated area. Do not eat, drink or smoke when using this product. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in original container. PROTECT FROM FREEZING. SHAKE WELL. BEFORE USE. Dispose of contents/container in accordance with Federal, state and local regulations. Do not reuse container. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the web page at www.acrecycle.org. Triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration, or if allowed by state and local authorities, by burning. If burned stay out of smoke.

FIRST AID

IF SWALLOWED: Immediately call a poison control center or doctor for treatment advice. Rinse mouth.
IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor for treatment advice if you feel unwell.

For Emergency, Spill, Leak, Fire, Exposure, or Accident, Call: CHEMTREC 1-800-424-9300.

DIRECTIONS FOR USE:
READ ENTIRE LABEL BEFORE USING
Aqua-King Plus is a low foaming, spreader-activator for use on plants to improve the effectiveness of herbicides. Aqua-King Plus increases contact activity and improves spray penetration by providing more uniform spray coverage without excessive runoff of the spray. Aqua-King Plus contains buffering agents which lower the pH of the spray solution when used with herbicides which are adversely affected by high pH.

Distributed by:
Winfield Solutions, LLC
P.O. Box 64589
St. Paul, MN 55164-0589

Net Contents

1/0111/7

Aqua-King Plus is intended for use with products registered for aquatic vegetative applications, but may also be used with herbicides that are registered for aquatic, wetland vegetation management, right-of-ways, ditch banks, shorelines and other non-crop areas.

Rate for Aquatic use: Aqua-King Plus use rates vary from 1 to 4 pints (unless otherwise directed) per 100 gallons of spray solution with most post-emerge aquatic herbicides that recommend the use of a nonionic surfactant on the label.

Notice of Warranty

Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NOR IS ANY REPRESENTATIVE OF SELLER AUTHORIZED TO MAKE ANY SUCH WARRANTY OR MODIFY THESE TERMS. This warranty does not extend to the storage, handling or use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Seller, and Buyer assumes the risk of any such storage, handling or use. Seller shall not be responsible for incidental or consequential damages, if any, resulting from a breach of warranty.

Aqua-King Plus® is a registered trademark of Winfield Solutions, LLC.

WINFIELD™
Safety Data Sheet

Aqua-King Plus®

NFPA HAZARD RATING				U.S. TRANSPORT SUMMARY
0	Least			Not regulated by the U.S. DOT as a hazardous material in quantities less than 5.7 gallons. See Section 14 for additional information.
1	Slight	1	Health	
2	Moderate	0	Flammability	
3	High	0	Reactivity	
4	Severe			

SECTION 1: IDENTIFICATION

Product Name: Aqua-King Plus®
EPA Registration #: Exempt
Product ID/Unity #: 1400362
Common Name: Agricultural adjuvant
Chemical Description: Spreader-Activator with Buffering Agents
Recommended Uses: Adjuvant – See product label for full directions for use.
Restrictions for Use: See product label for any restrictions on use.

Manufactured For:
WINFIELD SOLUTIONS, LLC
P. O. Box 64589
St. Paul, MN 55164-0589

MEDICAL EMERGENCY TELEPHONE NUMBER: 1-877-424-7452 (24hrs)

Non-Emergency Business Inquiries: 1-855-494-6343
Mon – Fri 8am – 5pm (Central Standard Time)

FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:
CHEMTREC 1-800-424-9300 (24 hours)

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Viscous, blue liquid with a slight fatty acid odor. Causes serious eye irritation and skin irritation. Harmful if swallowed and may cause respiratory irritation.

POTENTIAL HEALTH EFFECTS:
Eyes: Causes moderate but temporary eye irritation including redness, tearing, blurred vision and discomfort.
Skin: Causes skin irritation including defatting and dermatitis. Prolonged exposure may cause more severe irritation such as local redness and swelling.
Inhalation: May cause irritation of the upper respiratory tract and lungs.
Ingestion: May cause severe abdominal irritation, nausea, vomiting and diarrhea.
Preexisting Conditions: Preexisting respiratory conditions may be aggravated by exposure to mist.
Chronic Health Effects: None known

Carcinogenicity NTP: Not listed IARC: Not listed OSHA: Not listed

OSHA HCS 2012 CLASSIFICATION: Eye Irritation Category 2A; Skin Irritation Category 2; Acute Oral Toxicity Category 4; Specific Target Organ Toxicity – Single Exposure – Category 3

SIGNAL WORD: WARNING

HAZARD STATEMENTS:
Causes serious eye irritation.
Causes skin irritation.
May cause respiratory irritation.
Harmful if swallowed.

Percent of product with unknown toxicity: 0%

PRECAUTIONARY STATEMENTS:
Prevention: Wash hands thoroughly after handling. Wear protective gloves and eye and face protection. Avoid breathing mist or spray. Use only outdoors in a well-ventilated area. Do not eat, drink or smoke when using this product.

Continued on next page

Response:	**If in eyes:** Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. **If on skin:** Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. **If Swallowed:** Immediately call a poison control center (1-877-424-7452) or doctor for treatment advice. Rinse mouth. **If inhaled:** Remove person to fresh air and keep comfortable for breathing. Call a poison control center (1-877-424-7452) or doctor for treatment advice if you feel unwell.
Storage:	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with Federal, state and local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	% (wt)	CAS Reg. #
Proprietary blend of surfactants and formulation aids	90.0 – 95.0%	*
Phosphoric acid	<5.0%	7664-38-2
Glycol ethers	<2.0%	*

*Ingredients not specifically listed are non-hazardous and/or are considered to be confidential business information under 29 CFR 1910.1200(i).

See Section 8 for exposure limits.

SECTION 4: FIRST AID MEASURES

Inhalation:	Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Ingestion:	Seek medical attention or call a poison control center immediately for treatment advice. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Eyes:	Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention immediately.
Skin:	Remove contaminated clothing and wash before re-using. Flush skin with water and then wash with soap and water. Seek medical attention if irritation persists.

SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Foam, carbon dioxide, dry chemical, water spray or water fog
Unsuitable Extinguishing Media: Water jet
Special Fire Fighting Procedures: Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Avoid breathing vapors; keep upwind.
Hazardous Combustion Products: Carbon oxides, sulfur oxides and/or nitrogen oxides
Unusual Fire and Explosion Hazards: None known

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.
Environmental Precautions: Do not allow spilled product to enter sewers or waterways.
Methods for Containment: Contain spilled liquid by diking area with sand or earth. DO NOT use combustible materials such as sawdust.
Methods for Clean-up: Cover contained spill with an inert absorbent material such as sand, vermiculite or other appropriate material. Scoop or sweep up material and place in a container for disposal. Do not place spilled material back in original container.
Other Information: Spills of this product may require reporting under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as the product contains glycol ethers with a reportable quantity (RQ) of 1 lb. See Section 15 for additional information.

SECTION 7: HANDLING AND STORAGE

Handling: Ensure adequate ventilation. Immediately clean up spills that occur during handling. Keep containers closed when not in use. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.
Storage: Store in cool, dry areas away from children, feed and food products and sources of heat or flame. Protect from freezing. Protect package from physical damage. Store between 40°F and 120°F.
Minimum Storage Temperature: 40°F
Other Precautions: Consult Federal, state and local laws and regulations pertaining to storage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component:	OSHA PEL	ACGIH TLV	NIOSH REL
Phosphoric acid (CAS # 7664-38-2)	1 mg/m3 TWA; 3 mg/m3 STEL	1 mg/m3 TWA; 3 ppm STEL	1 mg/m3 TWA; 3 mg/m3 STEL

Respiratory Protection: When handling this product in areas which are not properly ventilated wear NIOSH approved air-purifying respirator with cartridges/canisters approved for general particulates and acid gases.

Engineering Controls: **Local Exhaust:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.

Protective Gloves: Wear chemical resistant gloves to prevent skin contact.
Eye Protection: To avoid contact with eyes, wear chemical goggles or full face shield and safety glasses. Contact lenses are not protective eye devices. An emergency eyewash or water supply should be readily accessible to the work area.
Other Protective Clothing or Equipment: Wear long-sleeve shirt, long pants and shoes plus socks to prevent skin contact.

Work/Hygienic Practices: Never eat, drink, nor use tobacco in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid	**Specific Gravity (H_2O=1):**	1.05 (typical)
Vapor Pressure (mm Hg):	Not determined	**Density (lbs/gallon):**	8.76 lbs/gallon (typical)
Vapor Density (Air=1):	Not determined	**Melting Point/Freezing Point:**	Not determined
Solubility in Water (wt %):	Soluble, hazy	**Boiling Point/Range:**	Not determined
Viscosity:	Not determined	**pH (0.5% solution in distilled water):**	3.5 – 4.5
Appearance and odor:	Viscous, blue liquid with slight fatty acid odor	**Flash Point:**	>200°F

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None known
Chemical Stability: This product is stable at ambient temperature and pressure, under normal storage and handling conditions.
Possibility of Hazardous Reactions: Will not occur
Conditions to Avoid: Avoid high temperatures. Avoid heat, flame, and sparks.
Incompatible Materials: Strong oxidizing agents and acids
Hazardous Decomposition Products: Carbon oxides and other hazardous gases

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Eye Effects:	May cause severe irritation to eyes including redness, tearing, blurred visions and discomfort.
Skin Effects:	LD50 >3,000 mg/kg.
Acute Inhalation Effects:	LC50 is not determined. Inhalation of mist may cause respiratory irritation including discomfort to the nose and throat.
Acute Oral Effects:	LD50 >3,300 mg/kg.
Specific Target Organ Toxicity:	None known

CHRONIC TOXICITY

Chronic Effects:	None known
Carcinogenicity:	No component is known to have a carcinogenic effect.
Mutagenicity:	No component is known to have a mutagenic effect.
Teratogenicity:	No component is known to have a teratogenic effect.
Reproductive Toxicity:	No component is known to have an effect on the reproductive system.

POTENTIAL HEALTH EFFECTS:

Eyes: Causes moderate but temporary eye irritation including redness, tearing, blurred vision and discomfort.

Skin: Causes skin irritation including defatting and dermatitis. Prolonged exposure may cause more severe irritation such as local redness and swelling.

Inhalation: May cause irritation of the upper respiratory tract and lungs.

Ingestion: May cause severe abdominal irritation, nausea, vomiting and diarrhea.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: Not determined

ECOTOXICITY DATA:

Fish Acute and Prolonged Toxicity:	Not determined
Aquatic Invertebrate Acute Toxicity:	Not determined
Aquatic Plant Toxicity:	Not determined
Bird Acute and Prolonged Toxicity:	Not determined
Honeybee Toxicity:	Not determined

ENVIRONMENTAL EFFECTS:

Soil Absorption/Mobility:	Not determined
Persistence and degradability:	Not determined
Bioaccumulative Potential:	Not determined
Other adverse effects:	Not determined

SECTION 13: DISPOSAL CONSIDERATIONS

Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.

Container: Triple rinse and recycle the container or dispose of in accordance with Federal, state and local laws and regulations.

RCRA Characteristics: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

SECTION 14: TRANSPORT INFORMATION

DOT: (Ground)	This product is not regulated by the U.S. Department of Transportation for ground transportation in quantities less than 5.7 gallons per container.
IMDG: (Sea)	Not determined
IATA: (Air)	Not determined
TDG: (Canada)	Not determined

SECTION 15: REGULATORY INFORMATION

TSCA Inventory: All components are listed or are exempt from listing on the TSCA inventory.
SARA Title III Information:
Section 302 - Extremely hazardous substances: None listed
Section 311/312 – Hazard Categories: Immediate (Acute)
Section 313 – The following chemicals are subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:
Glycol ethers ≤2.0%

CERCLA - This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):
Glycol ethers have an RQ of 1 lb which is reached with 5.7 gallons of product.
Phosphoric acid has an RQ of 5,000 lbs which is reached with 5707 gallons of product.
Ethylene oxide (CAS # 75-21-8) <0.0001% has an RQ of 10 lbs which is not reached with any practical quantity of product.

California Proposition 65: This product contains a chemical known to the state of California to cause cancer and/or reproductive harm.

U.S. State Worker and Community Right-To-Know (RTK) Information (CT, IL, MA, MN, NH, NJ, PA, RI):

Chemical Name	CAS #	State(s)
Glycol ethers	*	NJ
Phosphoric acid	7664-38-2	MA, NJ, PA

Canadian Domestic Substances List: Not determined

WHMIS Classification: This product is not approved for use in Canada. WHMIS classification is not determined.

Other Information: A maximum of 1 ppm Ethylene Oxide (CAS # 75-21-8) may be present in this product. The OSHA PEL and the ACGIH TLV for Ethylene Oxide are 1 ppm. Ethylene Oxide is a NTP, IARC, and OSHA carcinogen. Ethylene Oxide has also been determined to be a reproductive hazard. The trace levels of Ethylene Oxide in this product are not expected to result in acute or long-term hazards when handled according to the precautions set forth in this SDS. However, Ethylene Oxide may accumulate in the container headspace and be released into the ambient environment. It is the responsibility of the employer to comply with OSHA Ethylene Oxide standards (29 CFR 1910.1047).

SECTION 16: OTHER

Disclaimer: The information presented herein is based on available data from reliable sources and is correct to the best of WinField Solutions' knowledge. WinField Solutions, LLC makes no warranty, express nor implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

Revision Date: June 10, 2014 **Supersedes document dated:** June 4, 2011
Sections Revised: All

NUTRIEN AG SOLUTIONS
13622 E. HARDY RD.
HOUSTON, TEXAS 77039

"SEALED BID"

IFB 22-023/YS
Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District
11:00am CST, Wednesday, May 11, 2022

rec. 5/10/22
3:10 pm

"SEALED BID"

Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701
Attn: Deborah L.Clark

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street, 1st Floor, Beaumont, TX 77701 409-835-8593 Fax 409-835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

April 12, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for **IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and three (3) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District**
BID NO:	**IFB 22-023/YS**
DUE DATE/TIME:	**11:00 AM CT, Wednesday, May 11, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these requirements should be directed to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provisions of services. Individuals requiring special accommodations are requested to contact our office at 409-835-8593 to make arrangements no later than seven (7) calendar days prior to the submittal deadline. Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation.

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

Publish: Beaumont Enterprise & Port Arthur News – April 13, 2022 and April 20, 2022

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Bid Submissions:

Bidder is responsible for submitting: One (1) original and three (3) bid copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to see if addenda or additional instructions have been posted. Failure to return all required forms could result in a response being declared as non-responsive. https://www.co.jefferson.tx.us/Purchasing/

Instructions to Bidders

1. Bid Submission

Bids must be submitted in complete original form by mail or messenger to the following address:

Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Late bids will not be accepted and will be returned unopened to the bidder.

All bids submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

Bidder shall submit bid in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the Bid Number, Bid Name, Bid Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Bidder is responsible for submitting:

- **One (1) Original Bid Copy and (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.**

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

https://www.co.jefferson.tx.us/Purchasing/

DEADLINE FOR QUESTIONS:

The deadline for asking questions in writing or requesting additional information (in writing or in person) is 5:00 pm, Thursday, April 28, 2022.

2. Bid Submissions During Time of Inclement Weather, Disaster, or Emergency

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3. Courthouse Security

Bidders are advised that all visitors to the Courthouse must pass through Security. **Bidders planning to hand deliver bids must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal.** Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures recommended by the CDC within its facilities. Visitors to the courthouse will be required to wear a mask within the courthouse.

Bidders are strongly urged to plan accordingly.

4. Preparation of Bids

The bid shall be legibly printed in ink or typed.

The County requests that bid submissions NOT be bound by staples or glued spines.

If a unit price or extension already entered is to be altered, it shall be crossed out and initialed in ink by the bidder.

The bid shall be legally signed and shall include the complete address of the bidder.

Jefferson County is exempt from Federal and State Sales Taxes, and such taxes shall not be included in bid prices.

5. Signatures

All bids, notifications, claims, and statements must be signed by an individual authorized to bind the bidder. The individual signing certifies, under penalty of perjury, that he or she has the legal authorization to bind the bidder.

6. County Holidays – 2021:

January 18, 2021	Martin Luther King, Jr. Day	Monday
February 15, 2021	President's Day	Monday
April 2, 2021	Good Friday	Friday
May 31, 2021	Memorial Day	Monday
July 5, 2021	Independence Day	Monday
September 6, 2021	Labor Day	Monday
November 11, 2021	Veteran's Day	Thursday
November 25 & 26, 2021	Thanksgiving	Thursday & Friday
December 23 & 24, 2021	Christmas	Thursday & Friday
December 31, 2021	New Year's	Friday

7. Rejection or Withdrawal

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within 90 days after opening date.

8. Emergency/Declared Disaster Requirements

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

9. Award

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group,

whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial nonconformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment. In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

10. Contract

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

11. Waiver of Subrogation

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

12. Fiscal Funding

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

13. Bid Results

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

14. Changes and Addenda to Bid Documents

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

15. Specifications

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate.

All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

16. Delivery

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

17. Interpretation of Bid and/or Contract Documents

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

18. Currency

Prices calculated by the bidder shall be stated in U.S. dollars.

19. Pricing

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

20. Notice to Proceed/Purchase Order

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

21. Certification

By signing the offer section of the Offer and Acceptance page, bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The bidder hereby certifies that the individual signing the bid is an authorized agent for the bidder and has the authority to bind the bidder to the contract.

22. Definitions

"County" – Jefferson County, Texas.

"Contractor" – The bidder whose proposal is accepted by Jefferson County.

23. Minority-Women Business Enterprise Participation

It is the desire of Jefferson County to increase the participation of Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

General Conditions of Bidding and Terms of Contract

By execution of this document, the vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. Bidding

1.1 Bids. All bids must be submitted on the bid form furnished in this package.

1.2 Authorized Signatures. The bid must be executed personally by the vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the vendor shall accompany the bid to become a valid bid.

1.3 Late Bids. Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 Withdrawal of Bids Prior to Bid Opening. A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 Withdrawal of Bids after Bid Opening. Bidder agrees that its offer may not be withdrawn or cancelled by the vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 Bid Amounts. Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 Exceptions and/or Substitutions. All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 Alternates. The Invitation for Bid and/or specifications may expressly allow bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 Descriptions. Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 Bid Alterations. Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 Tax Exempt Status. Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 Quantities. Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 Bid Award. Award of contract shall be made to the most responsible, responsive bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 Silence of Specifications for Complete Units. All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 Addenda. Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 General Bid Bond/Surety Requirements. Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 General Insurance Requirements. Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 Responsiveness. A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 Responsible Standing of Bidder. To be considered for award, bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 Confidential/Proprietary Information

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 Public Bid Opening. Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. Performance

2.1 Design, Strength, and Quality. Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 Age and Manufacture. All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 Delivery Location. All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 a.m. to 4:00 p.m., Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 Delivery Schedule. Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 Delivery Charges. All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 Installation Charges. All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 Operating Instructions and Training. Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 Storage. Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 Compliance with Federal, State, County, and Local Laws. Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA. The bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 Patents and Copyrights. The successful vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 Samples, Demonstrations and Testing. At Jefferson County's request and direction, bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the bidder/vendor.

2.13 Acceptability. All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 Maintenance. Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 Material Safety Data Sheets. Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 Evaluation. Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. Purchase Orders and Payment

3.1 Purchase Orders. A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 Invoices. All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 Prompt Payment. In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful bidder(s) is required to pay subcontractors within ten (10) days after the successful bidder receives payment from the County.

3.4 Funding. Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. Contract

4.1 Contract Definition. The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful bidder and Jefferson County.

4.2 Change Order. No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 Price Re-determination. A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 Termination. Jefferson County reserves the right to terminate the contract for default if the bidder breached any of the terms therein, including warranties of bidder or if the bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies

which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the bidder in default.

4.5 Conflict of Interest. Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 Injuries or Damages Resulting from Negligence. Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 Interest by Public Officials. No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 Warranty. The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.9 Uniform Commercial Code. The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.10 Venue. This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.11 Sale, Assignment, or Transfer of Contract. The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.12 Silence of Specifications. The apparent silence of these specifications as to any detailed description concerning any point, shall he regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

Federal Emergency Management Agency (FEMA)
MANDATED CONTRACT PROVISIONS

1. REMEDIES

a. Standard. Contracts for more than the simplified acquisition threshold, currently set at $250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. See 2 C.F.R. Part 200, Appendix II(A).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

2. TERMINATION FOR CAUSE AND CONVENIENCE

a. Standard. All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity, including the manner by which it will be affected and the basis for settlement. See 2 C.F.R. Part 200, Appendix II(B).

b. Applicability. This requirement applies to all FEMA grant and co-operative agreement programs.

3. EQUAL EMPLOYMENT OPPORTUNITY

If applicable, exact language below in subsection 3.d is required.

a. Standard. Except as otherwise provided under 41 C.F.R. Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. §60- 1.4(b), in accordance with Executive Order 11246, Equal Employment Opportunity (30 Fed. Reg. 12319, 12935, 3 C.F.R. Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, Amending Executive Order 11246 Relating to Equal Employment Opportunity, and implementing regulations at 41 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See 2 C.F.R. Part 200, Appendix II(C).

b. Key Definitions.

i. Federally Assisted Construction Contract. The regulation at 41 C.F.R. § 60-1.3 defines a "federally assisted construction contract" as any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.

ii. Construction Work. The regulation at 41 C.F.R. § 60-1.3 defines "construction work" as the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

c. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

d. Required Language. The regulation at 41 C.F.R. Part 60-1.4(b) requires the insertion of the following contract clause.

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's non-compliance with the non-discrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may he imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any sub-contract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it

participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24,1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

4. DAVIS-BACON ACT

a. Standard. All prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction). See 2 C.F.R. Part 200, Appendix II(D). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week.

b. Applicability. The Davis-Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Non-profit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It DOES NOT apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must do the following:

i. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

ii. Additionally, pursuant 2 C.F.R. Part 200, Appendix II(D), contracts subject to the Davis-Bacon Act, must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). The Copeland Anti-Kickback Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA.

iii. Include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction").

COMPLIANCE WITH THE DAVIS-BACON ACT:

a. All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) and the requirements of 29C.F.R.pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable.

b. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.

c. Additionally, contractors are required to pay wages not less than once a week.

5. COPELAND ANTI-KICKBACK ACT

a. Standard. Recipient and subrecipient contracts must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

b. Applicability. This requirement applies to all contracts for construction or repair work above $2,000 in situations where the Davis-Bacon Act also applies. It DOES NOT apply to the FEMA Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). Each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA. Additionally, in accordance with the regulation, each contractor and subcontractor must furnish each week a statement with respect to the wages paid each of its employees engaged in work covered by the Copeland Anti-Kickback Act and the Davis Bacon Act during the preceding weekly payroll period. The report shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work.

COMPLIANCE WITH THE COPELAND "ANTI-KICKBACK ACT":

a. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

b. Subcoutracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. §5.12."

6. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

a. Standard. Where applicable (see 40 U.S.C. §§ 3701-3708), all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II(E). Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Further, no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous.

b. Applicability. This requirement applies to all FEMA contracts awarded by the non-federal entity in excess of $100,000 under grant and cooperative agreement programs that involve the employment of mechanics or laborers. It is applicable to construction work. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open
market, or contracts for transportation or transmission of intelligence.

The regulation at 29 C.F.R. § 5.5(b) provides contract clause language concerning compliance with the Contract Work Hours and Safety Standards Act. FEMA suggests including the following contract clause: Compliance with the Contract Work Hours and Safety Standards Act.

> **(1) Overtime requirements.** No contractor or subcontractor contracting for any Part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
>
> **(2) Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
>
> **(3) Withholding for unpaid wages and liquidated damages.** Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
>
> **(4) Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

7. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

a. Standard. If the FEMA award meets the definition of "funding agreement" under 37C.F.R. § 401.2(a) and the non-Federal entity wishes to enter into a contract with a small business firm or non-profit organization regarding the substitution of parties, assignment or performance of experimental,
developmental, or research work under that "funding agreement," the non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA. See 2 C.F.R. Part 200, Appendix II(F).

b. Applicability. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

c. Funding Agreements Definition. The regulation at 37 C.F.R. § 401.2(a) defines "funding agreement" as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

8. CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

a. Standard. If applicable, contracts must contain a provision that requires the contractor to agree to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). Violations must be reported to FEMA and the Regional Office of the Environmental Protection Agency. See 2 C.F.R. Part 200, Appendix II(G).

b. Applicability. This requirement applies to contracts awarded by a non-Federal entity of amounts in excess of $150,000 under a federal grant.

CLEAN AIR ACT:

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

2. The contractor agrees to report each violation to Jefferson County and understands and agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT:

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

2. The contractor agrees to report each violation to Jefferson County agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

9. DEBARMENT AND SUSPENSION

a. Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

c. Requirements.

i. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. See 2

C.F.R. Part 200, Appendix II(H); and 2 C.F.R. § 200.213. A contract award must not be made to parties listed in the SAM Exclusions. SAM Exclusions is the list maintained by the General Services Administration that contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. SAM exclusions can be accessed at www.sam.gov. See 2 C.F.R. § 180.530.

ii. In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. This includes parties that receive Federal funding indirectly, such as contractors to recipients and subrecipients. The key to the exclusion is whether there is a "covered transaction," which is any non-procurement transaction (unless excepted) at either a "primary" or "secondary" tier. Although "covered transactions" do not include contracts awarded by the Federal Government for purposes of the non-procurement common rule and DHS's implementing regulations, it does include some contracts awarded by recipients and subrecipients.

iii. Specifically, a covered transaction includes the following contracts for goods or services:

1. The contract is awarded by a recipient or subrecipient in the amount of at least $25,000.

2. The contract requires the approval of FEMA, regardless of amount.

3. The contract is for federally-required audit services.

4. A subcontract is also a covered transaction if it is awarded by the contractor of a recipient or subrecipient and requires either the approval of FEMA or is in excess of $25,000.

The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified.

SUSPENSION AND DEBARMENT:

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by the County. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the County, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

10. BYRD ANTI-LOBBYING AMENDMENT

a. Standard. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. FEMA's regulation at 44 C.F.R. Part 18 implements the requirements of 31 U.S.C. § 1352 and provides, in Appendix A to Part 18, a copy of the certification that is required to be completed by each entity as described in 31 U.S.C. § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the Federal awarding agency.

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs. Contractors that apply or bid for a contract of $100,000 or more under a federal grant must file the required certification. See 2 C.F.R.Part 200, Appendix II(I); 31 U.S.C. § 1352; and 44 C.F.R. Part 18.
Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

c. Required Certification.

If applicable, contractors must sign and submit to the non-Federal entity the **"Certification Regarding Lobbying" Form** included within these bid specifications.

11. PROCUREMENT OF RECOVERED MATERIALS

a. Standard. A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. See 2 C.F.R. Part 200, Appendix II(J); and 2 C.F.R. §200.322.

b. Applicability. This requirement applies to all contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.

c. Requirements. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired by the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

1. Competitively within a timeframe providing for compliance with the contract performance schedule;

2. Meeting contract performance requirements; or

3. At a reasonable price.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:
https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Although FEMA does not currently require additional provisions, FEMA recommends the following:

1. ACCESS TO RECORDS

a. Standard. All recipients, subrecipients, successors, transferees, and assignees must acknowledge and agree to comply with applicable provisions governing DHS access to records, accounts, documents, information, facilities, and staff. Recipients must give DHS/FEMA access to, and the right to examine and copy, records, accounts, and other documents and sources of information related to the federal financial assistance award and permit access to facilities, personnel, and other individuals and information as may be necessary, as required by DHS regulations and other applicable laws or program guidance. See DHS Standard Terms and Conditions: Version 8.1 (2018). Additionally, Section 1225 of the Disaster Recovery Reform Act of 2018 prohibits FEMA from providing reimbursement to any state, local, tribal, or territorial government, or private non-profit for activities made pursuant to a contract that purports to prohibit audits or internal reviews by the FEMA administrator or Comptroller General.

ACCESS TO RECORDS:

The following access to records requirements apply to this contract:

(1)The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contraetor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

(2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.

(4) In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

2. CHANGES

a. **Standard.** To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

b. Applicability. FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

3. DHS SEAL, LOGO, AND FLAGS

a. Standard. Recipients must obtain permission prior to using the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials. See DHS Standard Terms and Conditions: Version 8.1 (2018).

b. Applicability. FEMA recommends that all non-Federal entities place in their contracts a provision that a contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

"The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval."

4. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

a. Standard. The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

b. Applicability. FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

c. "This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

5. NO OBLIGATION BY FEDERAL GOVERNMENT

a. Standard. FEMA is not a party to any transaction between the recipient and its contractor. FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

6. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

a. Standard. Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

Special Requirements/Instructions

The following requirements and instructions **supersede** General Requirements where applicable.

1. Bid Requirement

Each bidder shall ensure that required parts of the bid are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Bidder is responsible for submitting:

One (1) Original Bid Copy and three (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

All bids shall be tightly sealed in an opaque envelope or box and plainly marked "SEALED BID."

The outside of the envelope or box shall also include: Bid Number, Bid Name, Bid Due Date, Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB. All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

2. Vendor Registration: SAM (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

Bidders are strongly encouraged to review their firm's SAM (System for Award Management) status prior to Bid Submission.

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission)

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission) – CONTINUED

FORM 1295 Exemptions:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law? The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement. A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and o any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

Upon entering into a contract or professional agreement, the Jefferson County Purchasing Department will submit a request to the Vendor to both:

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department.

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

4. Multiple Vendor Award

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

5. Delivery

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

6. Payment

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to: Jefferson County Auditing Department, Attention: Accounts Payable, 1149 Pearl Street, 7th floor, Beaumont, TX 77701.

7. Usage Reports

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases

to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

8. Insurance

The contractor (including any and all subcontractors as defined in Section 9.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation	Statutory Coverage (See Section 9 Below)

9. Workers' Compeusation Insurance

9.1 Definitions:

9.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

9.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

9.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

9.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

9.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – refer to Section 8 above.

9.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

9.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

9.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

9.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

9.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

9.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

9.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

9.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

9.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

9.9.2 Provide to the Contraetor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

9.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

9.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

9.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

9.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

9.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

9.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

9.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs 9.1. – 9.7., with the certificates of coverage to be provided to the person for whom they are providing services.

9.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements

will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

9.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

Minimum Specifications

The following requirements and specifications **supersede** General Requirements where applicable. Contact Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us, regarding any questions or comments. Please reference bid number IFB 22-023/YS.

Scope

Vendor shall provide Insecticides, Herbicides, Spray Adjuvants, and Adulticides for the Jefferson County Mosquito Control District subject to the terms and conditions stated for an initial period **beginning on or about date of award.**

Bidders shall attach to bid form, a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Prices quoted shall be F.O.B. Jefferson County Mosquito Control District, Jefferson County Airport, 1st Street, Nederland, TX. Bidder bears freight charges. All prices must be written in ink or typewritten.

Quote unit prices extended to lump sum prices. The basis of the award will be the unit prices quoted. The County reserves the right to increase or decrease the quantity purchased based on weather conditions and availability of funds.

The County reserves the right to make the award to one (1) successful bidder or per line item.

Purchase orders for insecticides, herbicides, adjuvants, and adulticides will be released to the successful bidder(s) **on an as-needed basis. MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Refer questions of a commercial nature to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us; and questions of a technical nature to Denise Wheeler, Director, Jefferson County Mosquito Control, wheeler@co.jefferson.tx.us.

A price re-determination may be considered by Jefferson County only at the twelve (12) month and twenty-four (24) month anniversary dates of the contract. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

Approximate Annual Usage

No promise is made or implied for quantities that will be purchased. Orders will be placed on an **as-needed basis** for the duration of the contract. Purchase Orders will be released to the successful bidder(s) as required. **MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Contract

This bid, when properly accepted by Jefferson County Commissioners' Court, shall constitute a contract equally binding between the successful bidder and Jefferson County. No different or additional terms will become a part of this contract.

The brand name references are for description only, and are not intended to exclude other herbicides or adjuvants of equal quality. Bidders desiring to substitute items may do so provided brand name is **indicated on Bid Form**. Change of container size may disqualify bid. Dilution ratio will be a factor in award of chemicals.

Bidders shall attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Item	Description
1	**MSMA herbicide** – to contain 6.00 lb. MSMA (Mono-sodium Acid Methanearsonate) plus surfactant per gallon
2	**Tordon 101** – to contain 10.2% 4-amino3,5,6-trichloropicolinic acid (picloram), tri-isopropanolomine salt 39.6% 2,4-Dichlorophenoxyacetric acid, tri-isopropanolomiane salt.
3	**Roundup herbicide or equivalent** – to contain 41.0% by weight Isopropylamine Salt of Glyphosate
4	**Rodeo herbicide or equivalent** – to contain 53.5% by weight Isopropylamine Salt of Glyphosate
5	**Nalco Trol II or equivalent** – water soluble spray drift control agent
6	**Aqua-King or equivalent** – product must be a non-ionic aquatic surfactant approved for use in the State of Texas, contain 90% active ingredient (excluding alcohols, fatty acids, oils ethylene glycol or diethylene glycol), a minimum of 80% surfactant load, possess an HLB (hydrophilic to lipophilic balance) ratio of 12 to 17, a maximum of 10% isopropyl alcohol, have a flash point greater than 200 degrees F., and contain an anti-foaming agent that will provide instantaneous foam breakdown when agitation ceases.
7	**Malathion insecticide** – concentrate to contain a minimum of 9.9 lb. of malathion per gallon (96.5% by weight active ingredient). Product offered must have current approval in Texas for both aerial and ground ULV application against adult mosquitoes. Bulk shipments only.
8	**Bio Mist 3-15 ULV** - ACTIVE INGREDIENTS Permethrin (3-phenoxyphenyl) methyl (+/-) cis, trans3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate.....3.0% Piperonyl Butoxide*.....15.0% OTHER INGREDIENTS**..... 82.0% 100.0% Contains 0.222 pounds of Permethrin and 1.113 pounds of PBO per gallon Contains petroleum distillate *Ordered as 275 gallon containers. **Successful bidder will deliver full containers and pick up empty containers at no additional charge.
9	**Envion 30/30 insecticide or equivalent** - water compatible concentrate in 2.52 lb. Permethrin (30.0% by weight) and 2.52 lb. Piperonyl Butoxide (30.0% by weight) per gallon. Product offered must have current approval in Texas for aerial and ground ULV application against adult mosquitoes.

Bidder Information Form

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.

Bidder's Company/Business Name: Pro Pest and Lawn

Bidder's TAX ID Number: 20-4315917

Contact Person: Royal Tyler **Title:** Owner

Phone Number (with area code): 318-584-7217

Alternate Phone Number if available (with area code):

Fax Number (with area code):

Email Address: propestandlawn@gmail.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

3333 East Texas
Address
Bossier City, LA 71111
City, State, Zip Code

Bidder: Complete & Return this Form with Offer.

OFFER AND ACCEPTANCE FORM

OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer. We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

Pro Pest and Lawn Store
Company Name

3333 East Texas
Address

Bossier City LA 71111
City State Zip

Royal M Tyler
Signature of Person Authorized to Sign

Royal M Tyler
Printed Name

Owner
Title

For clarification of this offer, contact:

Royal Tyler
Name

318-584-7217
Phone Fax

propestandlawn@gmail.com
E-mail

Bidder: Complete & Return this Form with Offer.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. Contract Term: One (1) year from date of award with an option to renew for four (4) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

Countersigned:

Jeff R. Branick
County Judge

Date

Attest:

Laurie Leister
County Clerk

Bidder: Complete & Return this Form with Offer.

Bid Form

Item	Est Qty. (Gal.)	Description	Brand bid	MSDS Labels Attached	Price per Gallon	Total Price
1	700	MSMA Herbicide – 2.5 gal. container	MSMA 6 Plus		$ 44.00	$ 30,800.00
2	700	Tordon 101 Herbicide or equivalent – 2.5 gal. container	Gunslinger P+D		$ 36.75	$ 25,725.00
3	700	Roundup Herbicide or equivalent – 2.5 gal. container	MAKAZE		$ 48.00	$ 33,600.00
4	100	Rodeo Herbicide or equivalent – 2.5 gal. container	Roundup Custom		$ 55.00	$ 5500.00
5	100 4x1 gal	Nalco Trol II or equivalent – 2.5 gal. (or smaller) container	Novita Drift Control		$ 27.50	$ 2750.00
6	400	Aqua-King Surfactant or equivalent – 2.5 gal. (or smaller) container			$	$
7	20,000	Malathion Insecticide – **bulk shipment only**			$	$
8	1,100	Bio Mist 3-15 ULV – 275 gal containers			$	$
9	600	Envion 30/30 insecticide – 2.5 gal. containers	Perm-X UL 30-30		$ 105.00	$ 63,000.00

Bidders must attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Acknowledgment of Addenda (if any):

Addendum 1 _____ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

Bidder: Complete & Return this Form with Offer.

Vendor References Form

Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

THIS FORM MUST BE RETURNED WITH YOUR BID.

REFERENCE ONE

Government/Company Name: Shreveport Parks and Rec

Address: PO Box 31109 Shreveport, LA 71130

Contact Person and Title: Jason McDonald

Phone: 318-673-7773 Fax:

Email Address: jason.mcdonald@shreveportla.gov Contract Period: 4 years

Scope of Work: Annual supply contract for Parks and Rec

REFERENCE TWO

Government/Company Name: Bossier City Public Works

Address: 3223 Old Shed Rd, Bossier City, LA 71111

Contact Person and Title: Wade Rich - Bossier City Public Works director

Phone: 318-741-8405 Fax:

Email Address: richw@bossiercity.org Contract Period: 2022

Scope of Work: Herbicides Contract

REFERENCE THREE

Government/Company Name: Growing Solutions

Address: PO Box 5463 Bossier City, LA 71171

Contact Person and Title: Brett McAnn

Phone: 318-949-9337 Fax:

Email Address: brettmcann@aol.com Contract Period: 5 years

Scope of Work: pesticides and fertilizers supply

Bidder: Complete & Return this Form with Offer.

Signature Page

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions?..... **Yes** ☑ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Pro Pest and Lawn Store Bidder (Entity Name)	Royal M Tyler Signature
3333 East Texas Street & Mailing Address	Royal Tyler Print Name
Bossier City LA 71111 City, State & Zip	5-3-22 Date Signed
318-584-7217 Telephone Number	 Fax Number
propestandlawn@gmail.com E-mail Address	

Bidder: Complete & Return this Form with Offer.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Royal M Tyler

Signature of Contractor's Authorized Official

Royal Tyler - owner

Name and Title of Contractor's Authorized Official *(Please Print)*

5.3.22

Date

Bidder: Complete & Return this Form with Offer.

Conflict of Interest Questionnaire

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

N/A

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

N/A

Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4

Signature of vendor doing business with the governmental entity

5.4.22

Date

Adopted 8/7/2015

Bidder: Complete & Return this Form with Offer.

Local Government Officer

Conflicts Disclosure Statement – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

Note: This Form is for Office Use Only.

Good Faith Effort (GFE) Determination Checklist

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .

☐ Yes ☐ No 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?

☐ Yes ☐ No 2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☐ Yes ☐ No 3. **Provide** HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☐ Yes ☐ No 4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders?

☐ Yes ☐ No 5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?

☐ Yes ☐ No 6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid. If necessary, please use a separate sheet to answer the above questions.

Royal Tyler
Printed Name of Authorized Representative

Royal M Tyler
Signature

Owner
Title

5-4-22
Date

We are a certified small business.

Bidder: Complete & Return this Form with Offer.

Notice of Intent (NOI) to Subcontract with

Historically Underutilized Business (HUB)

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: p Yes p No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____ _____ _____
Printed Name of Contractor Representative Signature of Representative Date

_____ _____ _____
Printed Name of HUB Signature of Representative Date

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

HUB SUBCONTRACTOR DISCLOSURE

PART I: Continuation Sheet **(Duplicate as Needed)**

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

All HUB Subcoutractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that bidder is the apparent low bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

<u>Bidder</u>: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): _____

Title: _____

Signature: _____

Date: _____

E-mail address: _____

Contact person that will be in charge of invoicing for this project:

Name (print or type): _____

Title: _____

Date: _____

E-mail address: _____

Bidder: Complete & Return this Form with Offer.

Residence Certification/Tax Form

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Nonresident bidder" refers to a person who is not a resident.

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☐ I certify that _____ [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☑ I certify that ProPest and Lawn [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is Bossier City, Louisiana (city and state).

Taxpayer Identification Number (T.I.N.):	20-4315917
Company Name submitting bid/proposal:	Pro Pest and Lawn
Mailing address:	3333 East Texas, Bossier City, LA 71111
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

Bidder: Complete & Return this Form with Offer.

House Bill 89 Verification

I, Royal M. Tyler JR the undersigned representative of (company or business name) The Royal Hills, LLC dba Professional Lawn Store (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and

2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

5-4-22
Date

On this 4 day of May, 2022, personally appeared

Royal M Tyler JR, the above named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal: ALISA LYNN TURNER - #067378 - NOTARY PUBLIC - MY COMMISSION IS FOR LIFE - BOSSIER PARISH, LA

Notary Signature

May 04 2022
Date

Bidder: Complete & Return this Form with Offer.

Bid Affidavit

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Louisiana COUNTY OF BOSSIER

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Louisiana

on this day personally appeared Royal M. Tyler, JR (name), who

after being by me duly sworn, did depose and say:

"I, Royal M. Tyler, JR. (name) am a duly authorized officer of/agent

for Pro Pest and Lawn Store (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Pro Pest and Lawn Store (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of bidder: Pro Pest and Lawn Store, 3333 East Texas St., Bossier City, LA 71111

Fax: _____ Telephone# _____

by: Royal Tyler (print name) Title: Owner / President

Signature: Royal M Tyler

SUBSCRIBED AND SWORN to before me by the above-named Royal M Tyler JR on

this the 4 day of May, 2022

Notary Public in and for the State of Louisiana

ALISA LYNN TURNER #067378 NOTARY PUBLIC MY COMMISSION IS FOR LIFE BOSSIER PARISH, LA

Bidder Shall Return Completed Form with Offer.

Drexel

MSMA 6 Plus

MSMA Liquid Plus Surfactant

For selective post-emergent weed control in Cotton, Golf courses and Sod farms, and Highway Rights-of-Way.

ACTIVE INGREDIENT:

Monosodium acid methanearsonate*.....	47.6%
OTHER INGREDIENTS:	52.4%
TOTAL:	100.0%

* This product contains 6 pounds of MSMA per gallon.

* Total Arsenic (as elemental), all in water-soluble form, is 22.0%.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See FIRST AID Below

EPA Reg. No. 19713-42 **Net Content:**
EPA Est. No. 19713-MS-1 **2.5 Gals. (9.46 L)**

FIRST AID

IF SWALLOWED:
- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

IF IN EYES:
- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin and clothing. Avoid breathing spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are polyethylene or polyvinyl chloride. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart. ***(Continued)***

PRECAUTIONARY STATEMENTS *(Cont.)*

All mixers, loaders, applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves, and shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

When handlers use aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240 (d)(6)].

USER SAFETY RECOMMENDATIONS

Users should: 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

USE INFORMATION

MSMA 6 PLUS is a herbicide useful for controlling weeds in Cotton, Golf courses and Sod farms, and Highway Rights-of-Way. It is a combination of herbicide and surfactant. It is unnecessary to add any surfactant to the spray solution. Best results are obtained on young, actively growing weeds at air temperatures above 70°F.

Weeds controlled by this product include:

Bahiagrass *(Paspalum* sp.*)*	Crabgrass, Large *(Digitaria* sp.*)*
Barnyardgrass *(Echinochloa crus-galli)*	Crabgrass, Smooth *(Digitaria* sp.*)*
Beggartick, Hairy *(Biden pilosa)*	Dallisgrass *(Paspalum dilatatum)*
Brachiaria spp.	Dandelion *(Taraxacum officinale)*
Broomsedge	Dayflower *(Commelina* sp.*)*
Chickweed *(Stellaria media)*	Fiddleneck *(Amsinckia* sp.*)*
Cocklebur *(Xanthium spinosum)*	

(Continued)

Manufactured By:
Drexel Chemical Company
P.O. BOX 13327, MEMPHIS, TN 38113-0327
SINCE 1972

The DREXEL logo is a registered trademark of Drexel Chemical Company.

(Cont.)	
Florida Beggarweed *(Desmodium tortuosum)*	Oats, Wild *(Avena fatua)*
Foxtail *(Setaria* sp.*)*	Pigweed *(Amaranthus* sp.*)*
Goosegrass *(Eleusine indica)*	Puncturevine *(Tribulus terrestris)*
Guineagrass *(Panicum* sp.*)*	Purslane, common
Jimsonweed *(Datura stramonium)*	Ragweed *(Ambrosia* spp.*)*
Johnsongrass *(Sorghum halipense)*	Sandbur *(Cenchrus* sp.*)*
Morningglory *(Ipomoea* spp.*)*	Sicklepod *(Cassia obtusifolia)*
Mustard, Wild	Sorrel, Wood *(Oxalis* sp.*)*
Nutsedge *(Cyperus* sp.*)*	Spurge *(Euphorbia* sp.*)*
	Witchgrass *(Panicum capillare)*

RESISTANCE MANAGEMENT

GROUP 17 HERBICIDE

This product is a Group 17 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 17 herbicides. Weed species with acquired resistance to Group 17 may eventually dominate the weed population if Group 17 herbicides are used repeatedly in the same field or in successive years as primary method of control for targeted species. This may result in partial or total loss of control of those species by this product or other Group 17 herbicides.

To delay herbicide resistance, consider:

- Avoiding the consecutive use of this product or other target site of action Group 17 herbicides that have a similar target site of action on the same weed species.
- Using tank-mixtures or pre-mixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank-mix or pre-pack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product through any type of irrigation system. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE) and Restricted Entry Interval (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 12 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves such as polyethylene or polyvinyl chloride and shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the WPS for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep children and pets out of the treated area until sprays have dried.

APPLICATION RESTRICTIONS

- Do not apply this product in Florida except on Cotton in the counties listed in the Cotton use section of this label.
- Aerial application is prohibited, except when applying to Cotton.

MIXING INSTRUCTIONS

This product is completely water-soluble. Fill the spray equipment reservoir about half full with water and add the required amount of herbicide with agitation. Finish filling the tank with water and apply. After use, clean equipment thoroughly by flushing with water. Do not store spray solution in tank for a prolonged period. Although this product is only moderately corrosive, do not use in galvanized or aluminum equipment.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1) The distance of the outer most nozzles on the boom must not exceed three-fourth the length of the wingspan or rotor.
2) Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they shall be observed. The applicator should be familiar with and take into account the information covered in the *"AERIAL DRIFT REDUCTION ADVISORY INFORMATION"* section below.

AERIAL DRIFT REDUCTION ADVISORY INFORMATION

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see *"Wind"*, *"Temperature and Humidity"*, and *"Temperature Inversions"*).

Controlling Droplet Size

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressura – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

Boom Length

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

Wind
Drift potential is lowest between speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.
Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions
Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog. However, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas
This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive area).

COTTON
This product is useful for the control of weeds listed under *"USE INFORMATION"* section and many similar weeds. Applications can be made: 1) Post-emergent, over the top, when Cotton is 3 to 6 inches high or up to early first square stage, whichever occurs first using ground or aircraft equipment. 2) Post-emergent as a directed spray with ground equipment when Cotton is 3 inches high to first bloom. Slight burning and a reddish discoloration of the Cotton leaf may occasionally occur following application, but the Cotton plant will develop normally.

USE RESTRICTIONS
- Do not apply in Florida except on Cotton grown in the following counties: Calhoun, Columbia, Escambia, Gadsden, Hamilton, Holmes, Jackson, Jefferson, Okaloosa, Santa Rosa, Suwannee, Walton and Washington.
  Note: Applications to Cotton in Florida should be confined to band treatments.
- Only one application at 2 pounds a.i. (2.66 pts. of this product) per acre is allowed per season, except when a salvage operation is needed.
- If a salvage operation is needed (i.e., if Pigweed escapes the first application), then a second or repeat application at 2 pounds a.i. (2.66 pts. of this product) per acre is allowed.
- A second or repeat application, if needed, should be timed 1 to 3 weeks after the first application. Apply only as a salvage operation. Apply only to healthy rapidly growing Cotton 3 inches high, but no later than 6 inches high or early square, whichever occurs first. Preference should be given to directed spray. In order to minimize injury, the second application should be made as a directed spray when possible.
- Do not make more than two applications per season.
- Do not apply more than a total of 4 pounds a.i. per acre per season.
- Do not apply pre-plant to Cotton.
- Do not apply within 50 feet of permanent water bodies or aquatic habitat, including, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds and estuaries.
- Do not allow spray or spray drift to contact adjacent crops or injury will result.
- Apply only on still days when weather conditions do not favor drift from areas being treated. Aircraft applications of this product should only be made by applicators experienced in use of herbicides, and application should be made in accordance with State and Federal regulations.
- Do not feed treated foliage to livestock or graze treated areas.

Post-Emergent Applications Using Ground or Aircraft Equipment as an Over-the-Top Broadcast Spray when Cotton is 3 inches high until early first square stage as a salvage operation. **One application:** Apply 2.5 pints in 40 gallons of water for ground application, or in 5 to 10 gallons of water for aircraft application per acre. DO NOT repeat this treatment. **Two applications:** Mix at the rate of 1 to 1.25 pints of this product in 40 gallons of water for ground equipment or in 5 to 10 gallons of water for aircraft application per acre of Cotton. If needed, a second or repeat application should be made 1 to 3 weeks after the first application. Apply only as a salvage operation. Apply only to healthy, rapidly growing Cotton, 3 inches high, but no later than 6 inches high or early square, whichever occurs first. Preference should be given to directed sprays. In order to minimize injury, the second application should be made as a directed spray when possible. DO NOT make more than two applications per season. Do not feed treated foliage to livestock or graze treated areas.

Post-emergent Directed Spray Applications: Mix this product at the rate of 2.66 pints in 40 gallons of water per acre for application as directed broadcast spray when weeds are small. For band applications, mix 2.66 pints in 40 gallons of water per acre, then apply 1 gallon of the diluted spray for each 1 inch band width to be treated of Cotton grown on 40 inch row spacing. Direct the spray solution to the base of the Cotton plant. Nozzles should be placed so as to avoid spraying the Cotton foliage, but to give good coverage of the weeds. If regrowth occurs, make a second application about 1 to 3 weeks after the first. Make directed applications only when Cotton is 3 inches high to first bloom. Do not apply after first bloom. Do not feed treated foliage to livestock or graze treated areas.

GOLF COURSES AND SOD FARMS
Mow Turfgrass to a height of 1 to 1.5 inches before treetment. Mix 1 fluid ounce (2 tbsp.) of this product in 1 to 2.5 gallons of water for application to a total area of 1,000 square feet. For esteblished Bermudagrass and Zoysiagrass, mix 1 to 2 fluid ounces (2 to 4 tbsp.) of this product in 1 to 2.5 gallons of water for application to a total area of 1,000 square feet. Apply during warm weather when temperature is between 80°F and 90°F. Do not water turf for at least 24 hours after application. Turfgrass may be temporarily discolored. Bermudagrass, Bluegrass, and Zoysiagrass have shown tolerance if this product is properly applied. Injury may result if applied to Bentgrass, Fescue, and St. Augustinegrass. **DO NOT apply to St. Augustinegrass except for commercial sod production.** DO NOT apply to Carpetgrass, Centipedegrass or to Dichondra. DO NOT reseed until two weeks after last application. For application to St. Augustinegrass in sod farms, last application can be made 4 to 5 weeks prior to lifting the sod for harvest to allow full recovery before lifting. St. Augustinegrass sod will be temporarily discolored following application. DO NOT apply to freshly mowed St. Augustinegrass sod.

USE RESTRICTIONS
- For newly constructed golf courses, ONLY one broadcast application is permitted.
- For all other applications to golf courses, this product can ONLY be used for spot treatments (100 sq. ft. per spot), not to exceed 25% of the total golf course acreage per year.
- In Sod farms, ONLY two broadcast applications are allowed per season. Do not apply within 25 feet of permanent water bodies or aquatic habitat, including, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds and estuaries.

HIGHWAY RIGHTS-OF-WAY
This product is useful for controlling weeds listed under *"USE INFORMATION"* section and similar other weeds on Highway Rights-Of-Way. Mix this product at a rate of 2.5 to 6 pints per 40 to 50 gallons of water per acre. Use higher rates and spray volume for dense weed growth. For small areas, use 1 to 2 fluid ounces in 5 gallons per 1,000 square feet. Spray undesirable vegetation thoroughly to point of runoff. Adequate coverage and complete wetting of foliage is important for effective control. If regrowth occurs, reapply as required.

USE RESTRICTIONS
- Do not apply more than two broadcast applications per year.
- Do not apply within 100 feet of permanent water bodies or aquatic habitat, including, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds and estuaries.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool, dry area away from any heat or ignition source. High heat may form volatile arsenic compounds. Do not stack over 2 pallets high. Move containers by handles or in cases. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed, seed, fungicides, insecticides and fertilizers to avoid contamination. Store in original containers only. If the contents are leaking or material is spilled, follow these steps while wearing protective clothing:

1. Contain spill. Absorb with an inert material such as sand or sawdust.
2. Collect and place in suitable containers for disposal.
3. Wash area with soap and water to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in a plastic tub and transfer content as soon as possible, to an empty, original container.
6. Do not allow runoff to enter sewer or contaminate water supplies.
7. Dispose of waste as indicated below.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency or the hazardous waste representative at the nearest EPA regional office for guidance.

CONTAINER HANDLING:

Nonrefillable Container (rigid material; less than 5 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Refillable Container (≥ 250 gallons & Bulk): Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

WARRANTY—CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

Drexel®

MSMA 6 Plus

MSMA Liquid Plus Surfactant

For selective post-emergent weed control in Cotton, Golf courses and Sod farms, and Highway Rights-of-Way.

ACTIVE INGREDIENT:

Monosodium acid methanearsonate*.....	47.6%
OTHER INGREDIENTS:	52.4%
TOTAL:	100.0%

* This product contains 6 pounds of MSMA per gallon.

* Total Arsenic (as elemental), all in water-soluble form, is 22.0%.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See FIRST AID Below

EPA Reg. No. 19713-42 **Net Content:**
EPA Est. No. 19713-MS-1 **2.5 Gals. (9.46 L)**

FIRST AID

IF SWALLOWED:
- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

IF IN EYES:
- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin and clothing. Avoid breathing spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are polyethylene or polyvinyl chloride. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart. ***(Continued)***

PRECAUTIONARY STATEMENTS *(Cont.)*

All mixers, loaders, applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves, and shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

When handlers use aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240 (d)(6)].

USER SAFETY RECOMMENDATIONS

Users should: 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

USE INFORMATION

MSMA 6 PLUS is a herbicide useful for controlling weeds in Cotton, Golf courses and Sod farms, and Highway Rights-of-Way. It is a combination of herbicide and surfactant. It is unnecessary to add any surfactant to the spray solution. Best results are obtained on young, actively growing weeds at air temperatures above 70°F.

Weeds controlled by this product include:

Bahiagrass *(Paspalum* sp.*)*	Crabgrass, Large *(Digitaria* sp.*)*
Barnyardgrass *(Echinochloa crus-galli)*	Crabgrass, Smooth *(Digitaria* sp.*)*
Beggartick, Hairy *(Biden pilosa)*	Dallisgrass *(Paspalum dilatatum)*
Brachiaria spp.	Dandelion *(Taraxacum officinale)*
Broomsedge	Dayflower *(Commelina* sp.*)*
Chickweed *(Stellaria media)*	Fiddleneck *(Amsinckia* sp.*)*
Cocklebur *(Xanthium spinosum)*	

(Continued)

Manufactured By:
Drexel Chemical Company
P.O. BOX 13327, MEMPHIS, TN 38113-0327
SINCE 1972

The DREXEL logo is a registered trademark of Drexel Chemical Company.

(Cont.)	
Florida Beggarweed *(Desmodium tortuosum)*	Oats, Wild *(Avena fatua)*
Foxtail *(Setaria* sp.)	Pigweed *(Amaranthus* sp.)
Goosegrass *(Eleusine indica)*	Puncturevine *(Tribulus terrestris)*
Guineagrass *(Panicum* sp.)	Purslane, common
Jimsonweed *(Datura stramonium)*	Ragweed *(Ambrosia* spp.)
Johnsongrass *(Sorghum halipense)*	Sandbur *(Cenchrus* sp.)
Morningglory *(Ipomoea* spp.)	Sicklepod *(Cassia obtusifolia)*
Mustard, Wild	Sorrel, Wood *(Oxalis* sp.)
Nutsedge *(Cyperus* sp.)	Spurge *(Euphorbia* sp.)
	Witchgrass *(Panicum capillare)*

RESISTANCE MANAGEMENT

GROUP 17 HERBICIDE

This product is a Group 17 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 17 herbicides. Weed species with acquired resistance to Group 17 may eventually dominate the weed population if Group 17 herbicides are used repeatedly in the same field or in successive years as primary method of control for targeted species. This may result in partial or total loss of control of those species by this product or other Group 17 herbicides.

To delay herbicide resistance, consider:

- Avoiding the consecutive use of this product or other target site of action Group 17 herbicides that have a similar target site of action on the same weed species.
- Using tank-mixtures or pre-mixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank-mix or pre-pack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product through any type of irrigation system. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE) and Restricted Entry Interval (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 12 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves such as polyethylene or polyvinyl chloride and shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the WPS for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep children and pets out of the treated area until sprays have dried.

APPLICATION RESTRICTIONS

- Do not apply this product in Florida except on Cotton in the counties listed in the Cotton use section of this label.
- Aerial application is prohibited, except when applying to Cotton.

MIXING INSTRUCTIONS

This product is completely water-soluble. Fill the spray equipment reservoir about half full with water and add the required amount of herbicide with agitation. Finish filling the tank with water and apply. After use, clean equipment thoroughly by flushing with water. Do not store spray solution in tank for a prolonged period. Although this product is only moderately corrosive, do not use in galvanized or aluminum equipment.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1) The distance of the outer most nozzles on the boom must not exceed three-fourth the length of the wingspan or rotor.
2) Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they shall be observed. The applicator should be familiar with and take into account the information covered in the *"AERIAL DRIFT REDUCTION ADVISORY INFORMATION"* section below.

AERIAL DRIFT REDUCTION ADVISORY INFORMATION

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see *"Wind"*, *"Temperature and Humidity"*, and *"Temperature Inversions"*).

Controlling Droplet Size

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

Boom Length

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

Wind
Drift potential is lowest between speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.
Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions
Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog. However, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas
This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive area).

COTTON
This product is useful for the control of weeds listed under *"USE INFORMATION"* section and many similar weeds. Applications can be made: 1) Post-emergent, over the top, when Cotton is 3 to 6 inches high or up to early first square stage, whichever occurs first using ground or aircraft equipment. 2) Post-emergent as a directed spray with ground equipment when Cotton is 3 inches high to first bloom.
Slight burning and a reddish discoloration of the Cotton leaf may occasionally occur following application, but the Cotton plant will develop normally.

USE RESTRICTIONS
- Do not apply in Florida except on Cotton grown in the following counties: Calhoun, Columbia, Escambia, Gadsden, Hamilton, Holmes, Jackson, Jefferson, Okaloosa, Santa Rosa, Suwannee, Walton and Washington.
  Note: Applications to Cotton in Florida should be confined to band treatments.
- Only one application at 2 pounds a.i. (2.66 pts. of this product) per acre is allowed per season, except when a salvage operation is needed.
- If a salvage operation is needed (i.e., if Pigweed escapes the first application), then a second or repeat application at 2 pounds a.i. (2.66 pts. of this product) per acre is allowed.
- A second or repeat application, if needed, should be timed 1 to 3 weeks after the first application. Apply only as a salvage operation. Apply only to healthy rapidly growing Cotton 3 inches high, but no later than 6 inches high or early square, whichever occurs first. Preference should be given to directed spray. In order to minimize injury, the second application should be made as a directed spray when possible.
- Do not make more than two applications per season.
- Do not apply more than a total of 4 pounds a.i. per acre per season.
- Do not apply pre-plant to Cotton.
- Do not apply within 50 feet of permanent water bodies or aquatic habitat, including, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds and estuaries.
- Do not allow spray or spray drift to contact adjacent crops or injury will result.
- Apply only on still days when weather conditions do not favor drift from areas being treated. Aircraft applications of this product should only be made by applicators experienced in use of herbicides, and application should be made in accordance with State and Federal regulations.
- Do not feed treated foliage to livestock or graze treated areas.

Post-Emergent Applications Using Ground or Aircraft Equipment as an Over-the-Top Broadcast Spray when Cotton is 3 inches high until early first square stage as a salvage operation. **One application:** Apply 2.5 pints in 40 gallons of water for ground application, or in 5 to 10 gallons of water for aircraft application per acre. DO NOT repeat this treatment. **Two applications:** Mix at the rate of 1 to 1.25 pints of this product in 40 gallons of water for ground equipment or in 5 to 10 gallons of water for aircraft application per acre of Cotton. If needed, a second or repeat application should be made 1 to 3 weeks after the first application. Apply only as a salvage operation. Apply only to healthy, rapidly growing Cotton, 3 inches high, but no later than 6 inches high or early square, whichever occurs first. Preference should be given to directed sprays. In order to minimize injury, the second application should be made as a directed spray when possible. DO NOT make more than two applications per season. Do not feed treated foliage to livestock or graze treated areas.
Post-emergent Directed Spray Applications: Mix this product at the rate of 2.66 pints in 40 gallons of water per acre for application as directed broadcast spray when weeds are small. For band applications, mix 2.66 pints in 40 gallons of water per acre, then apply 1 gallon of the diluted spray for each 1 inch band width to be treated of Cotton grown on 40 inch row spacing. Direct the spray solution to the base of the Cotton plant. Nozzles should be placed so as to avoid spraying the Cotton foliage, but to give good coverage of the weeds. If regrowth occurs, make a second application about 1 to 3 weeks after the first. Make directed applications only when Cotton is 3 inches high to first bloom. Do not apply after first bloom. Do not feed treated foliage to livestock or graze treated areas.

GOLF COURSES AND SOD FARMS
Mow Turfgrass to a height of 1 to 1.5 inches before treatment. Mix 1 fluid ounce (2 tbsp.) of this product in 1 to 2.5 gallons of water for application to a total area of 1,000 square feet. For established Bermudagrass and Zoysiagrass, mix 1 to 2 fluid ounces (2 to 4 tbsp.) of this product in 1 to 2.5 gallons of water for application to a total area of 1,000 square feet. Apply during warm weather when temperature is between 80°F and 90°F. Do not water turf for at least 24 hours after application. Turfgrass may be temporarily discolored. Bermudagrass, Bluegrass, and Zoysiagrass have shown tolerance if this product is properly applied. Injury may result if applied to Bentgrass, Fescue, and St. Augustinegrass. **DO NOT apply to St. Augustinegrass except for commercial sod production.** DO NOT apply to Carpetgrass, Centipedegrass or to Dichondra. DO NOT reseed until two weeks after last application. For application to St. Augustinegrass in sod farms, last application can be made 4 to 5 weeks prior to lifting the sod for harvest to allow full recovery before lifting. St. Augustinegrass sod will be temporarily discolored following application. DO NOT apply to freshly mowed St. Augustinegrass sod.

USE RESTRICTIONS
- For newly constructed golf courses, ONLY one broadcast application is permitted.
- For all other applications to golf courses, this product can ONLY be used for spot treatments (100 sq. ft. per spot), not to exceed 25% of the total golf course acreage per year.
- In Sod farms, ONLY two broadcast applications are allowed per season. Do not apply within 25 feet of permanent water bodies or aquatic habitat, including, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds and estuaries.

HIGHWAY RIGHTS-OF-WAY
This product is useful for controlling weeds listed under *"USE INFORMATION"* section and similar other weeds on Highway Rights-Of-Way. Mix this product at a rate of 2.5 to 6 pints per 40 to 50 gallons of water per acre. Use higher rates and spray volume for dense weed growth. For small areas, use 1 to 2 fluid ounces in 5 gallons per 1,000 square feet. Spray undesirable vegetation thoroughly to point of runoff. Adequate coverage and complete wetting of foliage is important for effective control. If regrowth occurs, reapply as required.

USE RESTRICTIONS
- Do not apply more than two broadcast applications per year.
- Do not apply within 100 feet of permanent water bodies or aquatic habitat, including, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds and estuaries.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool, dry area away from any heat or ignition source. High heat may form volatile arsenic compounds. Do not stack over 2 pallets high. Move containers by handles or in cases. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed, seed, fungicides, insecticides and fertilizers to avoid contamination. Store in original containers only. If the contents are leaking or material is spilled, follow these steps while wearing protective clothing:

1. Contain spill. Absorb with an inert material such as sand or sawdust.
2. Collect and place in suitable containers for disposal.
3. Wash area with soap and water to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in a plastic tub and transfer content as soon as possible, to an empty, original container.
6. Do not allow runoff to enter sewer or contaminate water supplies.
7. Dispose of waste as indicated below.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency or the hazardous waste representative at the nearest EPA regional office for guidance.

CONTAINER HANDLING:

Nonrefillable Container (rigid material; less than 5 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Refillable Container (≥ 250 gallons & Bulk): Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

WARRANTY—CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

DREXEL MSMA 6 PLUS

Product Name: **Drexel MSMA 6 PLUS**
EPA Reg. No.: 19713-42
Product Usage: Herbicide
Manufacturer: Drexel Chemical Company
Address: 1700 Channel Avenue
PO Box 13327
Memphis, Tennessee, 38113-0327, USA
901-774-4370

Emergency Telephone Numbers:	CHEMTREC	800-424-9300
	DREXEL CHEMICAL COMPANY	901-774-4370

This product is an EPA FIFRA registered pesticide. Some of the classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Refer to SECTION 15: REGULATORY INFORMATION for explanation.

Label Elements:

Signal Word: **WARNING**

Classifications:
Hazard Class:

Toxicity Study:	**Category:**
Acute Toxicity, Oral	Category 5
Acute Toxicity, Inhalation	Category 4
Skin corrosion/ irritation	Category 2
Corrosive to Metals:	Category 1
Hazard to Aquatic Environment, short term (Acute)	Category 2

Hazard Statements:

H Code:	**Statement:**
H290	May be corrosive to metals
H303	May be harmful if swallowed
H315	Causes skin irritation
H332	Harmful if inhaled
H400	Very toxic to aquatic life

Precautionary Statements:
Prevention:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
In case of inadequate ventilation, wear respiratory protection.
Avoid release into the environment.
May react with aluminum, zinc or steel.

Response:

If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Get immediate medical advice/attention.

If Swallowed: Call a POISON CENTER or doctor/physician if you feel unwell. Treat symptomatically.

If Inhaled: Remove person to fresh air and keep comfortable for breathing. Call POISON CENTER or doctor if you feel unwell.

If on Skin or Clothing: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

If exposed or concerned: None available, get medical attention.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container in accordance with your local or area regulatory authorities.

Specific hazards: None available.

Chemical Name:	Synonym:	CAS No.:	EC No.:	RTECS:	% By Wt.:
Active Ingredient:					
Monosodium acid methanearsonate*	MSMA, Monosodium methanearsonate	2163-80-6	218-495-9	PA2625000	47.6%
Inert Ingredients:	N/A	N/A	N/A	N/A	52.4%

*Total Arsenic (as elemental), all in water-soluble form, is 22.0%.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency medical treatment information.

Eye Contact: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Skin/Clothing Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Indication of Medical Attention and Special Treatment Needed: Treat symptomatically
This product has low oral, dermal, and inhalation toxicity. If swallowed, gastric lavage may be preferred to vomiting. Literature recommendations for arsenic poisoning call for chelation therapy with BAL or d-penicillin. Persons with sensitivity to penicillin may suffer an allergic reaction. BAL is recommended for persons allergic to penicillin.

Fire Fighting Media: Use dry chemical or carbon dioxide when fighting fires involving this product. Do not use water or foam, as this may spread material.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Evacuate the area and fight the fire from upwind at a safe distance to avoid hazardous vapors or decomposition products. Cool containers with water if possible. Dike and collect fire-extinguishing water to prevent environmental damage and excessive waste runoff.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Use full face shield and operate in positive pressure mode. Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Specific Fire Hazards: Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.
Thermal decomposition during a fire can produce fumes and irritating gases.

Flammability classification (OSHA 29 CFR 1910.1200): Non-combustible
Flash point: Non-combustible (Aqueous Formulation)
Lower flammable limit (% by volume): N/A
Upper flammable limit (% by volume): N/A

Hazardous Combustion Products: May generate toxic fumes and smoke.

National Fire Protection Association:

NFPA:	Health	Fire	Reactivity
	3	0	0

Ratings:	4-Extreme	3-High	2-Moderate	1-Slight	0-Insignificant

Personal Precautions:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to SECTION 7: HANDLING AND STORAGE, for additional precautionary measures. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION.

Environmental Precautions:

Prevent from entering soil, ditches, sewers, waterways and/or groundwater. Refer to SECTION 12: ECOLOGICAL INFORMATION.

Steps to be taken if Material is Released or Spilled:

Control the spill at its source.

Small spills: Apply suitable absorbent and sweep up. Collect in suitable and properly labeled containers.

Large spills: Contact Drexel Chemical Company for clean-up assistance. Refer to SECTION 13: DISPOSAL CONSIDERATIONS, for additional information. Prevent entry into waterways, sewers, basements or confined areas.

KEEP OUT OF REACH OF CHILDREN

Handling: **General Handling:** Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not swallow. Avoid breathing dust. Use with adequate ventilation. Wear long-sleeved shirt, long pants and shoes with socks when handling. Keep away from heat, sparks and flame. Refer to SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Storage: Store in a cool, dry, ventilated and secure area designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Do not store in excessive heat. Do not store near children, food, foodstuffs, drugs or potable water supplies.

Occupational Exposure Limits:

Components:	OSHA PEL	ACGIH TLV
Monosodium acid methanearsonate	N/A	0.5 mg/m^3

THIS SECTION IS FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD REFER TO THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Engineering Controls:

Ventilation: Investigate engineering techniques to reduce exposures. When handling this product proper ventilation is required to maintain exposure below the TLV. Ventilate all transport vehicles prior to unloading. Facilities storing or utilizing this material should be equipped with and eyewash facility and safety shower.

Personal Protection:

Eye/Face Protection: Eye contact should be avoided through the use of chemical safety glasses, goggles, or a face shield selected in regard to exposure potential. Wear chemical splash goggles to prevent vapors or mists from entering the eyes. Where there is potential for eye contact have eye flushing equipment available. Safety glasses with side-shields.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face thoroughly with soap and water before smoking or eating. Avoid getting wash water in eyes.

Hand Protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR") or Polyvinyl chloride ("PVC" or "vinyl").

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. When handling in enclosed areas, when large quantities of dusts are generated or prolonged exposure is possible in excess of the TLV, use a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

Property	Reported Value
Physical State	Liquid
Appearance / Color	Green to Yellow
Odor	Slight garlic
Odor threshold	Not available
pH	5.0 – 7.0
Melting point	Not applicable
Freezing point	1S°F
Boiling point	220°F
Flash point	> 100°C
Evaporation rate	Not available
Flammability	Not available
Upper flammability/explosive limits	Not available

Drexel
SAFETY DATA SHEET

Lower flammability/explosive limits	Not available
Vapor pressure	15 mm/Hg
Vapor density	0.6
Relative density	12.45 lbs. / gal.
Solubility in water	Complete
Solubility in organic solvents	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidizing properties	Not available
Dissociation Constant	Not available
% Volatiles	Not available

[redacted]

Reactivity:	Thermally stable at typical use temperatures and in closed containers. Heavy metal salts may cause precipitation. Mildly corrosive to steel. May react with reducing agents such as aluminum, zinc, sodium borohydride, sulfur dioxide.
Chemical Stability:	Stable under recommended storage conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Avoid heat of open flame. Avoid high temperatures above 130°F (54.4°C).
Incompatible Materials:	Avoid contact with: Reducing agents such as aluminium and zinc.
Hazardous Decomposition Products:	Hazardous decomposition products can include and are not limited to: Arsine gas.

[redacted]

Acute Toxicity:

Potential routes of exposure/potential health effects:		Skin contact. Inhalation.
Acute Oral:	**LD_{50} (Rat):**	2, 833 mg/kg
Acute Dermal:	**LD_{50} (Rat):**	>2,500 mg/kg
Acute Inhalation:	**LC_{50} (Rat):**	>2.2 mg/kg
Eye Irritation:	**(Rabbit):**	Not a primary irritant
Skin Irritation:	**(Rabbit):**	Slight irritant
Skin Sensitization:	**(Guinea Pig):**	Non-sensitizer (guinea pigs)

Chronic Toxicity:	Exposure below levels of concern.
Carcinogenicity:	MSMA is not a carcinogen. Not listed as carcinogenic in humans by IARC, NTP and OSHA.
Mutagenicity:	No data available
Teratogenicity:	No data available
Reproductive Toxicity:	No data available
Developmental Toxicity:	No data available
Other Hazards Effects:	None / No data available

ENVIRONMENTAL FATE:

Monosodium acid methanearsonate	Slightly toxic to fish, aquatic invertebrates, and aquatic plants. Practically non-toxic to bees. Moderately toxic to birds.

ECO-ACUTE TOXICITY

Aquatic Toxicity:	**Rainbow Trout, LC_{50} 96 hour**	>167 mg/L
	Bluegill Sunfish, LC_{50} 96 hour	>51 mg/L
	Daphnia magna, LC_{50} 48 hour	77.5 mg/L
Arthropod Toxicity:	**Bees, Acute LD_{50}**	68 µg/bee
Bird Toxicity:	**Mallard Duck, LD_{50}**	>5,620 mg/kg
	Bobwhite Quail, LD_{50}	425 mg/kg

Persistence and degradability:	Not biodegradable
Bioaccumulation:	No bioaccumulative potential.
Mobility in soil:	Immobilized by binding to soil particles and not easily leached to groundwater except in sandy soils.
Other adverse effects:	Do not contaminate water supplies, lakes, streams, ponds or drains with this product.

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

DOT:	Not Regulated
IMDG:	Not Regulated
IATA / ICOA:	Not Regulated
UN Identification No.:	Not applicable
Proper Shipping Name:	Not applicable
Hazard Class:	Not applicable
Packing Group:	Not applicable
Reportable Quantity:	Not applicable
Environmental Hazard:	Not applicable
Freight Description:	Agricultural Herbicide, Liquid, N.O.S.
ERG Guide No.:	171
Transport Information Note:	Consult appropriate ICAO/IATA regulations for shipment requirements in the Air.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

OSHA Hazard Communication Standard:	**This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR1910.1200.**

Drexel
SAFETY DATA SHEET

Arsenic is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR1910.1200.

Pesticide Registration: This product is a pesticide registered by the Environmental Protection Agency (EPA) and is subject to certain FIFRA labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

EPA Reg. No.: 19713-42
FIFRA Label Signal Word: CAUTION
FIFRA Label Information: KEEP OUT OF REACH OF CHILDREN
FIFRA Label Information: Hazards to Humans and Domestic Animals
CAUTION: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin and clothing. Avoid breathing spray mist.

EPCRA SARA Title III Classification:

Section 302:	Extremely Hazardous Substance Notification:	This material is not known to contain any Extremely Hazardous Substance.
Sections 311 and 312:	Immediate (Acute) Health Hazard:	Yes
	Delayed (Chronic) Health Hazard:	Yes
	Fire Hazard:	No
	Reactive Hazard:	No
	Sudden Release of Pressure Hazard:	No

Section 313 Toxic Release Inventory (TRI): Arsenic Compounds

CERCLA/SARA 304 Reportable Quantity (RQ): Not listed

RCRA Hazardous Waste Classification (40 CFR 261): Not listed / Not available

US EPA Toxic Substances Control Act (TSCA): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):	Monosodium acid methanearsonate	Listed as causing:	Not Listed
		Listing date:	Not listed
		Listing basis:	Not listed

[redacted]

Date Issued: October 13, 2021 **Date Supersedes:** March 26, 2021 **Revision:** 2

For all non-emergency questions about this product, please contact:
1700 Channel Avenue
PO Box 13327
Memphis, Tennessee 38113-0327, USA
Phone: 901-774-4370
Fax: 901-774-4666
Website: www.drexchem.com

Drexel Chemical Company recommends that each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

RESTRICTED USE PESTICIDE

May injure (phytotoxic) susceptible, non-target plants. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Commercial certified applicators must also ensure that all persons involved in these activities are informed of the precautionary statements.

ALLIGARE

GUNSLINGER® P+D HERBICIDE

Specimen Label

For the control of broadleaf annual and perennial weeds, and certain woody species on Conservation Reserve Program (CRP) acres, rangeland and permanant grass pastures. Alligare GUNSLINGER P+D Herbicide may also be used for control of unwanted annual and perennial broadleaf weeds, woody plants, and vines on forest planting sites and non-crop areas including industrial, manufacturing and storage sites; rights-of-way, such as railroads, electric power lines, communication lines, pipelines, highways; and wildlife openings in forest and non-crop areas.

Not for sale, use, or distribution in Nassau and Suffolk Counties in New York State.

ACTIVE INGREDIENTS:

Picloram: 4-amino-3,5,6-trichloropicolinic acid, triisopropanolamine salt	10.2%
2,4-dichlorophenoxyacetic acid, triisopropanolamine salt	39.6%
OTHER INGREDIENTS:	50.2%
TOTAL:	100.0%

Alligare GUNSLINGER P+D Herbicide contains the following acid equivalents:
picloram: 4-amino-3,5,6-trichloropicolinic acid – 5.7% (0.54 lb./gal.)
2,4-dichlorophenoxyacetic acid – 21.2% (2 lbs./gal.)

EPA Reg. No. 81927-16

KEEP OUT OF REACH OF CHILDREN

DANGER / PELIGRO

Si usted no entiende le eliqueta, busque a alguien para que se la explique a usted en detaile. (If you do not understand the febel, find someone to explain it to you in detail.)

FIRST AID	
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	
NOTE TO PHYSICIAN	
Probable mucosal damage may contraindicate the use of gastric lavage.	

FOR CHEMICAL SPILL, LEAK, FIRE, OR EXPOSURE, CALL CHEMTREC (800) 424-9300

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category C on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators, flaggers, and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves Category C, such as barrier laminate ≥ 14 mils, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils
- Shoes plus socks
- Protective eyewear (goggles or faceshield)
- Chemical-resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate

See engineering controls for additional requirements.

USER SAFETY REQUIREMENTS

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this products concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of uae, clothing or PPE must not be reused until it has been cleaned.

ENGINEERING CONTROL STATEMENTS

Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)]. When handlers use enclosed systems, enclosed cabs, or aircraft in manner that meets the requirements listed in the WPS (40 CFR 170.240 (d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This pesticide is toxic to some plants at very low concentrations. Non-target plants may be adversaly affected if pesticida is allowed to drift from areas of application. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the maan high watar mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Picloram is known to leach through soil into groundwater undar certain conditions as a result of agricultural use. 2,4-D has properties and characteristics associated with chemicals detected in groundwater. Use of these chemicals in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This chemical can contaminate surface water through spray drift. Under some conditions, picloram may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetative filter strips, and areas over-laying tile drainaga systems that drain to surface water.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing and transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult tha agency responsible for pesticide regulation.

Do not apply this product through any type of irrigation system.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workars on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
- Chemical-resistant gloves made of any waterproof material.
- Shoes plus socks, and
- Protective eyewear

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NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: Do not enter or allow people (or pets) to enter treated area until sprays have dried.

INFORMATION

Alligare GUNSLINGER P+D Herbicide is a water soluble liquid product containing picloram and 2,4-D. Use Alligare GUNSLINGER P+D Herbicide in permanent grass pastures and rangeland to selectively control many annual, biennial, and perennial broadleaf weeds and woody species listed on this label. Alligare GUNSLINGER P+D Herbicide may also be used for control of unwanted annual and perennial broadleaf weeds and woody plants and vines on forest planting sites and non-crop areas including industrial, manufacturing and storage sites; rights-of-way, such as railroads, electric power lines, communication lines, pipelines, highways; and wildlife openings in forest and non-crop areas.

Herbicidal effects of Alligare GUNSLINGER P+D Herbicide occur primarily from uptake by plant foliage and translocation throughout the plant, however, secondary herbicidal activity may occur from soil uptake of picloram. Broadleaf plants can be killed or damaged by very small amounts of Alligare GUNSLINGER P+D Herbicide. To prevent damage to crops and other desirable plants, carefully follow all directions and precautions.

PRECAUTIONS AND RESTRICTIONS

Observe any special use and application restrictions and limitations, including method of application and permissible areas of use as required by state or local regulations. When used in tank mix combination with other products, follow all applicable use directions, precautions, restrictions, and limitations on the labels of each product used.

Not for sale, use, or distribution in Nassau and Suffolk Counties in New York State.

Application Rate Ranges: Use higher rates in areas with dense weed populations or for longer residual weed control. For best results, the lower rate should be used only when environmental conditions are favorable for plant growth and when the plants are in the recommended growth stage. Compared to results obtained with the higher rate, a lower rate may be slower to show activity, provide a lower level of control, and may require retreatment.

Maximum Use Rates:

Pasture and Rangeland: See rate restrictions under the section Pasture, Rangeland and CRP Application Restrictions.

Rights-of-Way and other Non-crop Areas: Do not exceed 7.4 quarts (4.0 lb ae 2,4-D) per acre of this product per annual growing season.

Forest Sites: No more than 7.4 quarts (1.0 lb ae picloram) per acre may be applied within a period of 2 annual growing seasons.

Grazing Restrictions: There are no grazing restrictions for non-lactating dairy animals or other livestock including horses, sheep, goats, and other animals in the treatment area. Do not allow lacteting dairy animals to graze treated areas within 7 days after application. Do not harvest grass cut for hay from treated areas for 30 days after application. Meat animals must be withdrawn from treated forage at least 3 days before slaughter.

Do not rotate to crops intended for food or feed use on areas treated with this product, other than range or pasture grasses, rye, forage sorghum, sudangrass, wheat, barley or oats not underseeded with a legume.

Do not move treated soil, or use treated soil for growing other plants until soil residues of picloram are no longer detectable as indicated by an adequately sensitive bioassay or chemical test.

Do not apply Alligare GUNSLINGER P+D Herbicide in residential areas or near ornamental trees and shrubs. Untreated trees can be affected by root uptake of the herbicide through movement into the top soil or by excretion of the product from the roots of nearby treated trees. Do not apply Alligare GUNSLINGER P+D Herbicide within the area occupied by roots of desirable trees, unless such injury can be tolerated.

Established grasses are tolerant to this product, but newly seeded gresses may be injured until well established as indicated by tillering, development of a secondary root system and vigorous growth (refer to the Planting Grasses Section of this label).

Alligare GUNSLINGER P+D Herbicide may suppress certain established grasses such as smooth bromegrass, Willman's lovegrass and buffalograss. However, subsequent grass growth should be improved by release from weed competition. Smooth bromegrass and Willman's lovegrass grown for seed may be sensitive to this product if applied under adverse growing conditions (moisture stress).

If injury to existing forage legumes cannot be tolerated, do not spray pastures. Alligare GUNSLINGER P+D Herbicide may injure or kill legume plants. Forage legumes may be less sensitive to the herbicide after the seed has set and plant growth is mature. Seeding of legumes may not be successful if made within one year of application.

Do not mix with dry fertilizer.

Do not transfer livestock from treated grazing areas to broadleaf crop areas without first allowing 7 days of grazing on untreated grass pasture. Otherwise, urine may contain enough picloram to cause injury to sensitive broadleaf plants.

Do not use manure from animals grazing treated areas on land used for growing broadleaf crops, ornamentals, orchards or other susceptible, desirable plants. Manure may contain enough picloram to cause injury to susceptible plants.

Do not use hay or grass from treated areas or manure from animals being fed treated forage or hay for composting or mulching of desirable, susceptible broadleaf plants.

Do not contaminate water intended for irrigation or domestic purposes. Do not treat or allow spray drift or run-off to fall onto banks or bottoms of irrigation ditches, either dry or containing water, or other channels that carry water that may be used for irrigation or domestic purposes. Do not apply to snow or frozen ground.

Do not apply or permit Alligare GUNSLINGER P+D Herbicide or sprays containing Alligare GUNSLINGER P+D Herbicide to contact crops or other desirable broadleaf plants, including but not limited to alfalfa, beans, cotton, grapes, melons, peas, potatoes, safflower, soybeans, sugar beets, sunflower, tobacco, tomatoes, and other vegetable crops, flowers, fruit plants, ornamentals and shade trees.

Do not use Alligare GUNSLINGER P+D Herbicide on sub-irrigated land.

Avoid injury to newly planted conifers. Conifer plantings vary. Pines planted sooner than 6 months after treatment with Alligare GUNSLINGER P+D Herbicide may be injured in the South or west of the Cascade Mountains. Other conifers, west of the Cascade Mountains, may be injured if planted sooner than 8 to 9 months after treatment. For all conifers, the waiting period between treatment and planting should be 11 to 12 months in the area between the Cascade and Rocky Mountains and 8 to 9 months in the Lake States and Northeastern U.S.

Pasture, Rangeland and CRP Application Restrictions

- Do not cut forage for hay within 30 days of application.
- Do not exceed 7.4 pints (0.5 lb ae picloram)/acre per broadcast application.
- Do not exceed 14.8 pints (1.0 lb ae picloram)/acre per year.
- For susceptible annual and biennial broadleaf weeds, use 4 pints (1.0 lb ae 2,4-D)/acre per application.
- For moderately susceptible biennial and perennial broadleaf weeds, use 4-7.4 pints (1.0-1.84 lb ae 2,4-D)/acre per application.
- For difficult to control weeds and woody plants, use 7.4 pints/acre per application.
- Spot Treatment: Do not exceed 7.4 pints (2 lb ae 2,4-D; 1.0 lb ae picloram)/acre, with no more than 50% of an acre being treated.
- Spot treatments and broadcast treatments can be applied during the same growing season only if the total amount applied does not exceed 14.8 pints (1.0 lb ae picloram)/acre per growing season.
- Minimum of 30 days between applications.
- Maximum of two applications per year.
- If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable.
- For program lands, such as Conservation Reserve Program, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.

SPRAY DRIFT MANAGEMENT

Spray Drift Management

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory.

Aerial Drift Reduction Advisory

[This section is advisory in nature and does not supersede the mandatory label requirements.]

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

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Boom Length
For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height
Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment
When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.)

Wind
Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions
Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas
The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Determine Air Movement and Direction Before Making Foliar Applications: Do not spray when wind is blowing toward susceptible crops or ornamental plants near enough to be injured. It is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movements, lapse conditions, or temperature inversions (stable air). If the smoke layers or otherwise indicates a potential for hazardous spray drift, do not spray.

Avoid Injurious Spray Drift
Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

Make applications to avoid spray drift because very small quantities of the spray that may not be visible may severely injure susceptible crops during both growing and dormant periods. To minimize spray drift:
1. Use nozzle pressures no greater than are required to obtain a proper spray pattern for adequate coverage of target plants.
2. Apply as a coarse spray.
3. Use nozzles designed for herbicide application that do not produce a fine droplet spray.
4. Spray when wind velocity is low. Follow local state regulations. Avoid application under conditions which are conducive to air inversions or conditions of atmospheric temperature inversion.

For aerial applications on rights-of-way or other areas near susceptible crops, spray drift may be further lessened by using a drift control system such as Microfoil®, Thru-Valve® boom (or equivalent) or a drift control agent such as Nalco-Trol® (or equivalent). If a drift control additive is used, follow all use recommendations and precautions on the product label.

For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles of VMD for spinning atomizer nozzles.

The applicator also must use all other measures necessary to control drift.

Ground Equipment: With ground equipment, spray drift may be lessened by keeping the spray boom as low as possible; by keeping the operating spray pressures at the manufacturers recommended minimum pressures for the specific nozzle types used (low pressure nozzles are available from spray equipment manufacturers). Do not apply this product with a mistblower. In hand-gun applications, spray drift may be minimized by selecting the minimum pressure that will provide adequate coverage (without forming a mist); by spraying no higher than brush tops.

High Volume Leaf-Stem Treatment: Spray drift may be minimized by using spray pressures no greater than are required to obtain adequate plant coverage and spraying no higher than brush tops. Avoid excessive pressures that result in formation of fine spray mists. Nalco-Trol® thickening agent or equivalent may be used to reduce spray drift. Do not apply this product through a mist blower.

Cleaning Instructions for Spray Equipment
To avoid injury to susceptible plants, equipment used to apply Alligare GUNSLINGER P+D Herbicide should be thoroughly cleaned before reusing to apply any other chemicals.
1. Rinse and flush application equipment thoroughly after use. Flush the entire system at least three times with water, and dispose of rinse water in non-cropland area away from water supplies.
3. During the second rinse, add 1 qt. of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 min.). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Nozzles and screens should be removed separately.

MIXING INSTRUCTIONS

Ground or Aerial Application – For Use With Water Alone
Start with about half the required amount of water in the spray tank. With agitation operating, add the required amount of Alligare GUNSLINGER P+D Herbicide. If a surfactant is needed, it should be added as the remainder of the required water is added to complete the spray mix. When using a drift control additive, carefully follow the manufacturer's directions. Complete dispersion and uniform mixing is essential to proper performance of drift control additives. This can be aided by thorough circulation through a mixing pump with moderate to high shearing action.

Use with Oil/Water Emulsions

Ground Application: Add oil to the total spray mix at a rate of 5 to 10% of the total mix, up to a maximum of 1 gallon of oil per acre, using agricultural spray emulsifiers and mixing procedures given below.

Aerial Application: Use oil and water in the spray mixture in a 1:5 ratio (1 part oil to 5 parts water), up to a maximum of 1 gallon of oil per acre using mixing procedures given below:

Mixing Instructions for Oil/Water Emulsions (Batch Mixing)
1. With continuous, vigorous agitation:
2. Add half the amount of water to be used to the spray tank
3. Add the amount of Alligare GUNSLINGER P+D Herbicide required for the total volume of spray being mixed.
4. Premix the required amount of oil with an emulsifier such as Sponto 712 or Triton X-100, using the manufacturer's recommended rate of emulsifier per gallon of oil. Add the oil-emulsifier premix to the spray tank.
5. Finally, add the remaining amount of water required to bring the spray batch to the desired total volume.
6. Maintain agitation in the spray tank during application.

Mixing with Liquid Fertilizer for Broadcast Weed Control in Rangeland and Permanent Grass Pastures
Alligare GUNSLINGER P+D Herbicide may be tank mixed with liquid fertilizers and used in foliar application for weed control and fertilization of rangelands and permanent grass pastures. Avoid using liquid fertilizers in applications to brush as efficacy may be reduced. Use liquid fertilizers at rates recommended by supplier or local Extension Service Specialists.

Compatibility with Liquid Fertilizer: Prior to large scale batch mixing, conduct a "jar test" for spray mixture compatibility by mixing each component in the required order and proportion in a clear glass jar. Close the jar and agitate the mixture until evenly dispersed. Use of a compatibility agent is indicated if components of the mixture do not disperse readily or do not remain dispersed after mixing. Use of a compatibility aid such as Unite or Compex is recommended to help obtain and maintain a uniform spray solution during mixing and application. Compatibility is best with straight liquid nitrogen fertilizer solutions. Mixing with N-P-K fertilizer solutions or suspensions is more difficult and should not be attempted without first conducting a successful jar test. Agitation in the spray tank must be vigorous to compare with jar test agitation.

Suggested Mixing and Application Procedure
With continuous vigorous agitation:
1. Add half the amount of liquid fertilizer to the spray tank.
2. Add a compatibility aid such as Unite or Compex at 1 quart per 100 gallons of total spray mix.
3. First add the amount of Alligare GUNSLINGER P+D Herbicide needed for the total spray mixture. Mixing with N-P-K fertilizer solutions may be improved by premixing Alligare GUNSLINGER P+D Herbicide with water (1 part Alligare GUNSLINGER P+D Herbicide to 25-30 parts water) before adding to the spray tank.
4. Add the remaining liquid fertilizer to produce the needed total spray volume.
5. Apply as soon as mixing is complete, maintaining continuous, vigorous agitation throughout mixing and application without interruption.

Application during very cold (near freezing) weather is not advisable. The likelihood of mixing or compatibility problems with liquid fertilizer increases under cold conditions.

Do not store the spray mixture.

Note: Do not use spray equipment for application of other products to land planted, or to be planted, to susceptible crops or desirable sensitive plants, unless it has been determined that all phytotoxic herbicide residue has been removed by thorough cleaning of the equipment. See "Cleaning Instructions for Sprayer Equipment" and the PRECAUTIONS AND RESTRICTIONS sections of this label.

APPLICATION DIRECTIONS
RANGELAND, PERMANENT GRASS PASTURES and CONSERVATION RESERVE PROGRAM (CRP) ACRES

Broadcast Foliar Application (Ground or Aerial)
Unless otherwise specified, apply in water alone or in an oil-water emulsion in a total spray

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volume of 10 to 40 gallons per acre using ground equipment or 1 or more gallons per acre by aerial application. If aerially applied, results will be more consistent for spray volumes of 2 or more gallons per acre. Use of the lower total spray volume with ground equipment is recommended primarily where Alligare GUNSLINGER P+D Herbicide is applied simultaneously with liquid fertilizer. Good coverage is essential. For aerial application, swath width should not exceed 1 ¼ times the wingspan of the aircraft. Aerial applications may be made using aerial electrostatic charging systems.

To provide more complete wetting and coverage of the foliage, a non-ionic surfactant may be used at recommended rates. Use a drift control additive for drift reduction and improved deposition.

Section I. Control of Broadleaf Weeds and Woody Plants in Rangeland and Permanent Grass Pastures in the Southwest, Southeast, and Mid-Atlantic States

1-2 Pints/Acre or 3-4 Pints/Acre: Make applications at the rate indicated by stage of growth to control the following woody plants or broadleaf weeds:

Weed Species	Specific Use Directions
annual broomweed, bitter sneezeweed, bitterweed, buffalo bur, bull thistle, bursege (bur ragweed), camphor weed, cocklebur, common ragweed, croton, horseweed, lambsquarters, pigweed, prickly lettuce, smartweed, sunflower, tasajillo, wild carrot	**Early Season: Apply at a rate of 1-2 pts/acre** in early to mid spring when weeds are less than 3 inches tall. Rates in the lower end of the rate range are effective only when weeds are less than 2 inches tall and conditions are favorable for plant growth. **Mid to Late Season: Apply at a rate of 3-4 pts/acre** in late spring to early summer when weeds are 3 inches tall to early flowering.

2-4 Pints/Acre: Make applications at the indicated growth stage to control the following woody plants or broadleaf weeds:

Weed or Brush Species	Specific Use Directions
aster, heath	Apply prior to bud stage when actively growing.
aster, spiny (Mexican devilweed)	Apply prior to bud stage when actively growing.
bee plant, Rocky Mountain	Apply prior to bud stage when actively growing.
bindweed, hedge	Apply prior to bud stage when actively growing.
blackberry	Tank-mix 2 pints per acre of Alligare GUNSLINGER P+D Herbicide with 1 pint per acre of Remedy® (triclopyr) herbicide plus surfactant. Apply in late May to early June during or after bloom (not before) when foliage is dark green. Do not treat blackberries in the same year after mowing, shredding, or burning. Even one year after removal of top growth, blackberry stands will be more difficult to control than undisturbed stands and will require retreatment.
buckwheat, climbing false	Apply prior to seed development when actively growing.
buckwheat, wild	Apply prior to seed development when actively growing.
bullnettle, western	Apply in spring when plants begin to flower.
bundleflower, Illinois	Apply prior to bud stage when actively growing.
burdock, common	Apply prior to bud stage when actively growing.
buttercup	Apply in early spring prior to bud stage.
chickweed, mouseear	Apply prior to bud stage when actively growing.
chicory	Apply from rosette stage to early bud stage when actively growing.
coneflower, upright prairie	Apply when plants are to 6 inches tall, but before flowering.
common goldenweed, Drummond's goldenweed (*Isocoma* spp.)	Apply in the spring (April-June) when favorable growing conditions result in substantial canopy development. Thorough and uniform coverage is essential. Use higher spray volumes (20-25 gpa for ground and 4-5 gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is racommended (refer to the Mixing Instructions section of this label).
curly dock	**Early Season:** Apply 2 pints per acre prior to bolting stage of growth. **Mid-to-Late Season: Apply at a rate of 3-4 pts/acre** from bolting to bud stage.
devil's-claw	Apply prior to flowering when actively growing.
dogfennel (cypressweed)	Apply when plants are from 6 to 24 inches tall, but before flowering. Increase rate within the rate range as season progresses and plants become larger.
eriogonum, annual	Apply prior to bud stage when actively growing.
fleabane, rough	Apply prior to bud stage when actively growing.
gray goldaster narrowleaf goldaster	Apply in the spring during the bud stage (pre-bloom) using an oil-water emulsion spray. Thorough coverage is essential.
goldenrod, Missouri	Apply prior to bud stage when actively growing.
hemlock, poison	Apply from rosette stage in spring or fall up to 36" tall.
hemlock, water (common)	Apply from rosette stage in spring or fall up to bud stage.
horsenettle, Carolina	Apply 2 pints per acre when plants are 4-6 inches tall. At 2 pints per acre, retreatment may be necessary for acceptable control. Apply 3 to 4 pints per acre when flowering or for longer residual control of later emerging plants and greater stand reduction the following year.
horehound	Apply during active growth.
jimsonweed	Apply prior to bud stage when actively growing.

2-4 Pints/Acre: Make applications at the indicated growth stage to control the following woody plants or broadleaf weeds:

Weed or Brush Species	Specific Use Directions
morningglory, ivyleaf	Apply prior to bud stage when actively growing.
mugwort	Apply prior to bud stage when actively growing.
nightshade, silverleaf	Apply 2 pints per acre when plants are 4-6 inches tall. Apply 3 to 4 pints per acre when flowering or for longer residual control of later emerging plants and greater stand reduction the following year. Retreatment is necessary for total control.
pennycress, field	Apply when plants are to 6 inches tall, but before flowering.
plantain, buckhorn	Apply prior to bud stage when actively growing.
pricklypoppy, annual	Apply prior to bud stage when actively growing.
puncturevine	Apply prior to flowering when actively growing.
ragweed, common, giant, lanceleaf and western	Use lower rates in rate range when weeds are no more than 2 inches tall and conditions are favorable for plant growth. Use higher rates when weeds are from 3 inches tall to early flowering.
sagebrush, sand	Apply when new terminal growth reaches 6-12" and before average daytime temperature reaches 95°F. Use low rate only in early season.
snow-on-the-mountain	Apply prior to bud stage when actively growing.
sowthistle, spiny (prickly)	Apply prior to bud stage when actively growing.
stickweed	Apply 2-3 pts./acre prebloom.
thistles, biennial: including bull, musk, plumeless or scotch	Apply 2 pts./acre at rosette stage. Apply 3 to 4 pts./acre in mid to late season from bolting to bud stage.
vervain, blue vervein, hoary	Apply when plants are 6 inches tall to early flowering. Increase rate within the rate range as season progresses and weeds mature.
vetch, hairy	Apply prior to bud stage when actively growing.
wingstem	Apply 2-3 pts./acre prebloom.
yankeeweed	Apply when plants are 8 to 10 inches tall.

3-4 Pints/Acre: Make applications at the indicated growth stage to control the following woody plants or broadleaf weeds:

Weed or Brush Species	Specific Use Directions
marshelder (sumpweed)	Apply in early season when weeds are less than 4 inches tall. Use higher rates on older plants. Thorough and uniform coverage is essential. Use higher spray volumes (20-25 gpa for ground and 5 or more gpa for aerial equipment).
mesquite and oak sprouts (suppression of regrowth)	Delay applications of Alligare GUNSLINGER P+D Herbicide for weed control until the foliage of regrowth brush in the treatment area is fully expanded and turned from light to dark green.
milkweed	Apply 4 pts./acre to actively growing milkweeds less than 4 inches tall. Add a surfactant at the manufacturer's recommended rate to improve wetting of foliage.
mullein, common	Apply 4 pts./acre during the rosette stage in spring or fall prior to bolting. Add a surfactant at the manufacturer's recommended rate to improve wetting of foliage.
poisonous plants such as: groundsel (*Senecio* spp.), garbancillo (Wooton loco) and Woolly loco	Make applications in fall or winter when moisture conditions are favorable. Because locoweeds are difficult to wet, use of a surfactant (0.25-0.5% vol/vol) or oil-water emulsion is recommended (refer to the Mixing Instructions section of this label). **Herbicide treatment may increase palatability of poisonous plants. Do not graze treated areas until the toxic plants are no longer palatable.**
thistle, wavyleaf	Apply from rosette to late boll stage.
tropical soda apple	Apply when plants are beginning to flower.

7.4 Pints/Acre: Make applications at the indicated growth stage to control the following woody plants or broadleaf weeds:

Weed or Brush Species	Specific Use Directions
cactus, pricklypear or cholla	Make a ground broadcast application in the spring or early summer to control a broad spectrum of broadleaf weeds in addition to pricklypear.
Chinese tallowtree	Make applications in the spring or fall when conditions are favorable for plant growth. Thorough and uniform spray coverage is required. Use higher spray volumes (20-25 gpa for ground and 5 or more gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is recommended (refer to the Mixing Instructions section of this label).
Macartney rose multiflora rose	Make applications in the spring or fall when conditions are favorable for plant growth. Thorough and uniform spray coverage is essential. Use higher spray volumes (20-25 gpa for ground and 5 or more gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is recommended (refer to the Mixing Instructions section of this label). Do not make application within 9-12 months after mowing or when plants have a high percentage of new growth. Poor control will result if plants are less than 3 ft. tall.
locust (honey and black) wild plum	Make applications in the spring when leaves are fully expanded and mature. Use of a surfactant (0.25-0.5% vol/vol) is recommended.

GUNSLINGER P+D Specimen Label

Section II. Control of Broadleaf Weeds and Woody Plants in Rangeland and Permanent Grass Pastures in the North and Northwestern U.S. Including Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming

For best results in terms of forage response, desirable forage grasses should be present in the area to be treated in sufficient density to provide competition to lessen weed re-establishment following treatment.

Additionally, good grazing management practices are recommended, particularly in the year following treatment, to allow forage grass density to increase.

Application Rates: Use higher rates in areas with dense weed populations or for longer residual control. For best results, the lower rate should be used only when environmental conditions are favorable for plant growth and when the plants are in the recommended growth stage. Compared to results obtained with the higher rate, a lower rate may be slower to show activity, provide a lower level of control, and may require retreatment.

2 to 4 Pints/Acre: Make applications at the indicated growth stage to control the following broadleaf plant species. Increase rate within rate range as growing season progresses:

Weed or Brush Species	Specific Use Directions
absinth wormwood annual broomweed	Apply when actively growing in spring or early summer.
biennial thistles, such as bull, musk, plumeless or scotch	Apply 2 pts./acre at rosette stage. Apply 3 to 4 pts./acre to bolted thistle, but apply before early bud stage.
broom snakeweed	Make application after full leaf development to early bloom stage when plants are actively growing.
curly dock	Apply 2 pts./acre early season prior to bolting. Apply 3 to 4 pts./acre in mid to late season from bolting to early flower.
curlycup gumweed	Apply when new growth and seedlings have fully emerged before bloom stage.
fringed sagebrush	Apply a minimum of 3 pts./acre after seed stalk elongation and early flowering (mid-late June) and throughout the summer under good growing conditions.
goldenrod	Apply prior to bud stage during active growth.
hemp (marijuana) hemlock, poison	Make application from rosette stage in spring or fall up to 36" tall.
hemlock, water (common)	Make application from rosette stage in spring or fall up to bud stage.
ironweed, western	Apply 2 to 3 pts./acre prior to bud stage during active growth. A surfactant is recommended.
locoweeds, such as silky crazyweed (white point loco) and lambert crazyweed	Apply from early bud to early bloom stage. Application of Alligare GUNSLINGER P+D Herbicide may increase palatability of these poisonous plants. Do not graze treated areas until after the toxic plants have dried up. Higher rate range should be considered to provide greater reduction of poisonous plants.
phlox, hoods	Make application during active growth.
plains pricklypear	Apply when the majority of plants are in the flower stage. The lower rate will provide a partial stand reduction. More complete control may be obtained with the higher rate. Treatment response is very slow and may continue for 2 years or longer.
ragweed, common, giant, lanceleaf and western	Use the lower rate in early season when weeds are no more than 2 inches tall. Use the higher rate when weeds range from 3 inches tall to early flowering, when conditions are favorable for plant growth.
thistles, biennial: including bull, musk, plumeless or scotch	Apply 2 pts./acre at rosette stage. Apply 3 to 4 pts./acre in mid to late season from bolting to bud stage.
vervain, blue and hoary	Apply when plants are 6 inches tall to early flowering. Increase rate within the rate range as season progresses and plants mature.
wormwood, Louisiana and absinth	Make application during active growth prior to woody stem development.
yarrow	Apply 2 pts./acre prior to bud stage. A surfactant is recommended.

4 Pints/Acre: Make applications at the indicated growth stage to control the following broadleaf weed species.

Weed or Brush Species	Specific Use Directions
dense clubmoss	Apply in early summer with a surfactant at 0.25% v/v.
geyer larkspur	Apply from rosette to flower bud formation.
hairy goldenaster	Apply at bloom stage during active growth.
houndstongue	Apply to rosettes in late fall or early summer.
larkspur, plains	Apply prior to bud stage when actively growing.
licorice, wild	Apply at bloom stage, but before bur formation.
loco, woolly	Make application from bolting to early bloom. Application of Alligare GUNSLINGER P+D Herbicide may temporarily increase palatability of this poisonous plant. Do not graze treated areas until toxic plants have dried up.
milkweed, common	Apply at bud stage when actively growing.
mullein, common	Apply during rosette stage in spring or fall prior to bolting. Add a surfactant at the manufacturer's recommended rate to improve wetting of foliage.
oxeye daisy	Apply 3-4 pts./acre when all plants have emerged to late flowering.
pussytoes	Make application prior to bud stage when actively growing. Use a surfactant at the manufacturer's recommended rate to improve wetting of foliage.

7.4 Pints/Acre: Make applications at the indicated growth stage to control the following woody plants or broadleaf weeds:

Weed or Brush Species	Specific Use Directions
Macartney rose multiflora rose	Make application in spring or fall when conditions are favorable for plant growth. Thorough and uniform spray coverage is essential. Use higher spray volumes (20-25 gpa for ground and 5 or more gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is recommended (refer to the Mixing Instructions section of this label). Do not make application within 9-12 months after mowing or when plants have a high percentage of new growth. Poor control will result if plants are less than 3 ft. tall.
locust (honey and black) wild plum	Apply in spring when leaves are fully expanded and mature. Use of a surfactant (0.25-0.5% vol/vol) is recommended.

High-Volume Foliar Applications
Spray to thoroughly wet foliage and stems. The use of an approved agricultural surfactant is recommended. Do not use more than 7.4 pints of Alligare GUNSLINGER P+D Herbicide (0.5 lb. of picloram) per acre. Keep sprays no higher than brush tops.

7.4 Pints/100 Gallons of Spray: Make applications at the indicated growth stage to control the following woody plants or broadleaf weeds:

Weed or Brush Species	Specific Use Directions
blackberry, elm, granjeno, locust, maple, oaks, sweetgum, sumac	Tank mix the recommended rate of Alligare GUNSLINGER P+D Herbicide with 1-2 qts./100 gallons of Remedy® (triclopyr) and apply in late spring to early summer when leaves are fully expanded and mature. Use of a surfactant (0.25-0.5% vol/vol) is recommended. Spray to thoroughly wet foliage. For best results on blackberry, treat during or after bloom.
annual broomweed, bitterweed, bitter sneezeweed, bullnettle, bursage (bur ragweed), bull thistle, buffalo bur, camphorweed, cocklebur, common ragweed, croton, gray goldaster, lanceleaf ragweed, marshelder (sumpweed), musk thistle, narrowleaf goldaster, prickly lettuce, smartweed, sunflower, wild carrot, silverleaf nightshade, tasajillo, upright prairie cone flower, western horsenettle, western ragweed, yankeeweed	Make application when target weeds are 2-3 inches tall until early flowering.
flameleaf sumac honeylocust	Apply in spring when leaves are fully expanded and mature. Use of a surfactant (0.25-0.5% vol/vol) is recommended. Spray to thoroughly wet foliage.
Tropical soda apple	Apply when plant begins to flower.

7.4 to 14.8 Pints/100 Gallons of Spray: Make applications at the indicated growth stage to control the following woody plants or broadleaf weeds:

Weed or Brush Species	Specific Use Directions
Macartney rose multiflora rose	Make application in spring or fall when conditions are favorable for plant growth. High volume applicetion is recommended for control of large undisturbed clumps or small regrowth.

14.8 Pints/100 Gallons of Spray: Make applications at the indicated growth stage to control the following woody plants or broadleaf weeds:

Weed or Brush Species	Specific Use Directions
Chinese tallow tree	Make application in spring or fall when conditions are favorable for plant growth.
cactus, pricklypear or cholla	Applications may be made throughout the year. Spray to wet all pads to runoff. Use of a surfactant (0.25-0.5% vol/vol) is recommended. Water soluble dye may be added to the spray mixture to mark treated plants.
common goldenweed, Drummond's goldenweed	Apply in the spring (April-June) when favorable growing conditions result in substantial canopy development.
Poisonous plants such as: groundsel (*Senecio* spp.), garbancillo (Woolon loco), and Woolly loco	Make application in fall or winter when moisture conditions are favorable. Application of Alligare GUNSLINGER P+D Herbicide may increase the palatability of poisonous plants. Do not graze treated areas until the toxic plants have dried up and lost their palatability.

Treatment After Planting Grasses, Including Conservation Reserve Program (CRP) Acres

Weed Control Prior to Seeding Planting Grasses
Alligare GUNSLINGER P+D Herbicide may be applied to control weeds prior to planting cool season grasses. Apply Alligare GUNSLINGER P+D Herbicide at 4 pints per acre or less depending on the target species. Alligare GUNSLINGER P+D Herbicide may be tank-mixed with Alligare Glyphosate 4 Plus (glyphosate) to control grasses prior to seeding.

- To optimize weed control, minimal disturbance of the treatment area with the seeding operation is suggested. The site should be left undisturbed for a minimum of 21 days prior to seedbed preparation or seeding. To optimize weed control and reduce the potential for injury of seeded grasses, increase the interval between application of Alligare GUNSLINGER P+D Herbicide and planting grass seed.
- Do not plant smooth bromegrass for 60 days after treatment.

GUNSLINGER P+D Specimen Label

Perennial Grasses
Make applications of Alligare GUNSLINGER P+D Herbicide to perennial grasses only after perennial grasses are well established as indicated by vigorous growth and a well-developed secondary root system.

Sprigged Bermudagrass: Alligare GUNSLINGER P+D Herbicide at 1.5 pints per acre or less can be used on sprigged bermudagrass once the runners (stolons) have reached 6 inches in length and growing conditions are favorable.

Overseeding: Alligare GUNSLINGER P+D Herbicide at rates of 1.5 pints per acre or less can be applied to permanent pastures that have been over seeded with small grains (such as barley, forage sorghum, oats, rye, ryegrass, sudangrass or wheat) grown for pasture or hay only. Young seedling small grains or grasses are sensitive to Alligere GUNSLINGER P+D Herbicide. Do not apply Alligare GUNSLINGER P+D Herbicide until overseeded grasses are well established and at tillering stage of growth or later.

Precautions:
- Applications of Alligare GUNSLINGER P+D Herbicide to established warm season grasses such as bermudagrass during initial greenup in early spring could delay or suppress emergence of new growth. If temporary suppression of new growth cannot be tolerated, application of Alligare GUNSLINGER P+D Herbicide should be made prior to greenup or after vigorous vegetative growth has resumed.
- Do not use Alligare GUNSLINGER P+D Herbicide if legumes are a desired cover during CRP.
- Conditions unfavorable to plant growth, such as drought, will increase potential for injury to grasses at all stages of growth.
- **Crop Rotation:** Do not rotate to grain sorghum (milo) if greater than 4 pints per acre of Alligare GUNSLINGER P+D Herbicide has been applied. For rates below 4 pints per acre, do not plant grain sorghum for 8 months after application. This product is not intended for use on land planted to sweet sorghum. To avoid potential crop injury, planting of small grains should be delayed a minimum of 60 days of soil temperatures above 40°F following application, except in Idaho, North Dakota, Nebraska, Montana, Oregon, South Dakota, Washington and Wyoming, where the minimum interval should be 90 days.
- After CRP, do not plant broadleaf crops in treated acres until an adequately sensitive bioassay (described below) shows that no detectable picloram is present in the soil.

Field Bioassay Instructions: In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application. The test area should sample field conditions such as soil texture, soil pH, drainage, and any other variable that could affect the seedbed of the new crop. The field bioassay can be initiated at any time between harvest of the treated crop and the planting of the rotational crop. Observe the test crop for herbicidal activity, such as poor stand (effect on seed germination), chlorosis (yellowing), and necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the test rotational crop; plant only a labeled crop such as pasture grasses, small grains (barley, oats, rye or wheat), or, after a rotational interval of 8 months, grain sorghum.

APPLICATION DIRECTIONS
FOREST PLANTING SITES AND NON-CROP AREAS

To control broadleaf weeds, use Alligare GUNSLINGER P+D Herbicide at rates of 2 to 7.4 quarts (0.25-1.0 lb ae picloram; 1.0-4.0 lb ae 2,4-D) per acre and at rates of 4 to 7.4 quarts per acre to control woody plants and vines. Alligare GUNSLINGER P+D Herbicide may be tank mixed with Triclopyr 4E (or Alligare Triclopyr 4) or Triclopyr 3A (or Alligare Triclopyr 3), or 4 lbs./gal. 2,4-D low-volatile esters registered for sites listed on this label to control mixed woody plant and vine species. When tank mixing, observe all precautions, directions and limitations on both products' labeling. In all cases, use the amounts specified in enough water to give thorough and uniform coverage of the plants to be controlled.

Note: Alligare GUNSLINGER P+D Herbicide does not readily mix with oil. Use a non-ionic surfactant such as Ortho® X-77, Triton® AG-98 or Tronic® for all applications. Follow the use directions and precautions listed on the surfactant manufacturer's label. When applying lower spray volumes per acre, use the higher recommended concentrations of surfactant in the spray mixture.

Alligare GUNSLINGER P+D Herbicide controls the following annual and perennial broadleaf weeds, woody plants and vines.

Annual and Perennial Broadleaf Weeds

bindweed, field	goldenrod	rush skeleton weed
bouncingbet	horsenettle	sowthistle
carrot, wild	knapweed	spurge, leafy
chicory	milkweed	starthistle, yellow
clover	plantain	thistles
dandelion	prickly lettuce	toadflax
dock	ragweed	vetch
fleabane	ragwort, tansy	

Woody Plants and Vines

ailanthus	fir, balsam	persimmon
alder	gorse	pine
aspen	gum	poison oak
birch	hemlock	sassafras
blackberry	hickory	sourwood
bracken fern	honeysuckle	spruce
buttonbush	kudzu	sumac
cherry	locust	Tulip, poplar
Douglas fir	maple	wild rose
elm	oak	willow

SPECIFIC USE DIRECTIONS

NON-CROPLAND
(Fencerows, Roadsides, Ditches, Rights-of-Way, Utility Power Lines, Railroads, Airports, and Industrial Sites)

High Volume Leaf-Stem Treatment
To control broadleaf weeds, vines and other woody plants, use 3.7 quarts of Alligare GUNSLINGER P+D Herbicide and dilute to make 100 gallons of spray. To control a wider range of plant species, mix 1 to 2 quarts of Alligare GUNSLINGER P+D Herbicide with 1-to-3 quarts of Triclopyr 4E herbicide (or Alligare Triclopyr 4) **or** 1-to-4 quarts of Triclopyr 3A herbicide (or Alligare Triclopyr 3) or 4 lbs./gal. 2,4-D low-volatile ester and dilute to make 100 gallons of spray. Provide thorough spray coverage after foliage is well developed. For woody plants, apply the spray mixture in a manner that thoroughly wets all leaves, stems, and root collars. For hard-to-kill species such as ash and oak, also wet the soil around the root collar. The amount of spray mixture applied per acre will vary with plant size and density; however, total use of Alligare GUNSLINGER P+D Herbicide must not exceed 7.4 quarts per acre.

Note: Do not allow the spray, even as minute amounts of spray drift, to contact desirable broadleaf plants, and do not wet the soil over roots of such plants.

Broadcast Ground or Aerial Foliage Treatment
For ground applications, make applications of Alligare GUNSLINGER P+D Herbicide in 15 or more gallons of total spray mixture per acre. For aerial applications, use 5 to 20 gallons of spray mixture per acre. Use higher spray volumes where plants are tall, where the vegetation to be treated is dense or where difficult to control species are present.

Broadleaf Annual and Perennial Weed and Woody Vine Control: Apply Alligare GUNSLINGER P+D Herbicide at rates of 2 to 3.7 quarts per acre in a water spray mixture. Apply to problem weeds and vines any time after growth begins in the spring and late in summer or fall.

Apply 2-to-3 quarts of Alligare GUNSLINGER P+D Herbicide per acre in water spray for season control of vigorously growing stands of field bindweed, Canada thistle or mixtures of these with susceptible annual weeds such as ragweed, dandelion, plantain, clovers and dock.

Use up to 3.7 quarts of Alligare GUNSLINGER P+D Herbicide per acre in arid areas and for control of more resistant perennial weeds. Use up to 3.7 quarts per acre to control species such as Canada thistle, field bindweed and milkweed. The higher rates should be used under drought stress conditions and for the more resistant species such as bouncingbet, leafy spurge, toadflax and woody vines. The spectrum of activity can be improved by tank mixing 2 to 3.7 quarts of Alligare GUNSLINGER P+D Herbicide with 1/3-to-1 gallon of Triclopyr 3A (or Alligare Triclopyr 3) or 1-to-3 quarts of Triclopyr 4E (Alligare Triclopyr 4) per acre.

Woody Plant Control: Use Alligare GUNSLINGER P+D Herbicide at the rate of 4 to 7.4 quarts per acre in a water spray mixture.

Use 4 to 6 quarts of Alligare GUNSLINGER P+D Herbicide per acre in a water spray mixture for susceptible seedling stages of species such as aspen, cherry and sumac.

For more mature and/or less susceptible species such as poison oak, blackberries, Douglas fir, willow, buttonbush, black locust, sassafras, sumac, tulip poplar and cherry, use 7.4 quarts of Alligare GUNSLINGER P+D Herbicide per acre in a water spray mixture.

For more resistant brush such as maple, pine, sourwood, blackgum, cedar and oak, and to improve the spectrum of species controlled, 4 to 7.4 quarts of Alligare GUNSLINGER P+D Herbicide per acre can be tank-mixed with 1 ½-to-2 gallons per acre of Triclopyr 3A (or Alligare Triclopyr 3), Triclopyr 4E (or Alligare Triclopyr 4) or 4 lbs./gal. 2,4-D low volatile ester.

Note: Use the higher rates for best results under conditions of drought stress. Even these rates under such conditions may not be as effective as the lower rates under good growing conditions.

BROADCAST CUT STUBBLE TREATMENT
Apply Alligare GUNSLINGER P+D Herbicide at the rate of 7.4 quarts per acre in 25 or more gallons of a water spray mixture to prevent resprouting of susceptible woody species after mowing or hand-cutting on non-crop areas and rights-of-way. For best results, make applications before or during periods of active root growth. Do not apply when the soil surface is frozen or covered by snow or standing water. Make applications soon after cutting, before sprouting of woody species has occurred.

NON-CROPLAND RESTRICTIONS:
- Postemergence (annual & perennial weeds): Do not make more than 2 applications per year.
- Postemergence (annual & perennial weeds): Do not apply more than 3.7 quarts (2.0 lbs ae 2,4-D) per acre per application.
- Postemergence (annual & perennial weeds): Minimum spray interval between applications is 30 days.
- Postemergence (woody plants): Do not make more than 1 application per year.
- Postemergence (woody plants): Do not apply more than 7.4 quarts (4.0 lbs ae 2,4-D) per acre per application.

Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

Alligare GUNSLINGER P+D Herbicide contains 0.5 pounds a.e. of 2,4-D per quart. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of 2,4-D a.e. per acre per year.

GUNSLINGER P+D Specimen Label

BROADCAST TREATMENTS FOR FOREST SITE PREPARATION
(Not for Conifer Release)

For broadcast applications, apply the recommended rate of Alligare GUNSLINGER P+D Herbicide in a total spray volume of 5-to-25 gallons per acre by air or 10-to-100 gallons per acre by ground. Use spray volumes sufficient to provide thorough coverage of treated foliage. **Note:** This use is not intended for conifer release (see General Use Precautions).

Southern states including Alabama, Arkansas, Delaware, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Tennessee, Texas and Virginia: Apply Alligare GUNSLINGER P+D Herbicide at a rate of 6-to-7.4 quarts per acre to control susceptible woody plants and broadleaf weeds. Apply 6-to-7.4 quarts per acre of Alligare GUNSLINGER P+D Herbicide in tank-mix combination with 2-to-4 quarts per acre of Triclopyr 4E herbicide (or Alligare Triclopyr 4) to broaden the spectrum of woody plants and broadleaf weeds controlled. Where grass control is also desired, Alligare GUNSLINGER P+D Herbicide alone, or in combination with Triclopyr 4E (or Alligere Triclopyr 4), may be tank-mixed with 1-to-4 quarts per acre of Accord™, Gly Star™ Plus, Glyphosate 4 Plus or Roundup® herbicides, or 8-to-16 fluid ounces per acre of Arsenal® Applicator's Concentrate. Susceptible woody plants, broadleaf weeds and grassas may also be controlled using a tank-mix of 6-to-7.4 quarts per acre of Alligare GUNSLINGER P+D Herbicide and 3-to-5 quarts of Accord™, Gly Star™ Original, Alligare Glyphosate 4 or Roundup® herbicide, or 16-to-24 fluid ounces of Arsenal® Applicator's Concentrate. When applying tank mixes, follow the directions for use and precautions on each product label.

In Western, Northeastern, North Central and Lake States (States not listed above as Southern States): To control susceptible woody plants and broadleaf weeds, apply Alligare GUNSLINGER P+D Herbicide at a rate of 4-to-7.4 quarts per acre. Apply 4-to-7.4 quarts per acre of Alligare GUNSLINGER P+D Herbicide in tank-mix combination with 1 ½-to-3 quarts of Triclopyr 4E (or Alligare Triclopyr 4) to broaden the spectrum of woody plants and broadleaf weeds controlled. Where grass control is also desired, Alligare GUNSLINGER P+D Herbicide alone, or in combination with Triclopyr 4E (or Alligare Triclopyr 4), may be tank-mixed with 1-to-3 quarts per acre of Accord™, Gly Star™ Plus, Glyphosate 4 Plus or Roundup®, or 2-to-4 fluid ounces of Oust®, or a combination of Accord™, Gly Star™ Plus, Glyphosate 4 Plus or Roundup®, plus Oust® at the rates listed, or 8-to-16 fluid ounces of Arsenal® Applicator's Concentrate. When applying tank mixes, follow the directions for use and precautions on each product label.

Conifer Strip Thinning in the Northeastern United States

To thin stands of naturally regenerated spruce and fir by applying herbicide in treated bands or strips which alternate with untreated bands or strips, apply Alligare GUNSLINGER P+D Herbicide such that the application rate in the treated bands or strips is 7.4 quarts of herbicide per acre in a total spray mixture volume of 12 to 20 gallons. Make applications during the period of active conifer growth. To obtain the precise placement of spray mixture in the treated bands that is required for this technique, aerial applications should be made using a helicopter equipped with a Microfoil® or Thru-Valve® boom. Multiple treated bands may be obtained within a single spray swath by establishing alternating series of flowing and blocked spray nozzles.

Note: Injury or death of desired residual conifers may result if spray mixture is permitted to contact their foliage as a result of inaccurate flight guidance during aerial application or as a result of spray drift from treated into untreated strips.

FORESTRY RESTRICTIONS (Woody Plants):
- Do not make more than one broadcast application per year.
- Do not apply more than 7.4 quarts (4.0 lbs ae 2,4-D) per acre per broadcast application within a period of 2 annual growing seasons.

CUT SURFACE TREATMENTS

In forest and other non-crop areas to kill unwanted trees such as elm, maple, oak and pine, apply Alligare GUNSLINGER P+D Herbicide diluted with water as described below.

Tree Injector Method: Make applications by injecting ½ milliliter of undiluted Alligare GUNSLINGER P+D Herbicide or 1 milliliter of the diluted solution through the bark at intervals of 3 inches between edges of the injector wound. The injections should completely surround the tree at any convenient height.

Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.

Frill or Girdle Method: Make a single girdle through the bark completely around the tree at a convenient height. Wet the cut surface with the diluted solution.

Stump Treatment: Paint or spray to wet the cut surfaces of freshly cut stumps or stubs with Alligare GUNSLINGER P+D Herbicide undiluted or diluted 1:1 in water. All of the cambium area next to the bark is the most vital area to wet.

Dilution Ratio: Maximum of 16 quarts Alligare GUNSLINGER P+D Herbicide in 100 gallons of water.

The above methods may be used successfully in any season except during periods of heavy sap flow of certain species, such as maples, or during drought periods. Untreated trees within a few feet of the treated trees or stumps may be injured or killed.

CUT SURFACE & INJECTION RESTRICTIONS:
- Do not make more than one basal or cut surface application per year.
- Do not use more than 22 pints per 100 gallons of spray solution.
- Do not make more than one injection application per year.
- Do not apply more than 4 ml of formulation per injection site.

Use of this product in certain portions of California, Oregon and Washington is subject to the January 22, 2204 Order for Injunctive Relief in Washington Toxics Coalition et al v. EPA, C01-0132C (W.D.W.A.). For further information, please refer to http://www.epa.gov/espp.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Keep container tightly closed when not in use. If exposed to subfreezing temperatures, the product should be warmed to at least 40°F and thoroughly mixed before using. Open dumping is prohibited.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

(Nonrefillable container ≤ 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(Nonrefillable > 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

To the extent consistant with applicable law, upon purchase or use of this product, purchaser and user agree to the following terms:

Warranty: Alligare, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. To the extent consistent with applicable law, the Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose. No such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

Terms of Sale: The Company's directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. To the extent consistent with applicable law, all such risks are assumed by the user.

Limitation of Liability: To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental or consequential damages of any kind, including loss of profits or income, and any such claims are hereby waived. Some states do not allow the exclusion or limitation of incidental or consequential damages.

The Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

Gly Star™ is a tradomark of Albaugh, Inc.
Arsenal® is a registered trademark of the BASF Corporation.
Accord™, Garlon™ and Remedy® are trademarks of Dow AgroSciences LLC.
Oust® is a registered trademark of E.I. duPont de Nemours & Co., Inc.
Roundup® is a registered trademark of the Monsanto Company.
GUNSLINGER® is a registered trademark of Alligare, LLC

EPA 20180606

SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)

1. IDENTIFICATION

PRODUCT NAME: Alligare GUNSLINGER® P+D Herbicide
DESCRIPTION: A water soluble liquid herbicide.
EPA Reg. No.: 81927-16

COMPANY IDENTIFICATION:
Alligare, LLC
13 N. 8th Street
Opelika, AL 36801

2. HAZARD IDENTIFICATION

DANGER

Causes serious eye damage (H318)

May cause an allergic skin reaction (H317)

Harmful if swallowed (H302)

Toxic to aquatic life with long lasting effects (H401+H411)

HAZARD CLASSIFICATION

Health Hazard	Category
Eye Damage / Irritation	1
Sensitization-Skin	1, 1A, 1B
Acute Toxicity, Oral	4

Physical Hazards	Category
None	-

Environmental Hazards	Category
Hazardous to the aquatic environment, acute	2
Hazardous to the aquatic environment, chronic	2

PRECAUTIONARY STATEMENTS

Wear protective gloves / protective clothing / eye protection / face protection. Refer to Section 8 for specific PPE requirements. (P280)

Avoid breathing mist/vapors/spray. (P261)

Contaminated work clothing should not be allowed out of the workplace. (P272)

Wash hands and skin thoroughly after handling. Do not eat, drinking or smoke when using this product. (P264+P270)

Avoid release into the environment not in accordance with the label. (P273)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Control Center or doctor. Refer to Section 4 for additional medical information. (P305+P351+P338+P310)

IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Refer to Section 4 for additional medical information. Specific treatment (See Section 4 for additional medical information). Take off contaminated clothing and wash it before reuse. (P302+P352+P333+P313+P321+P362+P364)

IF SWALLOWED: Call a POISON CENTER / doctor if you feel unwell. Rinse mouth. (P301+P312+P330)

Collect spillage. (P391)

Dispose of contents / containers in accordance with local, State and Federal regulations. Refer to the product label for specific disposal instructions. (P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
Picloram, Triisopropanolamine salt (TIPA)	4-amino-3,5,6-trichloropicolinic acid, triisopropanolamine salt	6753-47-5	10.2%
2,4-D Triisopropanolamine salt (TIPA)	2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt	32341-80-3	39.6%

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF SWALLOWED: Immediately call a doctor or poison control center. Do not give any liquid to the person. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. If skin irritation or rash occurs: Get medical attention/advice.

NOTE TO PHYSICIAN: Probably mucosal damage may contraindicate the use of gastric lavage.

5. FIREFIGHTING MEASURES

Flash Point (TCC): > 174°C (> 345°F)

Flammable Limits (LFL-UFL): Unknown

Fire and Explosion Hazards: May thermally decompose in fire releasing irritating and toxic gasses.

Extinguishing Medium: Foam, dry extinguishing media, CO_2, water spray.

Fire Fighting Instructions: Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

Fire Fighting Equipment: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

Hazardous Combustion Products: Thermal decomposition will produce nitrogen oxide, sulfur oxides, carbon oxides (CO, CO_2), and aniline.

NFPA Ratings: Health – 3 / Flammability – 1 / Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document.

Small Spills: Absorb using sand, vermiculite or other inert absorbent. Place contained material in appropriate container for disposal.

Large Spills: Dike spillage and recover and retain as much free liquid as possible for reuse. Pick up remainder with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. After removal, thoroughly clean contaminated area with water. Collect wash water for approved disposal.

7. HANDLING AND STORAGE

Handling: Do not get in eyes or on clothing. Use only in a well-ventilated area. Wear suitable personal protective clothing and equipment (see Section 8 of this SDS). Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. As soon as possible, wash thoroughly and change into clean clothing. Keep away from food, drink and animal feed.

Storage: Keep container tightly closed when not in use. If exposed to subfreezing temperatures, the product should be warmed to at least 40°F and thoroughly mixed before using. Open dumping is prohibited.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Local mechanical exhaust ventilation may be required. Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

For containers of 5 gallons or more: Do not open pour product from this container. A mechanical system (such as probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

For Containers over 1 Gallon but Less Than 5 Gallons: Mixers and loaders who do not use a mechanical system (such as probe and pump) to transfer the contents of this container must wear coveralls or a chemical-resistant apron in addition to other required PPE.

Protective Clothing: Wear long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (such as barrier laminate, butyl, nitrile or neoprene rubber, polyvinyl or Viton), and protective eyewear. When handling in enclosed areas or areas with limited ventilation, use a respirator with either an organic vapor cartridge with a pre-filter approve for pesticides (MSHA/NIOSH TC-23C) or a canister approved for pesticides (MSH/NIOSH TC-14G).

General: Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use; replace if necessary (e.g. pinhole leaks). Remove PPE immediately after handling this product; wash the outside of gloves before removing. Wash clothing and other absorbent materials that have been exposed to this product. Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	amber liquid	**pH:**	6.5-7.0
Odor:	alcohol-like	**Kinematic viscosity:**	not available
Melting/freezing point:	not available	**Solubility:**	in water, miscible
Boiling point/Boiling range:	not available	**Partition coefficient:**	not available
Flammability:	not available	**Vapor pressure:**	32mmHg @ 20°C
Flammability limits (upper/lower):	not available	**Density:**	not available
Flash point:	not available	**Relative vapor density:**	not available
Auto-ignition temperature:	not available	**Particle characteristics:**	not available
Decomposition temperature:	not available		

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Temperatures above 40°C (105°F) and below 6°C (40°F)

CHEMICAL STABILITY: Stable under normal use and storage conditions. May decompose if heated.

SUBSTANCES TO AVOID: Strong acids and oxidizing materials.

HAZARDOUS REACTIONS: This product is chemically stable. No hazardous reactions if stored and handled as prescribed/indicated.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride and oxides of nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ORAL TOXICITY (rat LD_{50}): 1,030 mg/kg
DERMAL TOXICITY (rat LD_{50}): > 5,000 mg/kg
INHALATION TOXICITY (rat LC_{50}): > 2.05 mg/L
EYE IRRITATION: Severely irritating
SKIN IRRITATION: Slightly irritating
SKIN SENSITIZATION: Potential sensitizer.
CARCINOGENICITY:
EPA: Not Listed
ACGIH: Not Listed
IARC: Class 2B (chlorophenoxy herbicides)
NTP: Not Listed
OSHA: Not Listed
MUTAGENIC TOXICITY: Little evidence of mutagenic effects during *in vivo* or *in vitro* studies.
REPRODUCTIVE TOXICITY: No evidence in animal studies.
DEVELOPMENTAL TOXICITY / TERATOGENICITY: No evidence in animal studies.

12. ECOLOGICAL INFORMATION

This pesticide is toxic to fish and aquatic invertebrates. This pesticide is toxic to some plants at very low concentrations. Non-target plants may be adversely affected if pesticide is allowed to drift from areas of application.

Picloram is known to leach through soil into groundwater under certain conditions as a result of agricultural use. 2,4-D has properties and characteristics associated with chemicals detected in groundwater. Use of these chemicals in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This product can contaminate surface water through spray drift.

The following information is for the active ingredient, 2,4-D acid (21.2% of this product):

Duckweed: EC_{50} 0.2992 mg/L; NOAEC 0.047 mg/L

The following information is for the active ingredient, Picloram acid (5.7% of this product):

Rainbow trout: LC_{50} 5.5 mg/L

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by disposal.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container, do not reuse or refill this container. Refer to product label for specific container disposal instructions.

14. TRANSPORT INFORMATION

UN Number:	UN3082
Proper Shipping Name:	Environmentally hazardous substance, liquid, N.O.S. (contains 2,4-D Acid and Picloram)
Transport Hazard Class:	9
Packing Group:	III
Hazard Zone:	A
Marine Pollutant:	Yes[1]
Hazardous Substance RQ:	None
Labels / Placards:	US-DOT: Class 9 Environmentally Hazardous Substance[2] IMDG, IATA: Class 9 Environmentally Hazardous Substance[3]
Emergency Guide:	171 (NAERG – North American Emergency Response Guide)
[1] **Marine Pollutant Note:**	Ground-only shipments are excluded from Marine Pollutant labeling requires as per 49CFR172.101 Appendix B (4). For any shipments involving all or part of the transport by vessel, the shipment must be classified as a Marine Pollutant unless a limited quantity exemption applies (see note 3 below).
[2] **US-DOT Note:**	Containers < 50 Gallons (190 Liters): Not regulated for "ground only" shipments.
[3] **IMDG / IATA Note:**	Not regulated when shipped in single or inner packaging ≤1.32 gal. (5 L).

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

FIFRA –

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals.

See inside label booklet for additional Precautionary Statements and Directions for Use including Storage and Disposal instructions.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This pesticide is toxic to some plants at very low concentrations. Non-target plants may be adversely affected if pesticide is allowed to drift from areas of application. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Picloram is known to leach through soil into groundwater under certain conditions as a result of agricultural use. 2,4-D has properties and characteristics associated with chemicals detected in groundwater. Use of these chemicals in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

15. REGULATORY INFORMATION (CONT.)

This chemical can contaminate surface water through spray drift. Under some conditions, picloram may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetative filter strips, and areas over-laying tile drainage systems that drain to surface water.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

SARA Title III – Section 302 Extremely Hazardous Substances
Not listed

SARA Title III – Section 311/312 Hazard Categories
Immediate, Delayed

SARA Title III – Section 312 Threshold Planning Quantity
N/A

SARA Title III – Section 313 Reportable Ingredients
Picloram Acid (CAS #1918-02-1): 5.7%
2,4-D Acid (CAS #94-75-7): 21.2%

CERCLA –
2,4-D Acid (CAS #94-75-7): 100 lbs.

CALIFORNIA PROP 65 STATUS –
This product does not contain any chemical known to the state of California to cause cancer or reproductive toxicity.

CANADA –
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

THIS INFORMATION IN THIS SDS IS BASED ON DATA AVAILABLE AS OF THE REVISION DATE GIVEN HEREIN, AND BELIEVED TO BE CORRECT. CONTACT ALLIGARE, LLC TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS. JUDGMENTS AS TO THE SUITABILITY OF THE INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES IS NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, ALLIGARE, LLC EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS, AND ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

SDS Version: 5.0

Effective Date: 07/01/2018

GROUP 9 HERBICIDE

Loveland PRODUCTS

MAKAZE®

HERBICIDE

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

LECI-TECH INSIDE

PEEL FILM HERE

ACTIVE INGREDIENT	
*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	41.0%
OTHER INGREDIENTS:	59.0%
TOTAL	100.0%

*Contains 480 grams per liter or 4.0 pounds per U.S. gallon of the active ingredient, glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per liter or 3.0 pounds per U.S. gallon of the acid, glyphosate.

Licensed for Roundup Ready® alfalfa, cotton, corn, canola, Flex cotton, sugarbeets and soybeans.

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA REG. NO. 34704-890

051215 V5D 08G16

FORMULATED FOR
LOVELAND PRODUCTS, INC.®, P.O. BOX 1286, GREELEY, COLORADO 80632-1286

EPA EST. NO. 34704-MT-001 (Lot No. begins "08")
EPA EST. NO. 34704-MS-001 (Lot No. begins "02")

0 21077 55189 9

NET CONTENTS 2.5 GAL (9.46 L)

GROUP 9 HERBICIDE

Loveland PRODUCTS

MAKAZE®

HERBICIDE

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

LECI-TECH INSIDE

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Licensed for Roundup Ready® alfalfa, cotton, corn, canola, Flex cotton, sugarbeets and soybeans.

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA REG. NO. 34704-890

051215 V5D 08G16

FORMULATED FOR
LOVELAND PRODUCTS, INC.®, P.O. BOX 1286, GREELEY, COLORADO 80632-1286

FIRST AID	
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.**	

SECTION		DESCRIPTION
1.0		**INGREDIENTS**
2.0		**EMERGENCY PHONE NUMBERS**
3.0		**PRECAUTIONARY STATEMENTS**
	3.1	Hazards to Humans and Domestic Animals
	3.2	Personal Protective Equipment (PPE) and User Safety Recommendations
	3.3	Environmental Hazards
	3.4	Physical or Chemical Hazards and Directions for Use
	3.5	Agricultural Use Requirements
	3.6	Non-Agricultural Use Requirements
	3.7	Seed Potato Precaution
4.0		**USE INFORMATION (Mode of Action)**
5.0		**WEED RESISTANCE MANAGEMENT**
	5.1	Weed Management Directions
	5.2	Management Directions for Glyphosate Resistant Biotypes
6.0		**MIXING**
	6.1	Mixing with Water
	6.2	Tank Mixing Procedure
	6.3	Mixing for Hand-Held Sprayers
	6.4	Surfactants
	6.5	Ammonium Sulfate
	6.6	Colorants or Dyes
	6.7	Drift Control Additives
7.0		**APPLICATION EQUIPMENT AND TECHNIQUES**
	7.1	Drift Precaution
	7.2	Aerial Equipment and Spray Drift Management
	7.3	Ground Broadcast Equipment
	7.4	Hand-Held or High-Volume Equipment
	7.5	Selective Equipment
	7.6	Injection Systems
	7.7	Controlled Droplet Application (CDA) Equipment
8.0		**ANNUAL AND PERENNIAL CROPS (Alphabetical)**
	8.1	Cereal Crops
	8.2	Corn (Non-Roundup Ready)
	8.3	Cotton
	8.4	Fallow Systems
	8.5	Grain Sorghum (Milo)
	8.6	Herbs and Spices
	8.7	Oil Seed Crops
	8.8	Soybeans (Non-Roundup Ready)
	8.9	Sugarcane
	8.10	Vegetable Crops
	8.11	Miscellaneous Crops
9.0		**TREE, VINE AND SHRUB CROPS (Alphabetical)**
	9.1	Cut Stumps (Tree Crops)
	9.2	Berry Crops
	9.3	Citrus
	9.4	Miscellaneous Tree Food Crops
	9.5	Non-Food Tree Crops
	9.6	Pome Fruit
	9.7	Stone Fruit
	9.8	Tree Nuts
	9.9	Tropical and Subtropical Trees and Fruits
	9.10	Vine Crops
10.0		**PASTURES, GRASSES, FORAGE LEGUMES, AND RANGES**
	10.1	Alfalfa, Clover and Other Forage Legumes
	10.2	Conservation Reserve Program (CRP) Acres
	10.3	Grass or Turfgrass Seed Production
	10.4	Pastures
	10.5	Rangelands
	10.6	Turfgrass, Sod Production
	10.7	Release of Bermudagrass and Bahiagrass

SPECIMEN

SECTION		DESCRIPTION
11.0		ROUNDUP READY® CROPS
	11.1	Roundup Ready Alfalfa
	11.2	Roundup Ready Canola (Spring Varieties)
	11.3	Roundup Ready Canola (Fall and Winter Varieties)
	11.4	Roundup Ready Corn
	11.5	Roundup Ready Cotton
	11.6	Roundup Ready Flex Cotton
	11.7	Roundup Ready Soybeans
	11.8	Roundup Ready Sugar Beets
12.0		NON-CROP USES AROUND THE FARMSTEAD
	12.1	Weed Control, Trim and Edge
	12.2	Greenhouse/Shadehouse
	12.3	Chemical Mowing
	12.4	Cut Stumps
	12.5	Habitat Management
13.0		FORESTRY, INDUSTRIAL, TURF AND ORNAMENTAL
	13.1	Forestry Site Preparation
	13.2	Non-crop Areas and Industrial Sites
	13.3	Injection and Frill (Woody Brush and Trees)
	13.4	Hollow Stem Injection
	13.5	Ornamentals, Plant Nurseries and Christmas Trees
	13.6	Parks, Recreational and Residential Areas
	13.7	Railroads
	13.8	Roadsides
	13.9	Utility Sites
14.0		ANNUAL WEEDS RATE TABLE (Alphabetical By Species)
	14.1	Annual Weeds - Water Carrier Volumes of 10.0 to 40.0 Gallons per Acre
	14.2	Annual Weeds - Tank Mixtures with 2,4-D or Dicamba or Picloram 22K
	14.3	Annual Weeds - Hand-Held or High-Volume Equipment
	14.4	Annual Weeds - Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems
15.0		PERENNIAL WEEDS RATE TABLE (Alphabetical By Species)
	15.1	Bromus Species and Medusahead
16.0		WOODY BRUSH AND TREES RATE TABLE (Alphabetical By Species)
17.0		STORAGE AND DISPOSAL
18.0		CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

1.0 INGREDIENTS

ACTIVE INGREDIENT	
***Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt**	**41.0%**
OTHER INGREDIENTS	**59.0%**
TOTAL	**100.0%**

2.0 EMERGENCY PHONE NUMBERS

24 Hour Emergency Phone: 1-800-424-9300
Medical Emergencies: 1-866-944-8565
U.S. Coast Guard National Response Center: 1-800-424-8802

3.0 PRECAUTIONARY STATEMENTS

3.1 HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist more than 24 hours.

3.2 PERSONAL PROTECTIVE EQUIPMENT: (PPE)
Applicators and other handlers must wear:
- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Waterproof gloves.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

SPECIMEN

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

3.3 ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

3.4 PHYSICAL OR CHEMICAL HAZARDS

Spray solutions of this product must be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE, OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Read the entire label before using this product. Use only according to label instructions.
Read the Conditions of Sale and Limitation of Liability, Section 18.0, at the end of the label before buying or using. If terms are unacceptable, return at once unopened.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.
For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

3.5 AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with Worker Protection Standard (WPS), 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.
Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

3.6 NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.
Keep people and pets off treated areas until spray solution has dried.

3.7 Seed Potato Precaution

Potatoes grown for seed are very sensitive to glyphosate at extremely low concentrations. Exposure of the seed potato crop can cause germination failure or deformities. Daughter tuber damage may occur at levels where mother crop symptoms are not visible. Multiple sprouting from eyes, weak and distorted stems, little potato syndrome, cauliflower sprouts, root distortions, excessive root growth, suppressed tuber initiation and bulking, failure or delay in opening of eyes, and rotting of tubers in the field or store can result. Subsequent plantings of seed pieces from the exposed mother crop can result in delayed or no emergence or produce lower than normal yields.

Glyphosate can contaminate seed potato crops through carryover residue in application equipment or drift from applying glyphosate to nearby crops.

Always follow good wash-out procedures using detergents or other suitable cleaning agents to remove all residual traces of glyphosate from application equipment that may be used to apply other products to seed potato crops.

To avoid contamination from spray drift follow the directions and precautions in the Spray Drift Management, Section 7.1.

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4.0 USE INFORMATION

Product Description: This product is a post-emergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Ammonium sulfate, drift control additives, or dyes and colorants may be used. See Mixing, Section 6.0, for instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of aboveground growth and deterioration of underground plant parts.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0, for use directions for specific weeds.

Always use the higher rate of this product per acre within the labeled rate range when weed growth is heavy or dense or weeds are growing in an undisturbed (non-cultivated) area.

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

Mode of Action: The active ingredient in this product inhibits an enzyme found only in plants that is essential to formation of specific amino acids.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Tank Mixing: This product does not provide residual weed control. For subsequent residual weed control follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this label. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance.

Annual Maximum Use Rate: Except as otherwise specified in a food crop section of this label, the combined total of all treatments must not exceed 8.0 quarts of this product per acre per year. For non-food/non-crop uses, the combined total of all treatments must not exceed 10.6 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rate and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

Note: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep containers closed to prevent spills and contamination.

5.0 WEED RESISTANCE MANAGEMENT

Glyphosate, the active ingredient in this product is a Group 9 herbicide. Target site resistance to Group 9 herbicides is rare. Any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural practices or mechanical practices.

5.1 Weed Management Directions

To minimize the occurrence of glyphosate resistant biotypes, observe the following weed management recommendations:

- Scout your fields before and after herbicide applications.
- Start with a clean field, use either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g. a selective and/or a residual herbicide) and cultural practices (e.g. tillage or crop rotation) where appropriate.
- One method of adding other herbicides into a continuous Roundup Ready® system is to rotate to other Roundup Ready crops.
- Utilize the labeled rate for the most difficult-to-control weed in your field. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture recommendations that encourage application rates of this product below the labeled rate.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Use new commercial seed that is as free of weed seed as possible.
- Report any incidence of repeated non performance of this product on a particular weed to your Loveland Products, Inc. representative, local retailer, or county extension agent.

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5.2 Management Directions for Glyphosate Resistance Biotypes
Note: Appropriate testing is critical in order to determine if a weed is resistant to glyphosate. Contact your Loveland Products, Inc. representative to determine if resistance has been confirmed to any particular weed biotype in your area, or visit on the internet www.weedresistancemangement.com or www.weedscience.org. For more information see the Annual Weeds and Perennial Weeds tables, Sections 14.0 and 15.0.

Control directions for biotypes confirmed as resistant to glyphosate are made available on separately published supplemental labeling or fact sheets for this product and can be obtained from your local retailer or Loveland Products, Inc. representative.

Since the occurrence of new glyphosate-resistant weeds cannot be determined until after product use and scientific confirmation, Loveland Products, Inc. is not responsible for any losses that may result from the failure of this product to control glyphosate resistant weed biotypes.

The following good agronomic practices are recommended to reduce the spread of confirmed glyphosate-resistant biotypes:
- If a naturally occurring resistant biotype is present in your field, this product should be tank mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices (e.g., crop rotation or tillage) may also be used as appropriate.
- One method for adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready crops.
- Scout treated fields after herbicide applications and control escaped weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

6.0 MIXING

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

6.1 Mixing with Water
This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the labeled amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or de-foaming agent.

6.2 Tank Mixing Procedure
Mix labeled tank mixtures of this product with water as follows:
1. Place a 20- to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank 1/2 full with water and start agitation.
3. If ammonium sulfate is used, add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding other products.
4. If a wettable powder is used, make a slurry with the water carrier and add it SLOWLY through the screen into the tank. Continue agitation.
5. If a flowable formulation is used, premix 1 part flowable with 1 part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
6. If an emulsifiable concentrate formulation is used, premix 1 part emulsifiable concentrate with 2 parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
7. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive and water soluble liquid.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Refer to Tank Mixing, Section 4.0, for additional precautions.

6.3 Mixing for Hand-Held Sprayers
Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

	Amount Makaze®					
Desired Volume	**0.5%**	**1.0%**	**1.5%**	**2.0%**	**5.0%**	**10.0%**
1.0 gal	0.6 oz	1.3 oz	2.0 oz	2.6 oz	6.5 oz	13.0 oz
25.0 gal	1.0 pt	1.0 qt	1.5 qt	2.0 qt	5.0 qt	10.0 qt
100 gal	2.0 qt	1.0 gal	1.5 gal	2.0 gal	5.0 gal	10.0 gal

2.0 tablespoons = 1.0 fluid ounce

For use in knapsack sprayers, it is suggested that the labeled amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.4 Surfactants
Optional Statements
No additional surfactant in the spray solution is needed or recommended. This includes additives containing surfactants, buffering agents or pH adjusting agents when Makaze is the only pesticide used unless otherwise directed.
OR
Additional surfactants labeled for use with herbicides may be used. Do not reduce application rates of this herbicide when adding surfactants. Read and carefully observe cautionary statements and other information appearing on the additives label.

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Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech® adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

6.5 Ammonium Sulfate
The addition of 1.0 to 2.0% dry ammonium sulfate by weight or 8.5 to 17.0 pounds per 100 gallons of water may increase the performance of this product particularly when tank mixed with certain residual herbicides on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used.

Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

Note: When using ammonium sulfate, apply this product at rates specified in this label. Lower rates will result in reduced performance.

6.6 Colorants or Dyes
Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's specifications.

6.7 Drift Control Additives
Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and CDA equipment. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

Note: The use of drift control additives can affect spray coverage which may result in reduced performance.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:
- Aerial - Fixed wing and helicopter.
- Ground Broadcast Spray - Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.
- Hand-held or High-volume Spray Equipment - Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.
- Selective Equipment - Shielded and hooded sprayers, wiper applicators and sponge bars.
- Injection Systems - Aerial or ground injection sprayers.
- Controlled Droplet Applicator (CDA) - Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

*This product is not registered in California or Arizona for use in mistblowers.
APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

7.1 Drift Precaution
Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation. Extreme care must be exercised to avoid contact of spray with foliage, green stems or fruit of desirable crops, plants, trees or other desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was NOT intended. Examples of, but not limited to, crop types that may be sensitive to glyphosate exposure include rice, small grain cereals, peanuts, potatoes, vegetables, fruits and ornamentals.

Applicators should be aware of any potentially sensitive crops near application zone before making application. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

1. Do not apply within 500 feet of any desirable vegetation or crops.
2. If wind up to 10 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

If unsure of appropriate buffer zone, contact your local Extension Agent for advice.

7.2 Aerial Equipment
DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL. FOR AERIAL APPLICATION IN CALIFORNIA AND ARKANSAS, REFER TO INSTRUCTIONS SPECIFIC TO THOSE STATES.

Use the specified rates of this herbicide in 3.0 to 15.0 gallons of water per acre unless otherwise specified, on this label. Unless otherwise specified do not exceed 1.0 quart per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced tillage systems and preharvest applications. Refer to the individual use area sections of this label for labeled volumes and application rates.

Ensure uniform application - To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Aerial Spray Drift Management
AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment-and-weather related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

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2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
Where states have more stringent regulations, they must be observed.

Information on Droplet Size
The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions sections of this label).

Controlling Droplet Size
- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturers specified pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.
- **Boom Length**- For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application Height** - Applications must not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment
When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance must increase with increasing drift potential (higher wind, smaller drops, etc.).

Wind
Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Do not apply below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions
Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly disperses indicates good vertical air mixing.

Sensitive Areas
The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Do not apply directly to any body of water.

Aircraft Maintenance - Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNPAINTED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-83413 may prevent corrosion.

FOR AERIAL APPLICATION IN CALIFORNIA ONLY

Aerial applications of this product are allowed in the following situations:
1. In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
2. In alfalfa and pasture renovation applications.
3. Over-the-top applications in Roundup Ready corn and cotton.
4. Preharvest in alfalfa, corn, cotton, wheat, Roundup Ready corn and Roundup Ready cotton.

Do not plant subsequent crops other than those listed in the label booklet for 30 days following application.

Do not apply tank mixes with dicamba products by air in California.

When tank mixing this product with 2,4-D for aerial applications, only 2,4-D amine formulations may be used. This tank mixture may be used for fallow and reduced tillage systems and alfalfa and pasture renovation applications only.

DO NOT EXCEED A MAXIMUM RATE OF 2.0 QUARTS PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN FALLOW AND REDUCED TILLAGE SYSTEMS AND ALFALFA AND PASTURE RENOVATION APPLICATIONS.

DO NOT EXCEED A MAXIMUM RATE OF 1.0 QUART PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN ALFALFA, CORN, COTTON, WHEAT, ROUNDUP READY CORN AND ROUNDUP READY COTTON PRIOR TO

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HARVEST. THIS RESTRICTION ALSO APPLIES TO OVER-THE-TOP APPLICATIONS IN ROUNDUP READY CORN AND COTTON.

Aerial Equipment
Use the labeled rates of this product in 3.0 to 15.0 gallons of water per acre.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops.

1. Do not apply within 100 feet of all desirable vegetation or crop(s).
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

FOR AERIAL APPLICATION IN FRESNO COUNTY CALIFORNIA
(From February 15 through March 31 Only)

Applicable Area
The area contained inside the following boundaries within Fresno County, California.

North: Fresno County line	East: State Highway 99
South: Fresno County line	West: Fresno County line

Use Information: Always read and follow the label directions and precautionary statements for all products used in aerial application.

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

Written Recommendations: A written recommendation MUST be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation MUST state the proximity of surrounding crops and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial Applicator Training and Equipment: Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate aerial equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

Applications at Night: Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

Note: For aerial application from April 1 through February 14, refer to the "For Aerial Application in California Only" section of this label.

FOR AERIAL APPLICATION IN ARKANSAS ONLY
AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the specified rates of this product in 3.0 to 15.0 gallons of water per acre. Use sufficient carrier volume and appropriate equipment set up to form droplets large enough to avoid drift potential. Coarse droplets in the 300 to 500 (VMD) micron range are recommended.

Applications should typically be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety. The distance of the outermost nozzles on the boom must not exceed 75% of the length of the wingspan or rotor. In many cases, reducing this distance to 65% of the length of the wingspan or rotor will improve drift control without affecting the swath width.

Nozzles must always discharge backward parallel with the air stream and never discharge downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing airflow on rotary winged aircraft. Avoid the use of nozzles with wide-angle discharge.

Do not apply this product when wind speeds are in excess of 10 miles per hour.

Do not apply when there is a low-level inversion where fine spray particles could be suspended in still air and move outside the target area when the inversion layer moves. These conditions may occur when wind speeds are less than 2 mph.

Use the following guidelines when applications are made near crops or other desirable vegetation:
1. Do not apply within 100 feet of any desirable vegetation or crops.
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

7.3 Ground Broadcast Equipment
Use the specified rates of this product in 3.0 to 40.0 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the labeled range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

7.4 Hand-Held or High-Volume Equipment
Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage must be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For labeled rates and timing refer to Annual Weeds - Hand-Held or High-Volume Equipment, Section 14.3.

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7.5 Selective Equipment
This product may be applied through shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any non-crop site specified on this label.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row-middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically labeled in this product's labeling.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation must be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Shielded and Hooded Applicators
When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at labeled rates will control those weeds listed in the Annual Weeds and Perennial Weeds Tables, Sections 14.0 and 15.0. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on the sprayers adjusted to protect desirable vegetation. When applying to crops grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. Avoid operating in rough or sloping ground where the spray hoods might be raised off the ground.

Use hoods designed to minimize excessive dripping or run off down the insides of the hoods. Use a single, low pressure/low drift flat-fan nozzle with an 80 to 95° spray angle positioned at the top center of the hood. Minimum spray volume must be 20.0 to 30.0 gallons per acre.

These procedures will reduce the potential for crop injury:
- The spray hoods must be operated on the ground or skimmed across the ground.
- Leave at least an 8 inch untreated strip over the drill row. For example, if the crop row width is 38 inches the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 miles per hour to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 miles per hour.
- Use low-drift nozzles that provide uniform coverage within the treated area.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Wiper Applicators
When applied under the conditions described in the following paragraphs, this product CONTROLS many weeds, including Bristly starbur, Common rye, Shattercane, Sicklepod, Spanish needles, Texas panicum, and Volunteer corn; and SUPPRESSES many weeds including Bermuda grass, Canada thistle, Dogfennel, Florida pusley, Giant ragweed, Guineagrass, Hemp dogbane, Johnsongrass, Milkweed, Musk thistle, Redroot pigweed, Silverleaf nightshade, Smutgrass, Sunflower, Vaseygrass, and Velvetleaf.

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that on sloping ground the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Do not add surfactant to the herbicide solution.

For Rope or Sponge Wick Applicators - Mix 1.0 gallon of this product in 2.0 gallons of water to prepare a 33% solution. Apply this solution to weeds listed above in this section.

For Panel Applicators - Solutions ranging from 33 to 100% of this product in water may be used in panel wiper applicators.

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7.6 Injection Systems
This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

7.7 Controlled Droplet Application (CDA) Equipment
The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount labeled in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3.0 to 20.0 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20% solution of this product at a flow rate of 2.0 fluid ounces per minute and a walking speed of 1.5 mph (1.0 quart per acre). For the control of perennial weeds, apply a 20 to 40% solution of this product at a flow rate of 2.0 fluid ounces per minute and a walking speed of 0.75 mph (2.0 to 4.0 quarts per acre).

Controlled droplet application equipment produces a spray pattern which is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

8.0 ANNUAL AND PERENNIAL CROPS (Alphabetical)

This section is organized alphabetically by crop category. There may be several labeled crops listed in a crop category.

SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PRE-HARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See Roundup Ready Crops, Section 11.0, or separate published Loveland Products, Inc. supplemental labeling for instructions for treating Roundup Ready crops.

Types of Applications
Chemical fallow, Preplant fallow beds, Preplant, Preemergence, At-planting, Hooded sprayers in row-middles, Shielded sprayers in row-middles, Wiper applications in row-middles and Postharvest treatments.

Additional application types may be specified or allowed in individual crop categories.

Use Directions
Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting or preemergent to annual and perennial crops listed in this label, except where specifically limited. For any crop NOT listed in this label, applications must be made at least 30 days prior to planting. UNLESS OTHERWISE SPECIFIED, WEED CONTROL APPLICATIONS MAY BE MADE ACCORDING TO THE RATES LISTED IN ANNUAL WEEDS, PERENNIAL WEEDS, AND WOODY BRUSH AND TREES RATE TABLES, SECTIONS 14.0, 15.0 AND 16.0. Repeat applications may be made up to a maximum of 8.0 quarts per acre per year.

Post directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or unmulched row-middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to Selective Equipment, Section 7.5, for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by contact of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rate and ensure that the total use of this and other glyphosate- or sulfosate-containing products does not exceed stated maximum use rate.

Precautions
- Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result.
- Apply before seed germination in coarse sandy soils to further minimize the risk of injury.

Restrictions
- Pre-harvest Interval (PHI): Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest.
- In crops where spot treatments are allowed, do not treat more than 10% of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.
- When making preemergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings.
- Postharvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.
- Pre-harvest Interval (PHI): For broadcast post-emergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

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8.1 CEREAL CROPS

LABELED CROPS: Barley, Buckwheat, Millet (Pearl and Proso), Oats, Rice, Rye, Quinoa, Teff, Teosinte, Triticale, Wheat (all), Wild rice

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence At-planting	This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.	Do not treat rice fields or levees when the field contains floodwater.
Red rice control (prior to planting Rice)	Avoid spraying during low humidity conditions, as reduced control may result. Apply 1.5 qt of this product in 5.0 to 10.0 gal of water/A. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may only be partially controlled.	DO NOT TREAT RICE FIELDS OR LEVEES WHEN THE FIELDS CONTAIN FLOOD WATER. DO NOT REFLOOD TREATED FIELDS FOR 8 DAYS FOLLOWING APPLICATION.
Spot treatment (except Rice)	This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.	Do not treat more than 10% of the total field area to be harvested or the crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.
Over-the-top Wiper applications (feed barley and wheat only)	Wiper applications may be used in wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, when the rye is at least 6 inches above the wheat crop.	Pre-harvest Interval (PHI): Allow at least 35 days between application and harvest. Do not use roller applicators.
Preharvest (feed barley and wheat only)	This product provides weed control when applied prior to harvest of wheat. Apply after the hard-dough stage of grain (30% or less grain moisture) and at least 7 days prior to harvest. Wheat stubble may be grazed immediately after harvest. This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10.0 to 20.0 gal of water/A. For aerial applications, apply this product in 3.0 to 10.0 gal of water/A.	Do not apply more than 1.0 qt of this product/A. Do not apply to wheat or barley grown for seed, as a reduction in germination or vigor may occur. Pre-harvest Interval (PHI): Allow 7 days between application and harvest or grazing.
Postharvest	This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.	For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Pre-harvest Interval (PHI): Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

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8.2 CORN (Non-Roundup Ready)
LABELED CROPS: Field corn, Seed corn, Silage corn, Sweet corn and Popcorn

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence At-planting	This product may be applied before, during or after planting corn. Applications must be made prior to emergence of the crop. Tank Mixtures: Apply these tank mixtures in 10.0 to 20.0 gal of water or 10.0 to 60.0 gal of nitrogen solution/A. 2,4 D Aim® Atrazine Axiom® Balance® Bicep Magnum® Bicep II Magnum® Bullet® Degree® Degree Xtra Distinct® Dual Magnum® Dual II Magnum® Epic® Frontier®/Outlook® FulTime® Guardsman®/Leadoff® Harness® Harness Xtra Harness Xtra 5.6L Lariat® Intrro® Linex®/Lorox® Marksman® Micro-Tech® Stealth® Python® simazine Topnotch® For difficult-to-control annual weeds such as Barnyardgrass, Broadleaf signal grass, Crabgrass, Fall panicum, and Shattercane, up to 2 inches tall and Pennsylvania smartweed up to 6 inches tall, apply this product at 2.0 pt/A in these tank mixtures. For other labeled weeds, apply 1.5 to 2.0 pt of this product/A when weeds are less than 6 inches tall, 2.0 pt/A when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.	Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn. For southern states, do not apply in nitrogen solutions to tough-to-control grasses such as Annual ryegrass, Barnyardgrass, Broadleaf signalgrass, Fall panicum, and any perennial weeds. The area covered by these directions includes from Route 50 South in IL and IN and the following states: AK, AL, DE, FL, GA, KY, LA, MD, MI, NJ, NC, OK, SC, TN, TX, VA, and West VA.
Spot treatment	For spot treatments, apply this product prior to silking of corn.	Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.
Hooded sprayers	This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instructions for the use of hooded sprayers in the Application Equipment and Techniques, Section 7.0, of this label. PRECAUTION: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.	Corn must be at least 12 inches tall, measured without extending leaves. Do not apply more than 1.0 qt of this product/A for each application and no more than 3.0 qt/A/yr for hooded sprayer applications.

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8.2 Corn (Non-Roundup Ready) cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preharvest	Make applications at 35% grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 3.0 qt of this product/A. For aerial applications, apply up to 2.0 qt of this product/A. PRECAUTION: It is not recommended that corn grown for seed be treated because a reduction in germination or vigor may occur.	Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest.
Postharvest	This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.	Pre-harvest Interval (PHI): Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.3 COTTON

LABELED CROPS: Cotton (Non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence At-planting	This product may be applied before, during or after planting cotton.	Applications must be made prior to emergence of the crop.
Hooded sprayer Selective equipment	This product may be applied through hooded sprayers, shielded applicators or wiper applicators in cotton.	See Selective Equipment, Section 7.5, for information on proper use and calibration of this equipment application and harvest. Pre-harvest Interval (PHI): Allow at least 7 days between application and harvest.
Spot treatment	For spot treatments, apply this product prior to boll opening of cotton.	Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.
Preharvest	This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the Annual Weeds, Perennial Weeds and Woody Brush and Trees rate tables, Sections 14.0, 15.0, and 16.0. Apply 1.0 pt to 2.0 qt of this product/A for cotton regrowth inhibition. Up to 2.0 qt of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential. Tank Mixtures: This product may be tank mixed with DEF® 6, Folex® Ginstar® or Prep® to provide additional enhancement of cotton leaf drop.	Pre-harvest Interval (PHI): Allow at least 7 days between application and harvest. Do not apply to cotton grown for seed, as a reduction in germination or vigor may occur. THE USE OF ADDITIVES OTHER THAN THOSE LISTED ON THIS LABEL FOR PREHARVEST APPLICATION TO COTTON IS PROHIBITED.

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8.4 FALLOW SYSTEMS

LABELED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0 Chemical fallow	See Use Directions in Section 8.0 This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used. Applications up to 2.0 qt/A may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.	See Restrictions in Section 8.0 For any crop not listed on this label applications must be made at least 30 days prior to planting. DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CA. Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures.
Preplant fallow Beds	This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. This product will control weeds listed in the Annual Weeds, Perennial Weeds and Woody Brush and Trees Rate tables, Sections 14.0, 15.0, and 16.0. Tank Mixtures: In addition, 12.0 fl oz of this product plus 2.0 to 3.0 oz of Goal® 2XL (or generic equivalent)/A will control the following weeds with the maximum height or length indicated: 3" - Chickweed, Common cheeseweed, Groundsel; 6" - London rocket, Shepherd's-purse. 16.0 fl oz of this product plus 2.0 to 3.0 oz of Goal 2XL (or generic equivalent)/A will control the following weeds with the maximum height or length indicated: 6" - Common cheeseweed, Groundsel, Marestail (Conyza canadensis), 12" - Chickweed, London rocket, Shepherd's-purse. PRECAUTION: Some crop injury may occur if dicamba is applied within 60 days of planting.	For any crop not listed on this label applications must be made at least 30 days prior to planting. DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CA. Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures.
Aid-to-Tillage	This product may be used in conjunction with tillage practices in fallow systems or preplant to labeled crops for control Cheat, Downy brome, Foxtail, Tansy mustard, and volunteer wheat. Apply 12.0 fl oz of this product in 3.0 to 10.0 gal of water/A. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs. PRECAUTION: Tank mixtures with residual herbicides may result in reduced performance.	Allow at least 1 day after application before tillage.

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8.5 GRAIN SORGHUM (Milo)

LABELED CROPS: Grain Sorghum (Milo)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence At-planting	This product may be applied alone or in tank mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop. Tank Mixtures: Apply these tank mixtures in 10.0 to 20.0 gal of water or 10.0 to 60.0 gal of nitrogen solution/A. Atrazine — Lariat Bicep II Magnum — Lasso® Bullet® — Micro-Tech Dual II Magnum — Milo-Pro® For difficult-to-control annual weeds such as Barnyardgrass, Broadleaf signalgrass, Crabgrass, fall panicum, and Shattercane up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 2.0 pt/A in these tank mixtures. For other labeled annual weeds, apply, 1.5 to 2.0 pt of this product/A when weeds are less than 6 inches tall, and up to 3.0 pt when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.	For spot treatment. Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason. Pre-harvest Interval (PHI): For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.
Spot treatment Over-the-top Wiper applications	This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under Shielded and Hooded Applicators in Section 7.5.	See Restrictions in Section 8.0 For spot treatment do not treat more than 10% of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason. Pre-harvest Interval (PHI): For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.
Hooded sprayers	This product may be used through hooded sprayers for weed control between the rows of milo. Only sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of Shielded and Hooded Applicators in Section 7.5. Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.	Milo must be at least 12 inches tall, measured without hooded extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 1.0 qt of this product/A/application and no more than 3.0 qt/A for hooded sprayer applications.

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8.5 Grain Sorghum (Milo) cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preharvest	It is not recommended that sorghum grown for seed be treated, as a reduction in germination or vigor may occur. Make applications at 30% grain moisture or less. The use of this product for pre-harvest grain sorghum (milo) is not registered in CA. As with other herbicides that cause sudden plant death, avoid pre-harvest applications of this product to milo infected with charcoal rot as lodging can occur.	Do not apply more than 2.0 qt of this product/A. Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest of sorghum.
Postharvest	This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 1.0 qt of this product/A for control, or 1.5 pt of this product/A for suppression.	Pre-harvest Interval (PHI): Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.6 HERBS AND SPICES

LABELED CROPS: Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Chamomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cilantro (seed), Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or Chinese parsley), Coriander seed (cilantro), Costmary, Cilantro (leaf), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fennel seed (common and Florence), Fenugreek, White ginger flower, Grains of Paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Miaga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0 PRECAUTION: This product could cause crop injury. When applying this product prior to transplanting or direct seeding crops into plastic mulch, care must be taken to remove product residues from the plastic prior to planting. Residual product can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care must be taken to ensure that the water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings. For some crops below, it is recommended to make applications 3 days before transplanting or planting.	See Restrictions in Section 8.0
Over-the-top wiper application Spot Treatment (Peppermint and Spearmint only)	This product may be applied as a spot treatment or over the top of peppermint or spearmint with wiper applications in spearmint and peppermint. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack sprayers, pump up pressure sprayers, hand guns, hand wands, or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area. In wiper applications, the applicator must be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds should be a minimum of 6 inches taller than the crop. PRECAUTION: Contact of the herbicide solution with the crop may result in discoloration, stunting, or destruction.	Pre-harvest Interval (PHI): Allow at least 7 days between application and harvest. Further applications may be made in the same area at 30-day intervals. In spot treatment applications, no more than 10% of the total field area to be harvested can be treated at one time. Crop sprayed in treated area will be killed. Take care not to spray or allow spray to drift outside the target area to avoid unwanted crop destruction.

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8.7 OIL SEED CROPS

LABELED CROPS: Borage, Buffalo gourd (seed), Canola (Non-Roundup Ready), Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0 Preplant At-planting Preemergence	See Use Directions in Section 8.0 This product may be applied before, during or after planting oilseed crops listed in this section, but must be applied prior to crop emergence. Observe the maximum application rates listed at the beginning of this section. Tank Mixtures: For sunflower, a tank mixture with Stealth may be applied before, during or after planting into conventionally tillage soil, a cover crop, established sod or previous crop residue.	See Restrictions in Section 8.0
Preharvest (except Buffalo gourd)	This product provides weed control and serves as a harvest aid when applied to a physiologically mature oilseed crop listed in this section. For safflower, apply up to 3.0 qt of this product/A when seed has lost its green color, approximately 20 to 30 days after the end of flowering of the secondary branches. For sunflower, apply up to 1.0 qt of this product when the back sides of the sunflower heads are yellow and bracts are turning brown and seed moisture content is less than 35%. For all other oilseed crops listed in this section (except Buffalo gourd), apply up to 48.0 fl oz of this product/A prior to harvest. **Maximum Application Rates If a Preharvest Application is Made** **Safflower** Combined total for all Preemergence and Selective Equipment applications 3.0 qt/A Preharvest application 3.0 qt/A **Sunflower** Combined total for all Preemergence and Selective Equipment applications 1.0 qt/A Preharvest application 1.0 qt/A **All other Oilseed Crops Listed (Except Buffalo gourd)** Combined total for all Preemergence and Selective Equipment applications 2.0 qt/A Preharvest application 48.0 fl oz/A	DO NOT MAKE A PREHARVEST APPLICATION if you have exceeded the maximum application rate for the combined total of all preemergence and selective equipment applications listed in the table in this section. Make only 1 preharvest application of this product. Preharvest Interval (PHI): Allow a minimum of 7 days between application and harvest or feeding to livestock. Application must be made a minimum of 30 days prior to the planting of any crop not listed on the Roundup Ultra® herbicide product label.
Postharvest	This product may be applied for weed control after harvest of oilseed crops. Higher rates might be required for control of large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the specific product being used is labeled for postharvest application in the crop harvested. Read and follow label directions for all products in the tank mixture.	Do not exceed a total application rate of 8.0 qt of this product/A/year. Pre-harvest Interval (PHI): Allow a minimum of 7 days between application of this product and harvest or feeding of vegetation in the application area. Application must be made a minimum of 30 days prior to the planting of any crop not listed on the Roundup Ultra herbicide product label.

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8.7 Oil Seed Crops cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Selective equipment	This product may be applied using a wiper applicator or shielded sprayer between crop rows once the crop is established. Observe the maximum application rates listed at the beginning of this section. See Application and Techniques, Section 7.0 for additional instructions on the use of wiper applicators and shielded sprayers.	See the use instructions at the beginning of this section for important information on maximum application rates for preemergence and selective equipment applications of this product.

8.8 SOYBEANS

LABELED CROPS: Soybeans (Non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence At-planting	This product may be applied before, during or after planting soybeans. Applications must be made prior to emergence of the crop. Refer to table below for tank mixtures that may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue. This product may be tank mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting. For difficult-to-control weeds such as Fall panicum, Barnyardgrass, Crabgrass, Shattercane and Broadleaf signalgrass up to 12 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 2.0 pt/A in these tank mixtures. For other labeled annual weeds, apply 1.5 to 2.0 pt of this product/A when weeds are less than 6 inches tall and 2.0 to 3.0 pt when weeds are over 6 inches tall. Tank Mixes: Aim / Intrro Assure II / Linex Authority® / Lorox/Linuron Boundary® / Lorox Plus Canopy / Magnum Canopy XL / Micro-Tech Command / Pursuit® Domain / Pursuit Plus Dual / Reflex® Dual II Magnum / Scepter® Firstrate / Sencor®/Lexone Flexstar® / Squadron® Frontline/Outlook / Stealth Fusion® / Steel® Gauntlet® / Valor®	See Restrictions in Section 8.0 Tank mix recommendations in this section are not registered in CA.
Spot treatment	For spot treatments, apply this product prior to initial pod set in soybeans.	Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

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8.8 Soybeans cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preharvest	This product provides weed control when applied prior to harvest of soybeans. Apply at rates given in the Annual Weeds, Perennial Weeds and Woody Brush and Trees rate tables, Sections 14.0, 15.0, and 16.0. This product may be applied using either aerial or ground spray equipment. Apply after pods have set and lost all green color. Care should be taken to avoid excessive seedshatter loss due to ground application equipment.	Do not apply more than 5.0 qt/A of this product for pre-harvest applications. Do not apply more than 2.0 qt/A of this product by air. Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last pre-harvest application. (If application rate is 1.0 qt/A or lower, the grazing restriction is reduced to 14 days after the last pre-harvest application.) Do not apply to soybeans grown for seed as a reduction in germination or vigor may occur.
Selective equipment	This product may be applied through shielded applicators, hooded sprayers, wiper applicators or shange bars in soybeans. See Selective Equipment, Section 7.5, for information on proper use and calibration of this equipment.	Pre-harvest Interval (PHI): Allow at least 7 days between application and harvest.

8.9 SUGARCANE

LABELED CROPS: Sugarcane

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence At-planting	This product may be applied in or around sugarcane fields or in fields prior to the emergence of plant cane.	Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.
Spot treatment	Avoid spray contact with healthy cane plants since severe damage or destruction may result. This product may be applied as a spot treatment in sugarcane for control of volunteer or diseased sugarcane using a 1% solution of this product in water and spray-to-wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.	Do not feed or graze treated sugarcane foliage following application.
Fallow treatments	This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. For removal of last stubble of ratoon cane, apply 4.0 to 5.0 qt of this product in 10.0 to 40.0 gal of water/A to new growth having at least 7 new leaves. Ground or aerial application equipment may be used. Applications up to 3.0 qt/A may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used.	Allow 7 or more days after application before tillage.

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8.9 Sugarcane cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0 Hooded sprayers	See Use Directions in Section 8.0 This product may be used through hooded sprayers for weed control between the rows of sugarcane. See Application Equipment and Techniques, Section 7.0, for additional Use Directions. Minimize the potential for spray particles to escape from under the hood by operating the sprayer at appropriate ground speeds, nozzle pressures and wind speeds. Operation on rough or sloping ground may result in spray particles escaping from the hood. When applying to sugarcane that is grown on raised beds, ensure that the hood is designed to completely enclose the spray. If necessary, extend the front and rear flaps of the hoods to reach the ground in furrows between the rows. PRECAUTION: Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.	See Restrictions in Section 8.0 Do not allow treated weeds to come into contact with the crop.
For aid in sugarcane ripening (FL, HI, LA, PR and TX)	This product is a foliar-applied plant growth regulator to hasten ripening and increase the level of sucrose in sugarcane. It is effective in nonirrigated and high-tonnage sugarcane. When applied as directed under the conditions described, this product will hasten ripening and extend the period of high sucrose level in sugarcane. As a result of leaf desiccation, improved trash burn can be expected. Most of the sucrose increase is concentrated in the top nodes of the treated cane stalk. In order to recover the potential sugar where topping is practiced during harvest, top at the base of the fourth leaf. Prior to application, consult your state sugarcane authority or local Loveland Products, Inc. representative regarding the degree of sucrose response anticipated from the variety of sugarcane to be treated. Do not plant subsequent crops in treated fields other than the following for 30 days after application: alfalfa or other forage legumes, beans (all types), corn (all types), cotton, melons (all types), pasture grasses, peanuts, potatoes (Irish or sweet), sorghum (milo), soybeans squash (all types) or wheat. Application Rates: Use the following application rates and timing instructions according to the state in which the sugarcane is grown. PRECAUTION: Application of this product may initiate development of shooting eyes. This product may not increase the sucrose content of sugarcane under conditions of good nature ripening. Within 2 to 3 weeks after application, this product may produce a slight yellowing to pronounced browning and drying of leaves, and a shortening of upper internodes.	Do not make application to sugarcane grown for seed, as a reduction in germination or vigor may occur. Do not feed or graze treated sugarcane forage following application. Do not apply for enhanced ripening to any crops other than sugarcane. Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

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8.9 Sugarcane cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
For aid in sugarcane ripening (FL, HI, LA, PR and TX) cont'd.:	Spindle death may occur. Rainfall within 6 hours after application may reduce effectiveness. Note: Use the higher rate within the labeled range when treating sugarcane under adverse ripening conditions or when less responsive varieties are to be treated. FL - Apply 5.0 to 12.0 fl oz of this product/A 3 to 6 weeks before harvest of LAST RATOON CANE ONLY. HI - Apply 9.0 to 21.0 fl oz of this product/A 4 to 10 weeks before harvest. LA - Apply 3.5 to 12.0 fl oz of this product/A 3 to 7 weeks before harvest of RATOON CANE ONLY. PR - Apply 5.0 fl oz of this product/A 3 to 5 weeks before harvest of RATOON CANE ONLY. TX - Apply 5.0 to 12.0 fl oz of this product/A 3 to 5 weeks before harvest of RATOON CANE ONLY.	Do not make application to sugarcane grown for seed, as a reduction in germination or vigor may occur. Do not feed or graze treated sugarcane forage following application. Do not apply for enhanced ripening to any crops other than sugarcane. Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

8.10 VEGETABLE CROPS

NOTE: THIS VEGETABLE CROPS SECTION GIVES DIRECTIONS THAT APPLY TO ALL LISTED VEGETABLE CROPS WITHIN SECTION 8.10 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

Types of Applications: Chemical fallow, Preplant fallow beds, Preplant, Preemergence, Prior to transplanting vegetables, At-planting, Hooded sprayers in row-middles, Shielded sprayers in row-middles, Wiper applications in row-middles and Postharvest, Directed applications (Non-Bearing Ginseng), Over-the-top wiper applications (Rutabagas only).

Precautions, Restrictions: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by single 0.5 inch application of water, either by natural rainfall or via a sprinkler system. Care must be taken to insure that the wash water flushed off the plastic mulch does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row-middles must be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Postharvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See Application Equipment and Techniques, Section 7.0, for additional information.

8.10-1 BRASSICA VEGETABLES

LABELED CROPS: Broccoli, Broccoli (raab), Brussels sprouts, Cabbage, Cabbage (Chinese), Cabbage (Chinese mustard), Cauliflower, Cavalo broccolo, Chinese broccoli (gai lon), Chinese cabbage (bok choy and napa), Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Restrictions in Section 8.10

8.10-2 BULB VEGETABLES

LABELED CROPS: Garlic, Great-headed garlic, Leek, Onion (dry bulb and green), Shallot, Welsh onion, Shallot

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Restrictions in Section 8.10

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8.10-3 CUCURBIT VEGETABLES AND FRUITS

LABELED CROPS: Chayote (fruit), Chinese waxgourd, Citron melon, Cucumber, Gherkin, Gourds, Gourds (edible including hyotan, cucuzza, hechima, Chinese okra), Melons (All), *Momordica* spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Muskmelon (cantaloupe, casaba, crenshaw, golden pershaw, honeydew, honey ball, mango melon, and Persian, pineapple, Santa Claus, snake), Pumpkin, Summer squash (including crookneck, scallop, straightneck, vegetable marrow, zucchini), Winter squash (including butternut, calabaza, hubbard, acorn, spaghetti), Watermelon

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	For cantaloupe, casaba melon, crenshaw melon, cucumber, gherkin, gourds, honeydew melon, honey ball melon, mango melon, melons (all), muskmelon, Persian melon, pumpkin, squash (summer and winter), and watermelon, allow at least 3 days between application and planting.

8.10-4 LEAFY VEGETABLES

LABELED CROPS: Amaranth (Chinese spinach), Arrugula (roquette), Beet greens, Cardoon, Celery, Celery (Chinese), Cotton, Chaya, Chervil, Chrysanthemum (edible-leaved), Chrysanthemum (Garland), Corn salad, Cress (garden and upland), Dandelion dock (sorrel), Dokudami, Endive (escarole), Fennel (Florence), Gow kee, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach (all), Swiss Chard, Watercress (upland), Water Spinach

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0 For watercress, avoid application within 3 days prior to seeding and during the period between seeding and emergence to minimize the risk of injury.	See Vegetable Crops in Section 8.10

8.10-5 FRUITING VEGETABLES

LABELED CROPS: Eggplant, Ground cherry (*Physalis* spp.), Pepino, Pepper (includes bell, chili, cooking, pimento, sweet), Tomatillo, Tomato

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0 PRECAUTION: For tomato, hooded or shielded sprayer applications in row-middles are not recommended.	See Vegetable Crops in Section 8.10 For eggplant, ground cherry, pepino, pepper (all), tomatillo, and tomato allow at least 3 days between application and planting.

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8.10-6 LEGUME VEGETABLES (succulent or dried)
LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, and white sweet lupin), Bean (*Phaseolus*: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), Bean (*Vigna*: includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean) Broad bean (fava), Chickpea (garbanzo), Guar, Jackbean, Lablab bean, Lentil pea, (*Pisum*: includes dwarf pea, edible podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea), Pigeon pea, Soybean (immature seed), Sword bean

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Vegetable Crops in Section 8.10
Preharvest broadcast spray (Dry beans)	This product may be applied as an over-the-top broadcast spray to control labeled weeds prior to the harvest of dry beans. Apply up to 32.0 fl oz in 3.0 to 20.0 gal of water/A at the hard dough stage of the legume seed (30% grain moisture or less). Either ground broadcast or aerial applications may be made.	Pre-harvest Interval (PHI): Apply at least 7 days before harvest for dry beans, dry peas, lentils and chickpeas. Only 1 application per year may be made; do not combine a preharvest spray with a spot treatment on the same crop area. Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system. Do not treat field (feed) peas, since these are considered to be grown as livestock feed.
Preharvest broadcast spray (Dry peas, Lentils and Chickpeas)	Preharvest application is not recommended for dry beans; dry peas, lentils and chickpeas grown for seed, as a reduction in germination or vigor may occur. This product may be applied as an over-the-top broadcast spray to control labeled weeds prior to the harvest of dry peas, lentils and chickpeas. Apply up to 32.0 fl oz in 3.0 to 20.0 gal of water/A at the hard dough stage of the legume seed (30% grain moisture or less). Either ground broadcast or aerial applications may be made.	
Spot treatment (Dry beans, Dry peas, Lentils, and Chickpeas)	This product may be applied as a spot treatment to control troublesome weeds such as Canada thistle, Quackgrass, Mayweed (Dog fennel) and Milkweed in dry beans. Apply up to 26.0 fl oz in 10.0 to 20.0 gal of water through ground spray equipment, or use a 2% solution in a handheld sprayer. For best results, applications should be made at or beyond the bud stage of growth. The crop receiving spray in treated areas will be killed.	Pre-harvest Interval (PHI): Apply at least 14 days before harvest. Only 1 application per year may be made; do not combine a pre-harvest spray with a spot treatment on the same crop. Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system. Do not treat field cowpeas, since these are considered to be grown as livestock feed.

8.10-7 ROOT AND TUBER VEGETABLES
LABELED CROPS: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden), Burdock, Canna, Carrot, Cassava (bitter and sweet), Celeriac, Chayote (root), Chervil, Chicory, Chufa, Dasheen, Galangal, Ginger, Ginseng, Horseradish, Leren, Kava, Parsley, Parsnips, Potato (Irish), Radish, Radish (Oriental), Rutabaga, Salsify, Salsify (Black and Spanish), Skirret, Sweet potato, Tanier, Tumeric, Turnip, Wasabi, Yacon, Yams, Yam bean, Yam (True)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Vegetable Crops in Section 8.10
Direct Application (Non-bearing Ginseng)	This product may be used for weed control in established non-bearing ginseng. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high-volume wands, lances, and orchard guns or with wiper application equipment. PRECAUTION: Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of desirable plants. Contact of this product with other than matured brown bark can result in serious crop damage.	Pre-harvest Interval (PHI): Applications must be made at least 1 year prior to harvest.
Over-the-Top Wiper Application (Rutabaga only)	Wiper applicators may be used over-the-top of rutabagas.	Pre-harvest Interval (PHI): Allow at least 14 days between application and harvest of rutabagas.

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8.11 MISCELLANEOUS CROPS

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar Beet (Non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Vegetable Crops in Section 8.10 Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at-planting applications, applications must be made before crop emergence to avoid serious crop injury. Apply before seed germination on coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row-middles must be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.
Weed control Site preparation	This product may be applied for weed control or for site preparation prior to planting or transplanting crops listed in this section. When applying this product prior to transplanting or direct seeding crops into plastic mulch, care must be be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by 0.5 inch natural rainfall or by applying water via a sprinkler system. Care must be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Injury made to emergence will result in injury or death to emerged seedlings.	Do not apply within a week before the first asparagus spears emerge. Do not feed or graze treated pineapple forage following application.
Spot treatment (Asparagus)	This product may be applied immediately after cutting, but prior to the emergence of new spears.	Do not treat more than 10% of the total field area to be harvested. Pre-harvest Interval (PHI): Do not harvest within 5 days of treatment.
Postharvest (Asparagus)	This product may be applied after the last harvest and all spears have been removed. If spears are allowed to re-grow, delay application until ferns have developed. Delayed treatments should be applied as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears. Select and use recommended types of spray equipment for postemergence postharvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.	Do not allow direct contact of the spray with the asparagus which will result in serious crop injury.

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9.0 TREE, VINE AND SHRUB CROPS (Alphabetical)

NOTE: THIS SECTION GIVES DIRECTIONS THAT APPLY TO ALL LISTED TREE, VINE AND SHRUB CROPS WITHIN SECTION 9 CROP GROUPS. INDIVIDUAL CROPS MAY HAVE MORE SPECIFIC INSTRUCTIONS, PRE-HARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

Types of Applications: Preplant (Site Preparation), Broadcast Sprays, Weed control, Middles (between rows of trees, vines or shrubs), Strips (within rows of trees, vines or shrubs), Selective Equipment (shielded sprayers, wiper treatments), Directed Sprays, Spot Treatments, Perennial Grass Suppression, Cut Stump.

Applications may be made with boom equipment, CDA, shielded sprayers, handheld and high-volume wands, lances, orchard guns, or with wiper applicator equipment, except as directed.

Use Directions: This product may be applied in middles (between rows of trees or vines), strips (within rows of trees or vines), and for weed control or perennial grass suppression in established tree fruit and tree nut groves, orchards, berries and vineyards. This product may also be used for site preparation prior to planting or transplanting these crops. **APPLY AT 1.0 PINT TO 5.0 QUARTS PER ACRE ACCORDING TO THE ANNUAL WEEDS, PERENNIAL WEEDS, AND WOODY BRUSH AND TREES RATE TABLES, SECTIONS 14.0, 15.0 AND 16.0.** Utilize rates at the higher end of the labeled rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 10.6 quarts per acre per year.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

Precautions

- Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other part of the trees, canes and vines.
- Avoid applications when recent pruning wounds or other mechanical injury has occurred.
- Contact of this product with other than mature brown bark can result in serious crop damage or destruction.
- For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) must be used to minimize the potential for leakage and drift of herbicide sprays onto crop.

See Application Equipment and Techniques, Section 7.0, for additional directions and precautions.

Restrictions

- Only wipers or shielded applicators capable of preventing all contact with crop may be used.
- Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance.
- For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back.
- Allow a minimum of 3 days between applications and transplanting.

Middles (between rows of trees, vines or bushes)

Use Directions: This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application.

Tank Mixtures: A tank mixture of this product plus Goal 2XL (or generic equivalent) may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is recommended when weeds are stressed or growing in dense populations. 16.0 to 32.0 ounces per acre of this product plus 3.0 to 12.0 ounces per acre of Goal 2XL will control annual weeds with a maximum height or diameter of 6 inches, including Annual sowthistle, Common cheeseweed (malva), Common groundsel, Common lambsquarters, Common purslane (suppression), Common ryegrass, Crabgrass, Filaree (suppression), Horseweed/marestail (*Conyza canadensis*), Junglerice, Redroot pigweed, Shepherd's purse, and Stinging nettle. 16.0 to 32.0 ounces per acre of this product plus 3.0 to 12.0 ounces per acre of Goal 2XL will control Common cheeseweed (malva) or Hairy fleabane (*Conyza bonanensis*) with a maximum height or diameter of 3 inches.

Strips (in rows of trees, vines or bushes)

Tank Mixtures: This product may be applied in rows of tree or vine crops and may also be tank mixed with the following products (or generic equivalent).

Caliber 90	Simazine 4L
Devrinol® 50 DF	Simazine 80W
Direx® 4L	Sim-Trol® 4L
Goal 2XL	Solicam® DF
Karmex® DF	Stealth
Krovar® I	Sulfan AS
Krovar II	Surflan 75W
Princep®	

Do not apply these tank mixtures in Puerto Rico.
Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial Grass Suppression

This product will suppress perennial grasses such as Bahiagrass, Bermudagrass, Tall fescue, Orchardgrass, Kentucky bluegrass, and Quackgrass that are grown as ground covers in tree and vine crops.

For suppression of Tall fescue, Fine fescue, Orchardgrass and Quackgrass, apply 8.0 fluid ounces of this product in 10.0 to 20.0 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 6.0 fluid ounces of this product per acre. Do not add ammonium sulfate.

For best results, mow cool season grass covers in the spring to even their height and apply this product 3 to 4 days after mowing.

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For suppression of vegetative growth and seedhead inhibition of Bahiagrass for approximately 45 days, apply 6.0 fluid ounces of this product in 10.0 to 25.0 gallons of water per acre. Apply 1 to 2 weeks after full green up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 4.0 fluid ounces of this product per acre, followed by an application of 2.0 to 4.0 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of Bermudagrass, apply 1.0 to 2.0 quarts of this product in 3.0 to 20.0 gallons of water per acre. Use this treatment only if reduction of the Bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

For suppression of Bermudagrass, apply 6.0 to 16.0 fluid ounces of this product per acre east of the Rocky Mountains and 16.0 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3.0 to 20.0 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the Bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and Bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 6.0 to 10.0 fluid ounces per acre should be used in shaded conditions or where a lesser degree of suppression is desired.

9.1 CUT STUMPS (Tree crops)

LABELED CROPS: Citrus Trees: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor

Fruit Trees: Apple, Apricot, Cherry (sweet sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (all), Quince

Nut Trees: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia, Pecan, Pistachio, Walnut (Black, English)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Suitable Hand-Held Equipment Section 7.4	Cut stump applications of this product may be made during site preparation or site renovation prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100% solution of this product to the freshly-cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion. PRECAUTION: Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.	DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES.

9.2 BERRY CROPS

LABELED CROPS: Blackberry (including arctic berry, black satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, juneberry, lavacaberry, lowberry, lucretiaberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry and youngberry), Blueberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Raspberry (Black, Red), Salal

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0 Do not permit herbicide solution to contact desirable vegetation, including green shoots, canes or foliage. Pre-harvest Interval (PHI): Allow a minimum of 30 days between last application and harvest of cranberries. For other small fruits and berries, allow a minimum of 14 days between last application and harvest. Do not make directed sprays within the cranberry bush areas prior to berry harvest.

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9.2 Berry Crops cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0 Spot Treatment (Cranberry production)	See Use Directions in Section 9.0 May be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayers or other appropriate application equipment listed under Application Equipment and Techniques, Section 7.0 may be used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers use 1 to 2% solution of this product. Spray-to-wet vegetation, not to run off. For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds.	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 30 days between last application and harvest of cranberries. Do not apply this material through irrigation system. Do not make applications by air. Do not apply directly to water. Use nozzles that emit medium- to large-size droplets to minimize drift in order to avoid crop injury.
Postharvest (Cranberry production)	Make applications only after cranberries have been harvested to control weeds growing within the field. Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers or other appropriate application equipment listed under Application Equipment and Techniques, Section 7.0, may be used. If using hand-held sprayers use 0.5 to 1% solution of this product. Spray-to-wet vegetation, not to run off. If using hand-held boom sprayers, apply 2.0 to 4.0 qt of his product/A.	Do not treat more than 10% of the total bog. Allow a minimum of 6 months after the last application and next harvest of cranberries. Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water. Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.

9.3 CITRUS

LABELED CROPS: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (All), Pummelo, Satsuma Mandarin, Tangelo (ugli), Tangor

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0 FL and TX only: For burn down or control of the weeds listed below, apply the labeled rates of this product in 20.0 to 40.0 gal of water/A. Where weed foliage is dense, use 30.0 gal of water/A. For Goatweed, apply 2.0 to 3.0 qt of this product/A. Apply in 20.0 to 30.0 gal of water/A when plants are actively growing. Use 2.0 qt/A when plants are less than 8 inches tall and 3.0 qt/A when plants are greater than 8 inches tall. If Goatweed is greater than 8 inches tall, the addition of Krovar II or Karmex may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 1 day between last application and harvest. For citron groves apply as directed sprays only.

Perennial weeds S=Suppression B=Burndown PC=Partial Control C=Control

Weed Species	Makaze Rate Per Acre			
	1.0 Qt	2.0 Qt	3.0 Qt	5.0 Qt
Bermudagrass	B	—	PC	C
Guineagrass Texas and Florida Ridge	B	C	C	C
Guineagrass Florida Flatwoods	—	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	—	PC	C

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9.4 MISCELLANEOUS TREE FOOD CROPS

LABELED CROPS: Cactus (fruits and pads), Palm (heart, leaves), Palm (oil)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0

9.5 NON-FOOD TREE CROPS

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas Trees, Other Non-food Tree Crops

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0
Directed sprays Spot treatments Wiper applications	This product may be used as a post directed spray and spot treatment around established poplar, eucalyptus, Christmas trees and other non-food tree crops. PRECAUTION: Care must be exercised to avoid contact of spray drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.	THIS PRODUCT IS NOT LABELED FOR USE AS AN OVER-THE-TOP BARK SPRAY IN CHRISTMAS TREES AND OTHER PINE TREES.
Site preparation	This product may be used prior to planting non-food tree crops.	Precautions must be taken to protect non-target plants during site preparations applications.
Directed spray (Eucalyptus and Poplar production)	This product can be used around established eucalyptus and poplar trees to control undesirable vegetation. Use a 1 to 2% spray solution to control herbaceous weeds in eucalyptus farms. Use a 2% spray solution for control of undesirable woody brush and trees. For "hard-to-control" weeds, use a 5 to 10% spray solution. Avoid contact of spray, drift, or mist with foliage, green bark or non-woody surface roots of plants.	AVOID HERBICIDE CONTACT WITH DESIRABLE VEGETATION.
Wiper Application (Eucalyptus and Poplar production)	This product may be used through a wick or other suitable wiper applicators for control or partial control of grass and broadleaf weeds listed in Annual Weeds and Perennial Weeds Section 14.0 and 15.0. For wick application, mix 1.0 gal of this product with 2.0 gal water to make a 33% solution. For wiper systems that can handle thicker solutions, such as force-fed systems, a 33 to 100% solution may be used. For best results, ensure that the herbicide solution is allowed to contact the maximum amount of leaf surface. As weed densities increase, decrease equipment speed to allow sufficient herbicide flow to wet all weed surfaces contacted. Weeds not contacted will be unaffected.	

9.6 POME FRUIT

LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 1 day between last application and harvest in pome fruits.

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9.7 STONE FRUIT

LABELED CROPS: Apricot, Cherry (Sweet, Tart), Nectarine, Olive, Peach, Pear, Plum/Prune (All types), Plumcot

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 17 days between last application and harvest in stone fruit crops. For olive groves, apply as directed sprays only.

Restrictions on application equipment:

For cherries, any application equipment listed in this section may be used in all states.

Any application equipment listed in this section may be used in apricots, nectarines, peaches and plums/prunes grow[illegible]nia, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah, and Washington, except for peaches grown in [illegible] states specified in the following paragraph. In all other states, use wiper equipment only.

For peaches grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Sou[illegible]arolina and Tennessee only, apply with a shielded boom spray or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low hanging limbs at least [illegible] days prior to application. Avoid application near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years.
EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.

9.8 TREE NUTS

LABELED CROPS: Almond, Beechnut, Betelnut, Brazil nut, Butternut, Cashew, Ch[illegible]nut, Ch[illegible]uapin, [illegible]onut, Filbert (Hazelnut), Hickory nut, Macadamia, Pecan, Pine nut, Pistachio, Walnut (Black, English)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Se[illegible]on 9.0	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 3 days between last application and harvest of tree nuts, except coconut. Allow 14 days between application and harvest in coconuts.

9.9 TROPICAL CROPS AND SUBTROPICAL TREES AND [illegible]

LABELED CROPS: Ambarella, Atemoya, Avoca[illegible]ana, [illegible]bados Cherry (acerola), Biriba, Blimbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Du[illegible], Feijoa, Figs, G[illegible]s plum, Guava, Ilama, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), M[illegible]tain papa[illegible], Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Sou[illegible], Sta[illegible]pple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots and leaves), Wax jambu

TYPES OF APPLICATIONS	[illegible]DIRECTIONS	RESTRICTIONS
See Types of Applications in Se[illegible]on 9.0	Se[illegible]e Directions in Section 9.0 [illegible]s product may be applied for weed control or for site p[illegible]paration prior to transplanting crops listed in this [illegible]ction. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 1 day between last application and harvest of banana, guava, papaya and plantain crops. Allow a minimum of 14 days between last application and harvest of any other tropical or subtropical tree fruit. Allow a minimum of 28 days between last application and harvest in coffee crops.

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9.9 Tropical Crops and Subtropical Trees and Fruit cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0
Bananacide (Banana only)	This product may be used to destroy banana plants infected with the Banana bunchy top virus as well as non-infected banana plants to establish a disease free buffer around plantations. Remove all fruit from the plants within the treatment area prior to treatment. Inject 1/25 fl oz (1.0 mL) of this product's concentrate/2 to 3 inches of pseudostem diameter. Make the injection at least 1 ft above ground, except for very small plants, which should be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4-ft radius) to a treated mat shall be mechanically destroyed. For control of the Banana bunchy top virus, it is critical that the grower follow a strict control program inv[illegible] monitoring for diseased plants, spraying to control [illegible] aphid vector, and destruction of all infected mats (or [illegible] units). An infected plant may not show s[illegible]toms of t[illegible] disease for up to 125 days, therefore it is [illegible]at th[illegible] entire mat (or unit) containing the [illegible]eased p[illegible]t be destroyed immediately.	Do not apply more than 1/2 fl oz (15.0 mL) of this product's concentrate/mat (or units). Remove all fruit from plants and mats (or units) prior to treatment. Do not harvest any fruit or plant materials from treated mats (or units) following injection. Do not allow livestock to consume treated materials. Following transplant of [illegible] banana plants into treated areas, al[illegible] [illegible]esc[illegible] established for 3 months before apply[illegible] this produc[illegible] for weed control.

9.10 VINE CROPS

LABELED CROPS: Grapes (raisin, table, wine), Hops, Kiwi, Passion fr[illegible]

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in S[illegible]ion 9.0 Applications [illegible]ust not be m[illegible] whe[illegible]reen shoots, canes or foliage [illegible]e in the [illegible]ay zone. In the no[illegible]ast ar[illegible]reat Lakes regions, applications must be made pr[illegible]the end of [illegible]om stage of grapes to [illegible]ld h[illegible]y, or [illegible]ke ap[illegible]ations with shielded sprayers or wiper [illegible]uipme[illegible]	See Restrictions in Section 9.0 Pre-harvest interval (PHI): Allow a minimum of 14 days between last application and harvest. Do not use selective equipment in kiwi.

10.1 ALFALFA, CLOVER AND OTH[illegible] FORAG[illegible]GUMES

LABELED CROPS: Alfalfa, Clov[illegible] Kenaf, Kudzu, [illegible]edeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence At-planting	[illegible]s product may be applied before, during or after [illegible]nting crops listed. [illegible]ake applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. Applications must be made prior to emergence of the crop.	If a single application is made at rates of 2.0 qt/A or less, no waiting period between treatment and feeding or grazing is required. If application rates greater than 2.0 qt/A are made, remove domestic livestock before application. Pre-harvest Interval (PHI): Wait 8 wk after application before grazing or harvesting.
Spot treatment Over-the-top Wiper applications (Alfalfa and Clover only)	This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed in Wiper Applicators, Section 7.5. Applications may be made in the same area at 30-day intervals.	For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 1/10 of any acre can be treated at one time. Pre-harvest Interval (PHI): Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

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10.1 Alfalfa, Clover and Other Forage Legumes cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Dormant (Alfalfa only)	This product will control or suppress many weeds including Downy brome, Cheatgrass and Quackgrass, in dormant alfalfa. Apply 8.0 to 12.0 oz/A of this product. Apply in the spring to alfalfa that is dormant. Applications should be made after spring temperatures have warmed enough to encourage resumption of weed growth, but prior to initiation of trifoliate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliate leaf of the alfalfa will cause growth reduction and reduced crop yield. Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off. PRECAUTION: Application of this product can cause crop injury. Any crop injury is the sole responsibility of the applicator.	Do not use ammonium sulfate when spraying dormant alfalfa with Makaze. Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated. Do not make more than 1 application/yr. Pre-harvest Interval (PHI): Allow 36 hours after application before grazing livestock or harvesting.
Preharvest (Alfalfa only)	This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds including Quackgrass, when applied prior to the harvest of alfalfa. Use up to 1.0 qt of this product/A. Applications may be made at any time of the year. For control of Quackgrass, apply in the spring, late summer or fall when Quackgrass is actively growing. Treatments for Quackgrass must be followed by deep tillage for complete control.	Make only 1 application to an existing stand of alfalfa/yr. Do not apply more than 2.0 qt of this product/A as a pre-harvest treatment. Do not use for alfalfa grown for seed, as a reduction in germination or vigor may occur. Pre-harvest Interval (PHI): The treated crop and weeds can be harvested and fed to livestock after 36 hr.
Renovation	This product may be applied as a broadcast spray to existing stands of alfalfa, clover or other labeled forage legumes. Labeled crops may be planted into the treated area. Make applications according to the rates listed in Annual Weeds, Perennial Weeds and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0.	Remove domestic livestock before application. Pre-harvest Interval (PHI): If application rates of 2.0 qt/A or less are used, wait 36 hr after application before grazing or harvesting. If application rates greater than 2.0 qt/A are used, wait 8 wk after application before grazing or harvesting.

10.2 CONSERVATION RESERVE PROGRAM (CRP)

LABELED CROPS: Conservation Reserve Program (CRP) Acres

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Renovation (rotating out of CRP) Site preparation	This product may be used to prepare CRP land for crop production. Refer to Federal, State or local use guides for CRP renovation recommendations. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. For any crop not listed in the crops sections of this label, applications must be made at least 30 days prior to planting. PRECAUTION: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.	Do not apply more than 3.0 qt/A/yr onto CRP grasses.

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10.2 Conservation Reserve Program (CRP) cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Postemergence Weed control in dormant acres Over-the-top Wiper application	This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 12.0 to 16.0 fl oz of this product/A in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.	Do not apply more than 3.0 qt/A year onto CRP grasses.

10.3 GRASS or TURFGRASS SEED PRODUCTION

LABELED CROPS: Any grass (*Gramineae* family), except corn, sorghum, sugarcane and those listed [illegible] Cereal Crops in Section 8.1.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence Renovation Site preparation	This product may be applied before, during, or aft[illegible] planting or for renovation of turf or forage grass are[illegible] grown for seed production. Make applications according to the rate[illegible]d in Annu[illegible] Weeds, Perennial Weeds, and Woody Bru[illegible]es rate tables, Sections 14.0, 15.0 and [illegible]6.0. Applications must be made prior to th[illegible]mergen[illegible] of the crop to avoid injury. For maximum control of [illegible]sting vegetation[illegible]lay planting to determine if[illegible]y regrowth from est[illegible]ed underground plant part[illegible]ccurs. Where[illegible]peat treatments are necessary, s[illegible]fficient[illegible]growth must[illegible] attained prior to application[illegible]or warm-s[illegible]on grass[illegible], such as Bermudag[illegible]s, summer or fa[illegible]tions provide best control.	D[illegible]t distu[illegible] soil or underground plant parts before treat[illegible]t[illegible]elay tillage or renovation techniques such as [illegible]ertica[illegible]owing, coring, or slicing for 7 days after a[illegible]lication to allow proper translocation into underground plant parts. If application rates total 3.0 qt/A or less, no waiting period between treatment and feeding or livestock grazing is required. Pre-harvest Interval (PHI): If the rate is greater than 3.0 qt/A, remove domestic livestock and wait 8 wk following application before grazing or harvesting.
Shielded Sprayer	Apply 1.0 [illegible]3.0 [illegible] of this pr[illegible]uct as a broadcast spray in 10[illegible]20.0 g[illegible]f total s[illegible]y volume/A. Uniform planting [illegible] straig[illegible]rows [illegible] in [illegible]lded sprayer applications. Best results a[illegible] obtaine[illegible]en the grass seed crop is small enoug[illegible]o easily pass by or through the protective shields. [illegible]AUTION: Contact of this product in any manner to an[illegible]egetation to which treatment is not intended may cause[illegible]mage. Grower assumes all responsibility for crop [illegible]ses from misapplication.	
Over-the-top Wiper Applications	[illegible]s product may be applied with wiper applicators to [illegible]ntrol or suppress the weeds listed under Wiper Applications in Section 7.5. Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when weed height varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Better results may be obtained if 2 applications are made in opposite directions.	Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators must be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation.

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10.3 Grass or Turfgrass Seed Production cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Spot treatments	Use a 1 to 1.5% solution. Apply this product prior to heading of grasses.	The crop receiving the spray in the treated area will be killed. Avoid drift or spray outside of the target area for the same reason.
Creating rows in Annual ryegrass	Use 16.0 to 32.0 fl oz of this product/A. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height. PRECAUTION: Set nozzle height to allow the establishment of the desired row spacing while preventing spray droplets, spray fines, or drift to contact the ryegrass plants not treated. Use of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended. Grower assumes all responsibility for crop losses from misapplication.	

10.4 PASTURES

LABELED CROPS: Any grass (*Gramineae* family), except corn, sorghum, sugarcane and those listed under Cereal Crops in Section 8.1, including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guineagrass, Kikuyugrass, Orchardgrass, Pangola[illegible] Ryegrass, Timothy, Wheatgrass

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Spot treatment Over-the-top Wiper Applications	This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.	For spot treatments or wiper application methods using rates of 3.0 qt/A or less, the entire field or any portion of it may be treated. When spot treatment or wiper applications are made using rates above 3.0 qt/A, no more the 10% of the total pasture may be treated at any one time. Pre-harvest Interval (PHI): Remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting.
Preplant Preemergence Pasture Renovation Stand Removal	This product may be applied prior to planting or emergence of forage grasses. In addition this product may be used to control perennial pasture species listed on the label prior to re-planting. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees Rate Tables, Sections 14.0, 15.0 and 16.0.	If application rates total 3.0 qt/A or less, no waiting period between treatment and feeding or livestock grazing is required. Pre-harvest Interval (PHI): If the rate is greater than 3.0 qt/A, remove domestic livestock and wait 8 wk following application before grazing or harvesting.
Chemical mowing (Bermudagrass) pastures prior to spring growth or immediately after first cutting	This product may be applied at 16.0 fl oz/A to control the weeds listed below and most other winter annual grass and broadleaf weeds in established coastal bermudagrass pastures. Annual bluegrass, Cheat, Crabgrass, Henbit, Johnsongrass seedling, Little barley, Oats, Ryegrass, Sandbur field, Wheat, Wild mustard **Applications prior to spring growth:** Apply this product in the late winter or early spring but before new coastal bermudagrass growth begins in the spring. Applications to new growth can damage the bermudagrass. **Applications following the first cutting:** Apply this product after the first bermudagrass cutting when the bermudagrass has not yet begun to regrow. Applications made after regrowth has begun can damage the bermudagrass.	Labeled application rates totaling 3.0 qt/A or less do not require a waiting period between treatment and feeding or livestock grazing. NOTE: ONLY 1 APPLICATION/YR MAY BE MADE TO ANY 1 FIELD. A SPRING APPLICATION PRIOR TO GROWTH AND AN APPLICATION FOLLOWING THE FIRST CUTTING MAY NOT BE MADE ON THE FIELD DURING THE SAME YEAR.

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10.4 Pastures cont'd.:

Colorado, Idaho, Iowa, Kansas, Montana, Nebraska, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming Only Bromus Species: This product may be used to treat Cheatgrass (*Bromus secalinus*), Downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), and Soft chess (*Bromus mollis*) found in industrial, rangeland and pasture sites. Apply 8.0 to 16.0 fluid ounces of product per acre on a broadcast basis. For best results, treatment should coincide with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Applications should be made to the same site each year until seed banks are depleted and the desirable perennial grasses are able to become reestablished on the site.

Medusahead: To treat Medusahead, apply 16.0 fluid ounces of this product per acre as soon as plants are actively growing and prior to the 4-leaf stage. Applications may be made in the fall or spring.

Application Equipment and Techniques: Applications may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2.0 to 10.0 gallons of water per acre. For application using ground equipment, apply in 10.0 to 20.0 gallons of water per acre.

When applied as directed there are no grazing restrictions.

10.5 RANGELANDS

LABELED CROPS: Rangeland (Perennial cool- and warm-season grass rangelands)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Postemergence	This product will control or suppress many annual weeds growing in perennial cool- and warm-season grass rangelands. Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in subsequent years should eliminate most of the viable seeds. Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition. Apply 12.0 to 16.0 fl oz/A to control or suppress many annual weeds growing in perennial cool and warm-season grass rangeland including cereal rye, Cheatgrass, Downy brome and Jointed goatgrass. Apply when most Japanese brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth. For Medusahead, apply 16.0 fl oz/A at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Fire may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn.	Do not use ammonium sulfate when spraying rangeland grasses with this product. Do not apply more than 3.0 qt/A/yr. Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off.

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10.6 TURFGRASS SOD PRODUCTION

LABELED CROPS: Turfgrass for Sod

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence Renovation Site Preparation	This product controls most existing vegetation prior to renovating turf grass areas or establishing turfgrass grown for sod. Broadcast of hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses such as bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth or good interception of the spray. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Tree rate tables, Sections 14.0, 15.0 and 16.0. Desirable turfgrasses may be planted following the above procedures.	If application rates total 3.0 qt/A or less, no waiting period between treatment and feeding or livestock grazing is required. Pre-harvest Interval (PHI): If the rate is greater than 3.0 qt/A, remove domestic livestock and wait 8 wk following application before grazing or harvesting. Do not disturb soil or underground plant before treatment. Delay tillage or renovation techniques such as vertical mowing, coring, or slicing 7 days after application to allow translocation into underground plant parts.
Spot treatment	Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass.	
Turfgrass renovation for sod production	This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses such as bermudagrass summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray. Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow translocation into underground plant parts. Desirable turfgrass may be planted following the above procedures. Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.	Do not feed or graze turfgrass grown for seed or sod production for 8 wk following application.

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10.7 RELEASE OF BERMUDAGRASS OR BAHIAGRASS

Dormant applications

This product may be used to control or partially control many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. Treat only when turf is dormant and prior to spring greenup. This product may also be tank mixed with Oust® for residual control. Tank mixtures of this product with Oust may delay greenup.

For best results on winter annuals, treat when plants are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is at or beyond the 4- to 6-leaf stage.

Apply 8.0 to 64.0 fluid ounces of this product per acre alone or in a tank mixture with 0.25 to 1.0 ounce per acre of Oust. Apply the labeled rates in 10.0 to 40.0 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in greenup and minimize injury, add no more than 1.0 ounce of Oust per acre on bermudagrass and no more than 0.5 ounce of Oust per acre on bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

Actively Growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 1.0 to 3.0 pints of this product in 10.0 to 40.0 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Fescue, tall	Trumpetcreeper
Bluestem, silver	Johnsongrass	Vaseygrass

This product may be tank mixed with Oust. If tank mixed, use no more than 1.0 to 2.0 pints of this product with 1.0 to 2.0 ounces of Oust per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Dock, curly	Poorjoe
Bluestem, silver	Dock, smooth	Trumpetcreeper
Broomsedge	Fescue, tall	Vaseygrass
Dallisgrass	Johnsongrass	Vervain, blue

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season are not recommended, since severe injury may occur.

Actively Growing Bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 6.0 fluid ounces of this product in 10.0 to 40.0 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 4.0 fluid ounces of this product per acre, followed by an application of 2.0 to 4.0 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

A tank mixture of this product plus Oust may be used. Apply 6.0 fluid ounces of this product plus 0.25 ounce of Oust per acre 1 to 2 weeks following an initial spring mowing. Make only 1 application per year.

11.0 ROUNDUP READY CROPS

The following instructions or those separately published on Loveland Products, Inc. supplemental labeling include all applications which can be made onto the specified Roundup Ready crops during the complete cropping season. DO NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready Annual and Perennial Crops, Section 8.0.

THIS PRODUCT IS TO BE USED FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE OR GLYPHOSATE TOLERANT GENE.

Applying this product to crop varieties that are not designated as glyphosate tolerant will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, fruit of crops, or any desirable plants that do not contain a Roundup Ready or glyphosate tolerant gene, since severe injury or destruction will result.

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on Roundup Ready crop varieties may be obtained from your seed supplier. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

Note: Roundup Ready seed, and the method of selectivity controlling weeds using glyphosate on a Roundup Ready crop, are protected under several U.S. patents. A license to use Roundup Ready seed must be obtained prior to use.

For ground applications with broadcast equipment, apply this product in 5.0 to 20.0 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use flat spray nozzles. Check for even distribution of spray droplets.

For aerial applications apply this product in 3.0 to 15.0 gallons of water per acre. See Application Equipment and Techniques, Section 7.0, for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANT GENE.

See Mixing and Application Equipment and Techniques, Sections 6.0 and 7.0, for additional directions and restrictions on the application of this product.

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or fertilizers may result in reduced weed control or crop injury and are NOT recommended for over-the-top applications of this product unless otherwise noted in this product label, supplemental labeling or fact sheets published separately by Loveland Products, Inc.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech® adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

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Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to Mixing, Sections 6.0, for use directions for ammonium sulfate.

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. Follow the cleaning procedures specified on the label of the product(s) previously used. THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.

Note: The following use directions are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, use a preplant burn-down treatment of this product to control existing weeds prior to crop emergence. Some weeds, such as Annual morningglory, Black nightshade, Broadleaf signalgrass, Burcucumber, Giant ragweed, Sandbur, Shattercane, Sicklepod, Texas panicum, Wild proso millet and Woolly cupgrass with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

11.1 ROUNDUP READY ALFALFA

FOR POSTEMERGENCE APPLICATION ONLY ON ALFALFA VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready designation indicates that the alfalfa contains a patented gene, which provides tolerance to this product. Information on Roundup Ready alfalfa varieties may be obtained from your seed supplier or Loveland Products, Inc. representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant At-planting Preemergence Postemergence	This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa. For ground applications with broadcast equipment, apply this product in 3.0 to 40.0 gal of spray solution/A. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets. For aerial application: Use the labeled rates of this product in 3.0 to 15.0 gal of spray solution/A. **A. New Stand Establishment (seeding year)** Prior to first cutting during new stand establishment: From emergence up to 4 trifoliate leaves: 2.0 qt/A From 5 trifoliate leaves up to 7 days before first cutting: 2.0 qt/A After first cutting in newly established stands: In-crop applications anytime, up to 5 days before cutting: 2.0 qt/A **B. Established Stands (non-seeding year)** In-Crop applications anytime, up to 5 days before cutting: 2.0 qt/A During stand establishment, due to the biology and timing constraints of alfalfa, up to 10% of the seedlings may not contain the Roundup Ready gene and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by the loss of plants not containing a Roundup Ready gene, a single application of at least 1.0 qt/A of this product should be applied at or before the 3- to 4-trifoliate growth stage. In both newly seeded and established stands, in order to maximize yield and quality potential of forage and hay, applications of this product should be made after weeds have emerged but before alfalfa growth or re-growth interferes with application spray coverage of the target weeds. In addition to those weeds listed in the Makaze herbicide label booklet, this product will suppress or control the parasitic weed, Dodder (*Cuscuta* spp.) in Roundup Ready alfalfa. Repeat applications may be necessary for complete control.	DO NOT EXCEED 2.0 QT OF THIS PRODUCT/A WHEN MAKING APPLICATIONS BY AIR. Any sequential over-the-top application of this product must not exceed 2.0 qt (64.0 fl oz)/A. Sequential applications of this production must be at least 7 days apart. The combined total/yr for all in-crop applications in newly established and established stands must not exceed 6.0 qt (192 fl oz)/A. Remove domestic livestock before application and wait a minimum of 5 days after last application before grazing, or cutting and feeding of Roundup Ready alfalfa forage and hay.

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11.1 - Roundup Ready Alfalfa cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Over-the-top applications	This product may be applied postemergence to Roundup Ready alfalfa from emergence until 5 days prior to cutting. Any single over-the-top applications of this product must not exceed 2.0 qt/A. ATTENTION: Where Roundup Ready alfalfa is grown with a companion or cover crop, or is over seeded with a second species, over-the-top applications of this product will eliminate the non-Roundup Ready species. Tank mixtures with other herbicides, insecticides, or fungicides may result in crop injury or reduced week control and are NOT recommended for over-the-top applications of this product.	Sequential applications of this production must be at least 7 days apart.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications, including preplant during year of establishment	7.75 qt/A
Combined total per year for in-crop applications for newly established and established stands	0 qt/A
Preplant, At-planting and Preemergence single applications	2.0 qt/A

11.2 ROUNDUP READY CANOLA (Spring Varieties)

LABELED CROPS: Roundup Ready spring canola is defined as those Roundup Ready [illegible]ieties that are seeded in the spring and harvested in the fall and do not enter a winter dormancy period.

DO NOT USE THIS PRODUCT ON SPRING CANOLA WITH A ROUNDUP READY GENE [illegible]NTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOU[illegible] CAROLINA, [illegible]NESSEE, VIRGINIA AND WEST VIRGINIA EXCEPT FOR USES IN WILDLIFE FOOD PLOTS THAT WILL NOT BE FOR HUMAN OR LIVESTOCK FOO[illegible]

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant At-planting Preemergence	This product may be ap[illegible]ed before, du[illegible]g or after planting Roun[illegible]p Ready [illegible]ing canola.	Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 2.0 qt/season.
Postemergence (in-crop)	This pro[illegible]t may be [illegible]pplied postemergence to Roundup Ready sp[illegible] ca[illegible]d from emergence through the 6-leaf st[illegible]f dev[illegible]ment. App[illegible]tions made during bolting [illegible]flow[illegible]g ma[illegible]sult [illegible]crop injury and yield loss. To maxi[illegible]ze yield [illegible]tial, make applications early to elimin[illegible] competing weeds. **[illegible] Application** - Apply 11.0 to 16.0 fl oz of this pr[illegible]ct/A no later than the 6-leaf stage for the control of annu[illegible]eeds. Avoid overlapping applications as this may [illegible]sult in temporary yellowing, delayed flowering, and or g[illegible]wth reduction. Similar crop injury may result when [illegible]plications of more than 11.0 fl oz/A are applied after the 4-leaf stage. **Sequential Application** - Apply 11.0 fl oz of this product/A to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential applications are recommended for early emerged annual weeds and perennial weeds such as Canada thistle and Quackgrass, or when multiple applications are needed for adequate weed control.	No more than 2 in-crop (over-the-top) broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total of all in-crop applications must not exceed 22.0 fl oz of this product/A. Pre-harvest Interval (PHI): Allow a minimum of 60 days between last application and canola harvest.

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11.2 Roundup Ready Canola (Spring Varieties) cont'd.:
DO NOT USE THIS PRODUCT ON SPRING CANOLA WITH A ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA EXCEPT FOR USES IN WILDLIFE FOOD PLOTS THAT WILL NOT BE FOR HUMAN OR LIVESTOCK FOOD.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Total of all preplant, at-planting, preemergence applications	2.0 qt/A
Total of all in-crop applications from emergence to 6-leaf stage	1.0 qt/A

11.3 ROUNDUP READY CANOLA (Fall and Winter Varieties)
LABELED CROPS: Roundup Ready winter canola is defined as those Roundup Ready canola varieties that are seeded in the fall and harvested the following spring or summer. Winter canola varieties are intended to enter a cold period dormancy in the winter.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant At-planting Preemergence	This product may be applied before, during or after planting Roundup Ready winter canola.	Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 2.0 qt/A/season.
Postemergence (in-crop)	This product may be applied to Roundup Ready winter canola varieties from emergence to canopy closure in the fall and prior to bolting in the spring. Applications made during or after bolting may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds. Some weeds with multiple germination times, suppressed (stunted) weeds, or weeds that have overwintered may require sequential applications of this product for control. The second application should be made after some re-growth has occurred and at least 60 days after a previous application of this product. **Single Applications** - Apply 22.0 to 32.0 fl oz of this product/A in the fall. Applications in the fall should be made when weeds are small and actively growing. Use the higher rate in the labeled range when weed densities are high, when weeds have overwintered or when weeds become large and well-established. Applications of greater than 16.0 fl oz/A prior to the 6-leaf stage may result in reduced crop growth in the fall. Avoid overlaps. Spray overlaps may result in temporary yellowing and/or growth distortion. **Sequential Applications** - Apply 16.0 to 32.0 fl oz of this product/A to 2-leaf or larger canola in the fall, followed by a sequential application at the same rate and at a minimum interval of 60 days, but before bolting in the spring. Sequential applications are recommended for early emerging annual weeds and winter emerging weeds such as Downy brome, Jointed goatgrass and Ryegrass, and for weeds that have overwintered. This product will control or suppress most perennial weeds. For some perennial weeds, sequential applications may be required to reduce competition with the crop.	More than one over-the-top broadcast applications may be made from crop emergence up to the onset of bolting, and the total in-crop application must not exceed 2.0 qt this product/A. Applications of greater than 24.0 fl oz/A prior to the 6-leaf stage may result in reduced crop growth in the fall. Pre-harvest Interval (PHI): Allow a minimum of 60 days between last application and harvest of canola grain. No waiting period is required between application and open grazing of livestock.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Total of all preplant, at-planting, preemergence applications	2.0 qt/A
Total of all in-crop applications from emergence to canopy closure or prior to bolting in the spring	2.0 qt/A

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11.4 ROUNDUP READY CORN

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence At-planting	This product may be applied alone or in a tank mixture before, during or after planting corn. **Tank Mixtures:** This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso, or Micro-Tech at 50 to 100% of labeled rate. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum re-cropping interval and rotational guidelines. The more restrictive requirements apply. Note: For maximum weed control, a postemergence (in-crop) application of this product should be applied following the use of less than labeled rates of the preemergence residual products listed above. Make applications according to the rates listed in [illegible]al Weeds, Perennial Weeds, and Woody Brush and Tr[illegible] rate tables, Sections 14.0, 15.0 and 16.0.	Applying this product to crop varieties that are not designated as glyphosate tolerant will result in severe crop injury and yield loss. Do not allow contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain a Roundup Ready or glyphosate-tolerant gene, since severe injury or destruction will result. AVOID DRIFT. EX[illegible]ME CARE MUST BE USED WHEN APPLYING THIS PR[illegible]CT TO PREVENT INJURY TO DESIRABLE PLANTS A[illegible] CROPS WHICH DO NOT CONTA[illegible]LERANT GENE. See Mixing [illegible]d Application [illegible]uipment and Techniques, S[illegible]tions 6.0 a[illegible]7.0, for additional directions and restrictions on th[illegible]pplication of this product.
Postemergence (in-crop)	When applied as directed, this product c[illegible]trols labele[illegible] annual grass and broadleaf weeds in R[illegible]dy c[illegible]n. Many Perennial grasses and broadl[illegible] of wee[illegible] will b[illegible] controlled or suppressed with one o[illegible]ore ap[illegible]ation o[illegible] this product. The post-emergent applic[illegible]n of 0[illegible] to 1.5 qt/A of this product shoul[illegible]e made befor[illegible]e weed[illegible] reach a height and/or d[illegible]ity that the weeds become competitive wi[illegible] the crop, gen[illegible]ally 4-inch tall weeds or less. This product m[illegible] be app[illegible]d over-the-t[illegible] to Roundup Ready corn f[illegible]m emergenc[illegible]ough the V8 stage (8 leaves wi[illegible] collars) o[illegible]until corn height reaches 48 inches, whichev[illegible]omes f[illegible]st. Use drop n[illegible] when cor[illegible]eight is 24 to 30 inches ([illegible] [illegible]ding)[illegible]r optim[illegible]n spray coverage and weed control. For cor[illegible]eights 30 [illegible] 48 inches (free standing), apply this [illegible]rodu[illegible] ONLY using ground application equipment with [illegible] nozzles adjusted to avoid spraying into the whorls of the [illegible]n plants. [illegible] orod[illegible] is applied to whorls of corn, plant injury and [illegible]d reduction can occur. [illegible]ximum single in-crop application rate of this product up [illegible] 46-inch corn is 48.0 fl oz per/A. **Tank Mixtures:** This product may be applied in tank mixture with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, and Micro-Tech at 50 to 100% of labeled rate. This product may be applied in tank mixture with Permit and atrazine at labeled rates. Refer to the specific product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum re-cropping interval and rotational guidelines. The more restrictive requirements apply.	[illegible]e Roundup Ready Crops, Section 11.0, for precautionary in[illegible]uctions for use in Roundup Ready Crops. Single in-crop applications of this product are not to exceed 1.5 qt/A. The maximum combined total of multiple in-crop applications from emergence through the 48-inch stage is 3.0 qt/A. Allow a minimum of 10 days between in-crop applications of this product. Pre-harvest Interval (PHI): Allow a minimum of 50 days between application of this product and harvest of corn forage.

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11.4 Roundup Ready Corn cont'd.:

Postemergence (in-crop) cont'd.:	Tank Mix Partner / Maximum Height of Corn Degree / 11 inches Degree Xtra Harness Harness Xtra Harness Xtra 5.6L Bullet* / 5 inches Micro-Tech* Atrazine / 12 inches *Bullet and Micro-Tech are not registered for use as a postemergence application in TX.	
Preharvest	In Roundup Ready corn, up to 1.0 qt/A of this product can be applied preharvest. Make applications at 35% grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).	Preharvest Interval (PHI): Allow a minimum of 7 days between application and harvest.
Postharvest	This product may be applied after harvest of corn. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.	Preharvest Interval (PHI): Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Le[illegible]diuvant. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications	8.0 qt/A
Total of all preplant, preemergence, at-planting applications	5.0 qt/A
Maximum single in-crop application rate up to 48-inch corn	1.5 qt/A
Total in-crop applications from emergence through 48-inch corn	3.0 qt/A
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	1.0 qt/A

11.5 ROUNDUP READY COTTON

ATTENTION: USE OF THIS PROOUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON; HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence At-planting	This product may be applied before, during or after planting cotton. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0.	See Roundup Ready Crops, Section 11.0, for precautionary instructions for use in Roundup Ready crops.

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11.5 Roundup Ready Cotton cont'd:

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON; HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Postemergence (over-the-top)	This product may be applied by aerial or ground application equipment at rates up to 1.0 qt/A/application postemergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the 5th true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss. **Salvage Treatment:** This treatment may be used after the 4-leaf stage of development and must only be used when weeds threaten to cause the loss of the crop. 1.0 qt/A may be applied either as over-the-top applications or a post directed treatment sprayed higher on the cotton plants and over the weeds. Note: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN 1 SALVAGE TREATMENT MAY BE USED/GROWING SEASON.	See Roundup Ready Crops, Section 11.0, for precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence until harvest must not exceed 6.0 qt/A. NO MORE THAN 2 OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. NO MORE THAN 3 APPLICATIONS MAY BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST 2 NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. Preharvest Interval (PHI): ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.
Selective equipment	This product may be applied as a precision post-directed or hooded spray at rates up to 1 qt/A/application to Roundup Ready cotton through layby. At this stage, post directed equipment must be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves should be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).	See Selective Equipment, Section 7.5, for information on proper use and calibration of this equipment.
Preharvest	This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20% boll crack. Up to 2.0 qt of this product may be applied using either aerial or ground spray equipment. Tank Mixtures: This product may be tank mixed with DEF 6, Folex, Ginstar, or Prep (or generic equivalents). Note: This product will not enhance the performance of these harvest aids when applied to Roundup Ready cotton.	Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest of cotton. Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur. REFER TO MANUFACTURER'S LABELS FOR USE OF ADDITIVES (such as surfactants, stickers and spreaders) FOR PREHARVEST APPLICATION TO COTTON.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications	8.0 qt/A
Total of all preplant, preemergence, at-planting applications	5.0 qt/A
Total in-crop applications from ground cracking to layby	4.0 qt/A
Maximum preharvest application rate	2.0 qt/A

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11.6 ROUNDUP READY FLEX COTTON

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON; HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence At-planting	This product may be applied before, during or after planting Roundup Ready Flex cotton. Always plant into a weed free seedbed. In no till and stale seedbed systems, always burn down existing weeds before cotton emerges. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0.	See Roundup Ready Crops, Section 11.0, for precautionary instructions for use in Roundup Ready crops.
Postemergence (over-the-top)	When applied in accordance with this label, Makaze herbicide will control labeled annual grasses and broadleaf weeds in Roundup Ready Flex cotton. To maximize yield potential, spray cotton early to eliminate competing weeds. Many perennial weeds will be controlled or suppressed with 1 or more applications of this product. An initial application of 1.0 qt/A on 1- to [illegible]-inch tall annual grass and broadleaf weeds is recommended. This product may be applied by ground application equipment at rates up to 1.5 qt/A/application post emergence to Roundup Ready Flex cotton. In addition to broadcast applications, post directed equipment may be used to achieve weed coverage. Note: For specific rates and application instructions refer to the Annual Weeds and Perennial Weeds rate tables, Sections 14.0 and 15.0.	The maximum rate for any single in-crop application of this product is 1.5 qt/A made using ground application equipment. Crop applications rates above 1.0 qt/A made alone or with the addition of other crop chemical products containing surfactant may cause a crop response including leaf speckling or leaf necrosis. Except for pre-harvest use, do not exceed a maximum rate of 1.0 qt/A of this product when making applications by air. Between layby and 60% open bolls the maximum combined total rate of this product that may be applied is 2.0 qt/A. The maximum combined total of all applications made from crop emergence through 60% open bolls must not exceed 6.0 qt/A. Application after 10th leaf or 10th node may result in plant injury and yield loss.
Preharvest	This product may be applied for harvest annual and perennial weed control as a broadcast treatment to Roundup Ready Flex cotton after 60% boll crack. Up to 2.0 qt/A of this product may be applied using either aerial or ground spray equipment. Note: This product will not enhance the performance of harvest aids when applied to Roundup Ready Flex [illegible]	Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest of cotton. Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur. THE USE OF ADDITIVES, OTHER THAN THOSE LISTED ON ON THIS LABEL, FOR PREHARVEST APPLICATION TO COTTON IS PROHIBITED.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications (calculate the combined rate to be used for all preplant, in-crop and pre-harvest applications)	8.0 qt/A
Total of all preplant, at-planting, preemergence applications	5.0 qt/A
Total in-crop applications from ground cracking to 60% open bolls	6.0 qt/A
Maximum allowed from 60% bolls open to 7 days prior to harvest	2.0 qt/A

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11.7 ROUNDUP READY SOYBEANS

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY SOYBEANS MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTION FOR USE.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence At-planting	This product may be applied before, during or after planting soybeans. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0.	See Roundup Ready Crops, Section 11.0, for precautionary instructions for use in Roundup Ready crops.
Postemergence (in-crop) Preharvest	When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to Annual Weeds rate table, Section 14.0, for rate specifications. For specific annual weeds, an initial application of 1.0 qt/A on 2- to 8-inch tall weeds is recommended. Weeds will generally be 2 to 8 inch[illegible] 2 to 5 weeks after planting. If the initial application [illegible] delayed and weeds are larger, apply a higher rate of [illegible] product. This product may be used up [illegible]qt/A in an single in-crop application for control of an[illegible] where heavy weed densities exist. A 1.0 to 2.0 qt/A rate (single or multiple [illegible]) of this product will control or s[illegible]s perennial wee[illegible] such as: Bermudagrass, Canada thistle, Common milkweed, Field bindweed, Hemp dogbane, Horsenettle, Johnsongrass, Marestail (horseweed), nutsedge, Quackgrass, Redvine, Rhizome, Swamp smartweed, Trumpetcreeper and Wirestem muhly. For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product. Under adverse growing conditions such as drought, hail, wind damage or poor soybean stand that slows or delays canopy closure, a sequential application of this may be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY SOYBEAN CROP. To control Giant ragweed, it is recommended that 1.0 qt/A of this product be applied when the weed is 8 to 10 inches tall to increase control and possibly avoid the need for a sequential application.	The combined total application from crop emergence through harvest must not exceed 3.0 qt/A. The maximum rate for a single in-crop application is 2.0 qt/A. The maximum combined total of this product that may be applied during flowering is 2.0 qt/A.
Preharvest	Care should be taken to avoid excessive seed shatter loss due to ground application equipment. This product provides weed control when applied prior to harvest of soybeans. Up to 1.0 qt/A of this product can be applied by aerial or ground application.	Pre-harvest interval (PHI): Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay.
Postharvest	This product may be applied after harvest of Roundup Ready soybeans. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures 2,4-D or dicamba may be used.	

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

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11.7 Roundup Ready Soybeans cont'd.:

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications	8.0 qt/A
Total of all preplant, preemergence, at-planting applications	5.0 qt/A
Total in-crop applications from cracking throughout flowering	3.0 qt/A
Maximum pre-harvest application rate	1.0 qt/A

11.8 ROUNDUP READY SUGAR BEETS

The Roundup Ready designation indicates that the sugar beet contains a patented gene, which provides tolerance to this product. Information on Roundup Ready sugarbeet may be obtained from your seed supplier or Loveland Products, Inc. representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

DO NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready gene listed in Annual and Perennial Crops, Section 8.0.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant At-planting Preemergence	This product may be applied before, during or after planting of Roundup Ready sugar beets. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees tables, Sections 14.0, 15.0 and 16.0.	Maximum quantity of this product that may be applied for preplant, at-planting and preemergence applications combined is 5.0 qt/A/season.
Postemergence (in-crop)	This product may be applied over-the-top of Roundup Ready sugar beets for control of annual grasses and broadleaf weeds from emergence to 30 days prior to harvest. To maximize yield potential, spray sugar beets early to eliminate competition. Up to 4 sequential applications of this product may be made with at least 10 days between application. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.	The combined total application from crop emergence through harvest must not exceed 4.5 qt/A. The maximum rate for any single application between emergence to the 8-leaf stage is 1.5 qt/A. The maximum rate for any single application between the 8-leaf stage and canopy closure is 1.0 qt/A. Pre-harvest Interval (PHI): Allow a minimum of 30 days between last application and sugar beet harvest. For any crop NOT listed in the crops sections of this label, applications must be at least 30 days prior to planting.

Enhanced product performance may be obtained with the use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications	8.0 qt/A
Total of all preplant, preemergence applications	5.0 qt/A
Emergence to 8-leaf stage	2.5 qt/A
Between 8-leaf stage and canopy closure	2.0 qt/A

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12.0 NON-CROP USES AROUND THE FARMSTEAD

12.1 WEED CONTROL, TRIM AND EDGE

LABELED SITES: Non-crop areas including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Any suitable application equipment described in Section 7.0.	This product may be used to control annual weeds, perennials weeds and woody brush which are found in any part of the farmstead. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. Tank Mixtures: This product may be tank mixed with the following products (or generic equivalents). Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 1.0 qt/A of this product wh[en] weeds are less than 6 inches tall and 1.5 qt/A when weed[s] are greater than 6 inches tall. For perennial weeds, [a]pply 2.0 to 5.0 qt/A in these tank mixes. For tank mixtures with these products through back[pack] sprayers, handguns or other high-volume spray-to-we[t] applications, see the Hand-held or High-[V]olume Equipment, Section 7.4, for allowable application rates. Arsenal® — Plate[au]® Barricade® 65WG — Princep [4L] Diuron — Princep Liq[uid] Endurance® — Ronstar® 50 [WP] Escort® — Sahara®[DG] Karmex DF — Simazine Krovar DF — Surflan Oust — Vanq[uish]® Pendulum 3.3 EC — 2,4-D Pendulum WDG For control [of] additional control of the following perennial [w]eeds, apply [1] to 2.0 [oz] Plateau + 2.0 to 4.0 oz [o]f Oust/[Arsenal] Bahiagrass — Fescue, tall Bermudagrass — Johnsongrass Dallisgrass — Poorjoe Dallisgrass — Quackgrass Dock, curly — Vaseygrass Dogfennel — Vervain, blue	This product plus dicamba tank mixtures may not be applied by air in CA.

12.2 GREENHOUSE/SHADEHOUSE

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Spot spray Directed spray	Desirable vegetation should not be present during application. This product may be used to control weeds in and around greenhouses and shadehouses. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0.	Air circulation fans must be turned off during application.

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12.3 CHEMICAL MOWING

LABELED USES: Farm Ditches and Other Parts of Farmsteads

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Any suitable application equipment described in Section 7.0.	This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 8.0 fl oz of Makaze/A when treating tall fescue, fine fescue, orchardgrass or quackgrass covers. Use 6.0 fl oz of Makaze/A when treating Kentucky bluegrass. Use 16.0 fl oz of Makaze when treating bermudagrass. Use 64.0 fl oz of Makaze when treating Torpedograss or Paragrass. Apply treatments in 10.0 to 20.0 gal of spray solution/A.	Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

12.4 CUT STUMPS

LABELED USES: Cut Stumps (on any non-crop site listed on this label)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Suitable Hand-held Equipment	This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100% solution of this product to the freshly-cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion. Alder — Reed, giant Eucalyptus — Salt cedar Madrone — Sweetgum Oak — Tan oak Pepper, Brazilian — Willow Pine, Aleppo	Cut sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

12.5 HABITAT MANAGEMENT

LABELED USES: Habitat Restoration and Maintenance, Wildlife Food Plots

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Any suitable application equipment described in Section 7.0.	This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas including rangeland and wildlife refuges. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad-spectrum vegetation control requirements in habitat management areas. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement. This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area.	If tillage is needed to prepare a seedbed, wait 7 days after application before tillage to allow translocation into underground plant parts.

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13.0 FORESTRY, INDUSTRIAL, TURF AND ORNAMENTAL

13.1 FORESTRY SITE PREPARATION

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom sprayers Shielded boom sprayers High-volume off-center nozzles Hand-held equipment and similar equipment	This product is recommended for the control or partial control of woody brush, trees and herbaceous weeds in forestry. This product is also recommended for use in preparing or establishing wildlife openings with these sites and maintaining logging roads. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. This product is recommended for use in site preparation prior to planting any tree species, including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites. Use higher rates of this product within the labeled range for control or partial control of woody brush, trees and hard-to-control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Increase rates within the labeled range for control of perennial herbaceous weeds any time after emergence and before seedheads, flowers or berries appear. Use the lower rates of this product within the labeled range for control of annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to the foliage of actively growing annual herbaceous weeds any time after emergence. Tank Mixtures: Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Use according to the restrictive precautionary statements for each product in the mixture. Note: For forestry site preparation, make sure the tank mix product is approved for use prior to planting the desired species. Observe planting interval restrictions. Any labeled rate of this product may be used in a tank mix with the following products (or generic equivalents) for forestry site preparation. Arsenal Applicators Concentrate Chopper® Escort or Escort XP Garlon® 3A Garlon 4A Landmark® XP Oust or Oust XP Westar® For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher labeled rates.	Do not apply this product as an over-the-top broadcast spray for forestry, conifer or hardwood release unless otherwise specified on this label, or in separate supplemental labeling published by Loveland Products, Inc. for this product.

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13.2 NON-CROP AREAS AND INDUSTRIAL SITES

LABELED USES: Non-crop areas including airports, apartment complexes, Christmas tree farms, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, dry ditches, dry canals, fencerows, golf courses, greenhouses, industrial sites, landscape areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals parks, parking areas, pastures, petroleum tank farms, and pumping installations, plant nurseries, public areas, railroads, range-land, recreational areas, residential areas, rights-of-way, roadsides, schools, sod or turf, seed farms, sports complexes, storage areas, substations, turfgrass, areas utility sites, warehouse areas and wildlife management areas

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
This product may be applied with any suitable application equipment described in Section 7.0.	This product may be used to trim and edge around objects in non-crop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees r tables, Sections 14.0, 15.0 and 16.0. Repeated applications of this product may be used weeds emerge, to maintain bare ground. Tank Mixtures: This product may be tank mixed with e following products (or generic equivale rovided t the specific product is registered for use get s Refer to these product labels for a oved s and application rates. Read and carefully o rve the utionary statements and all other information ap ing o labels of all herbicides us Use according the most restrictive precautionary tatements for each p uct in the mixture. User is res nsible for ens ng that the mixture product's label ows the speci applications. Arsenal Atrazine Barricad 5WG Certainty dic ba* aron Enduran Escort XP y® 75DF Gar A rlon l 2XL var I DF ust Oust XP Outride thalin Plateau Crossbow® L Landmark II MP Landmark II Poast® Ronstar 50 WP simazine Surflan AS Surflan WDG Transline® Velpar® DF Velpar L 2,4-D When applied as a tank mixture for bare ground, this product provides control of the emerged annual weeds and control of partial control of emerged perennial weeds, woody brush and trees. For control or partial control of the following perennial weeds, apply 1.0 to 2.0 qt of Makaze + 2.0 to 4.0 oz of Oust or Oust XP/A. Bahiagrass, Bermudagrass, Broomsedge, Dallisgrass, Dock, curly, Dogfennel, Fescue, tall, Johnsongrass, Poorjoe, Quackgrass, Vaseygrass, Vervain, blue	*This product plus dicamba tank mixtures may not be applied by air in C

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13.3 INJECTION AND FRILL (Woody Brush and Trees)

LABELED SITES: Woody brush and Trees in non-crop areas

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Injection or Frill applications	Apply this product using suitable equipment which must penetrate into the living tissue. Apply the equivalent of 1.0 mL of this product per each 2 to 3 inches of trunk diameter at breast height (DBH). This is best achieved by applying a 50 to 100% concentration of Makaze either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. For best results, application should be made during periods of active growth and after full leaf expansion. This product will control many species, some of which are listed below: Control: Oak, Poplar, Sweetgum, Sycamore Partial Control: Black gum, Dogwood, Hickory, Maple, red	Avoid application techniques that allow runoff to occur from frilled or cut areas in species that exude sap freely. In species such as this make the frill or cuts at an oblique angle to produce a cupping effect and use a 100% concentration of this product.

13.4 HOLLOW STEM INJECTION

LABELED SITES: Hollow-stem plants, growing in any non-crop site specified on this label

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Hand-held injection devices that deliver labeled amounts of this product	For control of the following hollow stem plants, use the application rates below: • Japanese Knotweed (*Polygonum cuspidatum*) Inject 5.0 mL stem Makaze between 2nd and 3rd internode. • Bohemian Knotweed (*Polygonum bohemicum*) Inject 5.0 mL stem Makaze between 2nd and 3rd internode. • Giant Hogweed (*Heracleum mantegazzianum*) Inject 1 leaf cane/plant 12 inches above the root crown with 5 mL of a 5% v/v solution of Makaze. • Poison Hemlock (*Conium maculatum*) Inject 1 leaf cane/plant 10 to 12 inches above the root crown with 5.0 mL of a 5% v/v solution of Makaze. • Field horsetail (*Equisetum arvense*) Inject 1 segment above the root crown with 0.5 mL/stem of Makaze. Use a small syringe that calibrates to this rate. • Canada Thistle (*Circisum arvense*) Cut 8 to 9 of the tallest plants at bud stage in a clump with clippers. Use a cavity needle that is pushed into the stem center and then slowly removed as 0.5 mL/stem of this product is injected into the stem.	The combined total for all treatments must not exceed 7.0 qt of Makaze/A. At 5.0 mL/stem, 7.0 qt will treat approximately 1300 stems/A.

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13.5 ORNAMENTALS, PLANT NURSERIES AND CHRISTMAS TREES

LABELED SITES: Plant Nurseries, Christmas Tree farms and other non-food tree production sites

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Post directed Trim-and-edge	This product may be used as a post directed spray around established woody ornamental species (including arborvitae azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce and yew, growing in plant nurseries, on Christmas tree farms or on other non-food tree production sites), or to trim and edge around trees, buildings, sidewalks, roads, potted plants and other objects in a production setting. Apply at a concentration labeled by Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0, appropriate to the species of weed to be controlled. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.	UNLESS OTHERWISE DIRECTED, THIS PRODUCT IS NOT ALLOWED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES. Care must be taken to avoid contact of spray, drift or mist with foliage or green bark of desirable ornamental species.
Site preparation	This product may be used prior to planting any tree, shrub or vine, including Christmas tree seedlings, in a nursery or production setting.	
Wiper application	This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established trees, shrubs or vines. See Selective Equipment, Section 7.5, for further information about the proper use of wiper applicators.	

13.6 PARKS, RECREATIONAL AND RESIDENTIAL AREAS

LABELED SITES: Around Trees, Fences, Paths, Driveways, around Buildings, Patios, Sidewalks, Flower Beds, around Shrubs, and other Ornamental Plants

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Trim-and-edge Spot treatment	This product may be used to eliminate unwanted weeds growing in areas listed above. Use suitable hand-held equipment for directed spraying according to instructions in Mixing for Hand-held Sprayers, Section 6.3. If necessary, use cardboard or plastic to shield desirable plants. Do not use for spot weed control in lawns since desirable lawn grass will also be killed.	Spray only when air is calm. Care must be taken to avoid contact of spray, drift or mist with foliage or green bark of desirable ornamental species.
Site preparation Lawn renovation	This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), lawn renovation or prior to laying asphalt or beginning construction projects. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. Apply using suitable broadcast or directed spray equipment. For lawn renovation, thorough coverage is necessary to kill all weeds and old lawn. For best results, apply when daytime temperatures are at least 60 °F. Do not mow for 7 days before or after treatment. Seven days after application, soil may be tilled, fertilized and seeded.	Spray only when air is calm. Care must be taken to avoid contact of spray, drift or mist with foliage or green bark of desirable ornamental species.

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13.7 RAILROADS

LABELED SITES: Railroad Rights-of-Way, Railroad Ballast areas

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom sprayers Shielded boom sprayers High-volume off-center nozzles Hand-held equipment	All of the instructions in Noncrop Areas and Industrial Sites, Section 13.2, apply to railroads. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. This product may be used to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used as weeds emerge to maintain bare ground. This product may be used to control tall-growing weeds to improve line of sight at railroad crossings and reduce the need for mowing along rights-of-way. For crossing applications, up to 80.0 gal of spray solution/A may be used. Tank Mixtures: This product may be tank mixed with the following products (or generic equivalent) for ballast, shoulder, spot, bare ground and crossing treatments provided that the specific product is registered for use on such sites. Refer to these product labels for approved non-crop sites and application rates. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive precautionary statements for each product in the mixture. Arsenal — Krovar I DF dicamba — Oust diuron — Sahara Escort — Spike® Garlon 3A — Velpar Garlon 4 — 2,4-D Hyvar® X Brush control: This product may be used to control woody brush and trees on railroad rights-of-way. Apply 4.3 to 10.0 qt of Makaze/A as a broadcast spray, using boom-type or boomless nozzles. Up to 80.0 gal of spray solution/A may be used. Apply a 0.5 to 2% solution of this product when using high-volume spray-to-wet applications. Apply a 5 to 10% solution of this product when using low volume directed sprays for spot treatment. This product may be mixed with the following products (or generic equivalent) for enhanced control of woody brush and trees: Arsenal — Tordon® 22K Escort — Tordon K Garlon 3A — Transline Garlon 4 — Vanquish Kernite — Velpar	Observe application precautions in Application and Techniques, Section 7.0. Avoid application to non-target plants due to drift, overspray or runoff.

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13.8 ROADSIDES

LABELED SITES: Roadside Rights-of-Way areas (including Shoulders, Guardrails and Signposts)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom sprayers Shielded boom sprayers High-volume off-center nozzles Hand-held equipment and similar equipment	All the instructions in the Noncrop Areas and Industrial Sites, Section 13.2, apply to roadsides. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. This product may be used on road shoulders, under guardrails and around signposts and other objects along roadsides that may be obstacles to mowing. Tank Mixtures: This product may be tank mixed with the following products (or generic equivalent) for shoulder, guardrail, spot and bare ground treatments: diuron — Princep Liquid Endurance — Rifle® Escort — Ronstar 50 WP Krovar I DF — Sahara Oust — simazine Pendulum 3.3 EC — Surflan Pendulum WDG — Vanquish Princep DF — 2,4-D See Noncrop Areas and Industrial Sites, Section 13.2, for instructions for tank mixing.	Observe application precautions in Application Equipment and Techniques, Section 7.0. Avoid application to non-target plants due to drift, overspray or runoff.
Spot treatment	This product must be used as a spot treatment to control unwanted vegetation growing along roadsides.	

13.9 UTILITY SITES

LABELED SITES: Electrical Power, Pipeline And Telephone rights-of-way and in other sites associated with these rights-of-way, Including Substations, Roadsides, Railroads or Similar Rights-of-way that run in conjunction with Utilities.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom sprayers Shielded boom sprayers High-volume off-center nozzles Hand-held equipment and similar equipment	This product may be used in utility sites and substations to control unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. Repeated applications of this product may be used as weeds emerge to maintain bare ground. This product can also be used when preparing or establishing wildlife openings within these sites, maintaining access roads and for side trimming along utility rights-of-way. For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands of tough-to-control woody brush and trees, use the higher labeled rates. Tank Mixtures: Tank mixtures of this product may be used to increase the spectrum of control for herbaceous weeds, woody brush and trees. This product may be tank mixed with the following products (or generic equivalent). Refer to these products labels for approved non-crop sites and	Observe application precautions in Application Equipment and Techniques, Section 7.0. Avoid application to non-target plants due to drift, overspray or runoff.

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13.9 Utility Sites cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom sprayers *Shielded boom sprayers* *High-volume off-center nozzles* *Hand-held equipment and similar equipment cont'd.*	application rates. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive precautionary statements for each product in the mixture. User is responsible for ensuring that the mixture product's label allows the specific application when tank mixing with a single generic active ingredient listed below. Arsenal atrazine[1] Barricade 65WG dicamba[1] diuron[1] Endurance Escort Escort XP Garlon 3A[2] Garlon 4[3] Krenite® Krovar 1 DF Oust Oust XP Outrider pendimethalin[1] Plateau Princep Ronstar 50WP Sahara simazine[1] Surflan AS Surflan WDG Transline Vanquish Velpar DF Velpar L 2,4-D[2] [1]Tank mixtures with products containing this generic active ingredient may be made provided the specific product is registered for the use. [2]Ensure that Garlon 3A is thoroughly mixed with water according to label directions before adding this product. Have spray mixture agitating at the time this product is added to avoid spray incompatibility problems. [3]For side trimming treatments, it is recommended that this product be used alone or in a tank mixture with Garlon.	Observe application precautions in Application Equipment and Techniques, Section 7.0. Avoid application to non-target plants due to drift, overspray or runoff.

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14.0 ANNUAL WEEDS RATE TABLES (Alphabetical by Species)

WATER CARRIER VOLUMES OF 3.0 TO 40.0 GALLONS PER ACRE FOR GROUND APPLICATIONS AND 3.0 TO 5.0 GALLONS PER ACRE FOR AERIAL APPLICATIONS ARE REQUIRED.

- Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.
- Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.
- Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.
- For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.
- This product may be used up to 48.0 fluid ounces per acre where heavy weed densities exist.

ANNUAL WEEDS RATE TABLE

WEED SPECIES	APPLICATION RATE (Fl Oz/Acre)				
	16	24	32	40	48
	Maximum height/length (in inches)				
Ammannia, purple	3"	6"	12"	-	18"
Annoda, spurred	-	2"	3"	5"	8"
Barley	18"	18+"	-	-	-
Barnyardgrass	-	3"	6"	7"	9"
Bassia, fivehook	-	-	6"	-	-
Beggarweed, Florida	-	5"	8"	-	-
Bittercress	12"	20"	-	-	-
Bluegrass, annual	10"	-	-	-	-
Bluegrass, bulbous	6"	-	-	-	-
Brome, downy[1, 2]	6"	12"	-	-	-
Brome, Japanese	6"	12"	24"	-	-
Browntop panicum	6"	8"	12"	-	24"
Buckwheat, wild[3]	-	1"	2"	-	-
Burcucumber	-	6"	12"	-	18"
Buttercup	6"	20"	-	-	-
Carolina geranium	-	-	4"	-	-
Carpetweed	-	6"	12"	-	-
Cheat[2]	6"	20"	-	-	-
Chervil	20"	-	-	-	-
Chickweed	-	12"	18"	-	-
Cocklebur	12"	18"	24"	-	36"
Copperleaf, hophornbeam	-	2"	4"	-	6"
Copperleaf, Virginia	-	2"	4"	-	6"
Coreopsis, plains	-	6"	12"	-	18"
Corn, volunteer	6"	12"	20"	-	-
Corn speedwell	12"	-	-	-	-
Crabgrass	3"	6"	12"	-	-
Crowfootgrass	-	-	6"	-	12"
Cutleaf evening primrose	-	-	3"	-	6"
Devilsclaw (unicorn plant)	-	-	6"	-	-
Dwarf dandelion	12"	-	-	-	-
Eastern mannagrass	8"	12"	-	-	-
Eclipta	4"	4"	8"	12"	-
Fall panicum	4"	-	6"	-	12"
Falsedandelion	-	20"	-	-	-
Falseflax, smallseed	12"	-	-	-	-
Fiddleneck	-	6"	12"	-	-
Field pennycress	6"	12"	-	-	-
Filaree	-	-	6"	-	12"
Fleabane, annual	6"	20"	-	-	-
Fleabane, hairy (*Conyza bonariensis*)	-	-	6"	-	10"
Fleabane, rough	3"	6"	12"	-	-
Florida pusley	-	-	4"	-	6"
Foxtail, giant, bristly, yellow	6"	12"	20"	-	-
Foxtail, Carolina	10"	-	-	-	-
Foxtail, green	12"	-	-	-	-
Goatgrass, jointed	6"	12"	-	-	-
Goosegrass	-	3"	6"	-	12"
Grain sorghum (milo)	6"	12"	20"	-	-

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Annual Weeds Rate Table cont'd.:

WEED SPECIES	APPLICATION RATE (Fl Oz/Acre)				
	16	24	32	40	48
	Maximum height/length (in inches)				
Groundcherry	-	3"	6"	-	9"
Groundsel, common	-	6"	10"	-	-
Hemp sesbania	-	2"	4"	6"	8"
Henbit	-	-	6"	-	12"
Horseweed/Marestail (*Conyza canadensis*)	-	6"	12"	-	18"
Itchgrass	6"	8"	12"	-	18"
Jimsonweed	-	-	12"	-	18"
Johnsongrass, seedling	6"	12"	18"	-	24"
Junglerice	-	3"	6"	7"	-
Knotweed	-	-	6"	-	12"
Kochia[4]	-	3" to 6"	12"	-	-
Lambsquarters	-	6"	12"	-	-
Little barley	6"	12"	-	-	-
London rocket	6"	-	24"	-	-
Mayweed	-	2"	6"	12"	18"
Morningglory (*Ipomoea* spp.)	-	-	3"	-	6"
Mustard, blue	6"	12"	18"	-	-
Mustard, tansy	6"	12"	18"	-	-
Mustard, tumble	6"	12"	18"	-	-
Mustard, wild	6"	12"	18"	-	-
Nightshade, black	-	4"	6"	-	12"
Nightshade, hairy	-	4"	6"	-	12"
Oats	3"	6"	18"	-	-
Pigweed	-	18"	18"	24"	-
Prickly lettuce	-	6"	12"	-	-
Purslane	-	-	3"	-	6"
Ragweed, common	-	6"	12"	-	18"
Ragweed, giant	-	6"	12"	-	18"
Red rice	-	-	4"	-	-
Rye volunteer/cereal[2]	6"	18"	18"+	-	-
Ryegrass	-	-	6"	-	12"
Sandbur, field	6"	12"	-	-	-
Sandbur, longspine	6"	12"	-	-	-
Shattercane	6"	12"	20"	-	-
Shepherdspurse	6"	12"	-	-	-
Sicklepod	-	2"	4"	-	8"
Signalgrass, broadleaf	-	3"	6"	7"	9"
Smartweed, ladysthumb	-	-	6"	-	9"
Smartweed, Pennsylvania	-	-	6"	-	9"
Sowthistle, annual	-	-	6"	-	12"
Spanishneedles	-	-	6"	-	12"
Speedwell, purslane	12"	-	-	-	-
Sprangletop	6"	12"	20"	-	-
Spurge, prostrate	-	6"	12"	-	-
Spurge, spotted	-	6"	12"	-	-
Spurry, umbrella	6"	-	-	-	-
Stinkgrass	-	12"	-	-	-
Sunflower	12"	18"	-	-	-
Swinecress	-	5"	12"	-	-

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Annual Weeds Rate Table cont'd.:

WEED SPECIES	APPLICATION RATE (Fl Oz/Acre)				
	16	24	32	40	48
	Maximum height/length (in inches)				
Teaweed/Prickly sida	-	2"	4"	-	6"
Texas panicum	6"	8"	12"	24"	-
Thistle, Russian[5]	-	6"	12"	-	-
Velvetleaf	-	-	6"	-	12"
Virginia pepperweed	-	18"	-	-	-
Waterhemp	-	-	6"	-	12"
Wheat[2]	6"	12"	18"	-	-
Wheat (overwintered)	-	6"	12"	-	18"
Wild oats	3"	6"	18"	-	-
Wild proso millet	-	6"	12"	-	-
Witchgrass	-	12"	-	-	-
Woolly cupgrass	-	6"	12"	-	-
Yellow rocket	-	12"	20"	-	-

[1]For control of Downy brome in no-till systems use 24.0 fluid ounces per acre.
[2]Performance is better if application is made before this weed reaches the boot stage of growth.
[3]Use 24.0 fluid ounces per acre of this product to control Wild buckwheat in the cotyledon to 2-leaf stage.
Use 32.0 fluid ounces per acre to control 2- to 4-leaf Wild buckwheat.
For improved control of Wild buckwheat over 2 inches in size, use sequential treatments of 12.0 fluid ounces followed by 32.0 fluid ounces of this product per acre.
[4]Do not treat Kochia in the button stage.
[5]Control of Russian thistle may vary based on environmental conditions and spray coverage.
Whenever possible, a tank mixture with 2,4-D as described below may improve control.

14.1 ANNUAL WEEDS - Water Carrier Volumes of 10.0 to 40.0 Gallons per Acre
Apply 1.0 to 2.0 quarts of this product per acre. Use 1.0 quart per acre if weeds are less than 6 inches tall, and 1.5 quarts per acre if weeds are 6 to 12 inches tall, and 2.0 quarts per acre if weeds are greater than 12 inches tall.

These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10.0 to 40.0 gallons per acre for ground applications. Older, mature (hardened) annual weeds specified may require higher rates even of they meet the size requirements.

14.2 ANNUAL WEEDS - Tank Mixtures with 2,4-D or Dicamba or Picloram 22K
12.0 to 16.0 fluid ounces of this product plus 0.25 pound active ingredient of dicamba or 0.5 pound active ingredient of 2,4-D per acre or 1.0 to 2.0 fluid ounces of Picloram 22K per acre will control the following weeds with the maximum height or length indicated:

6" - Prickly lettuce, Marestail/Horseweed (*Conyza canadensis*), Morningglory (*Ipomoea* spp), Kochia (dicamba only), and buckwheat (Picloram 22K only).

12" - Cocklebur, Lambsquarters, Pigweed, Russian thistle (2,4-D only).

16.0 fluid ounces of this product plus 0.5 pound active ingredient of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: Common ragweed, Giant ragweed, Pennsylvania smartweed, and Velvetleaf.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba or Picloram 22K is applied within 45 days of planting.

DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

14.3 ANNUAL WEEDS – Hand-Held or High-Volume Equipment
For control of weeds listed in the Annual Weeds rate table, Section 14.0, apply a 0.5% solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 1% solution.

For best results, use a 2% solution on harder-to-control perennials, such as Bermudagrass, Canada thistle, Dock, Dogbane milkweed, Field bindweed and Hemp.

When using application methods that result in less than complete coverage, use a 5% solution for annual and perennial weeds and a 5 to 10% solution for Woody brush and Trees.

14.4 ANNUAL WEEDS - Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems
For use only in Colorado, Kansas, Nebraska, Oklahoma, Oregon, South Dakota, and Washington. In Oregon and Washington, do not exceed 1.0 pound of atrazine per acre.

24.0 to 28.0 fluid ounces of this product plus 1.0 to 2.0 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 28.0 ounces for control), Downy brome, Field sandbur, Green foxtail, Kochia (add 0.125 pound of dicamba for control) Lambsquarters, Pigweed, Prickly lettuce, Stinkgrass, Tansy mustard, Russian thistle, Volunteer wheat and Witchgrass.

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Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures.

15.0 PERENNIAL WEEDS RATE TABLE (Alphabetical by Species)

Apply to actively growing perennial weeds.

Note: If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the specified stages.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence. Unless otherwise stated, allow 7 or more days after application before tillage. Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.

For hand-held sprayers, prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

	Amount of Makaze					
Desired Volume	**0.5%**	**1%**	**1.5 %**	**2%**	**5%**	**10%**
1.0 Gal	0.6 oz	1.3 oz	2.0 oz	2.6 oz	6.5 oz	13.0 oz
25.0 Gal	1.0 pt	1.0 qt	1.5 qt	2.0 qt	5.0 qt	10.0 qt
100 Gal	2.0 qt	1.0 gal	1.5 gal	2.0 gal	5.0 gal	10.0 gal

WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Alfalfa	1.0 to 2.0	3.0 to 10.0	2%	Make applications after the last hay cutting in the fall. Allow Alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.
Alligatorweed	4.0	3.0 to 20.0	1.5%	Partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.
Anise (fennel)	—	—	1 to 2%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Bahiagrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early head stage.
Bentgrass	1.5	10.0 to 20.0	2%	For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.
Bermudagrass	3.0 to 5.0	3.0 to 20.0	2%	For control, apply 5.0 qt of Makaze/A. For partial control, apply 3.0 qt/A. Treat when Bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.
Bermudagrass, water (Knotgrass)	1.0 to 1.5	5.0 to 10.0	2%	Apply 1.5 qt of Makaze in 5.0 to 10.0 gal of water/A. Apply when Water bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field. Fall applications only: Apply 1.0 qt of Makaze in 5.0 to 10.0 gal of water/A. Fallow fields should be tilled prior to application. Apply prior to frost on Water bermudagrass that is 12 to 18 inches in length. This product is not registered in CA for use on Water bermudagrass.
Bindweed, field	0.5 to 5.0	3.0 to 20.0	2%	Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth. For control, apply 4.0 to 5.0 qt of Makaze/A west of the Mississippi River and 3.0 to 4.0 qt east of the Mississippi River. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost. Also for control, apply 2.0 qt of Makaze + 0.5 lb AI of Rifle in 10.0 to 20.0 gal of water/A. Do not apply by air. For suppression on irrigated agricultural land, apply 1.0 to 2.0 qt of Makaze + 1.0 lb AI of 2,4-D in 10.0 to 20.0 gal of water/A with ground equipment only.

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WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Bindweed, field cont'd.	0.5 to 5.0	3.0 to 20.0	2%	Applications should be made following harvest or in fall fallow ground when the Bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least 1 irrigation will promote active Bindweed growth. For suppression, apply 16.0 fl oz of Makaze + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A for ground applications and 3.0 to 5.0 gal of water/A for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length. In CA only, apply 1.0 to 5.0 qt of Makaze/A. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 1.0 qt of this product in 3.0 to 10.0 gal of water/A. Apply to Bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.
Bluegrass, Kentucky	1.0 to 2.0	3.0 to 40.0	2%	Apply 2.0 qt of Makaze in 10.0 to 40.0 gal of water/A when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1.0 to 1.5 qt of Makaze in 3.0 to 10.0 gal of water/A. Apply to actively growing plants when most have reached 4 to 12 inches in height.
Blueweed, Texas	3.0 to 5.0	3.0 to 40.0	2%	Apply 4.0 to 5.0 qt of Makaze/A west of the Mississippi River and 3.0 to 4.0 qt/A east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.
Brackenfern	3.0 to 4.0	3.0 to 40.0	1 to 1.5%	Apply to fully expanded fronds which are at least 18 inches long.
Bromegrass, smooth	1.0 to 2.0	3.0 to 40.0	2%	Apply 2.0 qt of Makaze in 10.0 to 40.0 gal of water/A when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1.0 to 1.5 qt of Makaze in 3.0 to 10.0 gal of water/A. Apply to actively growing plants when most have reached 4 to 12 inches in height.
Bursage, woolly-leaf	—	3.0 to 20.0	2%	For control, apply 2.0 qt of Makaze + 1.0 pt of Rifle/A. For partial control, apply 1.0 qt of Makaze + 1.0 pt of Rifle/A. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.
Canarygrass, reed	2.0 to 3.0	3.0 to 40.0	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Cattail	3.0 to 5.0	3.0 to 40.0	2%	Apply when most plants have reached the early head stage.
Clover; red, white	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early bud stage. Also for control, apply 16.0 to 32.0 fl oz of Makaze + 0.5 to 1.0 lb of 2,4 -D in 3.0 to 10.0 gal of water/A.
Cogongrass	3.0 to 5.0	3.0 to 40.0	2%	Apply when Cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.
Dallisgrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early head stage.
Dandelion	3.0 to 5.0	3.0 to 40.0	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16.0 fl oz of Makaze + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A.
Dock, curly	3.0 to 5.0	3.0 to 40.0	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16.0 fl oz of Makaze + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A.

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WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Dogbane, hemp	4.0	3.0 to 40.0	2%	Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. For suppression, apply 16.0 fl oz of Makaze + 0.5 lb AI of 2,4-D in 3.0 to 10.0 gal of water/A for ground applications and 3.0 to 5.0 gal of water/A for aerial applications. Delay applications until maximum emergence of Dogbane has occurred.
Fescue (except tall)	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early head stage.
Fescue, tall	1.0 to 3.0	3.0 to 40.0	2%	Apply 3.0 qt of Makaze/A when most plants have reached boot-to-early seedhead stage of development. Fall applications only: Apply 1.0 qt of Makaze in 3.0 to 10.0 gal of water/A. Apply to Fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 8.0 pt/A of Makaze will improve long-term control and control seedlings germinating after fall treatments or the following spring.
Guineagrass	2.0 to 3.0	3.0 to 40.0	1%	Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment.
Horsenettle	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early bud stage.
Horseradish	4.0	3.0 to 40.0	2%	Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.
Iceplant	—	—	1.5 to 2%	Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.
Jerusalem artichoke	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early bud stage.
Johnsongrass	0.5 to 3.0	3.0 to 40.0	1%	In annual cropping systems, apply 1.0 to 2.0 qt of Makaze/A. Apply 1.0 qt of Makaze in 3.0 to 10.0 gal of water/A. Use 2.0 qt of Makaze when applying 10.0 to 40.0 gal of water/A. In noncrop, or areas where annual tillage (no till) is not practiced, apply 2.0 to 3.0 qt of Makaze, in 10.0 to 40.0 gal of water/A. For best results, apply when most plants have reached the boot to head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using the 1.0 qt/A rate. For burndown of Johnsongrass, apply 1.0 pt of is not practiced, in 3.0 to 10.0 gal of water/A before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage. Spot treatment (partial control or suppression) - Apply a 1% solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage must be uniform and complete.
Kikuyugrass	2.0 to 3.0	3.0 to 40.0	2%	Spray when most Kikuyugrass is at least 8 inches in height (3- or 4-leaf stage of growth). Allow 3 or more days after application before tillage.
Knapweed	3.0	3.0 to 40.0	2%	Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.
Lantana	—	—	1 to 1.25%	Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.
Lespedeza	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early bud stage.
Milkweed, common	3.0	3.0 to 40.0	2%	Apply when most plants have reached the late bud to flower stage of growth.
Muhly, wirestem	1.0 to 2.0	3.0 to 40.0	2%	Use 1.0 qt of Makaze, in 3.0 to 10.0 gal of water/A. Use 2.0 qt of Makaze when applying 10.0 to 40.0 gal of water/A or in pasture, sod, or noncrop areas. Spray when the Wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Pre-harvest Interval (PHI): Allow 3 or more days after application before tillage.
Mullein, common	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early bud stage.
Napiergrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early head stage.

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WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Nightshade, silverleaf	2.0	3.0 to 10.0	2%	Applications should be made when at least 60% of the plants have berries. Fall treatments must be applied before a killing frost.
Nutsedge; purple, yellow	0.5 to 3.0	3.0 to 40.0	1 to 2%	Apply 3.0 qt of Makaze/A or apply a 1 to 2% solution for control of Nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers. Sequential applications: 1.0 to 2.0 qt of Makaze in 3.0 to 10.0 gal of water/A will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control. For partial control of existing plants apply 1.0 pt to 2.0 qt of Makaze in 3.0 to 40.0 gal of water/A. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.
Orchardgrass	1.0 to 2.0	3.0 to 40.0	2%	Apply 2.0 qt of Makaze in 10.0 to 40.0 gal of water/A when most plants have reached mid- to early seed-head stage of development. For partial control in pasture or hay crop renovation, apply 1.0 to 1.5 qt of Makaze in 3.0 to 10.0 gal of water/A. Apply to actively growing plants when most have reached 4 to 12 inches in height. Orchardgrass sods going to no till corn: Apply 1.0 to 1.5 qt of Makaze in 3.0 to 10.0 gal of water/A. Apply to Orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.
Pampasgrass	—	—	1.5 to 2%	Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.
Paragrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early head stage.
Phragmites	3.0 to 5.0	10.0 to 40.0	1 to 2%	For partial control. For best results, treat during late summer or fall months or when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.
Poison hemlock	—		1 to 2%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Pokeweed common	2.0	3.0 to 10.0	2%	Apply to actively growing plants up to 24 inches tall.
Quackgrass	1.0 to 3.0	3.0 to 40.0	2%	In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 1.0 qt of Makaze in 3.0 to 10.0 gal of water/A. For 10.0 to 40.0 gal of water/A, apply 2.0 qt of Makaze. Do not tank mix with residual herbicides when using the 1.0 qt rate. Spray when Quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results. In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 2.0 to 3.0 qt of Makaze in 10.0 to 40.0 gal of water/A when the Quackgrass is greater than 8 inches tall.
Redvine	0.75 to 2.0	5.0 to 10.0	2%	For suppression, apply 24.0 fl oz of Makaze/A at each of 2 applications 7 to 14 days apart or a single application of 2.0 qt/A. Apply labeled rates in 5.0 to 10.0 gal of water/A. Apply in late September or early October to plants which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

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WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Reed, giant	—	—	2%	Best results are obtained when applications are made in late summer to fall.
Ryegrass, perennial	1.0 to 3.0	3.0 to 40.0	1%	In annual cropping systems, apply 1.0 to 2.0 qt of Makaze/A. Apply 1.0 qt of this product in 3.0 to 10.0 gal of water/A. Use 2.0 qt of Makaze when applying 10.0 to 40.0 gal of water/A. In noncrop, or areas where annual tillage (no till) is not practiced, apply 2.0 to 3.0 qt of Makaze in 10.0 to 40.0 gal water/A. For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank mix with residual herbicides when using the 1.0 qt/A rate.
Smartweed, swamp	3.0 to 5.0	3.0 to 40.0	2%	Apply when most plants have reached the early [illegible] of growth. Also for control, apply 16.0 fl oz of Makaze + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A in the late summer or fall.
Sowthistle, perennial	2.0 to 3.0	3.0 to 40.0	2%	Apply when most plants are at or beyond the bud stage of growth. After harvest mowing or tillage in the late summer or fall allow at least 4 weeks for initiation of active growth and rosette development prior to the application of Makaze. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.
Spurge, leafy	—	3.0 to 10.0	2%	For suppression, apply 16.0 fl oz of Makaze + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.
Starthistle, yellow	2.0	10.0 to 40.0	2%	Best results are obtained when applications are made during the rosette, bolting and early flower stages.
Sweet potato wild	—	—	2%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.
Thistle, artichoke	—	—	2%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.
Thistle, Canada	2.0 to 3.0	3.0 to 40.0	2%	Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage. For suppression, apply 1.0 qt of Makaze, or 1.0 pt of Makaze + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A in the late summer or fall after harvest, mowing or tillage. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.
Timothy	[illegible] to 3.0	[illegible] to 40.0	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Torpedograss	[illegible] to 5.0	[illegible] to 40.0	2%	For partial control. Apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.
Trumpetcreeper	2.0	5.0 to 10.0	2%	Partial control. Apply in late September or October, to plants which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Vaseygrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early head stage.
Velvetgrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early head stage.
Wheatgrass, western	2.0 to 3.0	3.0 to 40.0	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.

Refer to the specific product labels and comply with all restrictions and application instructions for all products used in tank mixes.

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15.1 PERENNIAL WEEDS - Bromus Species and Medusahead
For use in the states of Colorado, Idaho, Iowa, Kansas, Montana, Nebraska, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming only.

Bromus Species: This product may be used to treat Cheatgrass (*Bromus secalinus*), Downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*) and Soft chess (*Bromus mollis*) found in industrial, rangeland and pasture sites. Apply 8.0 to 16.0 fluid ounces of product per acre on a broadcast basis. For best results, treatment should coincide with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Applications should be made to the same site each year until seed banks are depleted and the desirable perennial grasses are able to become reestablished on the site.

Medusahead: To treat medusahead, apply 16.0 fluid ounces of this product per acre as soon as plants are actively growing and prior to the 4-leaf stage. Applications may be made in the fall or spring.

Application Equipment and Techniques: Applications may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2.0 to 10.0 gallons of water per acre. For applications using ground equipment, apply in 10.0 to 20.0 gallons of water per acre.
When applied as directed there are no grazing restrictions.

16.0 WOODY BRUSH AND TREES RATE TABLE (Alphabetical by Species)

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Unless otherwise directed, apply broadcast treatments in 3.0 to 40.0 gallons of water per acre. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn coloration on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

WEED SPECIES	RATE (QT/A)	HAND-HELD % SOLUTION	COMMENTS
Alder	3.0 to 4.0	1 to 1.5%	For control
Ash	2.0 to 5.0	1 to 2%	Partial control
Aspen, quaking	2.0 to 3.0	1 to 1.5%	For control
Bearmat (Bearclover)	2.0 to 5.0	1 to 2%	Partial control
Beech	2.0 to 5.0	1 to 2%	Partial control
Birch	2.0	1%	For control
Blackberry	3.0 to 4.0	1 to 1.5%	For control. Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 0.5% solution of this product. For control of blackberries after leaf drop and until a killing frost or as long as stems are green, apply 3.0 to 4.0 qt of Makaze in 10.0 to 40.0 gal of water/A.
Blackgum	2.0 to 5.0	1 to 2%	For control
Bracken	2.0 to 5.0	1 to 2%	For control
Broom; French Scotch		1.5 to 2%	For control
Buckwheat, California	—	1 to 2%	For partial control. Thorough coverage of foliage is necessary for best results.
Cascara	2.0 to 5.0	1 to 2%	Partial control
Catsclaw	—	1 to 1.5%	Partial control
Ceanothus	2.0 to 5.0	1 to 2%	Partial control
Chamise	—	1%	For control. Thorough coverage of foliage is necessary for best results.
Cherry; bitter, black, pin	2.0 to 3.0	1 to 1.5%	For control
Coyote brush	—	1.5 to 2%	For control. Apply when at least 50% of the new leaves are fully developed.
Dogwood	2.0 to 5.0	1 to 2%	Partial control
Elderberry	2.0	1%	For control

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WEED SPECIES	RATE (QT/A)	HAND-HELD % SOLUTION	COMMENTS
Elm	2.0 to 5.0	1 to 2%	Partial control
Eucalyptus	—	2%	For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.
Florida holly (Brazilian peppertree)	2.0 to 5.0	1 to 2%	Partial control
Gorse	2.0 to 5.0	1 to 2%	Partial control
Hasardia	—	1 to 2%	Partial control. Thorough coverage of foliage is necessary for best results.
Hawthorn	2.0 to 3.0	1 to 1.5%	For control
Hazel	2.0	1%	For control
Hickory	2.0 to 5.0	1 to 2%	Partial control
Honeysuckle	3.0 to 4.0	1 to 1.5%	For control
Hornbeam, American	2.0 to 5.0	1 to 2%	Partial control
Kudzu	4.0	2%	For control. Repeat applications may be required to maintain control.
Locust, black	2.0 to 4.0	1 to 2%	Partial control
Madrone resprouts	—	2%	Partial control. Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.
Manzanita	2.0 to 5.0	1 to 2%	Partial control
Maple, red	2.0 to 4.0	1 to 1.5%	For control, apply a 1 to 1.5% solution when at least 50% of the new leaves are fully developed. For partial control, apply 2.0 to 4.0 qt of Makaze/A.
Maple, sugar	—	1 to 1.5%	For control, apply when at least 50% of the new leaves are fully developed.
Monkey flower	—	1 to 2%	Partial control. Thorough coverage of foliage is necessary for best results.
Oak; black, white	2.0 to 4.0	1 to 2%	Partial control
Oak, post	3.0 to 4.0	1 to 1.5%	For control
Oak; northern, pin	—	1 to 1.5%	For control. Apply when at least 50% of the new leaves are fully developed.
Oak, southern, red	2.0 to 3.0	1 to 1.5%	For control
Persimmon	2.0 to 5.0	1 to 2%	Partial control
Pine	2.0 to 5.0	1 to 2%	For control
Poison ivy/Poison oak	4.0 to 5.0	2%	For control. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.
Poplar, yellow	2.0 to 5.0	1 to 2%	Partial control
Redbud, eastern	2.0 to 5.0	1 to 2%	For control
Rose, multiflora	2.0	1%	For control. Treatments should be made prior to leaf deterioration by leaf-eating insects.
Russian olive	2.0 to 5.0	1 to 2%	Partial control
Sage, black	—	1%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	2.0 to 5.0	1 to 2%	Partial control
Sage brush, California	—	1%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	2.0	1%	For control
Salt-cedar	2.0 to 5.0	1 to 2%	For control
Sassafras	2.0 to 5.0	1 to 2%	Partial control
Sourwood	2.0 to 5.0	1 to 2%	Partial control
Sumac; poison, smooth, winged	2.0 to 4.0	1 to 2%	Partial control
Sweetgum	2.0 to 3.0	1 to 1.5%	For control
Swordfern	2.0 to 5.0	1 to 2%	Partial control
Tallowtree, Chinese	—	1%	For control. Thorough coverage of foliage is necessary for best results.
Tan oak resprouts	—	2%	For partial control. Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.
Thimbleberry	2.0	1%	For control
Tobacco, tree	—	1 to 2%	Partial control

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WEED SPECIES	RATE (QT/A)	HAND-HELD % SOLUTION	COMMENTS
Trumpetcreeper	2.0 to 3.0	1 to 1.5%	For control
Vine maple	2.0 to 5.0	1 to 2%	Partial control
Virginia creeper	2.0 to 5.0	1 to 2%	For control
Waxmyrtle, southern	2.0 to 5.0	1 to 2%	Partial control
Willow	3.0	1%	For control

Refer to the specific product labels and comply with all restrictions and application instructions for all products used in tank mixes.

17.0 STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Store above 10 °F (-12 °C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68 °F (20 °C) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk container to mix well before using.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed must be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleansed, reconditioned, or destroyed.

CONTAINER HANDLING: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

For packages up to 5 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For packages greater than 56 gallons: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

For refillable containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.

SPECIMEN

18.0 CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND

PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

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SAFETY DATA SHEET

SDS NUMBER: 000890-16-LPI **SDS REVISIONS: SEC. 2** **DATE OF ISSUE: 05/24/16**

MAKAZE®
SUPERSEDES: 02/03/15

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 PRODUCT IDENTIFIER:
TRADE NAME: **MAKAZE®**

1.2 RECOMMENDED USE: GROUP 9 HERBICIDE – LICENSED FOR ROUNDUP READY ALFALFA, COTTON, CORN, SOYBEANS, CANOLA, FLAX COTTON, SUGARBEETS

1.3 SUPPLIER DETAILS:
LOVELAND PRODUCTS, INC.
P.O. Box 1286 • Greeley, CO 80632-1286

1.4 24 Hour Emergency Phone: 1-800-424-9300 - **Medical Emergencies:** 1-866-944-8565 – **Product Information:** 1-888-574-2878 (LPI-CUST)
U.S. Coast Guard National Response Center: 1-800-424-8802

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to 29 CFR 1910.1200

Acute Toxicity - Dermal	Category 4	H312
Eye Damage/Irritation	Category 2B	H320

2.2 Label elements

Signal word: WARNING

Hazard Statement:
H312 – Harmful in contact with skin.
H320 – Causes eye irritation.

Precautionary Statement: (Prevention):
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P264 – Wash hands and face thoroughly after handling.

Precautionary Statement: (Response):
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P331 – Call a Poison Center or doctor/physician if you feel unwell.
P320 – Specific treatment (see First Aid on the product label).
P362 – Take off contaminated clothing and wash it before reuse.
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 – If eye irritation persists: Get medical advice/attention.

Precautionary Statement: (Disposal):
P501 – Dispose of contents/container resulting from the use of this product that cannot be used or chemically reprocessed in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleansed, reconditioned, or destroyed.

2.3 Other hazards
None known

Loveland PRODUCTS

SAFETY DATA SHEET

SDS NUMBER: 000890-16-LPI **SDS REVISIONS: SEC. 2** **DATE OF ISSUE: 05/24/16**

MAKAZE®
SUPERSEDES: 02/03/15

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Concentration [%]
Isopropylamine salt of Glyphosate	38641-94-0	41.00
Other ingredients	n/a	Balance

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Harmful in contact with skin. Causes eye irritation.

4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically. Symptoms may be delayed.
FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565
Take container, label or product name with you when seeking medical attention.

NOTES TO PHYSICIAN: Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Dry chemical, carbon dioxide (CO_2), alcohol foam, foam, water spray or fog. Do not use water jet as this will spread the fire.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: During a fire, hazardous by-products can be released.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapors and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water.
Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination.
Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Avoid inhalation of mists, vapors / spray and contact with eyes, skin and clothing. Do not breathe mists or vapor. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Do not empty into drains. Handle and open container with care. Use care in handling/storage. Wash before eating, drinking and/or smoking.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Store above $10^{o}F$ ($-12.2^{o}C$) to keep product from crystallizing. Crystals will settle to the bottom of the container. If allowed to crystallize, place in a warm room at $68^{o}F$ ($20^{o}C$) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk containers to mix well before using. Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
No data available.		

U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
No data available.		

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

8.2 EXPOSURE CONTROLS:

Engineering Measures

Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mists. Provide eyewash station and safety shower.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.

Skin Protection: Coveralls worn over long-sleeved shirt and long pants. Chemical-resistant gloves. Chemical-resistant footwear plus socks.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment such as MSHA/NIOSH TC-21C or NIOSH approved respirator with N, R, P or HE filter. Wear respiratory protection during operations where spraying or misting occurs. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard. Wear air supplied respiratory protection if exposure concentrations are unknown.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE : Clear viscous liquid
ODOR: Amine.
ODOR THRESHOLD: No data available.
COLOR: Yellow.
pH: 4.6 – 5.1 (1% solution)
MELTING POINT / FREEZING POINT: No data available
BOILING POINT: No data available
FLASH POINT: Does not flash.
FLAMMABILILITY (solid, gas): No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: No data available.
VAPOR PRESSURE: 25 mmHg @ 24°C
SOLUBILITY: Emulsifies
PARTITION CO-EFFICIENT, n-OCTANOL / WATER: <3.2 @ 25°C (Glyphosate).
AUTO-IGNITION TEMPERATURE: No data available.
DECOMPOSITION TEMPERATURE: No data available
VISCOSITY: (kinematic): 22.42 cST @ 24°C
SPECIFIC GRAVITY (Water = 1): 1.169 – 1.178 g/ml
DENSITY: 9.75 – 9.83 lbs./gal / 1.04 kg/L

Note: These physical data are typical values based on material tested but may vary from sample to sample.
Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. STABILITY AND REACTIVITY

10.1 REACTIVITY
Stable

10.2 CHEMICAL STABILITY
Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS
No data available. Will not polymerize.

10.4 CONDITIONS TO AVOID
Use of galvanized or unlined steel.

10.5 INCOMPATIBILE MATERIALS
This product and its spray solutions will react with galvanized or unlined steel to produce hydrogen gas that may form a highly combustible gas mixture, which could flash or explode if ignited. Acids and bases.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS
Will emit toxic fumes as it burns.

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE
Eye contact. Skin contact.
LC_{50} (rat): >2.2 mg/L (4 HR)
LD_{50} Oral (rat): > 5,000 mg/kg
LD_{50} Dermal (rat): > 5,000 mg/kg
Acute Toxicity Estimates: No data available
Skin Irritation (rabbit): Harmful if absorbed.
Eye Irritation (rabbit): Causes moderate eye irritation
Specific Target Organ Toxicity: Single exposure: No data available.
Aspiration: No data available
Skin Sensitization (guinea pig): Not a sensitizer
Carcinogenicity: No data available
Germ Cell Mutagenicity: No data available
Interactive Effects: None known

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Ecotoxicological Data

	Species	Test Results
Glyphosate acid	Rainbow trout	5.4 mg/L – 96-hour LC_{50}
	Bluegill	7.3 mg/L – 96-hour LC_{50}
	Bee	>100µ/bee – Contact LD_{50}

Drift or runoff may adversely affect non-target plants.
Do not apply directly to water.
Do not contaminate water when disposing of equipment wash water.
Do not apply when weather conditions favor drift from target area.

12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: No data available

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: No data available.

12.4 MOBILITY IN SOIL

No data available.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Wastes may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent), adding rinse water to spray tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by appropriate authorities. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at http://www.acrecycle.org/. Do not contaminate water, food or feed by storage or disposal.

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

DOT Shipping Description: NOT REGULATED BY USDOT
U.S. Surface Freight Classification: COMPOUND, TREE OR WEED KILLING, NOI (NMFC 50320, SUB 2: CLASS 60)

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA		HMIS
1 Health	0 Least	1 Health
0 Flammability	1 Slight	0 Flammability
0 Instability	2 Moderate	0 Reactivity
	3 High	B PPE
	4 Severe	

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SARA Hazard Notification/Reporting
SARA Title III Hazard Category:

Immediate	Y	Fire	N	Sudden Release of Pressure	N
Delayed	N	Reactive	N		

Reportable Quantity (RQ) under U.S. CERCLA: Not listed.
SARA, Title III, Section 313: Not listed.
RCRA Waste Code: Not listed.
CA Proposition 65: Not applicable

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION
Harmful if absorbed through skin.
Causes moderate eye irritation.
Avoid contact with eyes, skin, or clothing.

16 OTHER INFORMATION

SDS STATUS: Section 2 revised.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

®Makaze is a registered trademark of Loveland Products, Inc.

®Roundup Ready is a registered trademark of Monsanto Technology, LLC

EPA REG. NO.: 34704-890

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GROUP 9 HERBICIDE

Roundup CUSTOM®

FOR AQUATIC & TERRESTRIAL USE

TRUEBLUE ADVANTAGE
PROVEN | RELIABLE | SUPPORTED

A broad-spectrum postemergence herbicide for aquatic and industrial, turf, ornamental, forestry, roadside, utility rights-of-way, select crop, and other listed terrestrial weed control.

(For a complete list of aquatic and terrestrial use sites, see the Directions for Use section of the attached labeling.)

ACTIVE INGREDIENT:	
*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	53.8%
OTHER INGREDIENTS:	46.2%
	100.0%

* Contains 648 grams of the active ingredient glyphosate, in the form of its isopropylamine salt per liter, or 5.4 pounds per U.S. gallon, which is equivalent to 480 grams of the acid, glyphosate, per liter or 4.0 pounds per U.S. gallon (39.9% by weight).

EPA Reg. No. 524-343 EPA Est. 524-IA-1

Keep Out of Reach of Children

CAUTION

See inside for additional Precautions.
COMPLETE DIRECTIONS FOR USE

Not all products listed on this label are registered for use in California. Check the registration status of each product in California before using.

FOR PRODUCT INFORMATION OR ASSISTANCE USING THIS PRODUCT, CALL TOLL-FREE, 1-866-99BAYER (1-866-992-2937)

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT, 1-800-334-7577

Packed for:
BAYER CROPSCIENCE LP
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI 63167 USA
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161018By2 10/20
US62217691B

Read the entire label before using this product.

Use only according to label directions.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of this labeling before buying or using. If terms are not acceptable, return at once unopened.

AVOID CONTACT OF THIS HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, AS SEVERE PLANT INJURY OR DESTRUCTION COULD RESULT.

THIS IS AN END-USE PRODUCT. BAYER CROPSCIENCE LP DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

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1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	53.8%
OTHER INGREDIENTS:	46.2%
	100.0%

*Contains 648 grams of the active ingredient glyphosate, in the form of its isopropylamine salt per liter, or 5.4 pounds per U.S. gallon, which is equivalent to 480 grams of the acid, glyphosate, per liter or 4.0 pounds per U.S. gallon (39.9% by weight).

2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE USING THIS PRODUCT, CALL TOLL-FREE, 1-866-99BAYER (1-866-992-2937)
2. IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT, 1-800-334-7577

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children

CAUTION

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation could result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, socks and shoes.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If there are no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:
Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

3.2 Environmental Hazards

Killing aquatic weeds can result in depletion or loss of oxygen in the water due to decomposition of dead plant material. This oxygen loss can cause fish suffocation. Consult with your State agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is required. For terrestrial uses, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark, except if applying aerially over the forest canopy. Do not contaminate water when cleaning equipment or disposing of equipment wash waters and rinsate.

3.3 Physical or Chemical Hazards

Spray solutions of this product may be mixed, stored and applied using stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas, which can form a highly combustible gas mixture. This gas mixture could flash or explode if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source and cause serious personal injury.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product may only be used in accordance with the Directions for Use on this label or on separately published supplemental labeling. Supplemental labeling for this product can be obtained from your Authorized Bayer CropScience LP Retailer or Bayer CropScience LP Representative.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, shoes plus socks, and chemical-resistant gloves made of any waterproof material.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried.

4.0 STORAGE AND DISPOSAL

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage and disposal.

PESTICIDE STORAGE: STORE ABOVE 5°F (-15°C) TO KEEP PRODUCT FROM CRYSTALLIZING. Crystals will settle to the bottom. If allowed to crystallize, warm to 68°F (20°C) to redissolve and roll or shake container or recirculate contents of larger containers to mix well before using. Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination. See individual container label for additional storage conditions, if any.

PESTICIDE DISPOSAL: To avoid wastes, use all material in the container, including rinsate, by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable federal, state and local regulations and procedures.

CONTAINER HANDLING AND DISPOSAL: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in this container. Contact your state regulatory agency to determine allowable practices in your state.

Triple rinse or pressure rinse (or equivalent) this container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or mix-tank and continue to drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix-tank, or store rinsate for later use or disposal. Continue to drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix-tank and continue to drain for 10 seconds after the flow begins to drip. Place container so that it can drain directly into application equipment or mix-tank while rinsing, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle into the side of the container and rinse at about 40 PSI for at least 30 seconds. Continue to drain for 10 seconds after the flow begins to drip.

Once properly rinsed, some plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest collection site, contact your chemical dealer or Bayer CropScience LP at 1-866-99BAYER (1-866-992-2937).

If recycling is not available, dispose of in accordance with federal, state and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

5.0 PRODUCT INFORMATION

Product Description: This product is a postemergence, systemic herbicide that, when mixed in the spray tank with a surfactant that is approved for aquatic use, may be used for both aquatic and terrestrial weed control. This product provides broad-spectrum control of many annual and perennial weeds, woody brush, trees and vines. This product does not control submerged weeds or provide residual weed control in soil. It is formulated as a water-soluble liquid that, unless otherwise directed, requires dilution with water or another carrier and the addition of a surfactant according to label directions and intended use site before application using standard and specialized pesticide application equipment.

Mechanism of Action: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to the formation of specific amino acids.

No Soil Activity: This product binds tightly to soil particles and does not provide residual weed control. Weeds must be emerged at the time of application to be controlled by foliar application of this product. Weed seeds in the soil will not be affected by this product and will continue to germinate. Unattached plant rhizomes and rootstocks beneath the soil surface will also not be affected by this product.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Stage of Weeds: Aquatic weeds must have foliage above the water surface in order to be controlled by this product. On terrestrial sites, annual and perennial weeds are easiest to control when they are small. See the "WEEDS CONTROLLED" section of this label for more information on the control of specific weeds.

Cultural Considerations: Reduced weed control could result when this product is applied to annual or perennial weeds that have been mowed, grazed or cut, and have not been allowed to re-grow prior to application. Always use the highest application rate of this product within the given range when weed growth is heavy or dense, or when weeds are growing in an undisturbed (non-cultivated) area. Reduced weed control could result when this product is applied to weeds that show signs of disease or insect damage, are covered with dust, or are surviving under poor growing conditions.

Spray Coverage: For enhanced results, spray coverage must be uniform and complete. Do not spray foliage to the point of runoff.

Rainfastness: Rainfall or submersion of aquatic weeds by wave action within 4 hours of application could wash this product off of the foliage and a second application might be needed for acceptable weed control. Refer to specific use sections of this label for additional information on minimum intervals required before re-application of this product.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects are a gradual wilting and yellowing of the plant that advances to complete browning of aboveground growth and deterioration of underground plant parts. Effects are visible on most annual weeds within 2 to 4 days, but on most perennial weeds, effects might not be visible for 7 or more days after application. Extremely cool or cloudy weather following application could slow activity of this product and delay development of visual symptoms.

Maximum Application Rates: The maximum application or use rates stated throughout this label are given in units of volume (fluid ounces or quarts) of this product per acre. However, the maximum allowable application rates apply to this product combined with the use of any and all other herbicides containing the active ingredient glyphosate, whether applied separately or in a tank mixture, on a basis of total pounds of glyphosate (acid equivalents) per acre. If more than one glyphosate-containing product is applied to the same site within the same year, you must ensure that the total use of glyphosate (pounds acid equivalents) does not exceed the maximum allowed. See the "INGREDIENTS" section of this label for necessary product information.

Unless otherwise specified on this label, the combined total of all applications of this product on a site must not exceed 8 quarts (8 pounds of glyphosate acid) per acre per year.

NOTE: Use of this product in any manner not consistent with this label could result in injury to persons, animals, crops or other desirable vegetation, or have other unintended consequences.

6.0 WEED RESISTANCE MANAGEMENT

GROUP	9	HERBICIDE

Glyphosate, the active ingredient in this product, is a Group 9 herbicide based on the mechanism of action classification system of the Weed Science Society of America. Any weed population can contain plants that are naturally resistant to Group 9 herbicides. Weeds resistant to Group 9 herbicides can be effectively managed by using another herbicide from a different Group (either alone or in a mixture according to label directions), by using other cultural or mechanical methods of weed control, or a combination of the two. Consult your local company representative, state cooperative extension agent, professional consultant or other qualified authority to determine appropriate actions for controlling specific resistant weeds.

6.1 Weed Management Practices

Resistant populations arise when rare individual plants are uncontrolled by a normal dose of a given herbicide under normal environmental conditions. In the absence of other control measures these individuals survive, produce seed, and eventually become the dominant biotype in the field through continuous selection. The best means of reducing this selection is to use diverse weed control practices such as multiple herbicides with different mechanisms of action, and often in combination with various mechanical and cultural practices.

To minimize the occurrence of herbicide-resistant biotypes, including those resistant to glyphosate, implement the following weed management practice options that are practical to your situation. These management practices are applicable to reduce the spread of confirmed resistant biotypes (managing existing resistant biotypes) and to reduce the potential for selecting for resistance in new species (proactive resistance management).

- Use a diversified approach toward weed management focused on preventing weed seed production and reducing the number of weed seeds in the soil.
- Plant crops into fields that are as weed-free as possible and then keep them as weed-free as possible.
- Plant seed that is as weed-free as possible.
- Scout fields and application sites routinely, before and after herbicide application.
- Use multiple herbicide mechanisms of action that are effective against the most troublesome weeds at your application site and against those with known resistance.
- Apply herbicides at application rates listed on the label when weeds are within the size range indicated on the label.
- Emphasize cultural practices that suppress weeds by using crop competitiveness.
- Use mechanical and biological weed management practices, where appropriate.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
- Manage weed seed at harvest and after harvest to prevent a buildup of the weed seedbank.

6.2 Management of Glyphosate-Resistant Biotypes

Appropriate testing is needed to determine if a weed is resistant to glyphosate. Call 1-866-99BAYER (1-866-992-2937) or contact your Bayer CropScience LP representative to determine if resistance in any particular weed biotype has been confirmed in your area, or visit on the Internet at

www.weedresistancemanagement.com or www.weedscience.org.

Glyphosate-resistant weeds can be controlled or managed by applying this product in combination with residual preemergence herbicides and/or other postemergence herbicides labeled for control of the targeted weed in the crop being grown or on the site of application. For more information, see the "WEEDS CONTROLLED" section of this label.

Since the occurrence of resistant weeds is difficult to detect prior to use, Bayer CropScience LP accepts no liability for any losses that result from the failure of this product to control resistant weeds.

7.0 MIXING

Spray solutions of this product may be mixed, stored and applied using clean stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.

Eliminate any risk of siphoning the contents of the tank back into the carrier source while mixing. Use approved anti-back-siphoning devices where required by state or local regulations.

A 50-mesh nozzle screen or line strainer on the spray equipment is adequate.

Clean sprayer parts promptly after using this product by thoroughly flushing with water.

7.1 Mixing with Water

PERFORMANCE OF THIS PRODUCT CAN BE SIGNIFICANTLY REDUCED IF WATER CONTAINING SOIL SEDIMENT IS USED AS CARRIER. DO NOT MIX THIS PRODUCT WITH WATER FROM PONDS OR DITCHES THAT IS VISIBLY MUDDY OR MURKY.

This product mixes readily with water. Mix spray solutions of this product as follows. Begin filling the mixing tank or spray tank with clean water. Add the required amount of this product near the end of the filling process and mix gently. Foaming of the spray solution can occur during mixing. To prevent or minimize foaming, mix gently, terminate by-pass and return lines at the bottom of the tank and, if necessary, add an appropriate anti-foam or defoaming agent to the spray solution.

7.2 Surfactant

Unless otherwise directed, this product requires the addition of 2 or more quarts of a nonionic surfactant that is labeled for use with herbicides per 100 gallons of spray solution (0.5% or more by volume). Unless otherwise directed, use a higher concentration of surfactant when any of the following conditions apply to the use of this product:

- Adding surfactants that contain less than 70 percent active ingredient
- Making a broadcast application using a high carrier volume or using handheld spray equipment
- Applying under adverse growing conditions or anytime weeds are under stress
- Applying as a tank-mix with other products
- Applying to hard-to-control weeds, woody brush, trees and vines

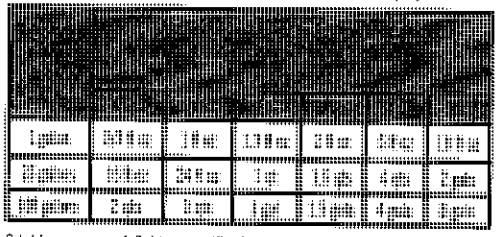
NOTE: For direct application of spray solutions of this product on emerged aquatic weeds or for use in intertidal areas below the mean high-water mark, or in application areas where a buffer that will ensure no overspray of an adjacent body of water cannot be maintained, a surfactant that is also approved for aquatic use must be used. For terrestrial applications, surfactant is also needed in the spray solution, but does not have to be approved for aquatic use.

RESTRICTION: If a surfactant that is NOT approved for aquatic use is added to the spray solution, DO NOT apply directly to or over water or use in intertidal areas below the mean high-water mark.

Check with your local State agency with primary responsibility for regulating pesticides for additional information about surfactants that are approved for aquatic use.

Read and follow all precautionary statements and directions for use on the surfactant label.

All reference throughout this label to concentration of surfactant in the spray solution is on a percentage-of-volume basis. Refer to the table below to achieve the appropriate concentration of surfactant in the spray solution.



2 tablespoons = 1 fluid ounce (fl oz)

7.3 Tank Mixtures

This product does not provide residual weed control. This product may be tank-mixed with other herbicides to provide residual weed control in the soil, a broader weed control spectrum or an alternative mechanism of action.

NOT ALL TANK-MIX PRODUCTS LISTED ON THIS LABEL ARE APPROVED FOR USE ON AQUATIC SITES. Refer to each individual label for all products in the tank mixture for approved use sites and application rates.

When a tank-mix with a generic active ingredient, such as 2,4-D or dicamba, or any other product or material, is listed on this label, the user is responsible for ensuring that the specific application being made and the use site is included on the label of the product used in the mix.

Bayer CropScience LP has not tested all tank-mix product formulations for compatibility, antagonism or reduction in product performance. Mixing this product with herbicides or other materials not specified on this label could result in reduced performance of this product. To the extent consistent with applicable law, buyer and all users are responsible for any loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified on this label, or on separate supplemental labeling or Fact Sheets published for this product.

Refer to all individual product labels, supplemental labeling and Fact Sheets for all products in the tank mixture, and observe all precautions and limitations on the label, including any application timing restrictions, soil restrictions, minimum re-cropping intervals and/or crop rotation restrictions. Use according to the most restrictive precautionary statements for each product in the tank mixture.

This product may be applied at any rate listed on this label in a tank mixture with the following products to provide preemergence and/or improved postemergence control of weeds listed on the individual product labels.

Arsenal; Arsenal Herbicide Applicators Concentrate; Banvel; Banvel 480; Barricade 4L; Barricade 65WG; Certainty® Turf; Chopper Gen2; Crossbow; Endurance; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XLT Specialty; Gallery SC; Gallery 75 Dry Flowable Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Goal 2XL; GoalTender; Habitat; Hyvar X; Hyvar X-L; Karmex DF; Krenita S Brush Control Agent; Krovar I DF; Landmark; Landmark XP; Oust Extra; Oust XP; Outrider®; Plateau; Poast; Poast Plus; Ronstar 50 WSP; Ronstar Flo; Ronstar G; Sahara DG; Spike 20P Specialty; Spike 80 DF Specialty; Stalker; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan XL 2G; Surflan Pro; Telar XP; Tordon 101 Mixture Specialty; Tordon 22K Specialty; Tordon K Herbicide Specialty; Transline Specialty; Vanquish; Velpar DF CU; Velpar DF VU; Velpar L CU; Velpar L; Velpar L VU; 2,4-D; atrazine; dicamba; bromacil; diuron; imazapyr; metsulfuron methyl; oryzalin; pendimethalin, prodiamine; simazine; sulfosulfuron; trichlopyr

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When used in combination as described on this label and to the extent consistent with applicable law, the liability of Bayer CropScience LP shall in no manner extend to any damage, loss or injury not solely and directly caused by the inclusion of the Bayer CropScience LP product in such combination use.

7.4 Tank-Mixing Procedure

Always predetermine the compatibility of all tank-mix products in the carrier by mixing small proportional quantities in advance.

Add individual tank-mix components to the tank as follows: wettable powders; flowables; emulsifiable concentrates; drift reduction additives; water soluble liquids (this product); nonionic surfactants. Ensure that the tank-mix products are well mixed in the spray solution before adding this product.

Mix only the quantity of spray solution that will be applied that day. Application of tank-mix solutions that are allowed to stand overnight could result in reduced weed control.

Maintain gentile agitation at all times until the contents of the tank are sprayed out. If the spray mixture is allowed to settle, agitate thoroughly to resuspend the mixture before resuming application.

Keep by-pass line on or near the bottom of the tank to minimize foaming.

A 50-mesh nozzle screen or line strainer on the spray equipment is adequate.

7.5 Mixing Spray Solution Concentrations

All reference throughout this label to concentration of this product in a spray solution is on a percentage-of-volume basis.

Prepare the desired volume of spray solution at a given concentration by mixing the amount of this product indicated in the following table with water.

Desired Volume of Spray Solution	0.5% Solution for Aquatic and Terrestrial Use					
	0.5%	0.75%	1%	1.5%	2%	4%
1 gallon	2/3 fl oz	1 fl oz	1.3 fl oz	2 fl oz	5 fl oz	10 fl oz
25 gallons	16 fl oz	24 fl oz	1 qt	1.5 qts	4 qts	2 gals
100 gallons	2 qts	3 qts	1 gal	1.5 gals	4 gals	8 gals

2 tablespoons = 1 fluid ounce (fl oz)

For filling backpack and pump-up sprayers, consider mixing the appropriate amount of this product with water in a larger container and then filling the sprayer from the larger container.

7.6 Colorants and Dyes

Colorants and marking dyes may be added to spray solutions of this product; however, they could reduce the performance of this product. Use colorants and dyes according to the manufacturer's directions.

7.7 Drift Reduction Additives

Drift reduction additives may be used with all application equipment types, except wiper applicators, sponge bars and controlled droplet applicators (CDA). When a drift reduction additive is used, read and carefully follow all precautions, limitations and all other information appearing on the product label. The use of drift reduction additives can affect spray coverage, which could result in reduced performance of this product.

8.0 APPLICATION EQUIPMENT AND TECHNIQUES

This product may be applied using the following equipment:

Aerial Application Equipment—fixed-wing and helicopter

Ground Application Equipment—boom or boomless systems, pull-type sprayers, floaters, pick-up sprayers, spray coupes and other ground broadcast application equipment

Handheld Sprayers—backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers*, lances and other handheld and motorized spray equipment used to direct the spray onto weed foliage.

*This product is not registered in California or Arizona for use in mistblowers.

Selective Application Equipment—recirculating sprayer, shielded and hooded sprayers, wiper applicator, sponge bar, single or hollow stem injectors, tree injector, spray bottle

Injection Systems—aerial or ground injection sprayers

Controlled Droplet Applicator (CDA)—handheld or boom-mounted applicators that produce a spray consisting of a narrow range of droplet sizes

APPLY THIS PRODUCT USING PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF ACCURATELY DELIVERING DESIRED VOLUMES.

Do not apply this product through any type of irrigation system.

8.1 Spray Drift Management

AVOID CONTACT OF THIS HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, AS SEVERE PLANT INJURY OR DESTRUCTION COULD RESULT.

Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation, as even small quantities of this product can cause severe damage or destruction to the crop, plants or other vegetation on which application was not intended.

AVOID DRIFT. USE EXTREME CARE TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHEN APPLYING THIS PRODUCT.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are

responsible for considering all these factors when making decisions regarding the application of this product.

The likelihood of injury occurring as the result of spray drift while applying this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or generation of fine particles (mist) that are likely to drift.

TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFERS MUST BE MAINTAINED.

AVOID APPLYING THIS PRODUCT AT EXCESSIVE SPEED OR SPRAYER PRESSURE.

8.2 Aerial Application Equipment

Unless otherwise prohibited, all broadcast applications of this product described on this label may be made using aerial application equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label and on separate supplemental labeling published for this product.

DO NOT APPLY THIS PRODUCT USING AERIAL APPLICATION EQUIPMENT EXCEPT UNDER CONDITIONS SPECIFIED ON THIS LABEL OR ON SEPARATELY PUBLISHED SUPPLEMENTAL LABELING FOR THIS PRODUCT.

FOR SPECIFIC USE INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS RELATED TO THE AERIAL APPLICATION OF THIS PRODUCT IN CALIFORNIA OR SPECIFIC COUNTIES THEREIN, REFER TO THE LIMITATIONS ON AERIAL APPLICATION IN THAT STATE OR COUNTY PRESENTED IN THIS SECTION.

Apply this product at the rate specified on this label in 3 to 25 gallons of water per acre, unless otherwise directed. Use a larger spray volume within this range where weeds, brush, trees and vines are dense or form multiple canopy layers.

Avoid direct application to any body of water.

Drift control reduction additives may be used.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Aircraft Maintenance

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES COULD RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. Maintaining an organic coating (paint) that meets aerospace specification MIL-C-38413 can help prevent corrosion.

AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to minimize off-target driff movement during aerial application. These requirements do not apply to forestry applications.

1. The distance of the outermost nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
2. Nozzles must always point backwards parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they must be followed.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if the application is made improperly or under unfavorable environmental conditions, such as in windy, high temperature with low humidity, and/or inversion conditions as described below.

Controlling Droplet Size

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Operate at a spray pressure towards the lower end of the range listed for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles:** Use the minimum number of nozzles that provides uniform coverage.
- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the air stream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom length:** For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length can further reduce driff without reducing swath width.
- **Application height:** Application must be made at a height of 10 feet or less above the top of the tallest plants, unless a greater height is required for aircraft safety. Making the application at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

When an application is made in the presence of a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase the swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest at wind speeds of between 2 and 10 miles per hour. However, many factors, including droplet size and equipment type, determine drift potential at any given wind speed. Avoid application when wind speeds are below 2 miles per hour due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making an application in low relative humidity, set application equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Do not apply this product during a temperature inversion as drift potential is high under these conditions. Temperature inversions restrict vertical air mixing, which causes small droplets to remain suspended in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

Apply this product only when the potential for drift to adjacent sensitive non-target areas (e.g., residential areas, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from a sensitive area).

State Specific Limitations on Aerial Application

LIMITATIONS ON AERIAL APPLICATION IN CALIFORNIA ONLY

DO NOT apply this product using aerial application equipment in residential areas.

AVOID DRIFT – DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT OF THIS PRODUCT ONTO ANY VEGETATION TO WHICH APPLICATION WAS NOT INTENDED CAN CAUSE DAMAGE. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, USE PROPER AERIAL APPLICATION EQUIPMENT FITTED WITH APPROPRIATE NOZZLES AND MAINTAIN ADEQAUATE BUFFERS.

Follow the directions below when making an aerial application near non-target crops, desirable annual vegetation, or desirable perennial vegetation after bud break and before total leaf drop.

1. Do not apply this product within 100 feet of all desirable vegetation or non-target crops.
2. If winds are blowing up to 5 miles per hour TOWARD desirable vegetation or non-target crops, do not apply this product within 500 feet of the desirable vegetation or crops.
3. If winds are blowing between 5 and 10 miles per hour TOWARD desirable vegetation or non-target crops, a buffer zone greater than 500 feet might be needed to protect the desirable vegetation or crops.
4. Do not apply this product using aerial application equipment when winds are blowing in excess of 10 miles per hour.
5. Do not apply this product using aerial application equipment when inversion conditions exist.

When tank-mixing this product with 2,4-D, only 2,4-D amine formulations may be applied in California using aerial application equipment. Tank mixtures of this product with 2,4-D amine formulations may be applied by air in California on fallow fields and in reduced tillage systems and for pasture renovation applications only.

This product, when tank-mixed with dicamba, may not be applied by air in California.

ADDITIONAL LIMITATIONS ON AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY

Always read and follow the label directions and precautionary statements for all products used in the aerial application.

The following information applies only from February 15 through March 31 within the following boundaries of Fresno County, California:

North: Fresno County line
South: Fresno County line
East: State Highway 99
West: Fresno County line

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

Written Directions

Written directions MUST be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. These written directions MUST state the proximity of surrounding crops and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial Applicator Training and Equipment

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to ensure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

Applications at Night – Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

For additional information on the proper aerial application of this product in Fresno County, call (800) 332-3111.

8.3 Ground Application Equipment

Apply this product at the appropriate rate as specified on this label in 3 to 40 gallons of water per acre when making a broadcast application using ground application equipment, unless otherwise directed on this label or on

separate supplemental labeling or Fact Sheets published for this product. As the weed density increases, increase the spray volume toward the upper end of this range to ensure complete coverage. Use nozzles that will avoid generating a fine mist. For enhanced results with ground application equipment, use flat-fan nozzles. Check spray pattern for uniform distribution of spray droplets.

8.4 Handheld Sprayers

When using a handheld sprayer, apply spray solutions of this product uniformly and completely to the foliage of target weeds using a coarse droplet spectrum and a spray-to-wet technique; do not spray to the point of runoff. For the appropriate concentration of this product in the spray solution and timing of application to control specific weeds, woody brush, trees and vines, refer to the "WEEDS CONTROLLED" section of this label.

For control of annual weeds, make application when weeds are small and prior to seedhead or bud formation. For control of perennial weeds, woody brush, trees and vines, make application after flowering and before fall color and leaf drop.

When making a low-volume directed spray application to annual and perennial weeds, woody brush, trees and vines using a handheld sprayer, ensure that at least 50 to 75 percent of the foliage or the top one-half of each unwanted plant is sprayed. If a straight stream nozzle is used, start the application at the top of the targeted plant and spray from top to bottom in a lateral zig-zag motion. To ensure uniform and complete coverage, spray both sides of large or tall woody brush, trees and vines, or when foliage is thick and dense, or where there are multiple sprouts. For enhanced results on woody brush, trees and vines, apply to actively growing vegetation after full leaf expansion and flowering, prior to fall color and leaf drop.

The following table summarizes various methods of foliar application using a backpack sprayer with a spray-to-wet or low-volume directed spray technique and high-volume sprayer application using handheld application equipment for control or partial control of herbaceous weeds, woody brush, trees and vines listed in the "WEEDS CONTROLLED" section of this label.

Method of Application	Spray Solution Concentration	Spray Volume
Handgun or Backpack Sprayer	0.5 to 1.5% by volume	Spray-to-wet technique
Low-Volume Directed Spray (Backpack)	4 to 8% by volume	15 to 25 gallons/acre
Modified High-Volume Spray	1.5 to 3% by volume	40 to 60 gallons/acre

Low-volume directed spray application with a backpack sprayer works best when applying to weeds and brush less than 10 feet tall. For taller weeds and brush, a high-volume handgun can be modified by reducing the nozzle size and spray pressure to produce a modified high-volume directed spray application.

8.5 Selective Application Equipment

Selective application equipment allows this product to be applied to weeds growing near a crop or other desirable vegetation without killing the desirable vegetation. Selective application equipment must be capable of preventing all contact of the herbicide solution with the desirable vegetation and operated without spray mist escape, leakage or dripping of the herbicide solution.

AVOID CONTACT OF THIS HERBICIDE WITH DESIRABLE VEGETATION. Contact of this product with desirable vegetation could result in unwanted plant damage or destruction. To the extent consistent with applicable law, such damage shall be the sole responsibility of the applicator.

This product may be diluted with water and applied using a recirculating sprayer, shielded sprayer, hooded sprayer, wiper applicator or sponge bar to weeds listed on this label growing in any aquatic or on any terrestrial non-food or non-feed crop site listed on this label, where feasible. This product may also be used with sprayers equipped with optical weed sensor technology.

Other selective equipment that may be used to deliver or apply this product are single and hollow stem injectors, tree injectors, wiper applicators for cut stem and cut stump applications, and spray or squirt bottles for cut stem, cut stump and frill applications to control large stem weeds, brush, trees and vines listed on this label.

Recirculating Sprayer

A recirculating sprayer directs the spray solution onto weeds growing above desirable vegetation, while spray solution that is not intercepted by weeds is collected and returned to the spray tank for reapplication. A recirculating sprayer may be used to apply spray solutions of this product to weeds listed on this label in any aquatic or on any terrestrial non-crop site described on this label.

Shielded and Hooded Sprayers

A shielded sprayer directs the herbicide solution to the target weeds while protecting desirable vegetation from coming into contact with the herbicide spray with an impervious material or shield. Use nozzles that provide uniform coverage within the application area. Keep shields properly adjusted to protect desirable vegetation.

A hooded sprayer is a type of shielded sprayer where the spray pattern is fully enclosed, including the top, sides, front and back, thereby shielding desirable vegetation from the spray solution.

This product may be diluted with water and, unless otherwise directed, mixed with a surfactant and applied using a shielded or hooded sprayer to weeds listed on this label growing in any aquatic or on any terrestrial non-crop site listed on this label, where feasible, and between rows of plants (row middles) in any cropping system listed on this label.

Properly adjust the hood to protect desirable vegetation. Ensure that the hood is capable of completely enclosing the spray pattern. If necessary when applying around crops grown on raised beds, extend the front and rear flaps of the hooded sprayer downward to reach the ground in deep furrows.

A hooded sprayer must be configured and operated in a manner that minimizes bouncing and avoids raising the hood up off the ground surface at any time. If the hood is raised, spray particles can escape and come into contact with the crop or other desirable vegetation, causing damage to or destruction of the desirable vegetation. Avoid operating this equipment on rough or sloping terrain where the spray hood is likely to rise up off the ground surface.

Use hoods designed to minimize excessive dripping or runoff down the inside of the hood, such as a single, low pressure, low drift, flat-fan nozzle with an 80- to 95-degree spray angle positioned at the top center of the hood, with a spray volume of 20 to 30 gallons per acre.

The following procedures will help reduce the potential for injury to desirable vegetation when using a hooded sprayer:

- Operate the sprayer with the hood on the ground or skimming across the ground surface.
- Leave at least an 8-inch untreated strip over the drill row. (For example, if a crop row width is 38 inches, use a sprayer hood with a maximum width of 30 inches.)
- Operate at a ground speed no greater than 5 miles per hour to minimize bouncing of the hooded sprayer.
- Apply when wind speed is 10 miles per hour of less.
- Use low-drift nozzles that provide uniform coverage within the application area.

Injury to a crop or other desirable vegetation can occur when application is made to foliage of weeds that come into direct contact with the desirable vegetation. Do not apply this product when leaves of desirable vegetation are growing in direct contact with weeds. Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation can result in discoloration, stunting or destruction.

Wiper Applicator

A wiper applicator is a device that physically wipes this product or solutions of this product directly onto the weed or cut stump. Any handheld device that is capable of physically wiping this product or solutions of this product directly onto the target weed or stump, such as a paint brush, may be used.

A mechanical wiper applicator, such as a rope wick or sponge bar that can be driven through a field over the top of a crop or other desirable vegetation to control weeds that are taller than the desirable vegetation, must be designed, maintained and operated to prevent the herbicide solution from coming into contact with desirable vegetation.

Wiper applicators may be used over the top of food or feed crops ONLY if specifically permitted for use over that crop by this label or by separately published supplemental labeling for this product.

When using a mechanical wiper applicator, adjust the height of the applicator to ensure adequate contact with the weeds and so that the wiper contact point is at least 2 inches above the crop or desirable vegetation. Enhanced results can be obtained when more of the weed is exposed to the herbicide solution and weeds are a minimum of 6 inches above the desirable vegetation. Weeds that do not come into contact with the herbicide solution will not be affected. Poor contact can occur when weeds are growing in dense clumps, when operating in areas of severe weed infestation, or when weed height varies dramatically. In these situations, more than one application of this product might be necessary.

Operate wiper applicators at a ground speed of no greater than 5 miles per hour. Performance in areas of heavy weed infestation can be improved by reducing speed, which will provide more time for re-saturation of the wiper with the herbicide solution and more contact time of the wiper with the weed. Enhanced results with a wiper applicator can be obtained when two applications are made traveling in opposite directions in the field.

Keep wiper surfaces clean.

Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation can result in discoloration, stunting or destruction. Avoid leakage or dripping onto desirable vegetation. Be aware that on sloping ground the herbicide solution can migrate to one side, causing dripping on the lower end and drying of the wiper on the upper end of the applicator.

Do not apply this product using a wiper applicator when weeds are wet.

Add a nonionic surfactant to a concentration of 10 percent by volume of the total applicator solution (one gallon of surfactant for every 10 gallons of solution) for use in a wiper applicator. See the "MIXING" section of this label for more information on the use of surfactants.

For Rope Wick and Sponge Bar Applicators-apply solutions ranging from 33 to 75 percent of this product by volume in water.

For Panel Applicators-apply solutions ranging from 33 to 90 percent of this product by volume in water.

Mix only the amount of this product that will be used during a 1-day period, as reduced product performance can result from the use of solutions held in storage.

Clean wiper parts promptly after using this product by thoroughly flushing with water.

Single and Hollow Stem Injectors

Control of certain weeds listed in the "WEEDS CONTROLLED" section can be obtained by injecting this concentrated product or solutions of this product directly in or onto the target weed. Ensure that the handheld injector being used for this application is capable of accurately delivering the volume specified on the label. When making stem injections, the combined total use of this product must not exceed 8 quarts per acre per year. At 5 milliliters of concentrated (undiluted) product per stem, 8 quarts will treat approximately 1500 stems per acre per year. The number of stems that can be treated per acre will vary depending on the injection volume and the concentration of this product in the application solution.

8.6 Injection Systems

This product may be used in aerial and ground injection spray systems as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this concentrated product with the undiluted concentrate of other products when using injection systems, unless otherwise directed. A non-ionic surfactant concentration of 0.5% or more in the spray stream is required for use of this product in injection systems.

8.7 Controlled Droplet Applicator (CDA)

The amount of this product applied per acre using a controlled droplet applicator (CDA) must be no less than the rate specified on this label for application using conventional broadcast application equipment.

A controlled droplet applicator produces a spray pattern that is not easily visible. Use extreme care to avoid spray or drift from contacting the foliage or any other tissue of desirable vegetation, as plant damage or destruction could result.

9.0 AQUATIC AND TERRESTRIAL USE SITES

This product may be used according to the directions for use described on this label to control weeds, woody brush, trees and vines listed on this label growing in aquatic environments and on any terrestrial site described on this label.

9.1 Aquatic Sites

This product may be used to control emerged weeds, brush, trees and vines in all flowing, non-flowing or transient bodies of fresh and brackish surface water. These bodies of water include lakes, rivers, streams, ponds, estuaries, rice levees, seeps, irrigation and drainage ditches, canals, reservoirs, wetlands and wastewater treatment facilities. This product may also be used to control weeds in intertidal areas below the mean high-water mark and on terrestrial sites where bodies of water may be present and a buffer that will ensure no overspray of the water cannot be maintained.

When applying spray solutions of this product in or near aquatic sites, a nonionic surfactant that is labeled for use with herbicides and approved for direct application to bodies of water must be used. See the "MIXING" section of this label for more information on the use of surfactants with this product.

Before using this product for aquatic weed control or for terrestrial weed control near aquatic sites, read the following information carefully.

- This product does not control plants that are completely submerged or have a majority of their foliage under water.
- There is no restriction on the use of water for irrigation, recreation or domestic purposes following direct application of this product to emerged aquatic plants.
- Consult your local State agency with primary responsibility for regulating pesticides, State fish and wildlife agency and/or water control authority before applying this product to vegetation growing in public waters to determine if a permit is required.
- Do not apply this product directly to water within 0.5 mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.) or within 0.5 mile of an active potable water intake in a standing body of water, such as a lake, pond or reservoir. To make aquatic applications around and within 0.5 mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after the application. The water intake may be turned on prior to 48 hours if the glyphosate level in the intake water is below 0.7 parts per million as determined by laboratory analysis. These aquatic applications may be made ONLY in those cases where there are alternative water sources or holding ponds that would permit the turning off of an active potable water intake for a minimum period of 48 hours after the application. This restriction does NOT apply to intermittent inadvertent overspray of water on terrestrial use sites.
- To achieve maximum weed control in dry ditches, apply this product within 1 day after water drawdown to ensure application to actively growing weeds and allow a minimum of 7 days after application before reintroduction of water
- Floating mats of vegetation could require more than one application of this product for control. Avoid washing this product off of foliage after application by boat backwash or rainfall within 4 hours of application. Wait a minimum of 24 hours before re-applying this product to the same vegetation.
- Application of this product to moving bodies of water must be made while traveling upstream to prevent concentration of this herbicide in the water.
- When making a bankside application, do not overlap more than 1 foot into open water.
- Do not apply this product to bodies of water where emerged weeds do not exist.
- If applying this product to more than 20 percent of the total area of a body of water, do not apply more than 3.75 quarts per acre in any single broadcast application. If applying to less than 20 percent of the total area of a body of water, any rate listed on this label may be applied. This single application rate restriction does not apply to stream crossings in utility rights-of-way.
- When emerged weed infestations cover the total surface area of an impounded waterbody, apply this product to the emerged vegetation in strips to help avoid oxygen depletion in the water due to decaying vegetation. Oxygen depletion in the water can result in increased fish mortality.

TANK MIXTURES: This product may be applied in a tank mixture with one or more of the following products for enhanced control of aquatic weeds, woody brush, trees and vines in aquatic sites, provided that the product used is labeled for aquatic use. Refer to the individual label of all products used in the tank mixture for approved uses and application rates. Always read and follow label directions for each product in the mix.

Clipper; Garlon 3A Specialty; Habitat; 2,4-D amine; imazapyr; flumioxazin; triclopyr

9.2 Terrestrial Sites

This product may be used according to the directions for use described on this label to control weeds, woody brush, trees and vines listed on this label on any terrestrial site described on this label.

This product may be used to control weeds, woody brush, trees and vines on maintained landscapes, on improved and unimproved land, on lawns and turf and around ornamentals on industrial, commercial and residential sites, including airports, apartment complexes, chaparrals, ditch banks, driveways, dry ditches, dry canals, farmsteads, foncerows, forestry sites, golf courses, greenhouses, lumber yards, manufacturing sites, municipal sites, natural areas, nurseries, office complexes, ornamental beds, parks, parking areas, pastures, petroleum tank farms, pumping installations, railroads, rangeland, recreational areas, residential areas, roadsides, schools, shadehouses, sod and turfgrass seed farms, sports complexes, storage areas, substations, utility rights-of-way, utility sites, warehouse areas, wildlife food plots and wildlife management areas.

This product may be used for non-selective control of unwanted vegetation on any site listed on this label for trim-and-edge application around objects, including around building foundations, equipment storage areas and trees, and along and in fences, and to eliminate unwanted weeds growing in and around established shrub beds and ornamental plantings. This product may also be used for complete elimination of vegetation from a terrestrial site prior to planting ornamentals, flowers, or turfgrass (sod or seed), and prior to land development, including prior to beginning construction projects or the laying of asphalt or other road material. Application of this product may be repeated, as needed, to maintain bare ground, up to a total application of 8 quarts per acre per year.

This product may be used for establishment and maintenance of fuel breaks, for establishing fire perimeters and black lines, along fire roads and to facilitate prescribed burning practices on any site described on this label.

This product may also be used for weed control or growth regulation on Christmas tree farms, citrus orchards, farmsteads, production nurseries, sugarcane fields, sod farms and turfgrass seed farms.

This product requires the addition of a nonionic surfactant to the spray solution labeled for herbicide application. See the "MIXING" section of this label for more information on the use of surfactants with this product.

Unless otherwise directed, application of this product may be made according to the directions for use in the sections that follow on any of these sites using any method of application described on this label to control any weeds, woody brush, trees and vines listed in the "WEEDS CONTROLLED" section of this label.

10.0 ADDITIONAL SITE MANAGEMENT INFORMATION

The following sections contain additional use information specifically related to certain use sites. Unless otherwise directed, any application of this product described in the "WEEDS CONTROLLED" section or any other section of this label may be made on the use sites described in the sections that follow, where applicable, using any method of application described on this label that is appropriate.

10.1 Forestry, Hardwood and Christmas Tree Site Management

This product may be used for control or partial control of woody brush, trees and herbaceous weeds on any tree site, including forestry settings, Christmas tree plantations, and silvicultural and production nursery sties, using any method of application listed on this label. See the "WEEDS CONTROLLED" section of this label for application rates and specific use directions.

Unless otherwise directed, this product requires a nonionic surfactant that is labeled for the intended use on the site of application to be added to the spray mixture. Use of this product without a surfactant will result in reduced performance. See the "MIXING" section of this label for more information on the use of surfactants with this product.

IMPORTANT: SOME SURFACTANTS CAN CAUSE TREE INJURY WHEN DIRECTLY APPLIED TO SOME SPECIES. READ AND FULLY UNDERSTAND ALL APPROVED USES, PRECAUTIONS AND LIMITATIONS OF THE SURFACTANT BEFORE USING.

Weed Management, Site Preparation

This product may be used to control or partially control undesirable woody brush, trees, vines and herbaceous weeds listed on this label for preparing sites prior to planting any tree species, including Christmas trees, eucalyptus trees and hybrid tree cultivars, and for controlling weeds around established trees, for the release of conifer and hardwood trees, establishing wildlife openings and maintaining roads on any tree site.

TANK MIXTURES: This product may be applied in a tank-mix with the products listed in this section to increase the spectrum of vegetation controlled. Any application rate of this product listed on this label may be used in a tank-mix with the following products for tree site management, including site preparation, provided that the product is labeled for the use on the site of application and prior to planting the desired species. Refer to the individual label of all products used in the tank mixture for approved uses and application rates. Read and follow all directions for use and precautions for each product used, including planting interval restrictions, if any. Use this product according to the most restrictive precautionary statements of any product in the mix.

Arsenal; Arsenal Herbicide Applicators Concentrate; Chopper; Chopper GEN2; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XRT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Landmark; Landmark XP; Oust Extra; Oust XP; imazapyr; metsulfuron methyl; sulfometuron methyl; triclopyr

For control of herbaceous weeds, apply these tank-mix products at the lower end of the application rate range specified on the product label. For control or partial control of dense stands or for hard-to-control woody brush, trees and vines, apply these products at a rate or spray solution concentration towards the higher end of the given range.

Conifer Release, Mid-Rotation Conifer Release, Hardwood Release, Timber Stand Improvement

This product may be applied as a directed spray using a handheld sprayer or using any selective application equipment described on this label to control woody and herbaceous weeds and other undesirable understory vegetation below the tree crop canopy in conifer plantations, hardwood sites, Christmas tree plantations and silvicultural and ornamental nurseries to facilitate the release and growth of conifer and hardwood trees.

This product may also be applied using ground broadcast equipment or as a directed spray application for mid-rotation release under the canopy of pines, other conifers and hardwoods.

PRECAUTIONS: Avoid contact of spray drift, mist or drips with foliage, green bark or non-woody surface roots of desirable plant species. Use application

techniques that prevent or minimize contact of this product with foliage of desired trees or other plants through direct contact or off-target spray movement.

Conifer Release – Broadcast Application

This product may be broadly applied over the top of conifer tree species listed in this section after formation of final conifor resting buds in the fall or prior to initial bud swelling in the spring for control, partial control or suppression of herbaceous weeds and hardwoods listed in the "WEEDS CONTROLLED" section of this label to facilitate the release of these tree species in a forestry, plantation or nursery setting. Unless otherwise directed, make this application only where conifers have been established for a minimum of one growing season.

PRECAUTIONS: Conifer injury can occur when this product is applied at rates higher than prescribed on this label, where spray applications overlap, if application is made when conifers are actively growing, or when they are growing under stress from drought, flood, improper planting or insect, animal or disease damage.

Conifer Release Outside the Southeastern United States

For release of the following conifer species growing for a minimum of one growing season in most areas outside the southeastern United States, apply 24 to 48 fluid ounces of this product per acre as a broadcast application over the top of the conifer trees.

- Douglas Fir
- Fir species
- Hemlock
- Pines*
- California redwood
- Spruce

** Includes all species except loblolly pine, longleaf pine, shortleaf pine or slash pine.*

Apply 24 to 40 fluid ounces of this product for release of Douglas fir, pine and spruce that have been established for only one growing season (except in California).

For release of spruce (*Picea spp.*) in Maine, Michigan, Minnesota, New Hampshire and Wisconsin, up to 2.25 quarts of this product may be applied after formation of final resting buds in the fall for control of woody brush and tree species.

PRECAUTIONS: Ensure that the conifers are well hardened off before application of this product. Some nonionic surfactants can cause tree injury when broadly applied over the top of hemlock and California redwood and in mixed conifer stands. Test the nonionic surfactant to be used for tree safety before using.

Conifer Release in the Southeastern United States

For release of the following conifer species established for more than one growing season in the southeastern United States, apply 36 to 60 fluid ounces of this product per acre in the fall as a broadcast application over the top of the trees. For release of these species after only one growing season, apply only 24 fluid ounces of this product per acre.

- Eastern white pine
- Loblolly pine
- Longleaf pine
- Shortleaf pine
- Slash pine
- Virginia pine

TANK MIXTURES: This product may be applied for conifer release in a tank-mix with the following products to provide a broader spectrum of postemergence weed control and for residual control of weeds listed on the label of those products. Only apply these tank mixtures over the top of conifer species that are approved for this use for all products in the mix. Refer to the individual product labels for approved uses and application rates. Read and follow all directions for use and precautions for each product used. Use this product according to the most restrictive precautionary statements of any product in the mixture.

Arsenal; Arsenal Herbicide Applicators Concentrate; Oust Extra; Oust XP; atrazine; imazapyr; metsulfuron methyl; sulfometuron methyl

For release of Douglas fir established for a minimum of one growing season prior to bud swell in early spring, apply 24 fluid ounces of this product in a tank-mix with an appropriate rate of atrazine. Do not add surfactant for this application.

For herbaceous release of loblolly pine, Virginia pine and longleaf pine in the spring and early summer, apply 12 to 18 fluid ounces of this product per acre in a tank-mix with an appropriate rate of Oust Extra or Oust XP.

Late-Summer and Fall after Resting Bud Formation

For release of jack pine, white pine and white spruce, apply 24 to 48 fluid ounces of this product per acre in a tank-mix with an appropriate rate of Oust Extra or Oust XP that will not harm these conifer species.

For release of Douglas fir, apply 24 to 36 fluid ounces of this product per acre in a tank-mix with an appropriate rate of Arsenal or Arsenal Herbicide Applicators Concentrate.

For release of balsam fir and red spruce, apply 48 fluid ounces of this product per acre in a tank-mix with an appropriate rate of Arsenal or Arsenal Herbicide Applicators Concentrate.

10.2 Native and Wildlife Habitat Management

This product may be used to control exotic and other undesirable vegetation in wildlife habitat and natural areas, including riparian and estuarine areas, rangeland, and wildlife refuges. Application may be made to allow recovery of native plant species or prior to planting desirable native species, and for similar broad-spectrum vegetation control. Spot treatment, cut stump, cut stem, stem injection, wiper applicator and all other methods of application listed on this label may be used to selectively remove unwanted plants for habitat management and enhancement.

This product may also be used to eliminate annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product or native species may be allowed to repopulate the area naturally. If tillage is needed to prepare a seedbed, wait a minimum of 7 days after application before tilling to allow translocation of this product into underground plant parts.

10.3 Ornamental and Production Nursery Management

All uses of this product described on this label may be used in a plant nursery setting using any method of application described.

This product may be used to clear an area of unwanted vegetation prior to planting any ornamental plant, tree, shrub or other plants.

This product may also be used to control weeds growing around established woody ornamental species, such as arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce and yew. This product may also be used to trim and edge around potted plants and other objects in a plant nursery.

PRECAUTIONS: Protect desirable plants from the spray solution using shields or coverings made of waterproof material. Take care to avoid contact of spray, drift or mist with foliage, green stems or immature bark of established ornamental species.

Greenhouse/Shadehouse

This product may be used to control weeds growing in and around greenhouses and shadehouses.

RESTRICTIONS: Desirable vegetation must not be present during application in a greenhouse. Turn air circulation fans off before applying this product inside a greenhouse or shadehouse and leave them off until the application solution has dried.

10.4 Commercial, Residential and Recreational Area Management

All applications of this product described on this label may be used on commercial, residential and recreational areas, including parks, schools and athletic fields, using any method of application described on this label, including spot treatment of unwanted vegetation, trim-and-edge application around trees, fences, walking paths, buildings, sidewalks, nature trails and other objects in these areas, to eliminate unwanted weeds growing in established shrub and ornamental beds, for turf management and renovation, and to eliminate vegetation from a site prior to development, including prior to planting an area to ornamentals, flowers or turfgrass (sod or seed), or beginning construction projects.

10.5 Pasture Management

The use of this product in pastures includes use on bahiagrass, bermudagrass, bluegrass, brome, fescue, guineagrass, kikuyugrass, orchardgrass, pangola grass, ryegrass, Timothy, and wheatgrass.

Preplant, Preemergence, Pasture Renovation

This product may be applied prior to planting or emergence of forage or perennial grasses. Refer to the "WEEDS CONTROLLED" section of this label for application rates of this product for control of specific weeds.

RESTRICTIONS: If the total application rate of this product is 2.25 quarts per acre or less, no waiting period between application and feeding or livestock grazing is required. If the rate is greater than 2.25 quarts per acre, remove domestic livestock before application and wait a minimum of 8 weeks after application before grazing or harvesting.

Spot Treatment, Wiper Applicator

This product may be applied in pastures as a spot treatment or over the top of desirable grasses using a wiper applicator to control taller growing weeds. For enhanced weed control, remove domestic livestock before application to allow for sufficient plant growth and wait a minimum of 7 days after application before grazing livestock or harvesting for feed. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: For spot treatment or use with a wiper applicator at rates of 2.25 quarts per acre or less, this product may be applied over the entire pasture or any portion of it. At rates greater than 2.25 quarts per acre, this product may be applied over no more than 10 percent of the total pasture at any one time. Application may be repeated in the same area at 30-day intervals.

Weed Suppression in Dormant Pastures

This product may be applied in dormant pastures to suppress competitive growth and seed production of annual weeds and other undesirable vegetation. Apply 9 to 12 fluid ounces of this product per acre using broadcast application equipment on pastures in late-fall after desirable perennial grasses have reached dormancy or in late-winter before desirable perennial grasses break dormancy and initiato green growth.

PRECAUTIONS: Higher application rates may be used for hard-to-control weeds; however, higher rates can cause stand reduction. Some stunting of perennial grasses can occur if broadcast application is made when they are not dormant.

RESTRICTIONS: No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 2.25 quarts of this product per acre per year onto pasture grasses except for renovation. If reseeding is needed due to severe stand reduction, no waiting period is required after application of this product before seeding the pasture grasses listed at the beginning of this section; for all other pasture grasses, wait a minimum of 30 days after application before seeding.

10.6 Railroad Management

All uses of this product described in the "WEEDS CONTROLLED" or any other section of this label may be used on railroad sites using any method of application described.

This product requires a nonionic surfactant that is labeled for the intended use on the site of application to be added to the spray mixture. If application is to be made where aquatic sites might be directly sprayed or inadvertently oversprayed, the surfactant must be labeled for aquatic use. Use of this product without a surfactant will result in reduced performance. See the "MIXING" section of this label for more information on the use of surfactants with this product.

Application of this product along railroad rights-of-way may be made in up to 80 gallons of spray solution per acre.

Bare Ground, Ballast and Shoulders, Crossings, Spot Treatment

This product may be used to maintain bare ground on railroad ballast and shoulders and reduce the need for mowing and mechanical brush removal along railroad rights-of-way. Application of this product may be repeated as weeds continue to emerge in order to maintain bare ground, up to a maximum total application rate of 8 quarts of this product per acre per year.

TANK MIXTURES: This product may be applied in a tank mixture with the following products for enhanced control of woody brush and trees for bare ground, ballast and shoulder, crossing and spot treatment applications, and other brush, tree and vine control on railroad sites, provided that the product used is labeled for these applications. Not all tank-mix products listed are labeled for aquatic use. Refer to the individual label of all products used in the tank mixture for approved uses and application rates. Always read and follow label directions for each product in the mix.

Arsenal; Arsenal Herbicide Applicators Concentrate; Chopper; Chopper Gen2; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XRT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Habitat; Hyvar X; Hyvar X-L; Krovar I DF; Oust Extra; Oust XP; Outrider®; Princep 4L; Princep Caliber 90; Princep Liquid; Sahara DG; Scythe; Stalker; Spike 20P Specialty; Spike 80DF Specialty; Telar XP; Transline Specialty; Velpar DF CU; Velpar DF VU; Velpar L; Velpar L CU; Velpar L VU; Vastlan Specialty; 2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diquat; diuron; hexazinone; imazapyr; metsulfuron methyl; pelargonic acid; simazine; sulfometuron methyl; sulfosulfuron; tebuthiuron; triclopyr

Brush, Tree and Vine Control

This product may be used to control woody brush, trees and vines along railroad rights-of-way. Apply 3 to 8 quarts of this product per acre in up to 80 gallons of spray solution containing 0.5% or more by volume of a nonionic surfactant as a broadcast application using either a boom or boomless sprayer. Apply a 0.75- to 1.5-percent solution of this product when using high-volume application equipment with a spray-to-wet technique, or a 4- to 8-percent solution when using low-volume directed spray for spot treatment.

TANK MIXTURES: This product may be applied in a tank-mix with one or more of the following products for enhanced control of woody brush, trees and vines along railroad rights-of-way, provided that the product is labeled for use on these sites. Refer to the individual product label for approved sites and application rates.

Arsenal; Arsenal Herbicide Applicator's Concentrate; Chopper; Chopper Gen2; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XRT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Habitat; Krenite S Brush Control Agent; Stalker; Telar XP; Tordon 101 Mixture Specialty; Tordon 22K Specialty; Tordon K Herbicide Specialty; Transline Specialty; Vanquish; Velpar DF CU; Velpar DF VU; Velpar L; Velpar L CU; Velpar L VU; Vastlan Specialty; chlorsulfuron; clopyralid; dicamba; fosamine; hexazinone; imazapyr; metsulfuron methyl; picloram; triclopyr

Weed Control in Dormant and Actively Growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds in dormant and actively growing bermudagrass along railroad rights-of-way. See the "WEEDS CONTROLLED" section of this label for directions for use of this product for weed control in grasses.

10.7 Rangeland Management

This product will control or suppress many annual weeds growing on perennial cool- and warm-season grass rangeland. Slight discoloration of the desirable grasses could occur, but will re-green and resume growing under moist soil conditions as effects of this product wear off.

Preventing seed production is critical to the control of invasive annual grassy weeds on rangeland. Yearly application of this product to eliminate invasive annual weeds before they produce seed will help eliminate viable weed seeds from the soil. Delay grazing of the area after application of this product to allow desirable perennials to grow, flower and re-seed the area.

***Bromus* Control:** A broadcast application of 9 to 12 fluid ounces of this product per acre will control or suppress downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*), cheatgrass (*Bromus secalinus*), cereal rye and jointed goatgrass on rangeland. For enhanced results, apply this product when most brome plants are in early-flower and before the plants, including seedheads, turn color. Allow for secondary weed flushes to occur after spring rains to further deplete the seed reserve in the soil and encourage perennial grass conversion on weedy sites. Apply this product in the fall in areas where spring moisture is normally limited and fall germination allows for good weed growth and weed seed depletion.

***Medusahead* Control:** To control or suppress medusahead, apply 12 fluid ounces of this product per acre at the 3-leaf stage. Delaying application beyond this stage will result in reduced or unacceptable control. Controlled burning prior to application of this product will eliminate the thatch layer produced by slowly decaying culms. Allow new weed growth to occur before applying this product after a burn. Repeat this application annually to eliminate medusahead seeds in the soil and allow desirable perennial grasses to repopulate the area.

RESTRICTIONS: Do not apply more than 2.25 quarts of this product per acre per year on rangeland. Do not use ammonium sulfate when applying this product on rangeland grasses. No waiting period between application of this product and feeding or livestock grazing is required.

10.8 Roadside Management

All uses of this product described on this label may be used for weed management along roadways, including weed control in dormant and active bermudagrass and bahiagrass, weed control along shoulders and under and around guardrails, signposts and other objects along the road, using any method of application described on this label. If applying this product in areas where the spray solution could inadvertently overspray a body of surface water, a non-ionic surfactant approved for aquatic use must be used. See the "MIXING" section of this label for more information on the use of surfactants with this product.

TANK MIXTURES: This product may be tank-mixed with the following products for shoulder, guardrail, spot treatment and maintaining bare ground applications, provided that the product used is labeled for use on these sites. Not all tank-mix products listed are labeled for aquatic use. Refer to the individual product labels for approved uses and application rates.

AAtrex 4L; AAtrex Nine-O; Banvel; Barricade 65WG; Chopper; Chopper Gen2; Crossbow; Direx 4L; Escort XP; Endurance; Formula 40; Gallery 75 Dry Flowable Specialty; Gallery SC; Garlon 4; Garlon XRT; Hyvar X; Karmex DF; Krenite S Brush Control Agent; Krovar I DF; Landmark; Landmark XP; Oust Extra; Oust XP; Outrider®; Pendulum 3.3 EC; Pendulum AquaCap; Pendimax 3.3; Plateau; Poast; Poast Plus; Princep 4L; Ronstar 50 WSP; Ronstar Flo; Ronstar G; Sahara DG; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan Pro; Surflan XL 2G; Telar XP; Tordon K; Vanquish; Vastlan Specialty; Velpar DF CU; Velpar DF VU; Velpar L; Velpar L CU; Velpar L VU; Weedar 64; 2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diuron; fosamine; hexazinone; imazapic; imazapyr; metsulfuron methyl; oryzalin; oxadiazon; pendimethalin; picloram; prodiamine; simazine; sulfometuron; sulfosulfuron; triclopyr

10.9 Utility Management

This product may be used along electrical power, pipeline and telephone rights-of-way, and on all sites associated with these utility rights-of-way, including substations, access roads and railroads, and along similar rights-of-way that run in conjunction with utilities, for spot treatment of unwanted vegetation, side-trimming, trim-and-edge application around objects, weed control prior to planting a utility site to ornamentals, flowers or turfgrass (sod or seed), turf management, to eliminate unwanted weeds growing in established shrub or ornamental beds, to prepare or establishing wildlife openings and for eliminating vegetation prior to beginning construction projects. Application of this product may be repeated as needed to maintain bare ground as weeds continue to emerge, up to a maximum application rate of 8 quarts per acre per year.

TANK MIXTURES: This product may be tank-mixed with the following products for use on utility sites, provided that the product is labeled for use on these sites. Not all tank-mix products listed are labeled for aquatic use. Refer to the individual product label for approved uses and application rates. For control of herbaceous weeds, use a lower application rate or spray solution concentration within the given ranges for these tank-mix products and increase the rate or concentration toward the higher end of the ranges for control of dense stands or hard-to-control woody brush, trees and vines.

AAtrex 4L; AAtrex Nine-O; Arsenal Herbicide Applicators Concentrate; Endurance; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XLT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Hyvar XL; Krenite S Brush Control Agent; Krovar I DF; Oust Extra; Oust XP; Outrider®; Plateau; Sahara DG; Surflan AS Agricultural; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan XL 2G; Telar XP; Transline Specialty; Vanquish; Velpar DF CU; Velpar DF VU; Velpar L; Velpar L CU; Velpar L VU; Vastlan Specialty; Weedar 64; 2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diuron; fosamine; hexazinone; imazapic; imazapyr; metsulfuron methyl; oryzalin; pendimethalin; prodiamine; simazine; sulfometuron methyl; sulfosulfuron; triclopyr

Ensure that the Garlon product is thoroughly mixed with water according to label directions before adding this product to the spray mixture. Maintain continuous agitation when adding this product in order to avoid tank-mix compatibility problems.

For enhanced results with side-trimming, apply this product in a tank-mix with one of the Garlon products listed above.

11.0 CROP USES

11.1 Tree, Vine and Shrub Crops

THIS SECTION PROVIDES DIRECTIONS FOR USE THAT APPLY TO ALL TREE, VINE AND SHRUB CROPS LISTED IN THE FOLLOWING SECTIONS. SEE THE INDIVIDUAL CROP SECTIONS FOR SPECIFIC DIRECTIONS FOR USE, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATION: Preplant (site preparation); Broadcast Spray, Selective Equipment (shielded sprayer, wiper applicator); Directed Spray and Spot Treatment in Middles (between rows of trees, vines or bushes) and Strips (within rows of trees, vines or bushes); Site Weed Control; Perennial Grass Suppression; Cut Stump Application

USE INSTRUCTIONS: Unless specifically prohibited in the individual crop sections that follow, this product may be applied using a boom sprayer, controlled droplet applicator (CDA), shielded sprayer, wiper applicator, handheld or backpack sprayer, lance or orchard gun, in middles (between rows of trees, vines or bushes) and strips (within rows of trees, vines or bushes), for weed control or perennial grass suppression in established tree fruit and nut groves, orchards and vineyards. It may also be used for site preparation prior to planting or transplanting these crops.

Apply 12 fluid ounces to 4 quarts of this product per acre as directed in the "WEEDS CONTROLLED" section of this label. Use a higher application rate within a given range when weeds are stressed, growing in dense populations or greater than 12 inches tall. Application may be repeated as needed up to a maximum of 8 quarts of this product per acre per year. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

PRECAUTIONS: Use extreme care to avoid contact of this herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of desirable trees, canes and vines. Avoid application when recent pruning wounds or other mechanical injury have occurred. Contact of this product with other than matured brown bark could result in serious crop damage or destruction. Only shielded or directed sprayers may be used in crops where potential for crop contact is high, and then only where there is sufficient clearance. For application in strips (within rows of trees), only selective equipment (directed sprayer, hooded sprayer, shielded sprayer or wiper applicator) may be used in order to minimize the potential for overspray or drift of this product onto the crop. For berry crops, hooded sprayers must be fully enclosed including top, sides, front and back. Only wiper applicators or shielded sprayers capable of preventing all contact of this product with the crop may be used. See additional use instructions and precautions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: Allow a minimum of 3 days between application of this product and transplanting.

Middles (between rows)

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between rows of tree, vine and shrub crops listed on this label. If weeds are under drought stress, irrigate prior to application. Reduced weed control could result if weeds have been recently mowed at the time of application.

TANK MIXTURES: A tank mixture of this product with Goal 2XL may be applied for annual weed control between rows (middles) of a variety of tree, vine and shrub crops when weeds are stressed or growing in dense populations. Application of 12 to 24 fluid ounces of this product per acre plus an appropriate rate of Goal 2XL will control annual weeds with a maximum height or length of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's-purse, annual sowthistle, filaree (suppression), horseweed/marestail, stinging nettle and common purslane (suppression). This tank-mix will also control common cheeseweed (malva) or hairy fleabane with a maximum height or length of 3 inches.

This product may also be applied to row middles in tank mixtures with the following products.

2,4-D; bromacil; clethodim; diuron; fluazifop-P-butyl; flumioxazin; glufosinate-ammonium; indaziflam; napropamide; norflurazon; oryzalin; oxyfluorfen; pendimethalin; penoxsulam; pyraflufen ethyl; rimsulfuron; saflufenacil; sethoxydim; simazine; thiazopyr

Alion; Chateau Herbicide SW; Devrinol 2-XT; Devrinol 50-DF; Devrinol 50-DF Ornamental; Devrinol DF-XT; Devrinol DF-XT Ornamental; Direx 4L; Dri-Clean; Fusilade II Turf & Ornamental; Fusilade DX; Goal 2XL; GoalTender; Karmex DF; Matrix FNV; Matrix SG; Orchard Master Broadleaf; Orchard Master CA; Pindar GT; Poast; Poast Plus; Prowl 3.3 EC; Prowl H2O; Princep 4L; Princep Caliber 90; Princep Liquid; Rely 280; Select; Select 2 EC; Select Max Herbicide with Inside Technology; Simazine 4L; Simazine 4L Flowable; Simazine 90DF; Simazine 90 WDG; Sim-Trol 4L; Sim-Trol DF; Solicam DF; Surflan AS Agricultural; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan XL 2G; Treevix Powered by Kixor; Venue; Visor Broadcrop

Ensure that the product used is labeled for application within the crop being grown. Read and follow label directions for all products in the tank mixture.

Strips (within rows)

TANK MIXTURES: This product may be applied within rows of tree, vine and shrub crops in tank mixtures with the following products.

2,4-D; bromacil; clethodim; diuron; fluazifop-P-butyl; flumioxazin; glufosinate-ammonium; indaziflam; napropamide; norflurazon; oryzalin; oxyfluorfen; pendimethalin; penoxsulam; pyraflufen ethyl; rimsulfuron; saflufenacil; sethoxydim; simazine; thiazopyr

Alion; Chateau Herbicide SW; Devrinol 2-XT; Devrinol 50-DF; Devrinol 50-DF Ornamental; Devrinol DF-XT; Devrinol DF-XT Ornamental; Direx 4L; Dri-Clean; Fusilade II Turf & Ornamental Fusilade DX; Goal 2XL; GoalTender; Karmex DF; Matrix FNV; Matrix SG; Orchard Master Broadleaf; Orchard Master CA; Pindar GT; Poast; Poast Plus; Prowl 3.3 EC; Prowl H2O; Princep 4L; Princep Caliber 90; Princep Liquid; Rely 280; Select; Select 2 EC; Select Max Herbicide with Inside Technology; Simazine 4L; Simazine 4L Flowable; Simazine 90DF; Simazine 90 WDG; Sim-Trol 4L; Sim-Trol DF; Solicam DF; Surflan AS Agricultural; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan XL 2G; Treevix Powered by Kixor; Venue; Visor Broadcrop

Ensure that the product used is labeled for application within the crop being grown. Read and follow label directions for all products in the tank mixture.

RESTRICTIONS: Do not apply these tank mixtures in Puerto Rico.

Perennial Grass Suppression

This product will suppress perennial grasses such as bahiagrass, bermudagrass, tall fescue, orchardgrass, Kentucky bluegrass and quackgrass that are grown as ground covers in tree, vine and shrub crops.

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 6 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4.5 fluid ounces of this product per acre. Do not add ammonium sulfate to the spray mix.

For enhanced results, mow cool-season grass covers in the spring to even their height and then apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4.5 fluid ounces of this product in 10 to 25 gallons of water per acre 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches prior to seedhead emergence. For suppression for up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 1.5 to 3 fluid ounces per acre about 45 days later. Make no more than two applications per year.

For burndown of bermudagrass, apply 24 to 48 fluid ounces of this product in 3 to 20 gallons of water per acre. Make this application only if a reduction of the bermudagrass stand can be tolerated. When burndown is required prior to harvest, make the application a minimum of 21 days prior to harvest to allow sufficient time for burndown to occur.

For suppression of bermudagrass, apply 4.5 to 12 fluid ounces of this product per acre east of the Rocky Mountains and 12 fluid ounces west of the Rocky Mountains in a total spray volume of 3 to 20 gallons per acre no sooner than 1 to 2 weeks after full green-up. If the bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when re-growth occurs and bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, apply 4.5 to 7.5 fluid ounces of this product per acre under shaded conditions or where a lesser degree of suppression is desired.

Cut Stump Application

Application of this product to a freshly cut tree stump may be made during site preparation or site renovation to control regrowth and re-sprouting of stumps of many tree species, some of which are listed below.

Citrus Trees: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor

Fruit Trees: Apple, Apricot, Cherry (sweet, sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (all), Quince

Nut Trees: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia, Pecan, Pistachio, Walnut (black, English)

USE INSTRUCTIONS: Cut the tree close to the soil surface and immediately apply a 50- to 100-percent (undiluted) solution of this product to the freshly cut surface using application equipment capable of covering the entire cambium. A delay in application could result in reduced performance. For enhanced results, cut the tree during period of active growth and full leaf expansion and apply this product.

PRECAUTIONS: DO NOT MAKE A CUT STUMP APPLICATION WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MIGHT BE GRAFTED TO THE ROOTS OF THE CUT STUMP, AS INJURY COULD OCCUR IN ADJACENT TREES. Some sprouts, stems or trees can share a common root system. Adjacent trees having a similar age, height and spacing could be an indicator of a shared root system. Whether grafted or shared, injury is likely to occur to adjacent stems or trees when this product is applied to one or more trees sharing a common root system.

11.1.1 Citrus Fruit Crops

LABELED CROPS: All cultivars, varieties and/or hybrids of Calamondin; Chironja; Citron; Citrus Hybrids; Grapefruit (including Japanese summer); Kumquat; Lemon; Lime (including Australian desert lime, Australian finger lime, Australian round lime, Brown river finger lime, Mount white, New Guinea wild, Russell river, sweet, and Tahiti); Mandarin (including Mediterranean, Satsuma); Orange (all); Pummelo; Tangelo (ugli); Tangerine (Mandarin); Tangor; Uniq Fruit (ugli)

TYPES OF APPLICATION: Preplant (site preparation); Broadcast Spray, Selective Equipment (shielded sprayer, wiper applicator), Directed Spray or Spot Treatment in Middles (between rows of trees) or Strips (within rows of trees); Perennial Grass Suppression; Cut Stump Application

USE INSTRUCTIONS: The following use instructions pertain to application in Florida and Texas only.

For burndown or control of the weeds listed below, apply this product at the specified rate in 3 to 30 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

To control goatweed, apply 48 to 72 fluid ounces of this product in 20 to 30 gallons of water per acre when plants are actively growing. Apply 48 fluid ounces per acre when plants are less than 8 inches tall and 72 fluid ounces per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the use of this product in a tank-mix with Krovar I or Karmex could improve weed control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Weed Species	Rate of Product for Control at Stage			
	2 to 4 Leaves	4 to 6 Leaves	6 to 8 Leaves	8 to 12 Leaves
Bermudagrass	B	–	PC	C
Guinea grass				
Texas and Florida Ridge	B	C	C	C
Florida Flatwoods	–	B	C	C
Para grass	B	C	C	C
Torpedograss	S	–	PC	C

S = Suppression, PC = Partial Control, B = Burndown, C = Control

RESTRICTIONS: Allow a minimum of 1 day between application and harvest of citrus fruit crops. For citron groves, apply as a directed spray only.

11.2 Annual and Perennial Crops

THIS SECTION PROVIDES DIRECTIONS FOR USE OF THIS PRODUCT THAT APPLY TO ALL CROPS LISTED IN THE FOLLOWING SECTIONS. SEE THE INDIVIDUAL CROP SECTIONS FOR SPECIFIC USE INSTRUCTIONS, PREHARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATION: Chemical Fallow; Preplant Fallow Beds; Preplant; At-Planting; Preemergence; Hooded Sprayer in Row Middles; Shielded Sprayer in Row Middles; Wiper Applicator in Row Middles; Post-Harvest

USE INSTRUCTIONS: This product may be applied during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergence to annual and perennial crops listed on this label, except where specifically limited. For any crop not listed on this label, application must be made a minimum of 30 days prior to planting. Unless otherwise directed, apply this product according to the rates listed in the "WEEDS CONTROLLED" section of this label. Application rates specified on this label for hard-to-control weeds, or those specified on separate supplemental labeling for this product, supersede the rates in the "WEEDS CONTROLLED" section of this label. Additional information on hard-to-control weeds can be found on Fact Sheets published for this product.

Application of this product may be repeated as needed up to a maximum of 6 quarts per acre per year. Refer to specific use sections of this label for additional information on minimum intervals required before re-application of this product.

Hooded sprayers and wiper applicators capable of preventing all contact of the herbicide solution with the crop may be used in mulched or unmulched row middles after crop establishment. Wiper applicators may be used over the top of crops to control tall weeds only when specifically directed in the individual crop sections that follow. Crop injury is possible with these methods of application. Refer to the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information regarding the potential for crop injury using selective application equipment.

Spot treatment application of this product for weed control in a cropping system may be made only when specifically directed in the individual crop sections that follow.

Unless otherwise prohibited, all applications of this product described in the sections that follow may be made using aerial application equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label and on all supplemental labeling published for this product. Refer to the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on aerial application and procedures for avoiding spray drift that could cause injury to any vegetation not intended for application. Use of appropriate buffers will help prevent injury to adjacent vegetation.

TANK MIXTURES: This product may be tank-mixed with other herbicides to provide residual weed control, a broader weed control spectrum or an alternate mechanism of action. Always read and follow label directions for all products in the tank mixture. Use all products according to rates and timing specified on the label. Some tank-mix products have the potential to cause crop injury. Read the label for all products in the tank mixture prior to use to determine the potential for crop injury. Always predetermine the compatibility of tank-mix products together in the carrier by mixing small proportional quantities in advance. Mixing other products with this herbicide in the spray tank can cause incompatibility, antagonism, or a reduction in the efficacy of this product. Bayer CropScience LP has not tested all product formulations for compatibility or performance in a tank-mix with this product. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not specifically identified on this label or on separate supplemental labeling or Fact Sheets for this product. See the "MIXING" section of this label for more information on tank mixtures.

PRECAUTIONS: Avoid contact of this herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops, as severe crop injury or destruction could result. Transplant seedlings coming into contact with weeds that are still wet with a spray solution of this product could result in significant crop injury. When making preemergence applications, application must be made before crop emergence to avoid severe crop injury. Broadcast application of this product at emergence will result in injury or death of emerged seedlings. Apply before seed germination in coarse sandy soils to further minimize the risk of crop injury. In crops where spot treatment is allowed, the crop sprayed with this product will be killed along with the weeds. Take care not to spray or allow spray to drift outside the target area in order to avoid unwanted crop destruction. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

Preharvest application on crops grown for seed could result in a reduction in germination or vigor. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the preharvest use of this product on any crop grown for seed.

RESTRICTIONS: Observe the maximum application rates stated throughout this label. Maximum application rates apply to the use of this product combined with the use of any and all other herbicides containing glyphosate as the active ingredient, whether applied separately or as mixtures. Calculate the application ratas (glyphosate acid equivalents) and ensure that the total use of this and other glyphosate-containing products does not exceed the stated maximum rate. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

Unless otherwise directed on this label, application using selective equipment, including wiper applicators and hooded sprayers, must be made a minimum of 14 days prior to harvest. In crops where spot treatment is allowed, do not apply this product to more than 10 percent of the total field to be harvested, unless otherwise directed. Post-harvest and fallow application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

Do not harvest or feed vegetation from an area for 8 weeks following broadcast postemergence application, unless otherwise directed.

When applying this product as a tank mixture with one or more products, refer to each individual tank-mix product label for restrictions and apply the mixture in accordance with the most restrictive statements for each product in the tank.

11.2.1 Sugarcane

TYPES OF APPLICATION: Chemical Fallow; Preplant; At-Planting; Preemergence; Hooded Sprayer in Row Middles; Shielded Sprayer in Row Middles; Wiper Applicator in Row Middles; Spot Treatment; Plant Growth Regulator; Post-Harvest

Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied in or around sugarcane fields, or in fields prior to the emergence of plant cane.

RESTRICTIONS: Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation unless the surfactant added to the spray solution is labeled for herbicide use and approved for aquatic application.

Spot Treatment

USE INSTRUCTIONS: This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, apply a 1-percent solution of this product in water using a handheld sprayer and a spray-to-wet technique. Enhanced results can be obtained on volunteer or diseased sugarcane when application is made when there are at least 7 new leaves. Avoid contact of this herbicide with healthy sugarcane plants as severe damage or destruction could result.

RESTRICTIONS: Do not feed or graze treated sugarcane foliage within the application area.

Hooded Sprayer

USE INSTRUCTIONS: This product may be applied using a hooded sprayer for weed control in between rows of sugarcane. See additional instructions on the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS: Do not allow weeds within the application area to come into contact with the crop.

Plant Growth Regulation

USE INSTRUCTIONS: This product may be used as a foliar-applied plant growth regulator to hasten ripening and extend the period of high sucrose level in both low- and high-tonnage sugarcane. Most of the sucrose increase is concentrated in the top nodes of the cane stalk. To maximize sugar recovery where topping is practiced at harvest, top at the base of the fourth leaf. Consult your state sugarcane authority or local Bayer CropScience LP representative regarding the degree of sucrose response that can be anticipated prior to application of this product.

As a result of leaf desiccation, improved trash burn can be expected.

Apply this product at the following rates and timing according to the State in which the sugarcane is grown. Use a higher application rate within the given range when applying to sugarcane under adverse ripening conditions or to less responsive varieties.

FLORIDA – Apply 6 to 14 fluid ounces of this product per acre 3 to 5 weeks before harvest of LAST RATOON CANE ONLY.

HAWAII – Apply 10 to 24 fluid ounces of this product per acre 4 to 10 weeks before harvest.

LOUISIANA – Apply 4 to 14 fluid ounces of this product per acre 3 to 7 weeks before harvest of RATOON CANE ONLY.

PUERTO RICO – Apply 6 fluid ounces of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.

TEXAS – Apply 6 to 14 fluid ounces of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.

PRECAUTIONS: Application of this product can initiate development of shooting eyes. This product might not increase the sucrose content of sugarcane under conditions of good natural ripening. Within 2 to 3 weeks after application, this product could produce a slight yellowing to a pronounced browning and drying of leaves, and a shortening of upper internodes. Spindle death could occur.

Rainfall within 6 hours after application could reduce the effectiveness of this product.

Application to sugarcane grown for seed could result in a reduction in germination or vigor. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the preharvest use of this product on sugarcane grown for seed.

RESTRICTIONS: Do not feed or graze sugarcane forage following application. Do not plant subsequent crops within 30 days after application of this product other than the following: alfalfa or other forage legumes, beans (all types), corn (all types), cotton, melons (all types), pasture grasses, peanuts, potatoes (Irish or sweet), sorghum (milo), soybean, squash (all types) or wheat.

Do not apply for enhanced ripening to any crops other than sugarcane. Use of this product in any manner not consistent with this label could result in injury to persons, animals or crops, or other unintended consequences.

Fallow Treatment

USE INSTRUCTIONS: This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane by applying 3 to 3.75 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow a minimum of 7 days after application before tillage. Aerial application of up to 72 fluid ounces per acre may be made onto fallow sites where there is sufficient buffer to prevent drift onto adjacent crops. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for this application in sugarcane. Read and follow label directions for all products in the tank mixture.

11.3 Grass Seed and Sod Production

USE INSTRUCTIONS: Refer to the "WEEDS CONTROLLED" section of this label for application rates of this product for specific weeds. When applied as directed, this product will control those annual and perennial grasses and broadleaf weeds listed. Application rates specified on this label for hard-to-control weeds, or those specified on separate supplemental labeling for this product, supersede rates listed in the "WEEDS CONTROLLED" section of this label. Additional information on hard-to-control weeds can be found on Fact Sheets published for this product.

LABELED CROPS: Any grass (*Gramineae* family) except Corn; Sorghum; Sugarcane; Barley; Buckwheat; Millet (pearl, proso); Oats; Rice; Rye; Quinoa; Teff; Teosinte; Triticale; Wheat (all types); Wild rice

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Renovation; Removal of Established Stands; Site Preparation; Shielded Sprayer; Wiper Application; Spot Treatment; Creating Rows in Annual Ryegrass

Preplant, At-Planting, Preemergence, Renovation, Removal of Established Stand, Site Preparation

USE INSTRUCTIONS: This product controls most existing vegetation for purposes of renovating turf or forage grass seed production areas, or for establishing turfgrass grown for sod. This product may be used to destroy undesirable grass vegetation when production fields are converted to altornative species or crops. Do not disturb soil or underground plant parts before application and delay tillage or renovation techniques, including vertical mowing, coring and slicing, for a minimum of 7 days after application to allow for herbicide translocation into underground plant parts.

Apply before, during or after planting, or for renovation purposes. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the herbicide spray. For maximum control of existing vegetation, delay planting until determining if any re-growth of underground plant parts will occur. Where repeat applications are necessary, sufficient re-growth must be attained prior to application. For warm-season grasses, such as bermudagrass, summer or fall application provides enhanced control. Broadcast application of this product may be used to control sod remnants or other unwanted vegetation after sod is harvested. Application rates of up to 3.75 quarts per acre may be used to totally remove an established stand of hard-to-kill grass species.

RESTRICTIONS: If application rate is 2.25 quarts of this product per acre or less, no waiting period between application and feeding or livesfock grazing is required. If the rato is greater than 2.25 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. Crops listed on this label may be planted into the area at any time; all other crops may be planted 30 days after application.

Shielded Sprayer

USE INSTRUCTIONS: Apply 24 to 72 fluid ounces of this product in 10 to 20 gallons of water per acre using a shielded sprayer to control weeds between grass seed rows. Uniform planting in straight rows will aid shielded sprayer application. Enhanced results can be obtained when the grass seed crop is small enough to easily pass by the protective shields. See additional instructions on the use of shielded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS: Contact of this product in any manner to any vegetation to which application is not intended could cause damage.

Wiper Applicator

USE INSTRUCTIONS: This product may be applied over the top of desirable grasses using a wiper applicator for the control of tall weeds. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS: Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation could result in discoloration, stunting or destruction.

Spot Treatment

USE INSTRUCTIONS: Apply a 1-percent solution of this product using a handheld sprayer to control weeds within established vegetation prior to heading of grasses grown for seed or to control sod remnants or other unwanted vegetation after sod is harvested.

PRECAUTIONS: This product will kill the desirable grasses along with the weeds. Take care not to spray or allow spray to drift outside the target area in order to avoid unwanted crop destruction.

Creating Rows in Annual Ryegrass

USE INSTRUCTIONS: Use low-pressure nozzles or drop nozzles designed to target the application over a narrow band. Set nozzle height to establish the desired row spacing and apply 12 to 24 fluid ounces of this product per acre. Enhanced results can be obtained when application is made before ryegrass reaches 6 inches in height. Use the higher application rate within this range when ryegrass is greater than 6 inches in height.

PRECAUTIONS: Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction. To the extent consistent with applicable law, grower assumes all responsibility for crop losses resulting from misapplication of this product.

12.0 WEEDS CONTROLLED

Read the entire label before proceeding to use this product.

Unless otherwise directed, this product requires the addition of a nonionic surfactant that is labeled for use with herbicides to the spray solution. See the "MIXING" section of this label for more information on the use of surfactants with this product.

Always use the higher application rate or spray solution concentration of this product within a given range when weed growth is heavy or dense, or when weeds are growing in an undisturbed (non-cultivated) area.

Poor weed control could be realized if application is made to weeds covered with dust. For weeds that have been mowed, grazed or cut, allow re-growth to occur prior to application of this product.

Refer to the sections that follow for application rates and timing of application for the control of annual and perennial weeds and woody brush, trees and vines.

12.1 Weed Control, Renovation and Chemical Mowing in Turf

The use of this product described in this section may be applied to turfgrass growing on any terrestrial site listed on this label. Ensure that any tank-mix product applied with this product is labeled for the intended use and on the site of application.

Weed Control in Dormant Bermudagrass and Bahiagrass

This product may be used to control or suppress many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass prior to spring green-up in areas where these turfgrasses are desirable ground covers and some temporary injury or discoloration can be tolerated.

Apply 6 to 48 fluid ounces of this product in 10 to 40 gallons of water per acre when bermudagrass and bahiagrass are dormant and prior to spring green-up.

Application of more than 12 fluid ounces of this product per acre on highly maintained bermudagrass and bahiagrass turf, such as golf courses and lawns, could result in injury or delayed green-up in the spring.

For residual weed control in dormant bermudagrass and bahiagrass, this product may be tank-mixed with Outrider®, Oust Extra or Oust XP herbicides. Apply 6 to 48 fluid ounces of this product in a tank-mix with an appropriate rate of Outrider, Oust Extra or Oust XP herbicide in 10 to 40 gallons of water per acre. To avoid delays in green-up and minimize injury, apply no more than 1 ounce of Oust Extra or Oust XP herbicide per acre on bermudagrass and no more than 0.5 ounce on bahiagrass, and avoid application when these grasses are in a semi-dormant condition.

DO NOT apply this product in a tank-mix with Outrider, Oust Extra or Oust XP herbicides on highly maintained bermudagrass and bahiagrass turf, such as on golf courses and lawns.

Weed Control in Actively Growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds in actively growing bermudagrass. Some bermudagrass injury could result from the application of this product, but the bermudagrass will recover under moist conditions once the effects of the product wear off. Use only on well-established bermudagrass where some temporary injury or discoloration can be tolerated.

Apply 12 to 36 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Use a lower application rate within this range when controlling annual weeds less than 4 inches tall (or runner length) and increase the rate towards the upper end of the range as weeds increase in size or as they approach flower or seedhead formation. At these application rates, this product will provide partial control of the following perennial weeds in actively growing bermudagrass:

- Bahiagrass
- Bluestem, silver
- Fescue, tall
- Johnsongrass
- Trumpetcreeper
- Vaseygrass

PRECAUTIONS: Applying more than 12 fluid ounces of this product per acre on highly maintained bermudagrass, such as on golf courses and lawns, could cause unacceptable turf injury and discoloration.

For a broader weed control spectrum in actively growing bermudagrass, this product may be tank-mixed with Outrider, Oust Extra or Oust XP herbicides. Apply these tank-mixtures only on well-established bermudagrass where some temporary injury or discoloration can be tolerated. Make no more than one application of this product in these tank mixtures in the same season, otherwise the bermudagrass could be severely injured.

Apply 6 to 24 fluid ounces of this product per acre in a tank-mix with Outrider herbicide for control or partial control of Johnsongrass and other weeds listed on the Outrider herbicide label. Use a higher application rate of both products within the given ranges for control of annual or perennial weeds greater than 6 inches tall.

Apply 12 to 24 fluid ounces of this product per acre in a tank-mix with Oust Extra or Oust XP herbicide per acre for enhanced control of weeds listed on those labels. Use a lower application rate of each product within the given ranges to control annual weeds listed on the labels that are less than 4 inches tall (or runner length) and increase the rates toward the upper end of the ranges as annual weeds increase in size and approach the flower or seedhead stage. This tank-mix will provide partial control of the following perennial weeds in actively growing bermudagrass:

- Bahiagrass
- Bluestem, silver
- Broomsedge
- Dallisgrass
- Dock, curly
- Dogfennel
- Fescue, tall
- Johnsongrass
- Poorjoe
- Trumpetcreeper
- Vaseygrass
- Vervain, blue

PRECAUTIONS: Apply these tank mixtures only on well-established bermudagrass where some temporary injury or discoloration can be tolerated. DO NOT apply this product in a tank mixture with Outrider or Oust herbicides on highly maintained bermudagrass, such as on golf courses and lawns.

Weed Control in Actively Growing Bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces of this product in 10 to 40 gallons of water per acre 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches prior to seedhead emergence.

For growth suppression of bahiagrass for up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than two growth suppression applications per year.

For broad spectrum weed control in actively growing bahiagrass, this product may be tank-mixed with Outrider®, Oust Extra or Oust XP herbicides.

Apply 1.5 to 3.5 fluid ounces of this product per acre in a tank-mix with an appropriate rate of Outrider herbicide per acre to control perennial weeds or annual weeds greater than 4 inches in height.

Apply 4 fluid ounces of this product per acre in a tank-mix with an appropriate rate of Oust Extra or Oust XP herbicide 1 to 2 weeks following an initial spring mowing for enhanced control of weeds listed on the Oust herbicide label in actively growing bahiagrass. Make this application only once per year.

PRECAUTIONS: Apply these tank mixtures only on well-established bahiagrass where some temporary injury or discoloration can be tolerated.

Turf Renovation

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding until after determining if any re-growth of underground plant parts will occur. Where repeat applications are necessary, sufficient re-growth must be attained prior to re-application of this product. Summer or fall application provides enhanced control of warm-season grasses, such as bermudagrass. For managed turfgrass, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray solution.

This product has no residual soil activity and will not affect plants, seed or sod planted back into the area after application.

A handheld sprayer may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast application or spot treatment using a handheld sprayer may be used to control sod remnants or other unwanted vegetation after sod is harvested.

PRECAUTIONS: Do not disturb soil or underground plant parts before application of this product. Delay tillage and renovation techniques, such as vertical mowing, coring or slicing, a minimum of 7 days after application to allow translocation of this herbicide into underground plant parts.

RESTRICTIONS: If application rates total 2.25 quarts of this product per acre or less, no waiting period between application and feeding or livestock grazing is required. If the rate is greater than 2.25 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Chemical Mowing

This product may be used to suppress growth of perennial and annual grasses to serve as a substitute for mowing.

Perennial Grasses – apply 5 fluid ounces of this product per acre to suppress growth of Kentucky bluegrass, or 6 fluid ounces to suppress tall fescue, fine fescue, orchardgrass, quackgrass or reed canarygrass in 10 to 40 gallons of spray solution per acre after grasses have greened up to at least 75 percent green color in the spring, or 7 to 10 days after mowing when sufficient

re-growth has occurred to provide a desirable height for growth regulation. Use chemical mowing only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

Annual Grasses – apply 3 to 4 fluid ounces of this product in 10 to 40 gallons of spray solution per acre to suppress growth of some annual grasses, such as annual ryegrass, wild barley and wild oats when actively growing in coarse turf on roadsides or other industrial areas and before the seedheads are in the boot stage of development. This application could injure the desired annual grasses.

PRECAUTIONS: Use this product for chemical mowing only in areas where some temporary injury or discoloration of perennial and annual grasses can be tolerated.

12.2 Annual Weeds

Annual weeds are easiest to control when they are small and actively growing. New leaf development indicates active growth.

To control or partially control the annual weeds listed in this section when they are less than 6 inches in height or runner length and actively growing, apply 24 fluid ounces of this product per acre. If they are over 6 inches in height or runner length, or slowly growing under stressed conditions, increase the application rate to 1 to 4 quarts per acre, depending on weed height and the severity of the poor growing conditions.

For application using a handheld sprayer with a spray-to-wet technique, apply a 0.5-percent solution of this product to annual weeds less than 6 inches in height or runner length prior to seedhead formation in grasses or bud formation in broadleaf weeds. To control annual weeds over 6 inches tall, or even smaller weeds growing under stressed conditions, apply a 0.75 to 1.5-percent solution. Apply the maximum concentration of this product within this range for hard-to-control weeds or to control weeds over 24 inches tall.

For control of annual weeds using a handheld controlled droplet applicator (CDA), apply a 15-percent solution of this product (19 to 20 fluid ounces of this product per gallon of spray solution) at a flow rate of 2 fluid ounces of spray solution per minute and a walking speed of 1.5 miles per hour (1 quart of spray solution per acre). When using a vehicle-mounted CDA, apply the required amount of this product, as indicated in this section, in 2 to 15 gallons of water per acre.

For enhanced control, do not mow, cut, till, burn or disturb vegetation in the application area for a minimum of 3 days after application.

This product has no residual soil activity and does not control emergence of new annual weeds from seed. Subsequent applications of this product will be needed to control weeds that continue to emerge.

WEED SPECIES

Anoda, spurred
Balsam apple[1]
Barley
Barley, little
Barnyardgrass
Bassia, fivehook
Bittercress
Bluegrass, annual
Bluegrass, bulbous
Brome, downy
Brome, Japanese
Broomsedge
Buttercup
Castor bean[2]
Cheatgrass
Cheeseweed (Malva parviflora)
Chervil
Chickweed
Cocklebur
Copperleaf, hophornbeam
Copperleaf, Virginia
Coreopsis, plains/tickseed
Corn
Crabgrass
Cupgrass, woolly
Dwarf dandelion
Eclipta
False dandelion
False flax, small-seed
Fiddleneck
Filaree
Fleabane, annual
Fleabane, hairy (Conyza bonariensis)
Fleabane, rough
Foxtail
Foxtail, Carolina
Geranium, Carolina
Goatgrass, jointed
Goosegrass
Groundsel, common
Henbit
Horseweed/Marestail (Conyza canadensis)
Itchgrass
Johnsongrass, seedling
Junglerice
Knotweed
Kochia
Lambsquarters
Lettuce, prickly
Mannagrass, eastern
Mayweed
Medusahead
Morning glory (Ipomoea spp)
Mustard, blue
Mustard, tansy
Mustard, tumble
Mustard, wild
Nightshade, black
Oats
Panicum, browntop
Panicum, fall
Panicum, Texas
Pennycress, field
Pepperweed, Virginia
Pigweed
Puncturevine
Purslane, common
Pusley, Florida
Ragweed, common
Ragweed, giant
Rice, red
Rocket, London
Rocket, yellow
Rye
Ryegrass
Sandbur, field
Sesbania, hemp
Shattercane
Shepherd's-purse
Sicklepod
Signalgrass, broadleaf
Smartweed, ladysthumb
Smartweed, Pennsylvania
Sorghum, grain (milo)
Sowthistle, annual
Spanish needles[3]
Speedwell, corn
Speedwell, purslane
Sprangletop
Spurge, annual
Spurge, prostrate
Spurge, spotted
Spurry, umbrella
Starthistle, yellow
Stinkgrass
Sunflower
Teaweed / Prickly sida
Thistle, Russian
Velvetleaf
Wheat
Wild oats
Witchgrass

[1] For control of balsam apple, apply this product using handheld equipment only.
[2] Control of castor bean can also be achieved by injecting 4 milliliters of this concentrated (undiluted) product per plant into the lower portion of the main stem.
[3] For control of Spanish needles, apply 48 fluid ounces of this product per acre.

12.3 Perennial Weeds

Enhanced control of perennial weeds can be obtained when this product is applied when target weeds are small and actively growing. New leaf development indicates active growth. If application of this product must be made to larger weeds or to weeds that are slowly growing under stressful conditions, apply at a rate or spray solution concentration towards the upper end of the specified range.

If weeds have been mowed or tilled, do not apply this product until plants have resumed active growth and have reached the specified stage of growth or sufficient growth has been achieved to allow for good interception of the spray solution. For enhanced control, do not mow, cut, till, burn or disturb vegetation in the application area for a minimum of 7 days after application.

For control of perennial weeds listed on this label using backpack or handheld equipment and a low-volume application technique, apply a 4 to 8-percent solution of this product over the crown of the target plant to cover 50 percent of the upper plant foliage.

For control of perennial weeds using a handheld controlled droplet applicator (CDA), apply a 15 to 30-percent solution of this product (19 to 38 fluid ounces of this product per gallon of spray solution) at a flow rate of 2 fluid ounces of spray solution per minute and a walking speed of 0.75 mile per hour (2 to 4 quarts of spray solution per acre). When using a vehicle-mounted CDA, apply the required amount of this product, as indicated in the following table, in 2 to 15 gallons of water per acre.

Application of this product in the fall must be made before a killing frost.

This product has no soil activity and does not control emergence of perennial weeds from seed and dormant underground roots, rhizomes or tubers present in the soil at the time of application. More than one application of this product will be necessary for continued control of weeds that emerge following application.

PERENNIAL WEEDS CONTROLLED Weed Species	Amount of Product per Acre	Amount of Product per Gallon of Spray-to-Wet Concentration Solution
Alfalfa*	0.7	1.5
Alligatorweed*	3	1.3

Apply this product when most of the target plants are in bloom. More than one application will be needed to achieve control.

Anise (fennel)	1.5 – 3	1 – 1.5
Bahiagrass	2.3 – 3.75	1.5
Beachgrass, European	–	3.5

Apply a 3.5-percent solution of this product using a spray-to-wet technique or an 8-percent solution using a low-volume application technique. Enhanced results can be obtained when application is made onto target weeds that are actively growing at the boot through the full-heading stage of development. Make application prior to the loss of more than 50 percent of green leaf color in the fall. Monitor application site and re-apply this product to any target weeds that were missed, if necessary, before re-seeding the area with desirable vegetation. For selective control of European beachgrass, apply a 33.3-percent solution of this product containing 1 to 2.5 percent of a nonionic surfactant during period of active growth using a wiper applicator. Maximizing the amount of individual leaf tissue contacted by the wiper applicator or making a second pass in the opposite direction will improve control.
Avoid contact of the herbicide solution with desirable vegetation.

Bentgrass*	1	1.5
Bermudagrass	4	1.5

Make application when seedheads are present.

Bermudagrass, water (knotgrass)	1	1.5
Bindweed, field	2.3 – 3.75	1.5

For control, apply 3 to 3.75 quarts of this product per acre as a broadcast application west of the Mississippi River and 2.3 to 3 quarts per acre east of the Mississippi River when bindweed is at or beyond full bloom. For enhanced results, apply in late-summer or fall.

Bittersweet, Oriental	2.25	2

For control of oriental bittersweet, apply this product as a broadcast spray in 30 to 40 gallons of spray solution containing 0.25 percent of a nonionic surfactant and 0.1 percent nonionic organosilicone per acre. Use a nonionic surfactant concentration of 0.5 to 2 percent by volume when using a handheld sprayer and a spray-to-wet application. For enhanced results, ensure complete coverage of the target plant with the spray solution.

Bluegrass, Kentucky	1.5 – 2.3	0.75

Apply when most target plants have reached the boot to head stage of development. When application is made prior to the boot stage, reduced control can result. In the fall, make application before plants have turned brown.

Blueweed, Texas	2.3 – 3.75	1.5

Apply 3 to 3.75 quarts of this product per acre west of the Mississippi River and 2.3 to 3 quarts per acre east of the Mississippi River when most target plants are at or beyond full bloom. For enhanced results, apply in late-summer or fall.

Brackenfern	2.3 – 3	0.75 – 1

Apply to fully expanded fronds that are at least 18 inches long.

PERENNIAL WEEDS RATE TABLE

Weed Species	Broadcast Rate (Pints/Acre)	Handheld Spray-to-Wet Concentration (% solution)
Bromegrass, smooth	1.5 – 2.3	0.75

Apply this product when most target plants have reached the boot to head stage of development. When application is made prior to the boot stage, reduced control can result. In the fall, make application before plants have turned brown.

Bursage, woolly-leaf	–	1.5
Canarygrass, reed	1.5 – 2.3	0.75

Apply this product when most target plants have reached the boot to head stage of development. When application is made prior to the boot stage, reduced control can result. In the fall, make application before plants have turned brown.

Cattail	2.3 – 3.75	0.75

Apply this product when target plants are actively growing and are at or beyond the early to full bloom stage of development. Enhanced results are achieved when application is made during the summer or fall months.

Clover, red, white	2.3 – 3.75	1.5
Cogongrass	2.3 – 3.75	1.5

Apply this product in late-summer or fall when cogongrass is at least 18 inches tall and actively growing. Due to uneven stages of growth and the dense nature of cogongrass vegetation, more than one application might be necessary to achieve control.

Cordgrass	2 – 8	5 – 8

Prior to application of this product for control of cordgrass, survey the area to determine if shellfish beds exist within the application area. If shellfish are intended to be harvested in the area, delay application of this product until after harvest or maintain a 50-foot buffer between the application area and commercial shellfish beds, or do not harvest shellfish for a minimum of 14 days following application of this product. See restrictions below.

Ideal conditions for control of cordgrass are when target plants are free of silt and debris and actively growing, and good spray coverage is achievable. The presence of debris or silt on the surface of cordgrass will reduce the performance of this product. To improve herbicide uptake, wash targeted plants prior to application and allow a minimum of 4 hours for plants to dry before applying this product. Where cordgrass has been cut or mowed prior to application, allow for sufficient re-growth before applying this product to ensure adequate interception and uptake of this product. Rainfall or immersion of the plant in tidewater within 4 hours after application could reduce the effectiveness of this product.

Apply 2 to 8 quarts of this product per acre using ground broadcast application or optical sensor equipment in 5 to 100 gallons of spray solution, or in 5 to 10 gallons of spray solution per acre when using aerial application equipment.

Apply a 5- to 8-percent solution of this product when using a handheld backpack sprayer or high-volume sprayer. Make all applications of this product for the control of cordgrass in a spray solution containing 0.25% or more (1 or more quarts per 100 gallons of spray solution) of a nonionic surfactant or other adjuvant that is compatible with this product and labeled for use with herbicides and approved for use on aquatic sites. For enhanced results, ensure complete coverage of cordgrass clumps.

RESTRICTIONS: If a minimum 50-foot buffer is maintained between the application area and commercial shellfish beds, there is no restriction on shellfish harvest. If application is made within 50 feet of commercial shellfish beds, DO NOT harvest shellfish for a minimum of 14 days following application of this product.

PERENNIAL WEEDS RATE TABLE

Weed Species	Broadcast Rate (Pints/Acre)	Handheld Spray-to-Wet Concentration (% solution)
Cutgrass, giant*	3	1

More than one application of this product will be required to achieve control, especially where vegetation is partially submerged in water. Allow target weeds to re-grow to the 7- to 10-leaf stage before making next application.

Dallisgrass	2.3 – 3.75	1.5
Dandelion	2.3 – 3.75	1.5
Dock, curly	2.3 – 3.75	1.5
Dogbane, hemp	3	1.5

Apply this product when most target plants have reached the late-bud to flower stage of growth. For enhanced results, make application in late-summer or fall.

Fescue (except tall)	2.3 – 3.75	1.5
Fescue, tall	2.3	1

Apply this product when most target plants have reached the boot to head stage of growth. If applied prior to the boot stage, less than desirable control might be obtained.

Guinea grass	2.3	0.75

Apply this product when most target plants have at least reached the 7-leaf growth stage.

Hemlock, poison	1.5 – 3	0.75 – 1.5

Control can also be achieved by injecting 5 milliliters of a 5-percent solution of this product using a handheld injection device in one leaf cane per plant, 12 inches above the root crown.[1] No surfactant is required.

Hogweed, giant	–	–

Inject 5 milliliters of a 5-percent solution of this product into one leaf cane per plant, 12 inches above the root crown.[1] No surfactant is required.

Horsenettle	2.3 – 3.75	1.5
Horseradish	3	1.5

Apply this product when most target plants have reached the late-bud to flower stage of development. For enhanced results, apply in late-summer or fall.

Horsetail, field	–	–

Inject 0.5 milliliter of this product per stem directly into the plant stem, one segment above the root crown.[1] No surfactant is required.

Iceplant	1.5	1.5
Iris, yellow flag	–	–

Cut flower stems 8 to 9 inches above the root crown. Push a cavity needle into the stem center and then slowly remove it as you inject 0.5 milliliter of this product using a handheld injector.[1] No surfactant is required.

Ivy; cape, German	1.5 – 3	0.75 – 1.5
Jerusalem artichoke	2.3 – 3.75	1.5
Johnsongrass	1.5 – 2.3	0.75

Apply this product when most target plants have reached the boot to head stage of development or before plants have turned brown in the fall. When applied prior to the boot stage, reduced control can result.

Kikuyu grass	1.5 – 2.3	0.75

PERENNIAL WEEDS RATE TABLE

Weed Species	Broadcast Rate (Pints/Acre)	Handheld Spray-to-Wet Concentration (% solution)
Knapweed	3	1.5

Apply this product when most target plants have reached the late-bud to flower stage of growth. For enhanced results, apply in late-summer or fall.

Knotweed; Bohemian, giant, Japanese	3	2

Apply 3 quarts of this product per acre as a broadcast application in 3 to 40 gallons of spray solution with 0.5 to 1 percent by volume of a nonionic surfactant. For application using a backpack sprayer and a spray-to-wet technique, apply a 2-percent solution of this product containing 0.5 to 2 percent by volume of a nonionic surfactant. For enhanced control, do not disturb vegetation in the application area for a minimum of 7 days after application.

Control can also be achieved by cutting stems cleanly just below the 2nd or 3rd node above the ground and immediately apply 0.36 fluid ounce (10 milliliters) of a 50-percent solution of this product in water into the "well" or remaining internode. Ensure that the upper plant material that was removed is gathered and properly discarded to prevent new plants from propagating from sprouting buds. Use of a bio-barrier, such as cardboard, plywood or plastic sheeting, will help guard against the spread of plant material. The combined total application rate of this product must not exceed 8 quarts per acre.[1] Control can also be achieved by injecting 5 milliliters of this product per stem into the second or third internode using a handheld injection device.[1] No surfactant is required.

Lantana	–	0.75 – 1

Apply this product when most target plants are at or beyond the bloom stage of growth. Use the higher spray solution concentration on plants that have reached the woody stage of growth.

Lespedeza	2.3 – 3.75	1.5
Loosestrife, purple	2	1 – 1.5

Apply this product when most target plants are at or beyond the bloom stage of growth. Enhanced results can be achieved when application is made during summer or fall months. Fall application must be made before a killing frost.

Lotus, American	2	0.75

Apply this product when most target plants are at or beyond the bloom stage of growth. Enhanced results can be achieved when application is made during summer or fall months. Fall application must be made before a killing frost. More than one application of this product might be necessary to control re-growth of underground plant parts and seeds.

Maidencane	3	0.75

More than one application of this product will be needed for control, especially for vegetation partially submerged in water. Allow plants to re-grow to the 7- to10-leaf stage before making next application.

Milkweed, common	2.3	1.5

Apply this product when most target plants have reached the late-bud to flower stage of growth.

Muhly, wirestem	1.5 – 2.3	0.75

Make application when most target plants are at least 8 inches in height (3- to 4-leaf stage of development) and actively growing.

Mullein, common	2.3 – 3.75	1.5
Napiergrass	2.3 – 3.75	1.5

Weed Species	Rate (pints per acre)	Spray Solution Concentration (% solution)
Nightshade, silverleaf	2.3 – 3.75	1.5

Apply 3 to 3.75 quarts of this product per acre as a broadcast application west of the Mississippi River and 2.3 to 3 quarts per acre east of the Mississippi River when most target plants are at or beyond full bloom. Enhanced results can be obtained when application is made in late-summer or fall after berries have formed.

Nutsedge; purple, yellow	2.3	0.75

Apply this product to control existing nutsedge plants and attached immature nutlets when target plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and will require repeated application of this product for long-term control.

Orchardgrass	1.5 – 2.3	0.75

Make application when most target plants have reached the boot to head stage of development. When applied prior to the boot stage, less than desirable control could be obtained. In the fall, make application before plants have turned brown.

Pampas grass	2.3 – 3.75	1.5
Para grass	3	0.75

More than one application of this product will be needed to achieve complete control. Allow plants to re-grow to the 7- to10-leaf stage before making next application.

Pepperweed, perennial	3	1.5
Phragmites*	2 – 3.75	0.75 – 1.5

For partial control of phragmites in Florida and the counties of other states bordering the Gulf of Mexico, apply 3.75 quarts of this product per acre as a broadcast application or a 1.5-percent solution using a handheld sprayer. In other areas of the U.S., apply 2 to 3 quarts per acre as a broadcast application or, for partial control, apply a 0.75-percent solution using a handhald sprayer. For enhanced results, make application in late-summer or fall when plants are actively growing and in full bloom. Due to the dense nature of this vegetation (which can prevent good spray coverage) and uneven stages of growth, more than one application of this product might be necessary to achieve control. Visual symptoms of control will be slow to develop.

Quackgrass	1.5 – 2.3	0.75

Apply this product when most target plants are at least 8 inches in height (3- fo 4-leaf stage of development) and actively growing.

Redvine*	1.5	1.5
Reed; common, giant	3 – 3.75	1.5

For enhanced results make application in late-summer or fall. Control can also be achieved by injecting 5 milliliters of this concentrated product (undiluted) directly into the second or third internode using a handheld injection device.[1] No surfactant is required.

Ryegrass, perennial	1.5 – 2.3	0.75

Apply this product when most target plants have reached the boot to head stage of growth. When applied prior to the boot stage, reduced control can result. In the fall, make application before ryegrass turns brown.

Weed Species	Rate (pints per acre)	Spray Solution Concentration (% solution)
Salvinia, giant	3 – 3.75	2

Apply a 2-percent solution of this product containing 0.5 to 2 percent by volume of a nonionic surfactant approved for aquatic use and containing at least 70 percent active ingredient using spray-to-wet technique. For broadcast application, apply 3 to 3.75 quarts of this product per acre in 3 to 40 gallons of spray solution containing 0.1 percent by volume nonionic organosilicone and 0.25 percent nonionic spreader sticker surfactant approved for aquatic use. Allow a minimum of 3 days after application before disturbing vegetation in the application site. This product will not control plants that are completely submerged or have a majority of foliage under water.

Smartweed, swamp	2.3 – 3.75	1.5
Spatterdock	3	0.75

Make application when most target plants are in full bloom. For enhanced results, apply in the summer or fall.

Spurge, leafy*	–	1.5
Starthistle, yellow	–	1.5
Sweet potato, wild*	–	1.5

Make application when most target plants are at or beyond the bloom stage of growth. More than one application will be needed to achieve control.

Thistle, artichoke	1.5 – 2.3	2

Make application when target plants are at or beyond the bud stage of growth.

Thistle, Canada	1.5 – 2.3	1.5

Make application when target plants are at or beyond the bud stage of growth. Control can also be achieved by stem-injection. Cut 8 to 9 of tallest plants in a clump at bud stage. Push a cavity needle into the stem center and then slowly remove it as you inject 0.5 milliliter of this concentrated product into the stem.[1] No surfactant required.

Timothy	1.5 – 2.3	1.5

Make application when most target plants have reached the boot to head stage of development. If application is made prior to the boot stage, reduced control can result. In the fall, make application before plants turn brown.

Torpedograss*	3 – 3.75	0.75 – 1.5

Apply this product at a lower rate or spray solution concentration within the specified range when torpedograss is growing on terrestrial sites and at a higher rate or concentration within the range when partially submerged under water or growing as a floating mat. Additional applications of this product will be needed to maintain control.

Trumpetcreeper*	1.5 – 2.3	1.5
Tules, common	–	1.5

Make application to target plants at or beyond the seedhead stage of development. Visual symptoms will be slow to appear and might not appear for 3 or more weeks after application.

Vaseygrass	2.3 – 3.75	1.5
Velvetgrass	2.3 – 3.75	1.5

Weed Species	Rate (pints per acre)	Spray Solution Concentration (% solution)
Waterhyacinth	2.5 – 3	0.75 – 1

Make application when target plants are at or beyond the early bloom stage of development. Visual symptoms might require 3 or more weeks after application to appear, with complete necrosis and decomposition not occurring until 60 to 90 days after application. Use a higher application rate within the given range when more rapid visual effects are desired.

Waterlettuce	–	0.75 – 1

Apply a 1-percent solution of this product in areas of heavy infestation. Enhanced results can be obtained when applied from mid-summer through winter. Application in the spring could require more than one application to achieve control.

Waterprimrose	–	0.75

Make application to target plants that are at or beyond the bloom stage of growth, but before fall color changes occur. Thorough coverage is necessary for enhanced control.

Wheatgrass, western	1.5 – 2.3	0.75

Make application when most target plants have reached the boot to head stage of development. Application made prior to the boot stage could result in reduced control. In the fall, make application before plants turn brown.

* Partial control

[1] When using stem injection, the combined total use of this product must not exceed 8 quarts per acre per year. At 5 milliliters of concentrated (undiluted) product per stem, 8 quarts will treat approximately 1500 stems per acre per year. The number of stems that can be treated per acre will vary depending on the injection volume and the concentration of this product in the application solution.

Other perennials listed on this label – Apply 2.3 to 3.75 quarts of this product per acre as a broadcast application or a 0.75 to 1.5-percent solution using a handheld sprayer.

12.4 Woody Brush, Trees and Vines

Apply this product to brush and trees that are actively growing after full leaf expansion, unless otherwise directed. Use a higher application rate within a given range for larger brush and trees and/or application in areas of dense vegetative growth. For control of vines, apply this product at a higher application rate or spray solution concentration within the given range when target plants have reached the woody stage of growth.

Enhanced control of woody brush and trees is obtained when application is made in late-summer or fall after fruit formation; however, in arid areas, enhanced control can be obtained when application is made in the spring to early-summer when brush and trees are at high moisture content and flowering. Poor control can be expected when this product is applied to drought-stressed brush and trees.

Some autumn color on undesirable deciduous species is acceptable when applying this product to brush and trees in the fall, provided no major leaf drop has occurred. Reduced performance of this product could result if fall application is made following a frost. Symptoms might not appear prior to frost or senescence following fall application.

For enhanced results, allow 7 or more days after application before mowing, cutting, tilling, burning or removal of woody brush, trees and vines from the application site. Additional applications of this product will be needed to control brush and trees regenerating from underground parts or seed.

TANK MIXTURES: This product may be applied at any rate stated on this label in a tank mixture with the following products to increase the spectrum of control of herbaceous weeds, woody brush, trees and vines. For control of herbaceous weeds, apply the tank-mix product at the lower end of the given application rate or spray solution concentration range. For control of dense stands or tough-to-control woody brush, trees and vines, increase

the application rate or spray solution concentration of the tank-mix product towards the higher end of the range. Refer to the individual product labels for approved uses and application rates. Not all tank-mix products listed are labeled for aquatic use.

Arsenal; Arsenal Herbicide Applicators Concentrate; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XRT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Vastlan Specialty; imazapyr; metsulfuron methyl; triclopyr

Ensure that the proper amount of the Garlon herbicide is thoroughly mixed with water in the spray tank before adding this product.

Cut Stump Application

This product may be used to control re-growth and re-sprouting of woody brush and trees on any site listed on this label.

Cut the woody brush or tree close to the soil or water surface and immediately apply a 50- to 100-percent (undiluted) solution of this product to the freshly-cut surface using an applicator capable of applying this product to the entire cambium. A delay in application could result in reduced performance. For enhanced results, cut the woody brush or tree during period of active growth and full leaf expansion and apply this product. No surfactant is needed for cut stump application.

For control of the tree of heaven (Ailanthus altissima), cut the tree close to the soil surface and immediately apply a 50-percent solution of this product (16 fluid ounces per quart of solution) and 10 percent Arsenal herbicide (3 to 4 fluid ounces per quart of solution) in water to the freshly-cut surface.

DO NOT MAKE A CUT STUMP APPLICATION WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP, AS INJURY COULD OCCUR IN THE ADJACENT TREES. Some sprouts, stems, or trees can share a common root system. Adjacent trees having a similar age, height and spacing could be an indicator of a shared root system. Whether grafted or shared, injury is likely to occur to adjacent stems or trees when this product is applied to one or more trees sharing common root system.

Woody Brush and Tree Injection and Frill Application

This product may be used to control woody brush and trees listed in this section by injection or frill application on any aquatic and terrestrial site listed on this label.

Inject or apply the equivalent of 1 milliliter (0.04 fluid once) of this product for every 2 to 3 inches of trunk diameter at breast height (DBH). If injecting this product into the woody brush or tree, use equipment capable of penetrating into the living plant tissue under the bark. No surfactant is required for direct injection of this product into woody brush and trees.

For frill application, apply a 50 to 95-percent solution of this product in water, with 0.5% or more by volume of a nonionic surfactant, to either a continuous frill around the tree or to cuts evenly spaced around the tree below all branches. As tree diameter increases, enhanced results can be achieved by applying this product to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow this product to run out of the frill or cut areas. In species that freely exude sap, make the frill or cuts at an oblique angle to produce a cupping effect and apply a 95-percent solution of this product with a nonionic surfactant as described above. For enhanced results, make this application during period of active growth and after full leaf expansion.

Modified High-Volume and Low-Volume Backpack Application

For control and partial control of woody bush, trees and vines listed on this label when using a backpack sprayer or other handheld equipment and a directed low-volume foliar application technique, apply a 4 to 8-percent solution of this product containing 0.5 to 1 percent by volume of a nonionic surfactant evenly over the plant crown to cover 50 percent of the upper foliage of undesirable woody brush, trees and vines.

WOODY BRUSH, TREES AND VINES RATE TABLE

Species	Broadcast Rate (Quarts per Acre)*	Handheld Spray Concentration (% Solution)*
Alder	2.3 – 3	0.75 – 1.2
Ash*	1.5 – 3.75	0.75 – 1.5
Aspen, quaking	1.5 – 2.3	0.75 – 1.2
Bearclover (Bearmat)*	1.5 – 3.75	0.75 – 1.5
Beech*	1.5 – 3.75	0.75 – 1.5
Birch	1.5	0.75
Blackberry	2.3 – 3	0.75 – 1.2
Blackgum	1.5 – 3.75	0.75 – 1.5
Bracken	1.5 – 3.75	0.75 – 1.5
Broom; French, Scotch	1.5 – 3.75	1.2 – 1.5
Buckwheat, California*	1.5 – 3	0.75 – 1.5
Cascara*	1.5 – 3.75	0.75 – 1.5
Castor bean	1.5 – 3.75	1.5

Also for control, inject 4 milliliters of this concentrated (undiluted) product per plant directly into the lower portion of the main stem using a handheld injection device.[1] No surfactant is required.

Catsclaw*	–	1.2 – 1.5

For partial control, apply this product when at least 50 percent of the new leaves are fully developed.

Ceanothus*	1.5 – 3.75	0.75 – 1.5
Chamise*	1.5 – 3.75	0.75
Cherry; bitter, black, pin	1.5 – 3.75	1 – 1.5
Cottonwood, eastern	1.5 – 3.75	0.75 – 1.5
Coyote brush	2.3 – 3	1.2 – 1.5

For control, apply this product when at least 50 percent of the new leaves are fully developed.

Cypress; swamp, bald	1.5 – 3.75	0.75 – 1.5
Deerweed	1.5 – 3.75	0.75 – 1.5
Dewberry	2.3 – 3	0.75 – 1.2
Dogwood*	3 – 3.75	1 – 2
Elderberry	1.5	0.75
Elm*	1.5 – 3.75	0.75 – 1.5
Eucalyptus, blue gum	–	1.5

For control of eucalyptus re-sprouts, apply this product using a handheld sprayer when re-sprouts are 6 to 12 feet tall. Ensure complete coverage.

Gallberry	1.5 – 3.75	0.75 – 1.5
Gorse*	1.5 – 3.75	0.75 – 1.5
Hackberry, western	1.5 – 3.75	0.75 – 1.5
Hasardia*	1.5 – 3	0.75 – 1.5
Hawthorn	1.5 – 2.3	0.75 – 1.2
Hazel	1.5	0.75
Hickory*	3 – 3.75	1 – 2
Honeysuckle	2.3 – 3	0.75 – 1.2
Hornbeam, American*	1.5 – 3.75	0.75 – 1.5
Huckleberry	1.5 – 3.75	0.75 – 1.5
Ivy, poison	3 – 3.75	1.5

WOODY BRUSH, TREES AND VINES RATE TABLE

Species	Broadcast Rate (Quarts per Acre)*	Handheld Spray Concentration (% Solution)*
Kudzu	3	1.5
Locust, black*	1.5 – 3	0.75 – 1.5
Madrone resprouts*	–	1.5
Magnolia, sweetbay	1.5 – 3.75	0.75 – 1.5
Manzanita*	1.5 – 3.75	0.75 – 1.5
Maple, red	1 – 3.75	0.75 – 1.2

For control, apply a 0.75- to 1.2-percent solution of this product using a handheld sprayer when leaves are fully developed. For partial control, apply 1 to 3.75 quarts per acre as a broadcast application.

Maple, sugar	–	0.75 – 1.2

For control, apply this product using a handheld sprayer when at least 50 percent of the new leaves are fully developed.

Maple, vine*	1.5 – 3.75	0.75 – 1.5
Monkey flower*	1.5 – 3	0.75 – 1.5
Oak; black, white*	1.5 – 3	0.75 – 1.5
Oak; northern pin	1.5 – 3	0.75 – 1.2

For control, apply this product when at least 50 percent of the new leaves are fully developed.

Oak, poison	3 – 3.75	1.5

Repeat applications might be required to maintain control. Application in the fall must be made before leaves lose green color.

Oak, post	2.3 – 3	0.75 – 1.2
Oak, red	–	0.75 – 1.2

For control, apply this product using a handheld sprayer when at least 50 percent of the new leaves are fully developed.

Oak, scrub*	1.5 – 3	0.75 – 1.5
Oak, southern red	1.5 – 3.75	1 – 1.5
Orange, Osage	1.5 – 3.75	0.75 – 1.5
Peppertree, Brazilian (Florida holly)*	1.5 – 3.75	1.5
Persimmon*	1.5 – 3.75	0.75 – 1.5
Pine	1.5 – 3.75	0.75 – 1.5
Poplar, yellow*	1.5 – 3.75	0.75 – 1.5
Prunus	1.5 – 3.75	1 – 1.5
Raspberry	2.3 – 3	0.75 – 1.2
Redbud, eastern	1.5 - 3.75	0.75 - 1.5
Redcedar, eastern	1.5 – 3.75	0.75 – 1.5
Rose, multiflora	1.5	0.75

Make application prior to leaf deterioration by leaf-feeding insects.

Russian olive*	1.5 – 3.75	0.75 – 1.5
Sage, black	1.5 – 3	0.75
Sage, white*	1.5 – 3	0.75 – 1.5
Sagebrush, California	1.5 – 3	0.75
Salmonberry	1.5	0.75
Saltbush	–	1

WOODY BRUSH TREES AND VINES PLANT TYPE		
Species	Product (Quarts per Acre)	Spray-to-Wet Concentration (% solution)
Saltcedar*	3 – 3.75	1 – 2

For partial control, apply a 1- to 2-percent solution of this product using a handheld sprayer or 3 to 3.75 quarts per acre as a broadcast application. For control, apply a 1- to 1.5-percent solution of this product in a tank-mix with Arsenal herbicide or Arsenal Herbicide Applicators Concentrate using a handheld sprayer. For control using broadcast application, apply 1.5 quarts of this product per acre in a tank-mix with an appropriate rate of Arsenal herbicide or Arsenal Herbicide Applicators Concentrate to plants less than 6 feet tall. To control saltcedar greater than 6 feet tall using broadcast application, apply 3 quarts of this product per acre in a tank-mix with a higher rate of Arsenal herbicide or Arsenal Herbicide Applicators Concentrate.

Sassafras*	1.5 – 3.75	0.75 – 1.5
Sea Myrtle	–	1
Sourwood*	1.5 – 3.75	0.75 – 1.5
Sumac, laurel, poison, smooth, sugarbush, winged*	1.5 – 3	0.75 – 1.5
Sweetgum	1.5 – 2.3	0.75 – 1.5
Swordfern*	1.5 – 3.75	0.75 – 1.5
Tallowtree, Chinese	–	0.75
Tan oak re-sprouts*	–	1.5
Thimbleberry	1.5	0.75
Tobacco, tree*	1.5 – 3	0.75 – 1.5
Toyon*	–	1.5
Trumpetcreeper	1.5 – 2.3	0.75 – 1.2
Vine maple*	1.5 – 3.75	0.75 – 1.5
Virginia creeper	1.5 – 3.75	0.75 – 1.5
Waxmyrtle, southern*	1.5 – 3.75	1.5
Willow	2.3	0.75
Yerba Santa, California*	–	1.5

* Partial control

Other woody brush and trees listed on this label – For partial control, apply 1.5 to 3.75 quarts of this product per acre as a broadcast application or a 0.75- to 1.5-percent solution using a handheld sprayer and a spray-to-wet application technique.

13.0 LIMIT OF WARRANTY AND LIABILITY

Bayer CropScience LP ("Company") warrants that this product conforms to the chemical description on the label. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall use this product only for the purposes of and in accordance with the Complete Directions for Use label ("Directions") and shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

To the extent consistent with applicable law, buyer and all users are responsible for all loss, injuries or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, crop injury or failure of this product to control weed biotypes which develop resistance to glyphosate, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, use and/or application in any manner not explicitly set forth in or inconsistent with the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

In case of an emergency involving this product, or for medical assistance, call collect, day or night, 1-800-334-7577.

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EPA Reg. No. 524-343

Packed for:
BAYER CROPSCIENCE LP
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI. 63167 U.S.A.

GRUPO	9	HERBICIDA

Roundup CUSTOM®

FOR AQUATIC & TERRESTRIAL USE

TRUEBLUE ADVANTAGE
PROVEN | RELIABLE | SUPPORTED

Un herbicida de amplio espectro para aplicación postemergencia, para el control de malezas acuática e industrial, ornamental, en céspedes, forestación, lados de carreteras, servidumbres de paso, cultivos selectos y otros usos terrestres indicados.

(Para una lista completa de aplicaciones acuáticas y terrestres, vea la sección Modo de empleo de esta etiqueta).

INGREDIENTE ACTIVO:	
*Glifosato, N-(fosfonometil) glicina, en la forma de su sal de isopropilamina	53.8%
OTROS INGREDIENTES:	46.2%
	100.0%

* Contiene 648 gramos por litro o 5.4 libras por galón norteamericano del ingrediente activo glifosato, en la forma de su sal de isopropilamina, lo cual es equivalente a 480 gramos por litro o 4.0 libras por galón norteamericano (39.9% por peso) del ácido, glifosato.

Nº. Reg. EPA 524-343 EPA Est. 524-IA-1

Manténgase Fuera del Alcance de los Niños

PRECAUCIÓN

Consulte el interior para conocer las precauciones adicionales.
INSTRUCCIONES DE USO COMPLETAS

No todos los productos recomendados en esta etiqueta han sido registrados para su uso en California. Verifique el estado de registro de cada producto en California antes de utilizarlo.

PARA INFORMACIÓN SOBRE EL PRODUCTO O AYUDA PARA UTILIZAR ESTE PRODUCTO, LLAME GRATIS AL 1-866-99BAYER (1-866-992-2937)

EN CASO DE EMERGENCIA RELACIONADA CON ESTE PRODUCTO O PARA AYUDA MÉDICA, LLAME POR COBRAR, DE DÍA O DE NOCHE, AL 1-800-334-7577

Envasado para:
BAYER CROPSCIENCE LP
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI 63167 USA
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Lea toda la etiqueta antes de usar este producto.

Use solo de acuerdo con las instrucciones de la etiqueta.

Lea la declaración "LÍMITE DE GARANTÍA Y RESPONSABILIDAD" al final de esta etiqueta antes de comprar o usar. Si los términos no son aceptables, devuélvalos de inmediato sin abrir.

EVITE EL CONTACTO DE ESTE HERBICIDA CON FOLLAJE, TALLOS VERDES, RAÍCES NO LEÑOSAS EXPUESTAS O FRUTAS DE CULTIVOS, PLANTAS Y ÁRBOLES DESEABLES, COMO PODRÍA PRODUCIRSE UNA LESIÓN GRAVE A LA PLANTA O LA DESTRUCCIÓN.

ESTE ES UN PRODUCTO DE USO FINAL. BAYER CROPSCIENCE LP NO TIENE LA INTENCIÓN Y NO LO HA REGISTRADO PARA SU REFORMULACIÓN O REEMBALAJE.

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1.0 INGREDIENTES

INGREDIENTE ACTIVO:	
*Glifosato, N-(fostonometil) glicina, en la forma de su sal de isopropilamina	53.8%
OTROS INGREDIENTES:	46.2%
	100.0%

*Contiene 648 gramos por litro o 5.4 libras por galón norteamericano del ingrediente activo glifosato, en la forma de su sal de isopropilamina, lo cual es equivalente a 480 gramos por litro o 4.0 libras por galón norteamericano (39.9% por peso) del ácido, glifosato.

2.0 NÚMEROS DE TELÉFONO IMPORTANTES

1. PARA INFORMACIÓN SOBRE EL PRODUCTO O AYUDA PARA UTILIZAR ESTE PRODUCTO, LLAME GRATIS AL 1-866-99BAYER (1-866-992-2937)
2. EN CASO DE EMERGENCIA RELACIONADA CON ESTE PRODUCTO O PARA AYUDA MÉDICA, LLAME POR COBRAR, DE DÍA O DE NOCHE, AL 1-800-334-7577

3.0 DECLARACIONES PREVENTIVAS

3.1 Riesgos para los seres humanos y los animales domésticos

Manténgase Fuera del Alcance de los Niños

PRECAUCIÓN

ANIMALES DOMÉSTICOS: Se considera que este producto es relativamente no tóxico para perros y otros animales domésticos, sin embargo, la ingestión de este producto o de abundantes cantidades de vegetación rociada recientemente podría causar irritación gastrointestinal temporal (vómitos, diarrea, cólicos, etc.). Si se observan dichos síntomas, dé al animal suficiente cantidad de líquidos para evitar la deshidratación. Llame a un veterinario si los síntomas persisten por más de 24 horas.

Equipo de protección personal (EPP)

Los usuarios y personas que manipulan este producto deben usar: camisa de mangas largas y pantalones largos, zapatos y calcetines.

Respete las instrucciones del fabricante para limpiar y mantener los equipos de protección personal (EPP). En caso de que no haya instrucciones, use detergente y agua caliente. Mantenga el EPP aparte del resto de la ropa y lávelo por separado.

Recomendaciones de seguridad para el usuario:
Los usuarios deben:
- Lavarse las manos antes de comer, beber, masticar chicle, usar tabaco o usar el baño.
- Quitarse la ropa de inmediato si el pesticida traspasa la ropa. Luego deben lavarse muy bien y ponerse ropa limpia.

3.2 Riesgos para el medio ambiente

Matar las malezas acuáticas puede dar lugar a una reducción o pérdida de oxígeno en el agua debido a la descomposición de material vegetal muerto. Esta pérdida de oxígeno puede causar que los peces se asfixien. Antes de aplicar pesticidas a aguas públicas, consulte con la agencia de su estado que sea la principal responsable de su regulación para determinar si se necesita un permiso. Para usos terrestres, no aplique directamente al agua, en áreas donde el agua superficial esté presente o en áreas intermareales por debajo del nivel medio de mareas altas, excepto si se aplica por aire por encima de la cobertura forestal. No contamine el agua cuando limpie el equipo o deseche el agua de lavado y enjuague del equipo.

3.3 Riesgos físicos o químicos

Para mezclar, almacenar y aplicar la solución de rocío de este producto, se pueden usar recipientes de acero inoxidable, fibra de vidrio, plástico o recipientes de acero recubiertos internamente con plástico.

NO MEZCLE, ALMACENE O APLIQUE ESTE PRODUCTO O LAS SOLUCIONES DE ROCÍO DE ESTE PRODUCTO EN ENVASES DE ACERO GALVANIZADO O SIN REVESTIMIENTO (EXCEPTO ACERO INOXIDABLE) O EN TANQUES DE ROCÍO. Si se utiliza en estos envases o tanques, este producto o las soluciones de rocío de este producto reaccionan y producen gas hidrógeno que puede formar una mezcla de gases altamente inflamable. Esta mezcla de gases podría incendiarse o explotar si está en contacto con fuego, chispas, sopletes para soldar, cigarrillos encendidos o cualquier otra fuente de ignición y causar lesiones personales graves.

INSTRUCCIONES DE USO

Se considera una violación a la ley federal usar este producto de una manera que no sea la indicada en la etiqueta. Este producto solo puede utilizarse de acuerdo con las instrucciones de uso en la etiqueta o según las etiquetas complementarias que se publican por separado. Puede solicitar las etiquetas complementarias para este producto a su vendedor minorista autorizado de Bayer CropScience LP o a su representante de Bayer CropScience LP.

No aplique este producto de manera que entre en contacto con los trabajadores u otras personas, ya sea directamente o por arrastre. Solamente los aplicadores que usan protección podrán estar en el área durante su aplicación. Para verificar requisitos específicos de su tribu o estado, consulte con la agencia responsable de la regulación del uso de pesticidas.

Requisitos para uso agrícola

Utilice este producto solo de acuerdo con la etiqueta y con las Normas de Protección para Trabajadores, 40 CFR Parte 170. Estas Normas contienen los requisitos para la protección de trabajadores agrícolas en granjas, bosques, viveros e invernaderos y para las personas que manipulan pesticidas agrícolas. Contienen los requisitos para capacitar, descontaminar, notificar y ofrecer asistencia de emergencia. También contienen instrucciones específicas y excepciones relativas a las afirmaciones en esta etiqueta sobre los equipos de protección personal (EPP) y los intervalos de acceso restringido. Los requisitos en esta caja se refieren únicamente a las aplicaciones de este producto cubiertas por las Normas de Protección para Trabajadores.

No entre ni permita la entrada de personal a las áreas tratadas durante el intervalo de entrada restringida (REI, por sus siglas en inglés) de 4 horas. El EPP que se requiere para el acceso anticipado a zonas tratadas de acuerdo con las Normas de Protección para Trabajadores y que incluye el contacto con material tratado, como plantas, tierra o agua es: overoles, zapatos con calcetines y guantes resistentes a sustancias químicas confeccionados con cualquier tipo de material impermeable.

Requisitos para usos no agrícolas

Los requisitos en esta caja se refieren a las aplicaciones de este producto que NO cubren las Normas de Protección para Trabajadores para pesticidas agrícolas (40 CFR, Parte 170). Las Normas se aplican cuando este producto se utiliza para producir plantas agrícolas en granjas, bosques, viveros o invernaderos.

Mantenga a las personas y a las mascotas fuera de las áreas tratadas hasta que la solución de rocío se haya secado.

4.0 ALMACENAMIENTO Y ELIMINACIÓN

El almacenamiento y la eliminación adecuados de los pesticidas son fundamentales para evitar la exposición de las personas y el medio ambiente a consecuencia de pérdidas y derrames del producto, excedentes o desechos y actos de vandalismo. No permita que este producto contamine el agua, ni los alimentos para personas o animales, ni las semillas, por medio del almacenamiento y la eliminación.

ALMACENAMIENTO DEL PESTICIDA: CONSERVE POR ENCIMA DE 5 ° F (-15 ° C) PARA EVITAR QUE EL PRODUCTO SE CRISTALICE. Los cristales se depositarán en el fondo. Si se deja cristalizar, caliente a 68 ° F (20 ° C) para redisolver y hacer rodar o agitar el recipiente o recircular el contenido de recipientes más grandes para mezclar bien antes de usar. Almacene los pesticidas lejos de alimentos, alimentos para mascotas, piensos, semillas, fertilizantes y suministros veterinarios. Mantenga el recipiente cerrado para evitar derrames y contaminación. Consulte la etiqueta del recipiente individual para conocer las condiciones de almacenamiento adicionales, si las hubiera.

ELIMINACIÓN DEL PESTICIDA: Para evitar desechos, utilice todo el material contenido en este envase, incluyendo los residuos del enjuague, aplicándolo según las indicaciones de la etiqueta. Si no se pueden evitar los desechos, ofrezca el producto restante a un centro de eliminación de desechos o a un programa de desecho de pesticidas. Estos programas suelen ser manejados por los gobiernos estatales o locales o por la industria. Toda eliminación debe seguir los reglamentos y procedimientos federales, estatales y locales pertinentes.

MANEJO Y ELIMINACIÓN DEL ENVASE: Envase no rellenable. No reutilice este recipiente para contener materiales que no sean pesticidas o pesticidas diluidos (enjuague). Después de vaciar y limpiar, es posible que se permita retener temporalmente enjuague u otros materiales relacionados con pesticidas en este recipiente. Comuníquese con su agencia reguladora estatal para determinar las prácticas permitidas en su estado.

Enjuague tres veces o enjuague a presión (o equivalente) este recipiente inmediatamente después de vaciarlo.

Enjuague tres veces de la siguiente manera: Vacíe el contenido restante en el equipo de aplicación o tanque de mezcla y continúe drenando durante 10 segundos después de que el flujo comience a gotear. Llene el recipiente ¼ de su capacidad con agua y vuelva a tapar. Agite durante 10 segundos. Vierta el enjuague en el equipo de aplicación o en el tanque de mezcla, o almacene el enjuague para su uso o eliminación posterior. Continúe drenando durante 10 segundos después de que el flujo comience a gotear. Repita este procedimiento dos veces mas.

Enjuague a presión de la siguiente manera: Vacíe el contenido restante en el equipo de aplicación o tanque de mezcla y continúe drenando durante 10 segundos después de que el flujo comience a gotear. Coloque el recipiente de modo que pueda drenar directamente al equipo de aplicación o al tanque de mezcla mientras se enjuaga, o recolecte el enjuague para su uso o eliminación posterior. Inserte la boquilla de enjuague a presión en el costado del recipiente y enjuague a aproximadamente 40 PSI durante al menos 30 segundos. Continúe drenando durante 10 segundos después de que el flujo comience a gotear.

Una vez enjuagados correctamente, algunos envases plásticos de plaguicidas pueden llevarse a un sitio de recolección de envases o recogerse para reciclarlos. Para encontrar el sitio de recolección más cercano, comuníquese con su distribuidor de productos químicos o con Bayer CropScience LP al 1-866-99BAYER (1-866-992-2937).

Si el reciclaje no está disponible, deséchelo de acuerdo con las regulaciones y procedimientos federales, estatales y locales, que pueden incluir perforar el recipiente debidamente enjuagado y desecharlo en un relleno sanitario.

5.0 INFORMACIÓN DEL PRDDUCTO

Descripción del producto: Este producto es un herbicida sistémico para aplicar postemergencia que, mezclado en el tanque de rociado con un surfactante aprobado para uso acuático, se puede usar para el control de malezas tanto acuático como terrestre. Este producto proporciona un control de amplio espectro de muchas malezas anuales y perennes, árboles, enredaderas y matorrales leñosos. Este producto no controla malezas sumergidas ni proporciona control residual de malezas en el suelo. Está formulado como líquido soluble en agua que, a menos que se indique lo contrario, requiere diluirse con agua u otra sustencia vehicular y agregar un surfactante de acuerdo con las instrucciones en la etiqueta y con el lugar donde se pretende usar antes de la aplicación, usando un equipo estándar y especializado para aplicar pesticidas.

Mecanismo de la acción: El ingrediente activo en este producto inhibe una enzima que se encuentra solo en plantas y microorganismos y que es esencial para la formación de aminoácidos específicos.

No tiene actividad en el suelo: Este producto se adhiere con fuerza a las partículas en el suelo y no proporciona control residual de malezas. Las malezas tienen que haber emergido en el momento de la aplicación para que la aplicación foliar de este producto las controle. Este producto no tendrá efecto sobre las semillas de las malezas en el suelo, así que estas continuarán germinando. Este producto tampoco tendrá efecto en los rizomas o raíces de las plantas no conectadas que estén debajo de la superficie del suelo.

Degradación biológica: La degradación de este producto es primariamente un proceso biológico de los microbios de la tierra.

Etapas de malezas: Las malezas acuáticas deben tener follaje por encima de la superficie del agua para que este producto pueda controlarlas. En los lugares terrestres, resulta más tácil controlar las malezas anuales y perennes cuando son pequeñas. Consulte la sección "MALEZAS CONTROLADAS" en esta etiqueta para obtener más información sobre el control de malezas específicas.

Prácticas de cultivo: El control de malezas puede ser inferior cuando se aplica el producto a malezas anuales o perennes que hayan sido segadas, que hayan servido de alimento para animales o hayan sido cortadas, y que no hubiesen crecido nuevamente hasta el nivel recomendado para el tratamiento. Aplique siempre la proporción mayor de este producto dentro del rengo indicado cuando las malezas son muy densas o cuando crecen en áreas no tocadas (no cultivadas). El control de malezas puede ser inferior cuando se tratan malezas dañadas por enfermedades o insectos, si están cubiertas con polvo o si las condiciones de crecimiento de las malezas son deficientes.

Cobertura del rocío: Para obtener mejores resultados, la cobertura del rocío debe ser completa y uniforme. No rocíe el follaje hasta el punto de escurrimiento.

Resistencia a la lluvia: La lluvia o la inmersión de las malezas acuáticas por acción de las olas en un plazo de 4 horas después de su aplicación puede lavar este producto del follaje y puede requerirse una segunda aplicación para el control adecuado de las malezas. Consulte las secciones sobre uso específico en esta etiqueta para obtener información adicional sobre los intervalos mínimos requeridos antes de repetir la aplicación de este producto.

Aparición de los síntomas: Este producto se mueve dentro de la planta desde el punto de aplicación sobre el follaje hasta las raíces. Los efectos visibles son marchitamiento gradual y amarilleo progresivo de la planta hasta el oscurecimiento total de los brotes por encima de la tierra y el deterioro de las partes subterráneas de la planta. En la mayoría de las malezas anuales, los efectos son visibles en 2 a 4 días pero en la mayoría de las malezas perennes los efectos podrían no ser visibles hasta 7 días o más después de la aplicación. El frío extremo o el cielo muy nublado después de la aplicación podrían retardar la actividad del producto y hacer que el efecto visual se demore.

Proporciones de aplicación máxima: Las cantidades de aplicación o uso máximas especificadas en esta etiqueta están expresadas en unidades de volumen (onzas líquidas o cuartos de galón) de este producto por acre. Sin embargo, las proporciones máximas permitidas se aplican a este producto combinado con todos y cada uno de los otros herbicidas que contienen el ingrediente activo glifosato, ya sea que se apliquen por separado o como mezclas de tanque, sobre la base del total de libras de glifosato (equivalentes ácidos) por acre. Si se aplica más de un producto que contiene glifosato en el mismo terreno el mismo año, debe asegurarse de que el total de glifosato empleado (equivalentes de libras de ácido) no exceda el máximo permitido. Consulte la sección "INGREDIENTES" de esta etiqueta para la información necesaria sobre el producto.

A menos que se especifique de otra manera en esta etiqueta, el total combinado de todas las aplicaciones de este producto en un lugar no debe exceder los 8 cuartos de galón (8 libras de ácido de glifosato) por acre por año.

NOTA: El uso de este producto de cualquier manera contraria a las indicaciones contenidas en esta etiqueta, puede causar lesiones a personas, animales, cultivos u otra vegetación deseada o pueden ocurrir otras consecuencias no deseadas.

6.0 MANEJO DE RESISTENCIA DE MALEZAS

GRUPO	9	HERBICIDA

El glifosato, el ingrediente activo de este producto, es un herbicida del grupo 9 según el sistema de clasificación de modo de acción de la Weed Science Society of America. Cualquier población de malezas puede contener plantas naturalmente resistentes a los herbicidas del Grupo 9. Las malezas resistentes a los herbicidas del Grupo 9 pueden tratarse con buenos resultados utilizando un herbicida de otro grupo (ya sea solo o en una mezcla de acuerdo a las instrucciones en la etiqueta), adoptando otros métodos de cultivo o mecánicos para el control de malezas, o a través de una combinación de ambos. Consulte con su representante local de la compañía, el agente de extensión cooperativa del estado, un asesor profesional u otra autoridad calificada para determinar las acciones adecuadas para controlar malezas resistontes específicas.

6.1 Prácticas de manejo de malezas

Las poblaciones resistentes surgen cuando una dosis normal de un herbicida determinado no controla a contadas plantas individuales en condiciones ambientales normales. Si no hay otras medidas de control, estos individuos sobreviven, producen semillas y con el tiempo se convierten en el biotipo dominante en el campo a través de la selección continua. La mejor manera de reducir esta selección es usar prácticas diversas de control de malezas, tales como múltiples herbicidas con diferentes mecanismos de acción y, con frecuencia, combinados con diversas prácticas de cultivo y mecánicas.

Para minimizar la incidencia de biotipos resistentes a herbicidas, incluyendo los resistentes al glifosato, implemente las siguientes opciones de manejo de malezas que sean prácticas en su situación. Estas prácticas de manejo se aplican para reducir la propagación de biotipos resistentes confirmados (control de biotipos resistentes existentes) y para reducir el potencial para selección de resistencia de nuevas especies (control proactivo de la resistencia).

- Diversifique su enfoque del manejo de malezas concentrándose en evitar la producción de semillas de malezas y en reducir la cantidad de semillas de malezas en la tierra.
- Siembre los cultivos en campos con la menor cantidad de malezas posible y manténgalos así.
- Siembre semillas que tengan la menor cantidad de malezas posible.
- Haga un reconocimiento rutinario de los campos y los sitios de aplicación antes y después de la aplicación del herbicida.
- Use múltiples mecanismos de acción herbicida eficaces contra las malezas más molestas en su lugar de aplicación y contra aquellas de resistencia conocida.
- Aplique los herbicidas en las proporciones de aplicación indicadas en la etiqueta cuando las malezas estén dentro del rango de tamaño indicado en la etiqueta.
- Resalte las prácticas de cultivo que inhiben las malezas usando competencia de cultivos.
- Use prácticas de manejo de malezas mecánicas y biológicas, cuando sea adecuado.
- Evite el movimiento de semillas de malezas o de propágulos vegetativos entre campos o dentro de un campo.
- Controle las semillas de malezas en la cosecha y después de la cosecha para evitar que las semillas se acumulen.

6.2 Manejo de biotipos resistentes al glifosato

Es necesario realizar las pruebas adecuadas para confirmar la resistencia de una maleza al glifosato. Llame al 1-866-99BAYER (1-866-992-2937) o póngase en contecto con su representante de Bayer CropScience LP para determinar si se confirmó la resistencia de algún biotipo de maleza en particular en su región, o visite en Internet

www.weedresistancemanagement.com o www.weedscience.org.

Las malezas resistentes al glifosato se pueden controlar o manejar con la aplicación de este producto en combinación con herbicidas residuales de preemergencia y/o otros herbicidas de postemergencia etiquetados para el control de la maleza objetivo en el cultivo en cuestión o en el lugar de la aplicación. Para obtener más información, vea la sección "MALEZAS CONTROLADAS" en esta etiqueta.

Dado que la incidencia de malezas resistentes es difícil de detectar antes de usar, Bayer CropScience LP no será responsable de ninguna pérdida que tenga lugar porque este producto no logre controlar las malezas resistentes.

7.0 MEZCLAS

Para mezclar, almacenar y aplicar la solución de rocío de este producto, se pueden usar recipientes limpios de acero inoxidable, fibra de vidrio, plástico o recipientes de acero recubiertos internamente con plástico.

NO MEZCLE, ALMACENE O APLIQUE ESTE PRODUCTO O LAS SOLUCIONES DE ROCÍO DE ESTE PRODUCTO EN ENVASES DE ACERO GALVANIZADO O SIN REVESTIMIENTO (EXCEPTO ACERO INOXIDABLE) O EN TANQUES DE ROCÍO.

Elimine todo riesgo de que se forme un sifón de retorno de los contenidos del tanque a la fuente de la sustancia vehicular, al preparar la mezcla. Utilice aparatos aprobados para evitar la formación de sifones de retorno en lugares donde lo exijan las normas locales o estatales.

Un filtro de malla de 50 hilos para la boquilla o un colador en el equipo de rocío es adecuado.

Limpie las piezas del rociador inmediatamente después de su utilización lavándolas bien con agua.

7.1 Mezcla con agua

EL RENDIMIENTO DE ESTE PRODUCTO PODRÍA REDUCIRSE CONSIDERABLEMENTE SI SE UTILIZA AGUA CON SEDIMENTOS DE TIERRA COMO SUSTANCIA VEHICULAR. NO MEZCLE ESTE PRODUCTO CON AGUA DE ESTANQUES O ACEQUIAS QUE SE VEA TURBIA O ENFANGADA.

Este producto se mezcla fácilmente con agua. Mezcle las soluciones de rocío de este producto de la siguiente manera. Primero, llene el tanque de mezclado o de rocío con agua limpia. Agregue la cantidad requerida de este producto hacia el final del proceso de llenado y mezcle con cuidado. Es posible que durante la mezcla la solución de rocío produzca espuma. Para prevenir o minimizar la formación de espuma, mezcle con cuidado, tapone las derivaciones y mangueras de retorno en el fondo del tanque y, si es necesario, agregue un agente apropiado a la solución de rocío para evitar la formación de espuma o eliminarla.

7.2 Surfactantes

A menos que se indique lo contrario, este producto requiere que se agreguen 2 o más cuartos de galón de un surfactante no iónico cuyo uso con herbicidas esté recomendado en la etiqueta por cada 100 galones de solución de rocío (0.5% o más por volumen). A menos que se indique lo contrario, use una concentración mayor de surfactante cuando alguna de las siguientes condiciones aplique al uso de este producto:

- Se agregan surfactantes que contienen menos del 70 por ciento del ingrediente activo
- Se aplica al voleo usando un alto volumen de sustancia vehicular o usando equipo de rociado manual
- Se aplica en condiciones de crecimiento adversas o en cualquier momento en que las malezas están bajo estrés
- Se aplica como mezcla de tanque con otros productos
- Se aplica a malezas, matorrales leñosos, árboles y enredaderas difíciles de controlar

NOTA: Para la aplicación directa de soluciones de rocío de este producto en malezas acuáticas emergidas o para usar en áreas intermareales por debajo del nivel medio de mareas altas, o en áreas de aplicación donde una zona de transición asegurará que un rocío excesivo de un cuerpo de agua adyacente no se puede mantener, debe usar un surfactante que esté aprobado también para uso acuático. Para las aplicaciones terrestres, también se requiere un surfactante en la solución de rocío, pero no tiene que estar aprobado para uso acuático.

RESTRICCIÓN: Si se agrega un surfactante que NO esté aprobado para uso acuático a la solución de rocío, NO lo aplique directamente al agua o sobre esta ni use en áreas intermareales por debajo del nivel medio de mareas altas.

Consulte con la principal agencia reguladora de pesticidas de su estado si necesita información adicional sobre los surfactantes que están aprobados para uso acuático.

Lea y siga todas las declaraciones preventivas e instrucciones de modo de empleo en la etiqueta del surfactante.

Toda referencia en esta etiqueta a la concentración de surfactante en la solución de rocío está basada en un porcentaje de volumen. Vea la tabla a continuación para obtener la concentración adecuada de surfactante en la solución de rocío.

Volumen deseado de solución de rocío	Cantidad de surfactante requerida para la concentración de solución de rocío indicada					
	0.25%	0.5%	0.75%	1%	2%	4%
1 galón	2/3 onza líquida	1 cuarto de galón	1.3 onzas líquidas	2 onzas líquidas	5 onzas líquidas	10 onzas líquidas
25 galones	16 onzas líquidas	24 onzas líquidas	1 cuarto de galón	1.5 cuartos de galón	4 cuartos de galón	2 galones
100 galones	2 cuartos de galón	3 cuartos de galón	1 cuarto de galón	1.5 galones	4 galones	8 galones

2 cucharadas soperas = 1 onza líquida (onz. líq.)

7.3 Mezclas de tanque

Este producto no proporciona control residual de malezas. Este producto puede mezclarse en tanques con otros herbicidas para proporcionar control residual de malezas en la tierra, un espectro más amplio de control de malezas o un mecanismo de acción alternativo.

NO TODOS LOS PRODUCTOS PARA MEZCLA DE TANQUE INDICADOS EN ESTA ETIQUETA ESTÁN APROBADOS PARA USO EN SITIOS ACUÁTICOS. Consulte las etiquetas individuales de todos los productos usados en la mezcla de tanque para conocer los usos aprobados y las proporciones de aplicación.

Cuando en esta etiqueta se indica una mezcla de tanque con un ingrediente activo genérico como 2,4-D, o dicamba o cualquier otro producto o material, el usuario asume la responsabilidad de asegurarse de que la aplicación específica que está preparando y el sitio de uso estén incluidos en la etiqueta del producto utilizado en la mezcla.

Bayer CropScience LP no ha realizado pruebas en todas las fórmulas de producto de la mezcla de tanque para verificar la compatibilidad, antagonismo o reducción en el rendimiento del producto. La mezcla de este producte con herbicidas u otros materiales no recomendados en esta etiqueta puede dar como resultado una reducción en su rendimiento. Hasta el grado que sea compatible con la legislación pertinente, el comprador y todos los usuarios son responsables por todas las pérdidas o daños en relación con el uso o el manejo de mezclas de este producto con herbicidas u otros materiales que no se recomiendan expresamente en esta etiqueta o en las etiquetas complementarias separadas o en las Fichas Técnicas publicadas para este producto.

Consulte todas las etiquetas de cada uno de los productes, las etiquetas complementarias y las Fichas Técnicas de todos los productos de la mezcla de tanque, y respete todas las precauciones y limitaciones de la etiqueta, incluidas las restricciones de la época de aplicación, las restricciones de suelo, los intervalos mínimos para volver a cosechar y/o las restricciones de rotación. Utilice conforme con las declaraciones preventivas más restrictivas de cada producto en la mezcla de tanque.

Este producto puede aplicarse en cualquier proporción indicada en esta etiqueta en una mezcla de tanque con los siguientes productos para proporcionar control preemergencia y/o mejor control postemergencia de las malezas indicadas en las etiquetas de cada producto.

Arsenal; Herbicida concentrado para aplicadores Arsenal; Banvel; Banvel 480; Barricade 4L; Barricade 65WG; Certainty® Turf; Chopper Gen2; Crossbow; Endurance; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XLT Specialty; Gallery SC; Gallery 75 Dry Flowable Specialty; Garlon; 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Goal 2XL; GoalTender; Habitat; Hyvar X; Hyvar X-L; Karmex DF; Krenite S Brush Control Agent; Krovar I DF; Landmark; Landmark XP; Oust Extra; Oust XP; Outrider®; Plateau; Poast; Poast Plus; Ronstar 50 WSP; Ronstar Flo; Ronstar G; Sahara DG; Spike 20P Specialty; Spike 80 DF Specialty; Stalker; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan XL 2G; Surflan Pro; Telar XP; Tordon 101 Mixture Specialty; Tordon 22K Specialty; Tordon K Herbicide Specialty; Transline Specialty; Vanquish; Velpar DF CU; Velpar DF VU; Velpar L CU; Velpar L; Velpar L VU; 2,4-D; atrazina; dicamba; bromacil; diuron; imazapyr; metsulfuron methyl; oryzalin; pendimethalin, prodiamine; simazine; sulfosulfuron; trichlopyr

Al usarlo en combinaciones como se describe en esta etiqueta y hasta el grado que sea compatible con la legislación pertinente, la responsabilidad de Bayer CropScience LP de ninguna manera incluirá ninguna pérdida, daño o lesión que no sea exclusiva y directamente causada por incluir el producto de Bayer CropScience LP en dicho uso combinado.

7.4 Procedimiento de mezcla en tanque

Siempre determine con anticipación la compatibilidad de todos los productos de la mezcla de tanque en la sustancia vehicular, mezclando antes pequeñas cantidades proporcionales.

Agregue componentes individuales en la mezcla de tanque en el siguiente orden: polvos mojables, formulaciones fluidas, concentrados emulsionantes, aditivos de reducción de la dispersión, líquidos solubles en agua (este producto), surfactantes no iónicos. Asegúrese de que los productos en la mezcla de tanque estén bien mezclados en la solución de rocío antes de agregar este producto.

Mezcle solo la cantidad de solución de rocío que aplicará ese día. La aplicación de soluciones de mezcla de tanque que se dejan reposar toda la noche podrían tener un control de malezas reducido.

Continúe agitando suavemente todo el tiempo hasta haber rociado todo el contenido del tanque. Si se deja que la mezcla para rociar se asiente, agite bien para que la mezcla vuelva a estar en suspensión antes de continuar la aplicación.

Mantenga la manguera de retorno en el fondo del tanque, o próximo a este para minimizar la formación de espuma.

Un filtro de malla de 50 hilos para la boquilla o un colador en el equipo de rocío es adecuado.

7.5 Mezcla de concentraciones de solución de rocío

Toda referencia en esta etiqueta a la concentración de este producto en una solución de rocío está basada en un porcentaje de volumen.

Prepare el volumen deseado de solución de rocío en una concentración determinada mezclando con agua la cantidad de este producto que se indica en la siguiente tabla.

Volumen deseado de solución de rocío	Cantidad de producto requerida para la concentración de solución de rocío indicada					
	0.25%	0.5%	0.75%	1%	2%	4%
1 galón	2/3 onza líquida	1 cuarto de galón	1.3 onzas líquidas	2 onzas líquidas	5 onzas líquidas	10 onzas líquidas
25 galones	16 onzas líquidas	24 onzas líquidas	1 cuarto de galón	1.5 cuartos de galón	4 cuartos de galón	2 galones
100 galones	2 cuartos de galón	3 cuartos de galón	1 cuarto de galón	1.5 galones	4 galones	8 galones

2 cucharadas soperas = 1 onza líquida (onz. líq.)

Para llenar los rociadores tipo mochila y de bombeo, recomendamos mezclar la cantidad apropiada de este producto con agua en un envase más grande y luego llenar el rociador con esta solución mezclada.

7.6 Colorantes y tintes

A las soluciones de rocío de este producto se le pueden agregar colorantes o tinturas para marcar, sin embargo estos podrían reducir su rendimiento. Use colorantes o tinturas según las indicaciones del fabricante.

7.7 Aditivos de reducción de dispersión

Se pueden utilizar aditivos para reducir la dispersión en todos los tipos de equipo de aplicación, a excepción de aplicadores con enjugador, barras de esponja y aplicación por goteo controlado (CDA). Cuando se use un aditivo para reducir la dispersión, lea y siga cuidadosamente todas las precauciones, limitaciones y el resto de la información de la etiqueta del producto. El uso de aditivos de reducción del arrastre puede afectar la cobertura de rocío, lo cual puede dar lugar a que se reduzca la eficacia de esto producto.

8.0 EQUIPOS Y TÉCNICAS PARA LA APLICACIÓN

Este producto puede aplicarse usando los siguientes equipos:

Equipo de aplicación aérea— con alas fijas y helicóptero

Equipo de aplicación terrestre— sistemas con brazo o sin brazo, rociadores de arrastre, flotadores, rociadores de captación, cupés de rocío y otros equipos de aplicación terrestre al voleo

Rociadores manuales— rociadores de mochila, rociadores con presión de bombeo, pistolas de mano, bastones de mano, sopladores de vaporización*, lanzas y otros equipos rociadores de mano y a motor empleados para dirigir el rocío al follaje de la maleza.

* Este producto no está registrado en California ni en Arizona para su uso en sopladores de vaporización.

Equipo de aplicación selectiva— rociadores de recirculación, rociadores con pantalla y campana, aplicador con enjugador, barra con esponja, inyectores de tallo sencillos o huecos, inyectores de árboles, botella rociadora

Sistemas por inyección—rociadores por inyección aéreos o terrestres

Aplicador por goteo controlado (CDA)— aplicadores de mano o instalados en brazos que producen un rocío formado por un estrecho rango de tamaños de gotas

APLIQUE ESTE PRODUCTO UTILIZANDO EQUIPOS DEBIDAMENTE MANTENIDOS Y CALIBRADOS QUE SEAN CAPACES DE ROCIAR CON PRECISIÓN EL VOLUMEN DESEADO.

No use ningún sistema de irrigación para aplicar este producto.

8.1 Manejo de la dispersión del rocío

EVITE EL CONTACTO DE ESTE HERBICIDA CON EL FOLLAJE, TALLOS VERDES, RAÍCES NO LEÑOSAS EXPUESTAS O FRUTOS EXPUESTOS DE LOS CULTIVOS, PLANTAS Y ÁRBOLES DESEABLES, PORQUE LAS PLANTAS PUEDEN SUFRIR GRAVES DAÑOS O SER DESTRUIDAS.

No permita que la solución herbicida se vaporice, gotee, disperse o salpique sobre la vegetación deseable ya que incluso cantidades pequeñas de este producto pueden causar daños graves o destruir el cultivo, plantas u otra vegetación que no era el objetivo de la aplicación.

EVITE LA DISPERSIÓN. TENGA SUMO CUIDADO AL APLICAR ESTE PRODUCTO PARA EVITAR DAÑOS A LAS PLANTAS Y CULTIVOS DESEABLES.

Evitar la dispersión del rocío en el lugar de aplicación es responsabilidad del aplicador. La interacción de varios factores relacionados con el clima y el equipo determina la posibilidad de dispersión del rocío. El aplicador y el cultivador son responsables de considerar todos estos factores al tomar decisiones relacionadas con la aplicación de este producto.

Las probabilidades de daño causado por la dispersión del rocío al aplicar este producto aumentan cuando hay viento con ráfagas, cuando la velocidad del viento aumenta, cuando la dirección del viento cambia constantemente o cuando hay otras condiciones meteorológicas que favorecen la dispersión del rocío. Al rociar, evite las combinaciones de presión y tipo de boquillas que resulten en salpicaduras o partículas finas (niebla) que es probable que se dispersen.

PARA EVITAR DAÑAR LA VEGETACIÓN DESEADA ADJUNTA, SE DEBEN MANTENER ZONAS DE TRANSICIÓN ADECUADAS.

EVITE APLICAR ESTE PRODUCTO A ALTA VELOCIDAD O PRESIÓN EXCESIVA.

8.2 Equipo de aplicación aérea

A menos que se prohíba de otra manera, todas las aplicaciones al voleo de este producto indicadas en esta etiqueta se pueden realizar con equipos de aplicación aérea, de ser posible, siempre que la persona que aplica el producto cumpla con las precauciones y restricciones especificadas en esta etiqueta y en las etiquetas complementarias separadas que se publican para este producto.

NO APLIQUE ESTE PRODUCTO CON EQUIPOS AÉREOS EXCEPTO BAJO LAS CONDICIONES QUE SE ESPECIFICAN EN ESTA ETIQUETA O EN LAS ETIQUETAS COMPLEMENTARIAS SEPARADAS QUE SE PUBLICAN PARA ESTE PRODUCTO.

PARA CONOCER LAS INSTRUCCIONES, RESTRICCIONES Y REQUISITOS ESPECÍFICOS RELACIONADOS CON LA APLICACIÓN AÉREA DE ESTE PRODUCTO EN CALIFORNIA, O EN CONDADOS ESPECÍFICOS DE ESE ESTADO, CONSULTE LAS LIMITACIONES DE LA APLICACIÓN AÉREA EN ESE ESTADO O CONDADO QUE SE PRESENTA EN ESTA SECCIÓN.

Aplique este producto en la proporción recomendada en esta etiqueta en 3 a 25 galones de agua por acre, a menos que se indique de otra manera. Use un volumen de rocío mayor dentro de este rango si las malezas, matorrales, árboles y enredaderas son densas o forman varias capas de cobertura.

Evite la aplicación directa en masas de agua.

Pueden usarse aditivos para controlar o reducir la dispersión.

Asegúrese de que la aplicación sea uniforme. Para evitar la aplicación en surcos, irregular o encimada, utilice dispositivos de señalización apropiados.

Mantenimiento de aviones

Al final de cada día de trabajo, lave muy bien el avión, especialmente el tren de aterrizaje, para quitar los residuos de este producto que se acumulan durante el rocío o por derrames. EL CONTACTO PROLONGADO DE ESTE PRODUCTO CON PARTES DE ACERO SIN REVESTIMIENTO PUEDE CAUSAR CORROSIÓN Y POSIBLEMENTE QUE LAS PARTES FALLEN. LA PARTE MÁS SUSCEPTIBLE ES EL TREN DE ATERRIZAJE. Es posible prevenir la corrosión recubriendo las partes con pintura orgánica que cumpla con las especificaciones aeroespaciales MIL-C-38413.

MANEJO DE LA DISPERSIÓN DEL ROCÍO AÉREO

Deben seguirse los siguientes requerimientos de manejo de la dispersión para minimizar el movimiento de esta fuera del objetivo durante la aplicación aérea. Estos requisitos no se aplican para aplicaciones de forestación.

1. La distancia de la boquilla más externa en el brazo no debe exceder 3/4 del largo de la envergadura o rotor.
2. Las boquillas deben siempre apuntar hacia atrás, paralelas a la corriente de aire, nunca hacia abajo más de 45 grados. En los estados que tengan reglamentos más estrictos, deberán observarse estos.

Importancia del tamaño de las gotas

La forma más eficaz de reducir la posibilidad de dispersión es aplicar en gotas grandes. La mejor estrategia de manejo de la dispersión es la aplicación de las gotas más grandes que provean suficiente cobertura y control. La aplicación de gotas más grandes reduce la posibilidad de dispersión, pero no la evitará si la aplicación se hace de forma incorrecta o bajo condiciones ambientales desfavorables, como por ejemplo con viento, altas temperaturas y baja humedad y/o condiciones de inversión como se describe más adelante.

Control del tamaño de las gotas

- **Volumen:** Use boquillas de velocidad de flujo alta para aplicar el mayor volumen de rocío práctico. Las boquillas con mayores velocidades de flujo producen gotas más grandes.
- **Presión:** Opere a una presión de rocío que esté cerca del extremo más bajo del rango indicado para la boquilla. La presión más alta reduce el tamaño de la gota y no mejora la penetración de la cobertura. Cuando sean necesarias velocidades de flujo mayores, use boquillas con mayor velocidad de flujo en lugar de aumentar la presión.
- **Cantidad de boquillas:** Utilice la cantidad mínima de boquillas que proporcionen una cobertura uniforme.
- **Orientación de la boquilla:** Si orienta las boquillas de modo que liberen el rocío hacia atrás, en sentido paralelo a la circulación del aire, producirán gotas más grandes que si las orienta de otro modo. Cuanto más desviadas estén del plano horizontal, tanto más pequeñas serán las gotas y tanto mayor el potencial de dispersión.
- **Tipo de boquilla:** Utilice un tipo de boquilla diseñado para la aplicación deseada. Con la mayoría de los tipos de boquillas, cuanto menor sea el ángulo de rocío tanto mayor serán las gotas. Considere el uso de boquillas de poca dispersión. Las boquillas de chorro sólido orientadas completamente hacia atrás producen gotas más grandes que otros tipos de boquillas.
- **Longitud del brazo:** En algunos esquemas de uso, la reducción de la longitud efectiva del brazo a menos de 3/4 de la envergadura o de la longitud del rotor puede reducir la dispersión aún más sin reducir el ancho de la franja.
- **Altura de la aplicación:** Las aplicaciones deben realizarse a una altura de 10 pies o menos por encima de la copa de las plantas más grandes, a menos que se requiera mayor altura por razones de seguridad del avión. Realizar las aplicaciones a la menor altura que sea segura reduce la exposición de las gotas a la evaporación y el viento.

Ajuste de franja

Cuando la aplicación se lleve a cabo ante viento lateral, la franja de aspersión se desplazará a favor del viento. Por ello, en los extremos con o contra el viento del campo, el aplicador debe compensar este desplazamiento ajustando la trayectoria del avión contraria al viento. La distancia de ajuste de la franja debe aumentar, cuando aumenta la posibilidad de arrastre (mayor viento, gotitas más pequeñas, etc.).

Viento

El potencial de dispersión es menor cuando la velocidad del viento es de 2 a 10 millas por hora. Sin embargo, muchos factores, incluyendo el tamaño de las gotas y el tipo de equipo, determinan la posibilidad de dispersión a una velocidad determinada. Se debe evitar la aplicación cuando la velocidad del viento está por debajo de 2 millas por hora debido a los cambios de dirección del viento y la alta posibilidad de inversión. NOTA: El terreno local puede influir en los patrones de viento. Cada aplicador debe conocer los patrones de vientos locales y cómo éstos afectan la dispersión.

Temperatura y humedad

Cuando se realizan aplicaciones con humedad relativa baja, fije el equipo para que produzca gotas más grandes para compensar por la evaporación. La evaporación de gotas es más grave cuando las condiciones son calurosas y secas.

Inversiones de temperatura

Este producto no debe aplicarse durante una inversión de temperatura debido a que la posibilidad de dispersión es alta. Las inversiones de temperatura restringen la mezcla de aire vertical, lo que causa que pequeñas gotas permanezcan suspendidas en una nube concentrada. Esta nube puede moverse en direcciones no predecibles debido a los vientos variables leves que son comunes durante las inversiones. Las inversiones de temperatura están caracterizadas por temperaturas en aumento con la altitud y son comunes en las noches con cobertura de nubes limitada y poco o ningún viento. Comienzan a formarse cuando se mete el sol y a menudo continúan en la mañana. Su presencia puede indicarse por neblina en el suelo; sin embargo, si la neblina no está presente, las inversiones también pueden identificarse por el movimiento del humo desde una fuente del suelo o por el generador de humo de un avión. El humo en capas que se mueve lateralmente en una nube concentrada (bajo condiciones de poco viento) indica una inversión, mientras que el humo que se mueve hacia arriba y se disipa rápidamente indica buena mezcla de aire vertical.

Áreas susceptibles

Este producto solo se debe aplicar cuando la posibilidad de dispersión hacia zonas adyacentes susceptibles que no sean el objetivo (por ejemplo, áreas residenciales, hábitat conocido de especies amenazadas o en peligro de

extinción, cultivos que no sean el objetivo) sea mínima (por ejemplo, cuando el viento sople lejos de las áreas susceptibles).

Limitaciones estatales específicas de la aplicación aérea

LIMITACIONES DE LA APLICACIÓN AÉREA SOLAMENTE EN CALIFORNIA

NO aplique este producto usando equipo de aplicación aérea en áreas residenciales.

EVITE LA DISPERSIÓN – NO APLIQUE CUANDO HAYA VIENTO CON RÁFAGAS O BAJO OTRAS CONDICIONES QUE FAVOREZCAN LA DISPERSIÓN. LA DISPERSIÓN DE ESTE PRODUCTO EN CUALQUIER VEGETACIÓN QUE NO SEA EL OBJETIVO DE LA APLICACIÓN PUEDE CAUSAR DAÑOS. PARA EVITAR DAÑOS A LA VEGETACIÓN ADYACENTE DESEADA, USE EL EQUIPO DE APLICACIÓN AÉREA CORRECTO CON LAS BOQUILLAS APROPIADAS Y MANTENGA ZONAS DE TRANSICIÓN ADECUADAS.

Siga las siguientes instrucciones al hacer aplicaciones aéreas cerca de cultivos que no sean el objetivo, vegetación anual deseable o vegetación perenne deseable después de echar brotes y antes de la caída total de las hojas.

1. No aplique este producto a menos de 100 pies de la vegetación deseable o los cultivos que no son el objetivo.
2. Si está soplando un viento de hasta 5 millas por hora HACIA la vegetación deseable o los cultivos que no son el objetivo, no aplique este producto a menos de 500 pies de los cultivos o vegetación deseable.
3. Si están soplando vientos de entre 5 y 10 millas por hora HACIA la vegetación deseable o los cultivos que no son el objetivo, puede que se necesite una zona de transición de más de 500 pies para proteger los cultivos o vegetación deseable.
4. No aplique este producto usando equipo de aplicación aérea cuando soplen vientos de más de 10 millas por hora.
5. No aplique este producto usando equipo de aplicación aérea cuando existan condiciones de inversión.

Al mezclar en tanque este producto con 2,4-D, solo se pueden utilizar formulaciones de 2,4-D amina con equipo de aplicación aérea en California. Las mezclas de tanque de este producto con formulaciones de 2,4-D amina se pueden aplicar por aire en California únicamente en sistemas de labranza reducida o campos con barbecho y para renovación de pastura.

Este producto, al ser mezclado en tanques con dicamba, no se puede aplicar por aire en el estado de California.

LIMITACIONES ADICIONALES PARA LA APLICACIÓN AÉREA SOLAMENTE EN EL CONDADO DE FRESNO, CALIFORNIA

Siempre lea y siga las instrucciones de la etiqueta y las declaraciones preventivas para todos los productos usados en la aplicación aérea.

La siguiente información aplica solo del 15 de febrero al 31 de marzo dentro de los siguientes límites del Condado de Fresno, California:

Norte: Frontera del Condado de Fresno
Sur: Frontera del Condado de Fresno
Este: Autopista estatal 99
Oeste: Frontera del Condado de Fresno

Respete las siguientes instrucciones para minimizar el movimiento fuera del lugar durante la aplicación aérea de este producto. Minimizar el movimiento fuera del lugar es responsabilidad del cultivador, el Asesor en control de plagas y el encargado de la aplicación aérea.

Instrucciones por escrito

El encargado de la aplicación o su representante TIENEN que presentar instrucciones por escrito al Comisionado de Agricultura del Condado de Fresno 24 horas antes de la aplicación. Estas instrucciones por escrito TIENEN que indicar la proximidad de los cultivos en los alrededores y que se han cumplido las condiciones de esta etiqueta y de todas las etiquetas de los fabricantes de los productos.

Capacitación y equipo del encargado de la aplicación aérea

La aplicación aérea de este producto se limita a los pilotos que hayan completado con éxito un programa de capacitación para la aplicación aérea de herbicidas aprobado por el Comisionado de Agricultura del Condado de Fresno y el Departamento de Regulación de Pesticidas de California. Todos los aviones tienen que ser inspeccionados, revisados en vuelo y certificados por una organización aprobada por el Comisionado de Agricultura del Condado de Fresno. Pruebe y calibre el equipo de rocío a intervalos suficientes para garantizar que se estén aplicando las proporciones adecuadas de herbicidas y adyuvantes durante el uso comercial. El encargado de la aplicación tiene que documentar dichas pruebas y calibraciones. Una demostración de desempeño en una organización aprobada por el Comisionado de Agricultura del Condado de Fresno constituye documentación, además de otros registros por escrito que muestren cálculos y medidas de los parámetros de vuelo y rocío aceptables para el Comisionado de Agricultura del Condado de Fresno.

Aplicaciones de noche – No aplique este producto por aire más de 30 minutos antes del amanecer ni más de 30 minutos después de la puesta del sol sin autorización previa del Comisionado de Agricultura del Condado de Fresno.

Para obtener información adicional sobre la aplicación aérea adecuada de este producto en el Condado de Fresno llame al (800) 332-3111.

8.3 Equipo de aplicación terrestre

Aplique este producto en las proporciones apropiadas como se especifica en esta etiqueta en 3 a 40 galones de agua por acre cuando se realizan aplicaciones al voleo usando equipos de aplicación terrestre, a menos que se indique de otro modo en esta etiqueta, en las etiquetas complementarias separadas o en las Fichas Técnicas que se publican para este producto. A medida que aumenta la densidad de las malezas, aumente el volumen de rocío hacia al extremo superior dentro de este rango para conseguir una cobertura completa. Use boquillas que eviten generar una niebla fina. Para obtener mejores resultados con el equipo de aplicación terrestre, use boquillas tipo abanico plano. Compruebe la distribución uniforme del patrón de las gotas del rocío.

8.4 Rociadores manuales

Al usar un rociador de mano, aplique soluciones de rocío de este producto de manera completa y uniforme al follaje de la vegetación objetivo, usando un espectro de gotas gruesas y técnica de rocío para mojar; no rocíe hasta el punto de escurrimiento. Consulte la sección "MALEZAS CONTROLADAS" de esta etiqueta para conocer la concentración correcta de este producto en la solución de rocío y el momento de aplicación para controlar malezas específicas, árboles, enredaderas y matorrales leñosos.

Para el control de malezas anuales, aplique cuando las malezas están pequeñas y antes de la formación de inflorescencias o brotes. Para el control de malezas perennes, árboles, enredaderas y matorrales leñosos, aplique después de la floración y antes de la caída de hojas y el color otoñal.

Al hacer una aplicación de rocío dirigido a bajo volumen a malezas anuales y perennes, árboles, enredaderas y matorrales leñosos usando un rociador de mano, asegúrese de rociar por lo menos de 50 a 75 por ciento del follaje o la mitad superior de cada planta no deseada. Si se usa una boquilla de chorro recto, comience la aplicación en la parte superior de la planta objetivo y rocíe de arriba hacia abajo con un movimiento lateral en zigzag. Para asegurar una cobertura uniforme y completa, rocíe ambos lados de los matorrales leñosos grandes o altos, árboles y enredaderas o cuando el follaje es espeso y denso o hay varios brotes. Para obtener mejores resultados en los árboles, enredaderas y matorrales leñosos, aplique a la vegetación en crecimiento activo después de la expansión completa de las hojas y la floración, antes de la caída de las hojas y el color de otoño.

La siguiente tabla resume varios métodos de aplicación foliar usando un rociador de mochila con una técnica de rocío dirigido a bajo volumen o rocío para mojar y una aplicación con rociador de alto volumen usando equipo de aplicación a mano para el control total o parcial de malezas herbáceas, árboles, enredaderas y matorrales leñosos listados en la sección "MALEZAS CONTROLADAS" de esta etiqueta.

Método de aplicación	Concentración de la solución de rocío	Volumen de rocío
Pistola de mano o rociador de mochila	0.5 a 1.5% por volumen	Técnica de rocío para mojar
Rocío dirigido de bajo volumen (mochila)	4 a 8% por volumen	15 a 25 galones por acre
Rocío modificado de alto volumen	1.5 a 3% por volumen	40 a 60 galones por acre

La aplicación de rocío dirigido a bajo volumen con un rociador de mochila funciona mejor cuando se aplica a las malezas y matorrales con menos de 10 pies de alto. Para las malezas y matorrales más altos, una pistola de mano de alto volumen puede modificarse reduciendo el tamaño de la boquilla y la presión de rocío para producir una aplicación modificada de rocío dirigido de alto volumen.

8.5 Equipo de aplicación selectiva

El equipo de aplicación selectiva permite que este producto se aplique a las malezas que crecen cerca de cultivos o de otra vegetación deseable sin matar la vegetación deseable. El equipo de aplicación selectiva debe evitar todo contacto de la solución herbicida con la vegetación deseable y operarse sin filtración de rocíos de niebla, derrames o goteo de la solución herbicida.

EVITE EL CONTACTO DE ESTE HERBICIDA CON LA VEGETACIÓN DESEABLE. El contacto de este producto con la vegetación deseable podría causar daños o la destrucción de la planta. Hasta el grado que sea compatible con la legislación pertinente, este daño será responsabilidad exclusiva de la persona encargada de la aplicación del producto.

Este producto puede diluirse en agua y aplicarse usando rociadores de recirculación, rociadores con pantalla, rociadores con campana, aplicadores con enjugador o barras de esponja, a las malezas especificadas en esta etiqueta que crecen en cualquier sitio acuático o terreno de cultivo no alimentario indicado en esta etiqueta, donde sea posible. Este producto también puede usarse con rociadores equipados con tecnología de sensor óptico de malezas. Este producto también puede aplicarse con otro equipo selectivo como los inyectores de tallo sencillos o huecos, inyectores de árboles, aplicadores con enjugador para aplicaciones en tallos cortados y tocones cortados y en botellas rociadoras para aplicaciones en tallos cortados, tocones cortados y chorro para controlar malezas de tallo largo, matorrales, árboles y enredaderas indicados en esta etiqueta.

Rociador de recirculación

Los rociadores de recirculación dirigen la solución de rocío hacia los tipos de malezas que crecen sobre vegetación deseable, mientras que la solución de rocío que no ha sido interceptada por las malezas se recoge y se retorna al tanque para volverla a usar. Un rociador de recirculación puede usarse para aplicar soluciones de rocío de este producto a las malezas indicadas en esta etiqueta en cualquier sitio acuático o terreno sin cultivo descrito en esta etiqueta.

Rociadores con pantalla y con campana

Un rociador con pantalla dirige la solución herbicida a las malezas objetivo mientras protege la vegetación deseable de entrar en contacto con el rocío herbicida mediante una pantalla o material impermeable. Use boquillas que aseguren una cobertura uniforme de toda el área tratada. Mantenga las pantallas debidamente colocadas a fin de proteger la vegetación deseada.

Un rociador con campana es un tipo de rociador con pantalla en el que el rocío está totalmente encerrado, y que incluye parte superior, laterales, parte frontal y posterior, de modo que protege la vegetación deseable de la solución de rocío.

Este producto puede diluirse con agua y aplicarse, a menos que se indique lo contrario, mezclado con un surfactante, usando un rociador con pantalla o con campana a las malezas indicadas en esta etiqueta que crecen en cualquier sitio acuático o terreno sin cultivo descrito en esta etiqueta, donde sea posible, y entre hileras de plantas (en medio de las hileras) en cualquier sistema de cultivo indicado en esta etiqueta.

Coloque correctamente la campana para proteger la vegetación deseable. Asegúrese de que la campana es capaz de encerrar completamente el patrón

de rocío. De ser necesario cuando lo aplique alrededor de cultivos en camas elevadas, extienda hacia abajo las solapas frontal y posterior del rociador con campana para llegar a la tierra en surcos profundos.

Los rociadores con campana deben ser configurados y operados de manera que reduzcan al mínimo el rebote, y eviten que sea necesario levantar la campana de la superficie de la tierra en cualquier momento. Si la campana se levanta, pueden escapar partículas de rocío y hacer contacto con el cultivo o con otra vegetación deseable, causándole daño o destrucción. Evite operar este equipo en terreno irregular o en declive, donde la campana de rocío puede levantarse de la superficie del suelo.

Utilice campanas diseñadas para reducir al mínimo el escurrimiento o goteo excesivo por la parte interior de la campana, tales como una única boquilla en abanico de baja presión y poca dispersión con un ángulo de rocío de 80 a 95 grados, colocada en la parte central superior de la campana, con un volumen de rocío de 20 a 30 galones por acre.

Los siguientes procedimientos ayudarán a reducir las posibilidades de daño a la vegetación deseable cuando se usa un rociador con campana:

- Opere el rociador con la campana sobre el terreno o casi rozando la superficie del terreno.
- Deje una franja de al menos 8 pulgadas sin tratar sobre la hilera del surco. (Por ejemplo, si una hilera del cultivo tiene un ancho de 38 pulgadas, use una campana de rocío con un ancho máximo de 30 pulgadas).
- Trabaje a una velocidad terrestre no mayor de 5 millas por hora para minimizar el rebote del rociador con campana.
- Aplique cuando la velocidad del viento sea de 10 millas por hora o menos.
- Utilice boquillas de poca dispersión que ofrecen cobertura uniforme dentro del área de aplicación.

Puede causar daños al cultivo o a otra vegetación deseable si se aplica al follaje de las malezas que tienen contacto directo con la vegetación deseable. No aplique este producto si las hojas de la vegetación deseable crecen en contacto directo con las malezas. Las gotas, la niebla, la espuma o las salpicaduras de la solución herbicida que se depositan en la vegetación deseable pueden causar decoloración, atrofia o destrucción.

Aplicador con enjugador

El aplicador con enjugador es un dispositivo que pasa físicamente este producto o soluciones de este producto directamente a la maleza o los tocones cortados. Puede usarse cualquier dispositivo manual que sea capaz de pasar físicamente este producto o soluciones de este producto directamente en la maleza objetivo o tocón, como por ejemplo una brocha de pintor.

Un aplicador con enjugador mecánico, como una barra de esponja o mecha que pueda llevarse por un campo por encima de un cultivo u otra vegetación deseable para controlar las malezas que son más altas que la vegetación deseable, debe estar diseñado, mantenerse y operarse de tal manera que evite que la solución herbicida entre en contacto con la vegetación deseable.

Los aplicadores con enjugador pueden usarse sobre los cultivos alimentarios ÚNICAMENTE si su uso sobre ese cultivo está específicamente permitido en esta etiqueta o en las etiquetas complementarias que se publican por separado para este producto.

Al usar un aplicador con enjugador mecánico, ajuste la altura del aplicador para asegurar el contacto adecuado con las malezas, de manera que el punto de contacto del enjugador esté al menos 2 pulgadas por encima del cultivo o la vegetación deseable. Se obtienen mejores resultados cuando una mayor cantidad de maleza entra en contacto con la solución herbicida y las malezas tienen por lo menos 6 pulgadas de altura más que la vegetación deseable. Las malezas que no entran en contacto con la solución herbicida no se afectarán. El contacto puede ser insuficiente cuando las malezas crecen en macizos densos, en las áreas de infestaciones severas de malezas o cuando la altura de las malezas varía considerablemente. En estas situaciones, puede ser necesaria más de una aplicación de este producto.

Opere los aplicadores con enjugador a una velocidad terrestre no mayor de 5 millas por hora. Se puede mejorar el rendimiento en zonas infestadas con muchas malezas si se reduce la velocidad, lo que dará más tiempo para volver a saturar el enjugador con la solución herbicida y más tiempo de contacto del enjugador con la maleza. Se pueden obtener mejores resultados con un aplicador con enjugador si se hacen dos aplicaciones en direcciones opuestas del campo.

Mantenga limpias las superficies del enjugador.

Las gotas, la niebla, la espuma o las salpicaduras de la solución herbicida que se depositan en la vegetación deseable pueden causar decoloración, atrofia o destrucción. Evite las filtraciones o el goteo en la vegetación deseable. Tenga en cuenta que en terreno en declive la solución herbicida puede cambiar de lugar, goteando en el extremo inferior y secando el enjugador en el extremo superior del aplicador.

No aplique este producto con un aplicador con enjugador cuando las malezas estén mojadas.

Agregue un surfactante no iónico a una concentración de 10 por ciento por volumen de la solución total del aplicador (un galón de surfactante por cada 10 galones de solución) para usar en un aplicador con enjugador. Consulte la sección "MEZCLA" de esta etiqueta para obtener información adicional sobre el uso de surfactantes.

Para aplicadores con barra de esponja o mecha: aplique soluciones en un rango entre 33 y 75 por ciento de este producto por volumen en agua.

Para aplicadores de panel: aplique soluciones en un rango entre 33 y 90 por ciento de este producto por volumen en agua.

Mezcle solamente la cantidad de este producto que se usará durante el período de un día, debido a que el uso de soluciones de días anteriores puede reducir el efecto del producto.

Lave las piezas del enjugador inmediatamente después de utilizar este producto enjuagando con una gran cantidad de agua.

Inyectores de tallo sencillos y huecos

Se puede obtener el control de ciertas malezas indicadas en la sección "MALEZAS CONTROLADAS" inyectando este producto concentrado o soluciones de este producto directamente en la maleza objetivo. Asegúrese de que el inyector de mano que se use para esta aplicación sea capaz de rociar con precisión el volumen especificado en la etiqueta. Al inyectar los tallos, el uso total combinado de este producto no debe exceder 8 cuartos de galón por acre por año. A 5 mililitros de producto concentrado (sin diluir) por tallo, 8 cuartos de galón tratarán aproximadamente 1500 tallos por acre por año. La cantidad de tallos que pueden tratarse por acre variará dependiendo del volumen de inyección y de la concentración de este producto en la solución de aplicación.

8.6 Sistemas por inyección

Este producto puede usarse con sistemas de rocío por inyección, ya sean aéreos o terrestres, como concentrado líquido o diluido antes de inyectarlo en el chorro de rocío. No mezcle este producto concentrado con concentraciones de otros productos sin diluir cuando use los sistemas por inyección, a menos que se indique lo contrario. Para usar este producto en sistemas por inyección, se requiere una concentración de surfactante no iónico de 0.5% o más en el chorro de rocío.

8.7 Aplicador por goteo controlado (CDA)

La cantidad de este producto aplicada por acre con el aplicador por goteo controlado (CDA) no puede ser menos que la proporción indicada en esta etiqueta cuando se aplica con un equipo al voleo convencional.

El aplicador por goteo controlado produce un patrón de rocío que es difícil de ver. Debe tener sumo cuidado de no rociar o hacer contacto por dispersión con el follaje o con cualquier otro tipo de vegetación deseable, ya que esto puede causar daño o la destrucción de la planta.

9.0 SITIOS DE USO ACUÁTICO Y TERRESTRE

Este producto puede utilizarse de acuerdo con las instrucciones de uso en esta etiqueta para controlar malezas, árboles, enredaderas y matorrales leñosos indicados en esta etiqueta que crezcan en ambientes acuáticos o en cualquier terreno descrito en esta etiqueta.

9.1 Sitios acuáticos

Este producto puede usarse para controlar malezas, matorrales, árboles y enredaderas emergidas en todos los cuerpos de agua superficial fresca y salobre, fluyentes, estancados o transitorios. Estos cuerpos de agua incluyen lagos, ríos, arroyos, estanques, estuarios, diques de arroz, rezumaderos, acequias, canales, represas, tierras pantanosas e instalaciones para tratamiento de aguas usadas. Este producto puede usarse también para controlar malezas en zonas intermareales por debajo del nivel promedio de la marea alta y en terrenos donde pueda haber cuerpos de agua y una zona de transición que asegurará que un rocío excesivo del agua no se puede mantener.

Al aplicar soluciones de rocío de este producto en sitios acuáticos o cerca de estos, debe usarse un surfactante no iónico indicado para uso con herbicidas y aprobado para aplicación directa a los cuerpos de agua. Consulte la sección "MEZCLA" de esta etiqueta para obtener más información sobre el uso de surfactantes con este producto.

Antes de usar este producto para el control de malezas acuáticas o para control terrestre cerca de sitios acuáticos, lea cuidadosamente la siguiente información.

- Este producto no controla plantas que estén completamente sumergidas o que tienen la mayoría de su follaje debajo del agua.
- No hay restricciones al uso de agua para riego, recreación o fines domésticos después de la aplicación directa de este producto a plantas acuáticas emergidas.
- Consulte con la principal agencia reguladora de pesticidas de su estado, la agencia estatal de pesca y vida silvestre y/o la autoridad para el control de las aguas antes de aplicar este producto a la vegetación que crezca en aguas públicas para determinar si se requiere un permiso.
- No aplique este producto directamente al agua dentro de 0.5 millas aguas arriba de una toma activa de agua potable en corrientes de agua (esto es, ríos, arroyos, etc.) o dentro de 0.5 millas de una toma activa de agua potable en un cuerpo de agua estancada, como un lago, estanque o represa. Para aplicaciones acuáticas cerca y dentro de 0.5 millas de una toma activa de agua potable, la toma tiene que cerrarse por un período mínimo de 48 horas después de la aplicación. La toma de agua puede abrirse antes de las 48 horas si el nivel de glifosato en el agua de la toma está por debajo de 0.7 partes por millón según lo determina un análisis de laboratorio. Estas aplicaciones acuáticas pueden hacerse ÚNICAMENTE en aquellos casos donde existen fuentes de agua alternas o embalses que permitan cerrar una toma activa de agua potable por un período mínimo de 48 horas después de la aplicación. Esta restricción NO aplica al rocío excesivo accidental e intermitente del agua en sitios de uso terrestre.
- Para alcanzar el control máximo de malezas en zanjas secas, aplique este producto 1 día después de interrumpir el suministro de agua para asegurar la aplicación en las malezas con crecimiento activo y deje transcurrir 7 días o más después del tratamiento para volver a restaurar el agua.
- Puede ser necesario más de una aplicación de este producto para el control de matas de vegetación flotante. Evite que la lluvia o el oleaje levantado por los botes laven este producto del follaje en un plazo de 4 horas después de la aplicación. Espere por lo menos 24 horas antes de volver a aplicar este producto a la misma vegetación.
- La aplicación de este producto a cuerpos de agua en movimiento debe hacerse mientras se mueve contracorriente para evitar la concentración del herbicida en el agua.
- Al aplicar en las márgenes de cuerpos de agua, evite superponer más de un pie dentro del agua.
- No aplique este producto a cuerpos de agua donde no existan malezas emergidas.
- Si aplica este producto a más del 20 por ciento del área total de un cuerpo de agua, no aplique más de 3.75 cuartos de galón por acre en una sola aplicación al voleo. Si aplica a menos del 20 por ciento del área total de un cuerpo de agua, puede aplicar cualquier proporción indicada en esta etiqueta. Esta restricción de proporción en aplicación única no aplica

a cruces de corrientes de agua en servidumbres de paso de servicios públicos.

- Cuando la infestación de malezas emergidas cubre la superficie total de un cuerpo de agua en un embalse o represa, aplique este producto a la vegetación emergida en franjas para evitar la pérdida de oxígeno en el agua causada por la vegetación en descomposición. La pérdida de oxígeno en el agua puede dar lugar a un aumento en la mortalidad de los peces.

MEZCLAS DE TANQUE: Este producto se puede aplicar en una mezcla de tanque con uno o más de los siguientes productos para mejorar el control de malezas acuáticas, árboles, enredaderas y matorrales leñosos en sitios acuáticos, siempre que el producto usado esté registrado para uso acuático. Consulte las etiquetas de cada producto usado en la mezcla de tanque para conocer los usos aprobados y las proporciones de aplicación. Lea y siga siempre las indicaciones de las etiquetas de cada producto utilizado en la mezcla.

Clipper; Garlon 3A Specialty; Habitat; 2,4-D amina; imazapyr; flumioxazin; triclopyr

9.2 Sitios terrestres

Este producto puede utilizarse de acuerdo con las instrucciones de uso en esta etiqueta para controlar malezas, árboles, enredaderas y matorrales leñosos indicados en esta etiqueta en cualquier terreno descrito en esta etiqueta.

Este producto puede utilizarse para controlar malezas, árboles, enredaderas y matorrales leñosos en mantenimiento de jardines, terrenos mejorados y sin mejorar, céspedes y en los alrededores de plantas ornamentales en zonas industriales, comerciales y residenciales, incluyendo aeropuertos, complejos de viviendas, chaparrales, bordes de acequias, caminos de entrada de automóviles, zanjas y canales secos, ranchos, bordes de cercas, bosques, campos de golf, invernaderos, madereras, fábricas, zonas municipales, áreas naturales, viveros, complejos de oficinas, lechos ornamentales, parques, estacionamientos, pasturas, patios de tanques de petróleo, instalaciones de bombeo, ferrocarriles, tierras de pastoreo, áreas recreativas, áreas residenciales, bordes de carretera, escuelas, cobertizos, sitios para la producción de céspedes, complejos deportivos, almacenes, subestaciones, servidumbres de paso de servicios públicos, sitios de servicios públicos, áreas de almacenamiento, parcelas para alimento de la vida silvestre y áreas de preservación de la vida silvestre.

Este producto puede utilizarse para el control no selectivo de vegetación no deseada en cualquier sitio indicado en esta etiqueta para aplicación en recortes y bordes alrededor de objetos, incluyendo alrededor de los cimientos de edificios, áreas donde se guardan equipos, y árboles, a lo largo de cercas, y para eliminar las malezas no deseadas que crecen cerca de lechos de arbustos establecidos y plantaciones ornamentales. Este producto también puede utilizarse para la completa eliminación de la vegetación en un terreno antes de sembrar plantas ornamentales, flores o césped (en tepes o semillas), y antes de desarrollar terrenos, incluso antes de comenzar proyectos de construcción o de cubrir con asfalto u otro material para la construcción de caminos. Se pueden repetir las aplicaciones de este producto cuando sea necesario para mantener el terreno limpio de malezas, hasta un máximo de 8 cuartos de galón por acre por año.

Este producto puede utilizarse para el establecimiento y mantenimiento de cortafuegos, para establecer perímetros y pantallas contra fuegos, junto a caminos para bomberos y para facilitar las prácticas de quema recomendadas en cualquier sitio descrito en esta etiqueta.

Este producte también puede utilizarse para el control de malezas o para regular el crecimiento en las plantaciones de árboles de Navidad, huertos de cítricos, ranchos, viveros de producción, cañaverales de azúcar, plantaciones de césped y sitios de producción de semillas de céspedes.

Este producto requiere la adición de un surfactante no iónico a la solución de rocío indicada para aplicación herbicida. Consulte la sección "MEZCLA" de esta etiqueta para obtener más información sobre el uso de surfactantes con este producto.

A menos que se indique lo contrario, la aplicación de este producto se puede hacer de acuerdo con las instrucciones de uso en las secciones que siguen en cualquiera de estos sitios, usando cualquier método de aplicación descrito en esta etiqueta para controlar las malezas, árboles, enredaderas y matorrales leñosos indicados en la sección de "MALEZAS CONTROLADAS" de esta etiqueta.

10.0 INFORMACIÓN ADICIONAL SOBRE MANEJO DEL LUGAR

Las siguientes secciones contienen información adicional sobre uso específicamente relacionada con el uso en ciertas zonas. A menos que se indique lo contrario, cualquier aplicación de este producto descrita en la sección "MALEZAS CONTROLADAS" o en cualquier otra sección de esta etiqueta se puede hacer en las zonas de uso descritos en las secciones que siguen, cuando proceda, usando cualquier método de aplicación descrito en esta etiqueta que sea apropiado.

10.1 Manejo de bosques, árboles de madera y árboles de Navidad

Este producto puede usarse para el control total o parcial de matorrales leñosos, árboles y malezas herbáceas en cualquier zona de árboles, incluyendo bosques, plantaciones de árboles de Navidad y viveros dedicados a la silvicultura y la producción, usando cualquier método de aplicación indicado en esta etiqueta. Vea la sección "MALEZAS CONTROLADAS" de esta etiqueta para conocer las proporciones de aplicación y las instrucciones de uso específicas.

A menos que se indique lo contrario, este producto requiere que se agregue a la mezcla de rocío un surfactante no iónico aprobado para el uso deseado en el sitio de la aplicación. El uso de este producto sin un surfactante dará lugar a un rendimiento inferior. Consulte la sección "MEZCLA" de esta etiqueta para obtener más información sobre el uso de surfactantes con este producto.

IMPORTANTE: ALGUNOS SURFACTANTES PUEDEN CAUSAR DAÑOS A LOS ÁRBOLES SI SE APLICAN DIRECTAMENTE A ALGUNAS ESPECIES. LEA Y ENTIENDA COMPLETAMENTE TODOS LOS USOS APROBADOS, LAS PRECAUCIONES Y LIMITACIONES DEL SURFACTANTE ANTES DE USARLO.

Manejo de malezas, preparación del terreno

Este producto puede utilizarse para controlar total o parcialmente matorrales leñosos, árboles, enredaderas y malezas herbáceas no deseables indicados en esta etiqueta para preparar el terreno antes de sembrar cualquier especie de árbol, incluyendo árboles de Navidad, árboles de eucalipto y cultivos de árboles híbridos, así como para controlar las malezas en los alrededores de árboles establecidos, para la poda de coníferas y árboles de madera, establecer zonas de reserva de vida silvestre y mantener los caminos en cualquier zona de árboles.

MEZCLAS DE TANQUE: Este producto puede aplicarse en mezcla de tanque con los productos indicados en esta sección para aumentar el espectro de vegetación controlada. Cualquier proporción de aplicación de este producto indicado en esta etiqueta puede usarse en una mezcla de tanque con los siguientes productos para el manejo de la zona de árboles, incluyendo la preparación del terreno, siempre que el producto esté registrado para su uso en el sitio de aplicación y antes de sembrar las especies deseadas. Consulte las etiquetas de cada producto usado en la mezcla de tanque para conocer los usos aprobados y las proporciones de aplicación. Lea y siga todas las instrucciones de uso y las precauciones para cada producto usado, incluyendo las restricciones de intervalos de siembra, si las hay. Use este producto conforme a las precauciones más restrictivas de cada producto en la mezcla.

Arsenal; Herbicida concentrado para aplicadores Arsenal; Chopper; Chopper GEN2; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XRT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Landmark; Landmark XP; Oust Extra; Oust XP; imazapyr; metsulfuron methyl; sulfometuron methyl; triclopyr

Para el control de las malezas herbáceas, aplique estos productos en mezcla de tanque en la proporción de aplicación más baja dentro del rango especificado en la etiqueta del producto. Para el control total o parcial de poblaciones densas o para árboles, enredaderas y matorrales leñosos difíciles de controlar, aplique estos productos en una proporción o concentración de solución de rocío más alta dentro del rango dado.

Poda forestal de coníferas, poda de coníferas a mitad de rotación, poda de árboles de madera, mejora del grupo de madera

Este producto puede aplicarse como rocío dirigido usando un rociador manual o cualquier equipo de aplicación selectiva descrito en esta etiqueta para controlar las malezas leñosas y herbáceas y otra vegetación sotobosque no deseada por debajo de la copa de los árboles del cultivo en las plantaciones de coníferas, árboles de madera, árboles de Navidad y viveros ornamentales y de silvicultura para facilitar la poda forestal y el crecimiento de coníferas y árboles de madera.

Este producto también puede aplicarse usando un equipo de aplicación terrestre al voleo o en aplicación en rocío dirigido para la poda forestal a mitad de rotación bajo la copa de los pinos, otras coníferas y árboles de madera.

PRECAUCIONES: Evite el contacto de la dispersión, niebla o gotas del rocío con el follaje, la corteza verde o las raíces no leñosas expuestas de las especies de plantas deseables. Use técnicas de aplicación que eviten o minimicen el contacto de este producto con el follaje de los árboles u otras plantas deseados a través del contacto directo o del desvío del rocío fuera del objetivo.

Poda de coníferas – Aplicación al voleo

Este producto se puede aplicar ampliamente por encima de la copa de las especies de coníferas indicadas en esta sección, después de la formación de los brotes latentes finales en el otoño o antes de la expansión inicial de los brotes en la primavera, para el control total o parcial o la supresión de las malezas herbáceas y los árboles de madera indicados en la sección "MALEZAS CONTROLADAS" de esta etiqueta para facilitar la poda de estas especies de árboles en viveros, plantaciones y bosques. A menos que se indique lo contrario, aplique únicamente cuando las coníferas lleven establecidas por lo menos una temporada de crecimiento.

PRECAUCIONES: Se puede causar daño a las coníferas si se aplica este producto en proporciones mayores que las recomendadas en esta etiqueta, donde las aplicaciones se superponen, si se realiza la aplicación cuando las coníferas están en crecimiento activo o cuando crecen bajo estrés por sequía, inundaciones, siembra incorrecta o daños por insectos, animales o enfermedades.

Poda de coníferas fuera del sureste de los Estados Unidos

Para la poda de las siguientes especies de coníferas que hayan crecido como mínimo por una temporada de crecimiento en la mayor parte de las áreas fuera del sureste de los Estados Unidos, aplique de 24 a 48 onzas fluidas de este producto por acre en aplicación al voleo por encima de la copa de los árboles de coníferas.

- Abeto Douglas
- Especies de abeto
- Hemlock
- Pinos*
- Secoya de California
- Spruce

* Incluye todas las especies excepto pino loblolly, pino amarillo (longleaf), pino shortleaf o pino slash.

Aplique de 24 a 40 onzas líquidas de este producto para la poda de abeto de Douglas, pino y spruce que hayan estado establecidos por solo una temporada de crecimiento (excepto en California).

Para poda de spruce (Picea spp.) en Maine, Michigan, Minnesota, New Hampshire y Wisconsin, hasta 2.25 cuartos de galón de este producto se puede aplicar después de la formación de los brotes latentes finales en otoño para controlar las especies de árboles y matorrales leñosos.

PRECAUCIONES: Asegúrese de que las coníferas estén bien endurecidas antes de aplicar este producto. Algunos surfactantes no iónicos pueden dañar los árboles si se aplican ampliamente sobre la copa de hemlock y secoya de California y en grupos mixtos de coníferas. Pruebe el surfactante no iónico antes de usarlo para evitar dañar el árbol.

Poda de coníferas en el sureste de los Estados Unidos

Para la poda de las siguientes especies de coníferas establecidas por más de una temporada de crecimiento en el sureste de los Estados Unidos, aplique de 36 a 60 onzas fluidas de este producto por acre en el otoño con aplicación al voleo por encima de la copa de los árboles. Para la poda de estas especies después de una sola temporada de crecimiento, aplique solo 24 onzas líquidas de este producto por acre.

- Pino blanco del este
- Pino loblolly
- Pino amarillo (Longleaf)
- Pino shortleaf
- Pino slash
- Pino de Virginia

MEZCLAS DE TANQUE: Este producto se puede aplicar para la poda de coníferas en una mezcla de tanque con los siguientes productos para proporcionar un espectro más amplio de control de maleza postemergencia y para el control residual de malezas indicadas en la etiqueta de esos productos. Aplique estas mezclas de tanque solamente sobre la copa de las especies de coníferas que estén aprobadas para este uso para todos los productos en la mezcla. Consulte las etiquetas de cada producto para conocer los usos aprobados y las proporciones de aplicación. Lea y siga todas las instrucciones de uso y las precauciones para cada producto usado. Use este producto conforme a las precauciones más restrictivas de cada producto en la mezcla.

Arsenal; Herbicida concentrado para aplicadores Arsenal; Oust Extra; Oust XP; atrazina; imazapyr; metsulfuron methyl; sulfometuron methyl

Para la poda de abeto Douglas establecido como mínimo por una temporada de crecimiento antes de la formación de brotes a principios de primavera, aplique 24 onzas líquidas de este producto en mezcla de tanque con una proporción apropiada de atrazina. No agregue surfactantes para esta aplicación.

Para la poda herbácea de pino loblolly, pino de Virginia y pino longleaf en la primavera y a principios de verano, aplique de 12 a 18 onzas líquidas de este producto por acre en una mezcla de tanque con una proporción apropiada de Oust Extra u Oust XP.

Fines de verano y otoño después de la formación de brotes

Para la poda de pino jack, pino blanco y spruce blanco, aplique de 24 a 48 onzas líquidas de este producto por acre en mezcla de tanque con una proporción apropiada de Oust Extra u Oust XP que no dañará estas especies de coníferas.

Para la poda de abeto Douglas, aplique de 24 a 36 onzas líquidas de este producto por acre en una mezcla de tanque con una proporción apropiada de Arsenal o Herbicida concentrado para aplicadores Arsenal.

Para la poda de abeto balsam y spruce rojo, aplique 48 onzas líquidas de este producto por acre en una mezcla de tanque con una proporción apropiada de Arsenal o Herbicida concentrado para aplicadores Arsenal.

10.2 Manejo de hábitats de vida silvestre y especies nativas

Este producto puede usarse para controlar vegetación exótica y otra no deseada en áreas naturales y hábitats de vida silvestre, incluyendo riberas y estuarios, tierras de pastoreo y refugios de vida silvestre. Pueden hacerse aplicaciones para permitir la recuperación de especies de plantas nativas o antes de plantar especies nativas deseables, y para aplicaciones similares de control de amplio espectro de la vegetación. Puede hacerse tratamiento localizado, aplicación a tocones cortados, tallos cortados, inyección de tallo, aplicador con enjugador y todos los demás métodos indicados en esta etiqueta para eliminar de forma selectiva las plantas no deseadas para el manejo y mejora de hábitats.

Este producto también se puede utilizar para eliminar malezas anuales y perennes antes de sembrar parcelas para alimento de la vida silvestre.

Después de aplicar este producto, se puede sembrar cualquier especie de alimento para la vida silvestre o permitir la repoblación natural de la zona con especies nativas. Si debe labrar para preparar un semillero, espere por lo menos 7 días después de la aplicación antes de hacerlo a fin de permitir la absorción adecuada en las partes de la planta que estén bajo tierra.

10.3 Manejo de vivero ornamental y de producción

Todos los usos de este producto descritos en esta etiqueta pueden aplicarse a viveros de plantas usando cualquier método de aplicación descrito.

Este producto puede usarse para limpiar un área de vegetación no deseada antes de sembrar cualquier planta, árbol, arbusto ornamental o de otro tipo.

Este producto también puede utilizarse para controlar malezas que crecen alrededor de especies leñosas ornamentales establecidas, como árbol de la vida, azalea, boj, manzana silvestre, eucalipto, evónimo, abeto, abeto Douglas, jojoba, acebos, lirio, magnolia, arce, roble, álamo blanco o negro, ligustro, pino, abeto picea (spruce) y tejo. Este producto también puede ser utilizado para recortado de bordes alrededor de plantas en macetas y otros objetos en un vivero de plantas.

PRECAUCIONES: Proteja las plantas deseables de la solución de rocío con pantallas o cubiertas de materiales impermeables. Tenga cuidado para evitar que el rocío, la dispersión o la niebla no hagan contacto con el follaje, lo tallos verdes o la corteza inmadura de las especies ornamentales establecidas.

Invernaderos/cobertizos

Este producto se puede usar para controlar las malezas que estén creciendo en o alrededor de los invernaderos y cobertizos.

RESTRICCIONES: La vegetación deseable no debe estar presente durante la aplicación en un invernadero. Apague los equipos de ventilación antes de aplicar este producto dentro de un invernadero o cobertizo y déjelos apagados hasta que la solución aplicada haya secado.

10.4 Manejo de áreas comerciales, residenciales y recreativas

Todas las aplicaciones de este producto descritas en esta etiqueta se pueden usar en áreas comerciales, residenciales y recreativas, incluyendo parques, escuelas y campos de atletismo, usando cualquier método de aplicación descrito en esta etiqueta, incluyendo tratamiento localizado de vegetación no deseada, recorte de bordes alrededor de árboles, cercas, senderos, edificios, aceras, circuitos y otros objetos en estas áreas, para eliminar malezas no deseadas que crecen en lechos ornamentales y de arbustos establecidos, para el manejo y la renovación de céspedes y para eliminar la vegetación de un sitio antes de su desarrollo, incluyendo antes de sembrar un área de flores, plantas ornamentales o césped (en tepes o semillas) o de comenzar proyectos de construcción.

10.5 Manejo de zonas de pasturas

El uso de este producto en pasturas incluye el uso en bahiagrass, bermudagrass, bluegrass, brome, fescue, guineagrass, kikuyugrass, orchardgrass, pangola grass, ryegrass, Timothy y wheatgrass.

Antes de sembrar, preemergencia, renovación de pasturas

Este producto se puede aplicar antes de sembrar o de que emerjan pastos forrajeros o perennes. Consulte la sección "MALEZAS CONTROLADAS" de esta etiqueta para conocer las proporciones de aplicación de este producto para el control de malezas específicas.

RESTRICCIONES: Si la proporción total de aplicación de este producto es 2.25 cuartos o menos por acre, no se requiere período de espera entre el tratamiento y la utilización como alimento o el pastoreo del ganado. Si la proporción es mayor a 2.25 cuartos de galón por acre, retire el ganado doméstico antes de aplicar y espere como mínimo 8 semanas después de la aplicación para utilizar como pastura o para cosechar.

Tratamiento localizado, aplicador con enjugador

Este producto se puede aplicar en pasturas como tratamiento localizado o por la parte superior de pastos atractivos, utilizando aplicadores con enjugador para controlar las malezas más altas. Para un mejor control de malezas, retire el ganado doméstico antes de aplicar para permitir suficiente crecimiento de las plantas y espere como mínimo 7 días después de la aplicación antes del pastoreo del ganado o para cosechar como forraje. Vea en la sección "EQUIPO Y TÉCNICAS DE APLICACIÓN" de esta etiqueta las instrucciones adicionales para el empleo de aplicadores con enjugador.

RESTRICCIONES: Para tratamiento localizado o usando un aplicador con enjugador, en proporciones de 2.25 cuartos de galón o menos por acre, puede aplicar este producto sobre todo el pasto o en cualquier parte de este. En proporciones de más de 2.25 cuartos de galón por acre, este producto no se puede aplicar sobre más de 10 por ciento del total de la pastura cada vez. Se pueden repetir las aplicaciones en la misma zona con intervalos de 30 días.

Inhibición de malezas en pasturas latentes

Este producto se puede aplicar a pasturas latentes para inhibir el crecimiento competitivo y la producción de semillas de malezas anuales y otra vegetación no deseable. Aplique de 9 a 12 onzas líquidas de este producto por acre usando un equipo de aplicación al voleo en pasturas a finales del otoño después de que los pastos perennes deseables estén latentes o a finales del invierno antes de que los pastos perennes deseables comiencen la actividad e inicien el crecimiento vegetativo.

PRECAUCIONES: Pueden usarse proporciones de aplicación más altas para las malezas difíciles de controlar; sin embargo, las proporciones más altas pueden reducir los grupos. Puede producirse cierta atrofia de los pastos perennes si las aplicaciones al voleo se realizan cuando las plantas están activas.

RESTRICCIONES: No se necesita período de espera entre la aplicación y el pastoreo o para cosechar como forraje. No aplique más de 2.25 cuartos de galón de este producto por acre por año en pastos para pastura, excepto para renovación. Si necesita volver a sembrar debido a una reducción considerable del grupo, no se requiere período de espera después de aplicar este producto antes de sembrar el pasto para pastura indicado al inicio de esta sección; para todos los demás pastos para pastura, espere por lo menos 30 días después de la aplicación para sembrar.

10.6 Manejo de ferrocarriles

Todos los usos de este producto descritos en la sección "MALEZAS CONTROLADAS" o en cualquiera otra de esta etiqueta se pueden utilizar en las zonas de ferrocarriles con cualquier método de aplicación descrito.

Este producto requiere que se agregue a la mezcla de rocío un surfactante no iónico aprobado para el uso deseado en el sitio de la aplicación. Si se va a realizar la aplicación donde los sitios acuáticos puedan ser rociados directamente o rociados en exceso accidentalmente, el surfactante tiene que estar aprobado para uso acuático. El uso de este producto sin un surfactante dará lugar a un rendimiento inferior. Consulte la sección "MEZCLA" de esta etiqueta para obtener más información sobre el uso de surfactantes con este producto.

Este producto se puede aplicar a lo largo de las servidumbres de paso de los ferrocarriles en una proporción de hasta 80 galones de solución de rocío por acre.

Suelo limpio, balastos y bordes, cruces, tratamiento localizado

Este producto se puede usar para mantener el suelo limpio en los balastos y bordes de los ferrocarriles y reducir la necesidad de segar y desbrozar mecánicamente a lo largo de las servidumbres de paso de los ferrocarriles. Se pueden repetir las aplicaciones de este producto si las malezas continúan emergiendo para mantener el terreno limpio, hasta una proporción de aplicación total máxima de 8 cuartos de galón de este producto por acre por año.

MEZCLAS DE TANQUE: Este producto se puede aplicar en una mezcla de tanque con los siguientes productos para un mejor control de árboles y matorrales leñosos en aplicaciones para suelo limpio, balastos y bordes, cruces y tratamiento localizado, así como control de otros matorrales, árboles y enredaderas en zonas de ferrocarriles, siempre que el producto usado esté aprobado para estas aplicaciones. No todos los productos en mezcla de tanque están aprobados para uso acuático. Consulte las etiquetas de cada producto usado en la mezcla de tanque para conocer los usos aprobados y las proporciones de aplicación. Lea y siga siempre las indicaciones de las etiquetas de cada producto utilizado en la mezcla.

Arsenal; Herbicida concentrado para aplicadores Arsenal; Chopper; Chopper Gen2; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XRT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Habitat; Hyvar X; Hyvar X-L; Krovar I DF; Oust Extra; Oust XP; Outrider®; Princep 4L; Princep Caliber 90; Princep Liquid; Sahara DG; Scythe; Stalker; Spike 20P Specialty; Spike 80DF Specialty; Telar XP; Transline Specialty; Velpar DF CU; Velpar DF VU; Velpar L; Velpar L CU; Velpar L VU; Vastlan Specialty; 2,4-D; atrazina; bromacil; chlorsulfuron; clopyralid; dicamba; diquat; diuron; hexazinone; imazapyr; metsulfuron methyl; pelargonic acid; simazine; sulfometuron methyl; sulfosulfuron; tebuthiuron; triclopyr

Control de matorrales, árboles y enredaderas

Este producto se puede usar para controlar árboles, enredaderas y matorrales leñosos a lo largo de servidumbres de paso de los ferrocarriles. Aplique de 3 a 8 cuartos de galón de este producto por acre en hasta 80 galones de solución de rocío que contenga 0.5% o más por volumen de un surfactante no iónico como aplicación al voleo usando un rociador con brazo o sin brazo. Aplique una solución de 0.75 a 1.5 por ciento de este producto cuando use un equipo de aplicación de alto volumen con una técnica de rocío para mojar o una solución de 4 a 8 por ciento cuando use rocío dirigido de bajo volumen para tratamiento localizado.

MEZCLAS DE TANQUE: Este producto se puede aplicar en una mezcla de tanque con uno o más de los siguientes productos para mejorar el control de árboles, enredaderas y matorrales leñosos a lo largo de las servidumbres de paso de los ferrocarriles, siempre que el producto esté registrado para su uso en estos sitios. Consulte la etiqueta de cada producto para conocer los sitios aprobados y las proporciones de aplicación.

Arsenal; Herbicida concentrado para aplicadores Arsenal; Chopper; Chopper Gen2; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XRT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Habitat; Krenite S Brush Control Agent; Stalker; Telar XP; Tordon 101 Mixture Specialty; Tordon 22K Specialty; Tordon K Herbicide Specialty; Transline Specialty; Vanquish; Velpar DF CU; Velpar DF VU; Velpar L; Velpar L CU; Velpar L VU; Vastlan Specialty; chlorsulfuron; clopyralid; dicamba; fosamine; hexazinone; imazapyr; metsulfuron methyl; picloram; triclopyr

Control de malezas en Bermudagrass latente y en crecimiento activo

Este producto se puede usar para controlar total o parcialmente muchas malezas anuales y perennes en bermudagrass latente y en crecimiento activo a lo largo de la servidumtre de paso de los ferrocarriles. Vea la sección "MALEZAS CONTROLADAS" de esta etiqueta para conocer las instrucciones de uso de este producto para el control de malezas en pastos.

10.7 Manejo de tierras de pastoreo

Este producto controla o inhibe muchas malezas anuales que crecen en tierras de pastoreo de pastos perennes de estaciones fría y cálida. Se podría producir una ligera decoloración del pasto deseable, pero este reverdecerá y volverá a crecer en tierra húmeda a medida que desaparezcan los efectos de este producto.

Para controlar la invasión de malezas de pastos anuales en tierras de pastoreo es esencial prevenir la producción de semillas de malezas. La aplicación anual de este producto para eliminar las malezas anuales invasivas antes de que produzcan semillas ayudará a eliminar las semillas de maleza viables del suelo. Se deberá demorar la utilización del área como pastura después de aplicar este producto para permitir que las plantas perennes deseables crezcan, florezcan y vuelvan a producir semillas.

Control de *Bromus*: Una aplicación al voleo de 9 a 12 onzas líquidas de este producto por acre controlará o inhibirá malezas como downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*), cheatgrass (*Bromus secalinus*), rye (centeno) para cereal y jointed goatgrass en tierras de pastoreo. Para obtener mejores resultados, aplique cuando la mayoría de las plantas de bromus se encuentren en la etapa de floración temprana y antes de que las plantas, incluidas las inflorescencias, cambien de color. Permita el crecimiento secundario de malezas después de las lluvias de primavera para reducir aún más la reserva de semillas en el suelo y alentar la conversión del pasto perenne en lugares con malezas. Aplique este producto en otoño en las zonas donde la humedad en primavera es habitualmente limitada y la germinación de otoño permite el crecimiento de malezas y la reducción de semillas de malezas.

Control de *Medusahead*: Para controlar o inhibir las plantas de medusahead (Taeniatherum caput-medusa), aplique 12 onzas líquidas de este producto por acre en la etapa de 3 hojas. La demora de la aplicación después de esta etapa resultará en un control inferior o inaceptable. El quemado controlado antes de la aplicación de este producto eliminará la capa seca superficial producida por tallos de gramíneas en descomposición lenta. Permita que las malezas broten nuevamente antes de rociar este producto después de haber quemado. Repite la aplicación anualmente para eliminar las semillas de medusahead en el suelo y permitir al pasto perenne deseable repoblar el área.

RESTRICCIONES: No aplique más de 2.25 cuartos de galón de este producto por acre por año en tierras de pastoreo. No utilice sulfato de amonio cuando aplique este producto a pastos de tierras de pastoreo. No se requiere período de espera entre la aplicación de este producto y la utilización como pastura o alimento para el ganado.

10.8 Manejo de lados de carreteras

Todos los usos de este producto descritos en esta etiqueta pueden utilizarse para el manejo de malezas a lo largo de carreteras, incluyendo el control de malezas en bermudagrass y bahiagrass latente y activo, control de malezas a lo largo de bordes y debajo y alrededor de barandas, postes y otros objetos a lo largo del camino, usando cualquier método de aplicación descrito en esta etiqueta. Si se aplica este producto en zonas donde podría rociarse en exceso accidentalmente la solución de rocío en un cuerpo de agua, tiene que usarse un surfactante no iónico aprobado para uso acuático. Consulte la sección "MEZCLA" de esta etiqueta para obtener más información sobre el uso de surfactantes con este producto.

MEZCLAS DE TANQUE: Este producto puede mezclarse en tanque con los siguientes productos para aplicaciones a bordes, barandas, tratamiento localizado y mantener el suelo limpio siempre y cuando estos productos estén aprobados para su uso en dichos sitios. No todos los productos en mezcla de tanque están aprebados para uso acuático. Consulte las etiquetas de cada producto para conocer los usos aprobados y las proporciones de aplicación.

AAtrex 4L; AAtrex Nine-O; Banvel; Barricade 65WG; Chopper; Chopper Gen2; Crossbow; Direx 4L; Escort XP; Endurance; Formula 40; Gallery 75 Dry Flowable Specialty; Gallery SC; Garlon 4; Garlon XRT; Hyvar X; Karmex DF; Krenite S Brush Control Agent; Krovar I DF; Landmark; Landmark XP; Oust Extra; Oust XP; Outrider®; Pendulum 3.3 EC; Pendulum AquaCap; Pendimax 3.3; Plateau; Poast; Poast Plus; Princep 4L; Ronstar 50 WSP; Ronstar Flo; Ronstar G; Sahara DG; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan Pro; Surflan XL 2G; Telar XP; Tordon K; Vanquish; Vastlan Specialty; Velpar DF CU; Velpar DF VU; Velpar L; Velpar L CU; Velpar L VU; Weedar 64; 2,4-D; atrazina; bromacil; chlorsulfuron; clopyralid; dicamba; diuron; fosamine; hexazinone; imazapic; imazapyr; metsulfuron methyl; oryzalin; oxadiazon; pendimethalin; picloram; prodiamine; simazine; sulfometuron; sulfosulfuron; triclopyr

10.9 Manejo de servicios públicos

Este producto se puede usar a lo largo de servidumbres de paso de energía eléctrica, tuberías y líneas telefónicas, así como todos los sitios relacionados con las servidumbres de paso de estos servicios públicos, incluyendo subestaciones, caminos de acceso, ferrocarriles y a lo largo de servidumbres de paso similares en conjunto con servicios públicos, para el tratamiento localizado de vegetación no deseada, recorte lateral, recorte de bordes alrededor de objetos, control de malezas antes de sembrar plantas ornamentales, flores o césped (en tepes o semillas) en un sitio de servicios públicos, manejo de césped, eliminar malezas no deseadas que crecen en lechos ornamentales o arbustos establecidos, preparar o establecer zonas de reserva de vida silvestre y eliminar la vegetación antes de comenzar proyectos de construcción. Se pueden repetir las aplicaciones de este producto cuando sea necesario para mantener el terreno limpio cuando las malezas siguen emergiendo hasta una proporción de aplicación máxima de 8 cuartos de galón por acre por año.

MEZCLAS DE TANQUE: Este producto se puede mezclar en tanque con los siguientes productos para su uso en áreas de servicios públicos, siempre y cuando el producto esté aprobado para su uso en dichos sitios. No todos los productos en mezcla de tanque están aprobados para uso acuático. Consulte la etiqueta de cada producto para conocer los usos aprobados y las proporciones de aplicación. Para controlar las malezas herbáceas, use una proporción de aplicación o concentración de solución de rocío más baja dentro de los rangos dados para estos productos de mezcla de tanque y aumente la proporción o concentración hacia los extremos más altos de los rangos para controlar grupos densos o árboles, enredaderas y matorrales leñosos difíciles de controlar.

AAtrex 4L; AAtrex Nine-O; Herbicida concentrado para aplicadores Arsenal; Endurance; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XLT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Hyvar XL; Krenite S Brush Control Agent; Krovar I DF; Oust Extra; Oust XP; Outrider®; Plateau; Sahara DG; Surflan AS Agricultural; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan XL 2G; Telar XP; Transline Specialty; Vanquish; Velpar DF CU; Velpar DF VU; Velpar L; Velpar L CU; Velpar L VU; Vastlan Specialty; Weedar 64; 2,4-D; atrazina; bromacil; chlorsulfuron; clopyralid; dicamba; diuron; fosamine; hexazinone; imazapic; imazapyr; metsulfuron methyl; oryzalin; pendimethalin; prodiamine; simazine; sulfometuron methyl; sulfosulfuron; triclopyr

Asegúrese de que el producto Garlon esté bien mezclado con agua de acuerdo con las instrucciones en la etiqueta antes de agregar este producto a la mezcla de rocío. Continúe agitando al agregar este producto para evitar problemas de compatibilidad de la mezcla de tanque.

Para obtener mejores resultados con el recorte lateral, aplique este producto en una mezcla de tanque con uno de los productos Garlon indicados antes.

11.0 USOS EN CULTIVOS

11.1 Cultivos de árboles, enredaderas y arbustos

ESTA SECCIÓN OFRECE INSTRUCCIONES DE USO QUE APLICAN A TODOS LOS CULTIVOS DE ÁRBOLES, ENREDADERAS Y ARBUSTOS INDICADOS EN LAS SIGUIENTES SECCIONES. VEA LAS SECCIONES DE CULTIVOS INDIVIDUALES SI NECESITA INSTRUCCIONES ESPECÍFICAS DE USO, INTERVALOS ANTES DE LA COSECHA, PRECAUCIONES Y RESTRICCIONES.

TIPOS DE APLICACIONES: Antes de sembrar (preparación del lugar); aplicaciones al voleo; equipo selectivo (rociador con pantalla, aplicador con enjugador); rocío dirigido y tratamiento localizado en hileras (entre las hileras de árboles, enredaderas o arbustos) y franjas (en hileras de árboles, enredaderas o arbustos); control localizado de malezas; inhibición de pasto perenne; aplicación a tocones cortados

INSTRUCCIONES DE USO: A menos que se prohíba específicamente en las secciones de cultivo individuales que siguen, este producto se puede aplicar usando rociadores con brazo, aplicador por goteo controlado (CDA), rociadores con pantalla, aplicadores con enjugador, rociadores de mano o de mochila, lanzas o pistolas para huerto, en hileras (entre las hileras de árboles, enredaderas o arbustos) y franjas (en hileras de árboles, enredaderas o arbustos), para el control de malezas o inhibición de pasto perenne, en arboledas establecidas de árboles frutales y de frutos secos, huertos y viñedos. También se puede usar para preparar el lugar antes de sembrar o de trasplantar estos cultivos.

Aplique 12 onzas líquidas a 4 cuartos de galón de este producto por acre, como se indica en la sección "MALEZAS CONTROLADAS" de esta etiqueta. Utilice una proporción de aplicación más alta dentro del rango recomendado cuando las malezas están bajo estrés, crecen en poblaciones densas o tienen más de 12 pulgadas de altura. Se pueden repetir las aplicaciones de este producto cuando sea necesario, hasta un máximo de 8 cuartos de galón por acre por año. Consulte la sección "INFORMACIÓN DEL PRODUCTO" de esta etiqueta para más información sobre las proporciones de aplicación máximas.

PRECAUCIONES: Debe tener sumo cuidado para evitar que la solución herbicida, el rocío, arrastre o niebla de este producto entre en contacto con el follaje o la corteza verde de troncos, ramas, retoños, frutos u otras partes de árboles, cañas y enredaderas deseables. Evite aplicar cuando los cultivos tienen heridas por podas recientes o alguna otra lesión mecánica. El contacto de este producto con corteza que no está madura y oscura puede resultar en daño o destrucción del cultivo. Solo se pueden utilizar rociadores con pantalla o dirigidos en aquellos cultivos con alto potencial de contacto con el cultivo y solo cuando hay espacio libre suficiente. Para aplicaciones en franjas (en las mismas hileras de los árboles), solo se debe utilizar equipo selectivo (rociador dirigido, rociador con campana, rociador con pantalla o aplicador con enjugador) a fin de reducir al mínimo el potencial de rocío excesivo o arrastre de este producto al cultivo. En el caso de cultivos de bayas, los rociadores con campana deben estar completamente cerrados por la parte superior, lateral, frontal y posterior. Solo se pueden emplear aplicadores con enjugadores o rociadores con pantalla que pueden evitar todo contacto de este producto con los cultivos. Vea instrucciones adicionales sobre uso y precauciones en la sección "EQUIPO Y TÉCNICAS DE APLICACIÓN" de esta etiqueta.

RESTRICCIONES: Deje transcurrir al menos 3 días entre la aplicación de este producto y el trasplante.

Entre hileras

INSTRUCCIONES DE USO: Este producto controlará o inhibirá las malezas anuales y perennes, así como las coberturas de terreno en medio de las hileras de cultivo de árboles, enredaderas y arbustos indicados en esta etiqueta. Si las malezas sufren estrés por sequía, riegue antes de aplicar. El control de malezas puede ser inferior si estas se han cortado recientemente en el momento de la aplicación.

MEZCLAS DE TANQUE: Se puede aplicar una mezcla de tanque de este producto con Goal 2XL para el control de malezas anuales entre las hileras de una variedad de cultivos de árboles, enredaderas y arbustos cuando las malezas están bajo estrés o crecen en poblaciones densas. La aplicación de 12 a 24 onzas líquidas de este producto por acre más una proporción apropiada de Goal 2XL controlará malezas anuales con una altura o longitud máxima de 6 pulgadas, incluyendo crabgrass, groundsel común, junglerice, lambsquarters común, redroot pigweed, London rocket, ryegrass común, shepherd's-purse, sowthistle anual, filaree (inhibición), horseweed/marestail, stinging nettle y purslane común (inhibición). Esta mezcla de tanque controlará también el cheeseweed común (malva) o el hairy fleabane con una altura o longitud máxima de 3 pulgadas.

Este producto también se puede aplicar en el medio de las hileras en mezclas de tanque con los siguientes productos.

2,4-D; bromacil; clethodim; diuron; fluazifop-P-butyl; flumioxazin; glufosinate-ammonium; indaziflam; napropamide; norflurazon; oryzalin; oxyfluorfen; pendimethalin; penoxsulam; pyraflufen ethyl; rimsulfuron; saflufenacil; sethoxydim; simazine; thiazopyr

Alion; Chateau Herbicide SW; Devrinol 2-XT; Devrinol 50-DF; Devrinol 50-DF Ornamental; Devrinol DF-XT; Devrinol DF-XT Ornamental; Direx 4L; Dri-Clean; Fusilade II Turf & Ornamental; Fusilade DX; Goal 2XL; GoalTender; Karmex DF; Matrix FNV; Matrix SG; Orchard Master Broadleaf; Orchard Master CA; Pindar GT; Poast; Poast Plus; Prowl 3.3 EC; Prowl H2O; Princep 4L; Princep Caliber 90; Princep Liquid; Rely 280; Select; Select 2 EC; Select Max Herbicide con Tecnología Inside; Simazine 4L; Simazine 4L Flowable; Simazine 90DF; Simazine 90 WDG; Sim-Trol 4L; Sim-Trol DF; Solicam DF; Surflan AS Agricultural; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan XL 2G; Treevix Powered by Kixor; Venue; Visor Broadcrop

Asegúrese de que el producto que use esté aprobado para la aplicación en el cultivo a tratar. Lea y siga las instrucciones de la etiqueta para todos los productos en la mezcla de tanqua.

Franjas (en hileras)

MEZCLAS DE TANQUE: Este producto se puede aplicar entre hileras de cultivos de árboles, enredaderas y arbustos en mezclas de tanque con los siguientes productos.

2,4-D; bromacil; clethodim; diuron; fluazifop-P-butyl; flumioxazin; glufosinate-ammonium; indaziflam; napropamide; norflurazon; oryzalin; oxyfluorfen; pendimethalin; penoxsulam; pyraflufen ethyl; rimsulfuron; saflufenacil; sethoxydim; simazine; thiazopyr

Alion; Chateau Herbicide SW; Devrinol 2-XT; Devrinol 50-DF; Devrinol 50-DF Ornamental; Devrinol DF-XT; Devrinol DF-XT Ornamental; Direx 4L; Dri-Clean; Fusilade II Turf & Ornamental; Fusilade DX; Goal 2XL; GoalTender; Karmex DF; Matrix FNV; Matrix SG; Orchard Master Broadleaf; Orchard Master CA; Pindar GT; Poast; Poast Plus; Prowl 3.3 EC; Prowl H2O; Princep 4L; Princep Caliber 90; Princep Liquid; Rely 280; Select; Select 2 EC; Select Max Herbicide con Tecnología Inside; Simazine 4L; Simazine 4L Flowable; Simazine 90DF; Simazine 90 WDG; Sim-Trol 4L; Sim-Trol DF; Solicam DF; Surflan AS Agricultural; Surflan AS Specialty; Surflan Flex; Surflan Flex T&O; Surflan XL 2G; Treevix Powered by Kixor; Venue; Visor Broadcrop

Asegúrese de que el producto que use esté aprobado para la aplicación en el cultivo a tratar. Lea y siga las instrucciones de la etiqueta para todos los productos en la mezcla de tanque.

RESTRICCIONES: No aplique estas mezclas de tanque en Puerto Rico.

Inhibición de pasto perenne

Este producto inhibe el crecimiento de pastos perennes como bahiagrass, bermudagrass, tall fescue, orchardgrass (Dactylis glomerata), Kentucky bluegrass (Poa pratensis) y quackgrass que se cultivan como cobertura del terreno en cultivos de árboles, enredaderas y arbustos.

Para la inhibición de tall fescue, fine fescue, orchardgrass y quackgrass, aplique 6 onzas líquidas de este producto en 10 a 20 galones de agua por acre.

Para inhibir las coberturas de Kentucky bluegrass, aplique 4.5 onzas líquidas de este producto por acre. No añada sulfato de amonio a la mezcla de rocío.

Para obtener mejores resultados, corte la cobertura de pasto de temporada fría en primavera para emparejar la altura y luego aplique este producto de 3 a 4 días después de cortar.

Para inhibir el crecimiento vegetativo y la inflorescencia de bahiagrass durante aproximadamente 45 días, aplique 4.5 onzas líquidas de este producto en 10 a 25 galones de agua por acre de 1 a 2 semanas después del reverdecer completo o después de cortar a una altura uniforme de 3 a 4 pulgadas antes de la emergencia de las inflorescencias. Para inhibir hasta por 120 días, aplique 3 onzas líquidas de este producto por acre, y luego una aplicación de 1.5 a 3 onzas líquidas por acre unos 45 días más tarde. No haga más de dos aplicaciones al año.

Para quemar bermudagrass, aplique de 24 a 48 onzas líquidas de este producto en 3 a 20 galones de agua por acre. Utilice este tratamiento solo si se puede tolerar la reducción del grupo de plantas de bermudagrass. Cuando se necesita quemar antes de la cosecha, realice la aplicación al menos 21 días antes de la cosecha para asegurarse de tener tiempo suficiente para que se produzca el quemado.

Para inhibir el bermudagrass, aplique de 4.5 a 12 onzas líquidas de este producto por acre al este de las Montañas Rocosas, y 12 onzas líquidas al oeste de las Montañas Rocosas, en un volumen de rocío total de 3 a 20 galones por acre de 1 a 2 semanas después de reverdecer completo. Si se corta el bermudagrass antes de la aplicación, mantenga como mínimo 3 pulgadas de altura. Se pueden realizar aplicaciones secuenciales si hay nuevo crecimiento y si se puede tolerar el daño y la reducción del grupo de plantas de bermudagrass. Al este de las Montañas Rocosas, aplique de 4.5 a 7.5 onzas líquidas de este producto por acre en condiciones de sombra o donde se desee un menor grado de inhibición.

Aplicación a tocones cortados

Este producto se puede aplicar a tocones recién cortados durante la preparación del lugar o la renovación del terreno para controlar rebrotes y retoños de tocones de muchas especies de árboles, algunas de las cuales se detallan abajo.

Árboles cítricos: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (todos), Pummelo, Tangelo (ugli), Tangor

Árboles frutales: Apple, Apricot, Cherry (dulce, amargo), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (todos), Quince

Árboles de nueces: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia, Pecan, Pistachio, Walnut (negro, inglés)

INSTRUCCIONES DE USO: Corte el árbol cerca de la superficie de la tierra y aplique inmediatamente una solución de este producto al 50 o 100 por ciento (sin diluir) a la superficie recientemente cortada utilizando el equipo de aplicación adecuado para asegurar la cobertura de la totalidad del cámbium. La demora en la aplicación puede resultar en un rendimiento inferior. Para obtener mejores resultados, corte el árbol durante el período de crecimiento activo y expansión completa de las hojas y aplique este producto.

PRECAUCIONES: NO REALICE UNA APLICACIÓN EN TOCONES CORTADOS CUANDO LAS RAÍCES DE ÁRBOLES DESEABLES ADYACENTES PUEDEN ESTAR INJERTADAS EN LAS RAÍCES DEL TOCÓN CORTADO, PORQUE SE PUEDE CAUSAR DAÑO A LOS ÁRBOLES ADYACENTES. Algunos retoños, tallos o árboles pueden compartir el mismo sistema de raíces. Los árboles adyacentes de edad, altura y espaciado similares pueden tener raíces compartidas. Ya sea injertados o compartidos, es probable que se dañen tallos/árboles no tratados cuando se tratan uno o más árboles que comparten un sistema común de raíces.

11.1.1 Cultivos de frutas cítricas

CULTIVOS RECOMENDADOS: Todos los cultivos, variedades y/o híbridos de Calamondin; Chironja; Citron; Citrus Hybrids; Grapefruit (incluye Japanese summer); Kumquat; Lemon; Lime (incluye Australian desert lime, Australian finger lime, Australian round lime, Brown river finger lime, Mount white, New Guinea wild, Russell river, sweet, and Tahiti); Mandarin (incluye Mediterranean, Satsuma); Orange (todas); Pummelo; Tangelo (ugli); Tangerine (Mandarin); Tangor; Uniq Fruit (ugli)

TIPOS DE APLICACIONES: Antes de sembrar (preparación del lugar); aplicaciones al voleo; equipo selectivo (rociador con pantalla, aplicador con enjugador); rocío dirigido y tratamiento localizado en hileras (entre las hileras de árboles) o franjas (en hileras de árboles); inhibición de pasto perenne; aplicación a tocones cortados

INSTRUCCIONES DE USO: Las siguientes instrucciones de uso se refieren únicamente a las aplicaciones en Florida y Texas.

Para quemar o controlar las malezas indicadas abajo, aplique las proporciones recomendadas de este producto en 3 a 30 galones de agua por acre. Cuando la maleza tiene follaje denso, utilice de 10 a 30 galones de agua por acre.

Para quemar goatweed, aplique de 48 a 72 onzas líquidas de este producto en 20 a 30 galones de agua por acre cuando las plantas estén en crecimiento activo. Aplique 48 onzas líquidas por acre cuando las plantas tengan menos de 8 pulgadas de altura, y 72 onzas líquidas por acre cuando las plantas tengan más de 8 pulgadas de altura. Si la maleza goatweed tiene una altura mayor de 8 pulgadas, el uso de este producto en mezcla de tanque con Krovar I o Karmex podría mejorar el control. Consulte las etiquetas de los productos individuales para información específica sobre cultivos, dosis, restricciones geográficas y declaraciones preventivas.

Especies de maleza	Onzas líquidas por acre	Onzas líquidas por acre	Onzas líquidas por acre	Onzas líquidas por acre
				3.75 cuartos de galón
Bermudagrass	B	–	PC	C
Guinea grass				
Texas y Florida Ridge	B	C	C	C
Florida Flatwoods	–	B	C	C
Para grass	B	C	C	C
Torpedograss	S	–	PC	C

S = Inhibición, PC = Control parcial, B = Quemado, C = Control

RESTRICCIONES: Deje transcurrir al menos 1 día entre la aplicación y la cosecha de cultivos de frutas cítricas. Para huertos de citrus medica (cidro), aplique solamente como rocío dirigido.

11.2 Cultivos anuales y perennes

ESTA SECCIÓN OFRECE INSTRUCCIONES PARA EL USO DE ESTE PRODUCTO QUE APLICA A TODOS LOS CULTIVOS INDICADOS EN LAS SIGUIENTES SECCIONES. VEA LAS SECCIONES DE CULTIVOS INDIVIDUALES SI NECESITA INSTRUCCIONES ESPECÍFICAS DE USO, INTERVALOS ANTES DE LA COSECHA, Y PRECAUCIONES Y RESTRICCIONES ADICIONALES.

TIPOS DE APLICACIONES: Barbecho químico; camas de barbecho antes de sembrar; antes de sembrar; al momento de sembrar; preemergencia; rociador con campana entre hileras; rociador con pantalla entre hileras; aplicador con enjugador entre hileras; posterior a la cosecha

INSTRUCCIONES DE USO: Este producto se puede aplicar durante los intervalos de barbecho que preceden a la siembra, antes de sembrar o de trasplantar, al momento de sembrar, o preemergencia de los cultivos anuales y perennes indicados en esta etiqueta, excepto cuando se limita específicamente. Para todos los cultivos no indicados en esta etiqueta,

las aplicaciones se deben realizar al menos 30 días antes de sembrar. A menos que se indique lo contrario, aplique este producto de acuerdo con las proporciones indicadas en la sección "MALEZAS CONTROLADAS" de esta etiqueta. Las proporciones de aplicación especificadas en esta etiqueta para el control de malezas difíciles, o las especificadas en las etiquetas complementarias separadas de este producto, reemplazan las proporciones en la sección "MALEZAS CONTROLADAS" de esta etiqueta. Puede encontrar información adicional acerca del control de malezas difíciles, en las Fichas Técnicas publicadas para este producto.

Se pueden repetir las aplicaciones de este producto cuando sea necesario, hasta un máximo de 6 cuartos de galón por acre por año. Consulte las secciones sobre uso específico en esta etiqueta para obtener información adicional sobre los intervalos mínimos requeridos antes de repetir la aplicación de este producto.

Se pueden utilizar rociadores con campana y aplicadores con enjugador que eviten todo contacto del cultivo con la solución herbicida en el medio de hileras con mantillo o sin este, una vez que el cultivo esté establecido. Donde se detalla específicamente en las secciones de cultivo individuales, a continuación, se pueden utilizar aplicadores con enjugador sobre ciertos cultivos para controlar las malezas más altas. Con estos métodos de aplicación es posible causar daños a los cultivos. Consulte la sección "EQUIPO Y TÉCNICAS DE APLICACIÓN" de esta etiqueta para información relacionada con el potencial de daño a los cultivos usando el equipo de aplicación selectiva.

La aplicación de tratamiento localizado de este producto para el control de malezas en un sistema de cosecha solo puede realizarse si se indica específicamente en las secciones de cultivo individuales que siguen.

A menos que se prohíba de otra manera, todas las aplicaciones de este producto indicadas en estas secciones se pueden realizar con equipos de aplicación aérea, de ser posible, siempre que la persona que aplica el producto cumpla con las precauciones y restricciones especificadas en esta etiqueta y en las etiquetas complementarias separadas que se publican para este producto. Consulte la sección "EQUIPO Y TÉCNICAS DE APLICACIÓN" de esta etiqueta para información sobre aplicación aérea y los procedimientes para evitar el arrastre del rocío que pudiera causar daño a cualquier vegetación que no sea el objetivo de la aplicación. La utilización de las zonas de barrera apropiadas ayudará a evitar el daño a la vegetación adyacente.

MEZCLAS DE TANQUE: Este producto puede mezclarse en tanques con otros herbicidas para proporcionar control residual de malezas, un espectro más amplio de control de malezas o un mecanismo de acción alternativo. Lea y siga siempre las indicaciones de las etiquetas de todos los productos utilizados en la mezcla de tanque. Utilice todos los productos conforme a las proporciones y la época de aplicación indicadas en las etiquetas. Algunos productos de mezcla de tanque tienen el potencial de provocar daños en el cultivo. Lea todas las etiquetas de los productos utilizados en la mezcla de tanque antes de usarlos, para determinar el potencial de daño a los cultivos. Siempre determine con anticipación la compatibilidad de los productos de la mezcla de tanque juntos en la sustancia vehicular, mezclando antes pequeñas cantidades proporcionales. Mezclar otros productos con este herbicida en el tanque de rocío puede causar incompatibilidad, antagonismo o la reducción de la eficacia de este producto. Bayer CropScience LP no ha realizado pruebas de todas las formulaciones de productos para comprobar su compatibilidad o rendimiento en mezclas de tanque con este producto. Hasta el grado que sea compatible con la legislación pertinente, el comprador y todos los usuarios son responsables por todas las pérdidas o daños en relación con el uso o el manejo de mezclas de este producto con herbicidas u otros materiales que no se identifican específicamente en esta etiqueta, o en las etiquetas complementarias separadas o en las Fichas Técnicas publicadas para este producto. Consulte la sección "MEZCLA" de esta etiqueta para obtener mayor información sobre las mezclas de tanque.

PRECAUCIONES: Evite el contacto de este herbicida con follaje, brotes verdes o tallos, cortezas, raíces expuestas (incluidas las que emergen del mantillo plástico) o frutos de cultivos, ya que podría ocasionar daños severos o la destrucción de los cultivos. Las plántulas trasplantadas que tienen contacto con las malezas que están todavía mojadas con una solución de rocío de este producto podrían causar daños considerables al cultivo. Cuando realice aplicaciones de preemergencia, realícelas antes de la emergencia del cultivo para evitar graves daños al cultivo. Las aplicaciones al voleo de este producto efectuadas en la emergencia provocarán daños o serán fatales para las plántulas. Aplique antes de que germinen las semillas en tierra arenosa gruesa para minimizar aún más el riesgo de daños al cultivo. En los cultivos donde se permita el tratamiento localizado, el cultivo rociado con este producto se matará junto con las malezas. Tenga cuidado de no rociar ni permitir que el rocío se disperse fuera de la zona a tratar para evitar destruir otros cultivos. Vea la sección "EQUIPO Y TÉCNICAS DE APLICACIÓN" de esta etiqueta para obtener información adicional.

La aplicación antes de la cosecha en cultivos para semilla podría reducir su vigor o poder de germinación. Hasta el grado que sea compatible con la legislación pertinente, el comprador y todos los usuarios son responsables por todas las pérdidas o daños relacionados con el uso de este producto antes de la cosecha en cualquier cultivo para semilla.

RESTRICCIONES: Observe las proporciones de aplicación máximas indicadas en toda esta etiqueta. Las proporciones máximas permitidas se aplican al uso de este producto combinado con el uso de todos y cada uno de los otros herbicidas que contienen glifosato como el ingrediente activo, ya sea que se apliquen por separado o como mezclas. Calcule las proporciones de aplicación (equivalentes de ácido glifosato) y asegúrese de que el uso total de este y otros productos que contienen glifosato no exceda la proporción máxima especificada. Consulte la sección "INFORMACIÓN DEL PRODUCTO" de esta etiqueta para más información sobre las proporciones de aplicación máximas.

A menos que se especifique de otro modo en esta etiqueta, la aplicación con equipo selectivo, incluyendo los aplicadores con enjugador y rociadores con campana, se deben realizar al menos 14 días antes de la cosecha. En cultivos que aceptan tratamientos localizados, no aplique este producto a más del 10 por ciento del total del terreno a ser cosechado, a menos que se indique lo contrario. Las aplicaciones posteriores a la cosecha o en barbecho se deben realizar como mínimo 30 días antes de sembrar algún cultivo no indicado en esta etiqueta.

No coseche ni utilice como alimento la vegetación del área durante 8 semanas después de la aplicación de postemergencia, a menos que se indique lo contrario.

Cuando aplique este producto como mezcla de tanque con uno o más productos, consulte la etiqueta de cada producto de la mezcla de tanque para ver las restricciones y aplicar la mezcla según las precauciones más restrictivas de cada producto de la mezcla de tanque.

11.2.1 Caña de azúcar

TIPOS DE APLICACIONES: Barbecho químico; antes de sembrar; al momento de sembrar; preemergencia; rociador con campana entre hileras; rociador con pantalla entre hileras; aplicador con enjugador entre hileras; tratamiento localizado; regulador de crecimiento; posterior a la cosecha

Antes de sembrar, al momento de sembrar, preemergencia

INSTRUCCIONES DE USO: Este producto se puede aplicar en campos de caña de azúcar, alrededor de esos campos o tien, en el campo antes de la emergencia de la caña.

RESTRICCIONES: No aplique a la vegetación en o alrededor de zanjas, canales o estanques que contengan agua para riego, a menos que el surfactante agregado a la solución de rocío esté indicado para uso herbicida y aprobado para aplicación acuática.

Tratamiento localizado

INSTRUCCIONES DE USO: Este producto se puede aplicar como tratamiento localizado en caña de azúcar. Para el control de la caña de azúcar espontánea o enferma, prepare una solución de 1 por ciento de este producto en agua y rocíe hasta mojar usando un rociador de mano. Pueden obtenerse mejores resultados en caña de azúcar espontánea o enferma si se realiza la aplicación cuando haya por lo menos 7 hojas nuevas. Evite el contacto de este herbicida con la caña de azúcar sana, ya que podría ocasionar daños severos o destrucción.

RESTRICCIONES: No utilice el follaje de la caña de azúcar dentro del área de aplicación como alimento o pastura.

Rociadores con campana

INSTRUCCIONES DE USO: Este producto se puede aplicar con un rociador con campana para el control de malezas entre hileras de caña de azúcar. Vea en la sección "EQUIPO Y TÉCNICAS DE APLICACIÓN" de esta etiqueta las instrucciones adicionales para el empleo de rociadores con campana.

PRECAUCIONES: No permita el contacto de las malezas dentro del área tratada con el cultivo.

Regulación del crecimiento de plantas

INSTRUCCIONES DE USO: Este producto puede utilizarse como tratamiento foliar para regular el crecimiento de las plantas para acelerar la maduración y extender el período de nivel alto de sacarosa en caña de azúcar tanto de bajo tonelaje como de gran tonelaje. La mayor parte del aumento de sacarosa se concentra en los nódulos superiores del tallo de la caña tratada. Para maximizar la recuperación del azúcar cuando se realiza el desmoche en la cosecha, corte en la base de la cuarta hoja. Antes de aplicar este producto, consulte con la autoridad de caña de azúcar de su estado o con su representante local de Bayer CropScience LP acerca del grado de respuesta de sacarosa que puede anticipar.

Como resultado de la desecación de la hoja, se puede esperar mejor quema de los desechos.

Consulte las proporciones y los tiempos de aplicación siguientes de acuerdo con el estado donde se cultive la caña de azúcar. Al tratar caña de azúcar bajo condiciones de maduración adversas, o cuando aplique a variedades menos receptivas, utilice la proporción más elevada dentro del rango recomendado.

FLORIDA – Aplique de 6 a 14 onzas líquidas de este producto por acre, de 3 a 5 semanas antes de la cosecha del ÚLTIMO RETOÑO DE CAÑA SOLAMENTE.

HAWAII – Aplique de 10 a 24 onzas líquidas de este producto por acre, de 4 a 10 semanas antes de la cosecha.

LOUISIANA – Aplique de 4 a 14 onzas líquidas de este producto por acre, de 3 a 7 semanas antes de la cosecha del RETOÑO DE CAÑA SOLAMENTE.

PUERTO RICO –Aplique 6 onzas líquidas de este producto por acre de 3 a 5 semanas antes de la cosecha de RETOÑO DE CAÑA SOLAMENTE.

TEXAS – Aplique de 6 a 14 onzas líquidas de este producto por acre. de 3 a 5 semanas antes de la cosecha del RETOÑO DE CAÑA SOLAMENTE.

PRECAUCIONES: La aplicación de este producto puede provocar que los ojos se entrecierren. Este producto puede que no aumente el contenido de sacarosa de la caña de azúcar en condiciones de buena maduración natural. De 2 a 3 semanas después de la aplicación, este producto puede causar que las hojas pasen de un ligoro color amarillento a un color café pronunciado y se sequen, y los entrenudos superiores se acorten. Puede morir el eje.

La lluvia antes de transcurrir 6 horas de la aplicación puede reducir la eficacia de este producto.

La aplicación en cultivos de caña de azúcar para semilla podría reducir su vigor o germinación. Hasta el grado en que sea compatible con la legislación pertinente, el comprador y todos los usuarios son responsables por todas las pérdidas o daños relacionados con el uso de este producto antes de la cosecha en cualquier cultivo de caña de azúcar para semilla.

RESTRICCIONES: No utilice el forraje de la caña de azúcar para alimentar animales después de la aplicación. Durante 30 días después de la aplicación de este producto, no siembre cultivos subsiguientes aparte de los siguientes: alfalfa y otras legumbres para forraje, frijoles (todo tipo), maíz (todo tipo), algodón, melones (todo tipo), pastos para pastura, maní, papas (irlandesas o dulces), sorgo (milo), soya, calabaza (todo tipo) o trigo.

No aplique para mejorar la maduración de ningún otro cultivo que no sea la caña de azúcar. El uso de este producto de cualquier manera contraria a las indicaciones contenidas en esta etiqueta, podría causar lesiones a personas, animales o cultivos u otras consecuencias no deseadas.

Tratamientos de barbecho

INSTRUCCIONES DE USO: Este producto se puede utilizar como sustituto de labranza en campos de barbecho entre cultivos de caña de azúcar. Este producto también puede usarse para quitar los últimos rastrojos de retoños de caña al aplicar de 3 a 3.75 cuartos de galón de este producto en 10 a 40 galones de agua por acre a los nuevos brotes de al menos 7 nuevas hojas. Deje transcurrir al menos 7 días entre la aplicación y la labranza. Se pueden realizar aplicaciones aéreas de hasta 72 onzas líquidas por acre en lugares con barbecho, donde la barrera es suficiente para evitar la dispersión a los cultivos adyacentes. Se pueden usar mezclas de tanque con 2,4-D o dicamba. Asegúrese de que el producto específico que se está usando esté indicado

para esta aplicación en la caña de azúcar. Lea y siga las instrucciones de la etiqueta para todos los productos en la mezcla de tanque.

11.3 Producción de semillas de paso o tepes

INSTRUCCIONES DE USO: Consulte la sección "MALEZAS CONTROLADAS" de esta etiqueta para conocer las proporciones de aplicación de este producto para malezas específicas. Cuando se aplica del modo indicado, este producto controlará estos pastos anuales y perennes, y las malezas de hoja ancha indicados. Las proporciones de aplicación especificadas en esta etiqueta para el control de malezas difíciles, o las especificadas en las etiquetas complementarias separadas de este producto, reemplaza las proporciones indicadas en la sección "MALEZAS CONTROLADAS" de esta etiqueta. Puede encontrar información adicional acerca del control de malezas difíciles, en las Fichas Técnicas publicadas para este producto.

CULTIVOS RECOMENDADOS: Cualquier pasto (familia de las gramíneas), excepto maíz; sorgo; caña de azúcar; cebada; trigo sarraceno; mijo (pearl, proso); avena; arroz; centeno; quinoa; teff; teosinte; triticale; trigo (todos los tipos); arroz salvaje

TIPOS DE APLICACIONES: Antes de sembrar; al momento de sembrar; preemergencia; renovación; eliminación de grupos de plantas establecidos; preparación del lugar; rociador con pantalla; aplicador con enjugador; tratamiento localizado; creación de hileras en ryegrass anual

Antes de sembrar, al momento de sembrar, preemergencia, renovación, eliminación de grupos de plantas establecidos, preparación del lugar

INSTRUCCIONES DE USO: Este producto controla la mayor parte de la vegetación existonto a los fines de la renovación del césped o de zonas de semillas de pasto para forraje, o para establecer césped cultivado para tepes. Este producto se puede utilizar para destruir restos de vegetación no deseada cuando los campos de producción se convierten para especies o cultivos alternativos. No remueva la tierra ni las partes de la planta que estén bajo tierra antes del tratamiento y retrase las técnicas de labranza o renovación como segado vertical, ahuecamiento o rebanado al menos 7 días después de la aplicación para que se produzca el correcto traslado del herbicida a las partes subterráneas de la planta.

Aplique antes, durante o después de sembrar o para renovación. En aquellos lugares donde la vegetación existento crece con manejo de césped segado, aplique este producto después de omitir al menos una siega regular a fin de darle tiempo para crecer lo suficiente para que el rocío de herbicida sea interceptado por las plantas. Para lograr máximo control de la vegetación existente, demore la siembra hasta determinar si se produce algún crecimiento de partes de plantas subterráneas. Cuando se necesita repetir el tratamiento, debe permitirse el crecimiento suficiente de las plantas antes de la aplicación. Para pastos de estación cálida, como bermudagrass, las aplicaciones en verano u otoño brindan el mejor control. Se pueden utilizar equipos al voleo para controlar restos de tepes o de otra vegetación no deseada después de cosechar los tepes. Se pueden aplicar proporciones de hasta 3.75 cuartos de galón por acre para eliminar totalmente grupos de plantas establecidos de especies de pastos difíciles de eliminar.

RESTRICCIONES: Si el total de proporciones de aplicación es 2.25 cuartos de galón de este producto por acre o menos, no se requiere período de espera entre la aplicación y la utilización como forraje o pastora del ganado. Si la proporción es mayor de 2.25 cuartos de galón por acre, retire el ganado doméstico antes de aplicar y espere 8 semanas después de la aplicación para utilizar como pastura o para cosechar. Los cultivos indicados en esta etiqueta se pueden sembrar en el área en cualquier momento; todos los demás cultivos pueden sembrarse 30 días después de la aplicación.

Rociadores con pantalla

INSTRUCCIONES DE USO: Aplique de 24 a 72 onzas líquidas de este producto en 10 a 20 galones de agua por acre usando un rociador con pantalla para controlar las malezas entre las hileras de semilla para pasto. La siembra uniforme en hileras rectas facilita las aplicaciones con rociador con pantalla. Se obtienen los mejores resultados cuando el cultivo de semilla de pasto es suficientemente pequeño como para pasar con facilidad por las protecciones. Vea en la sección "EQUIPO Y TÉCNICAS DE APLICACIÓN" de esta etiqueta las instrucciones adicionales para el empleo de rociadores con pantalla.

PRECAUCIONES: Cualquier tipo de contacto de este producto con vegetación que no se desea incluir en el tratamiento podría causar daño.

Aplicador con enjugador

INSTRUCCIONES DE USO: Este producto se puede aplicar por la parte superior de pastos deseables utilizando aplicadores con enjugador para controlar las malezas altas. Vea en la sección "EQUIPO Y TÉCNICAS DE APLICACIÓN" de esta etiqueta las instrucciones adicionales para el empleo de aplicadores con enjugador.

PRECAUCIONES: Las gotas, la niebla, la espuma o las salpicaduras de la solución herbicida que se depositan en la vegetación deseable podrían causar decoloración, atrofia o destrucción.

Tratamiento localizado

INSTRUCCIONES DE USO: Aplique una solución de este producto al 1 por ciento con equipo de rocío manual para controlar las malezas en la vegetación establecida, antes del despunte de los pastos cultivados para semilla o para controlar restos de tepes o de otra vegetación no deseada después de cosechar los tepes.

PRECAUCIONES: Este producto matará el pasto deseable junto con las malezas. Tenga cuidado de no rociar ni permitir que el rocío se disperse fuera de la zona a tratar para evitar destruir otros cultivos.

Creación de hileras en ryegrass anual

INSTRUCCIONES DE USO: Se recomienda utilizar boquillas de baja presión o boquillas de goteo diseñadas para concentrar la aplicación en una franja estrecha. Ajuste la altura de la boquilla para establecer el espaciado deseado entre hileras y aplique de 12 a 24 onzas líquidas de este producto por acre. Se obtienen los mejores resultados cuando las aplicaciones se realizan antes de que las plantas de ryegrass alcancen 6 pulgadas de altura. Utilice la proporción más alta dentro del margen recomendado si las plantas de ryegrass tienen más de 6 pulgadas de altura.

PRECAUCIONES: Tenga cuidado de no rociar ni permitir que el rocío se disperse fuera de la zona a tratar para evitar destruir otros cultivos. Hasta el grado que sea compatible con la legislación pertinente, el cultivador asume toda la responsabilidad por las pérdidas de cultivos causadas por la aplicación incorrecta de este producto.

12.0 MALEZAS CONTROLADAS

Lea toda la etiqueta antes de usar este producto.

A menos que se indique lo contrario, este producto requiere que se agregue un surfactante no iónico cuyo uso con herbicidas esté recomendado en la etiqueta para la solución de rocío. Consulte la sección "MEZCLA" de esta etiqueta para obtener más información sobre el uso de surfactantes con este producto.

Aplique siempre la proporción de aplicación o concentración de solución de rocío mayor de este producto dentro del rango indicado cuando las malezas son muy densas o cuando crecen en áreas no tocadas (no cultivadas).

El control de malezas puede ser deficiente si se aplica a malezas cubiertas de polvo. En el caso de malezas segadas, utilizadas como pastura o cortadas, déjelas crecer nuevamente antes de aplicar este producto.
Consulte las secciones que siguen para conocer las proporciones de aplicación y el momento de aplicación para el control de malezas anuales y perennes, árboles, enredaderas y matorrales leñosos.

12.1 Control de malezas, renovación y segado químico en céspedes

El uso de este producto descrito en esta sección puede aplicarse al césped que crece en cualquier terreno indicado en esta etiqueta. Asegúrese de que cualquier producto de mezcla de tanque aplicado con este producto esté registrado para el uso deseado y en el sitio de la aplicación.

Control de malezas en Bermudagrass y Bahiagrass latentes

Este producto puede usarse para controlar o inhibir muchas malezas anuales y tall fescue (Festuca arundinacea) para el alivio eficaz de céspedes de bermudagrass y bahiagrass latentes antes de reverdecer en primavera las áreas donde estos céspedes son cobertura de terreno deseable y se puede tolerar algún daño o decoloración temporales.

Aplique de 6 a 48 onzas líquidas de este producto en 10 a 40 galones de agua por acre cuando bermudagrass y bahiagrass estén latentes y antes de reverdecer en primavera.

Aplicar más de 12 onzas líquidas de este producto por acre en céspedes bermudagrass y bahiagrass con mucho mantenimiento, como campos de golf y jardines, podría ocasionar daños o que se retrase el reverdecer en primavera.

Para el control residual de malezas en bermudagrass y bahiagrass latentes, este producto se puede mezclar en tanque con los herbicidas Outrider®, Oust Extra u Oust XP. Aplique de 6 a 48 onzas líquidas de este producto en una mezcla de tanque con la proporción apropiada de herbicida Outrider, Oust Extra u Oust XP en 10 a 40 galones de agua por acre. Para evitar que el reverdecer se retrase y minimizar el daño, no aplique más de 1 onza de herbicida Oust Extra u Oust XP por acre sobre bermudagrass y no más de 0.5 onzas sobre bahiagrass, y evite el tratamiento cuando estos pastos se encuentren en estado semilatente.

NO aplique este producto en mezcla de tanque con los herbicidas Outrider, Oust Extra u Oust XP en céspedes bermudagrass y bahiagrass con mucho mantenimiento, como campos de golf y jardines.

Control de malezas en Bermudagrass en crecimiento activo

Este producto se puede usar para controlar total o parcialmente muchas malezas anuales y perennes en bermudagrass en crecimiento activo. La aplicación de este producto podría ocasionar algún daño al bermudagrass, pero este se recuperará en condiciones de humedad una vez desaparezcan los efectos del producto. Utilícelo solo en bermudagrass bien establecido, donde puede tolerarse algún daño o decoloración temporales.

Aplique de 12 a 36 onzas líquidas de este producto en 10 a 40 galones de solución de rocío por acre. Use una proporción de aplicación más baja dentro de este rango para controlar malezas anuales de menos de 4 pulgadas de alto (o longitud de estolón) y aumente la proporción hacia el extremo superior del rango cuando las malezas aumenten de tamaño o se aproximen a la formación de flores o inflorescencias. En estas proporciones de aplicación, este producto proporcionará control parcial de las siguientes malezas perennes en bermudagrass en crecimiento activo:

- Bahiagrass
- Bluestem, silver
- Fescue, tall
- Johnsongrass
- Trumpetcreeper
- Vaseygrass

PRECAUCIONES: Aplicar más de 12 onzas líquidas de este producto por acre en bermudagrass con mucho mantenimiento, como campos de golf y jardines, podría causar daño y decoloración inaceptables del césped.

Para un espectro más amplio de control de malezas en bermudagrass en crecimiento activo, este producto se puede mezclar en tanque con los herbicidas Outrider, Oust Extra u Oust XP. Aplique estas mezclas de tanque solo en bermudagrass bien establecido, donde puede tolerarse algún daño o decoloración temporales. No haga más de una aplicación de este producto en estas mezclas de tanque en la misma temporada, de lo contrario podría causar un daño considerable al bermudagrass.

Aplique de 6 a 24 onzas líquidas de este producto por acre en una mezcla de tanque con el herbicida Outrider para control total o parcial de Johnsongrass y otras malezas indicadas en la etiqueta del herbicida Outrider. Use una proporción de aplicación mayor de ambos productos dentro de los rangos indicados para control de malezas anuales y perennes de más de 6 pulgadas de alto.

Aplique de 12 a 24 onzas líquidas de este producto por acre en una mezcla de tanque con herbicida Oust Extra u Oust XP por acre para un mejor control de las malezas indicadas en dichas etiquetas. Use una proporción de aplicación más baja de cada producto dentro de los rangos dados para controlar malezas anuales indicadas en las etiquetas de menos de 4 pulgadas de alto (o longitud de estolón) y aumente las proporciones hacia el extremo superior de los rangos cuando las malezas anuales aumenten de tamaño y se aproximen a la etapa de flores o inflorescencias. Esta mezcla de tanque proporcionará control parcial de las siguientes malezas perennes en bermudagrass en crecimiento activo:

- Bahiagrass
- Bluestem, silver
- Broomsedge
- Dallisgrass
- Dock, curly
- Dogfennel
- Fescue, tall
- Johnsongrass
- Poorjoe
- Trumpetcreeper
- Vaseygrass
- Vervain, blue

PRECAUCIONES: Aplique estas mezclas de tanque solo en bermudagrass bien establecido, donde puede tolerarse algún daño o decoloración temporales. NO aplique este producto en mezcla de tanque con los herbicidas Outrider u Oust en céspedes bermudagrass con mucho mantenimiento, como campos de golf y jardines.

Control de malezas en Bahiagrass en crecimiento activo

Para inhibir el crecimiento vegetativo y la inflorescencia de bahiagrass durante aproximadamente 45 días, aplique 4 onzas líquidas de este producto en 10 a 40 galones de agua por acre de 1 a 2 semanas después del reverdecer completo o después de cortar a una altura uniforme de 3 a 4 pulgadas antes de la emergencia de las inflorescencias.

Para inhibir el crecimiento de bahiagrass hasta por 120 días, aplique 3 onzas líquidas de este producto por acre, seguido por una aplicación de 2 a 3 onzas líquidas por acre unos 45 días más tarde. No haga más de 2 aplicaciones para inhibir el crecimiento al año.

Para un espectro más amplio de control de malezas en bahiagrass en crecimiento activo, este producto se puede mezclar en tanque con los herbicidas Outrider®, Oust Extra u Oust XP.

Aplique de 1.5 a 3.5 onzas líquidas de este producto por acre en una mezcla de tanque con una proporción adecuada de herbicida Outrider por acre para controlar malezas perennes o malezas anuales de más de 4 pulgadas de alto.

Aplique 4 onzas líquidas de este producto por acre en una mezcla de tanque con una proporción adecuada de herbicida Oust Extra u Oust XP de 1 a 2 semanas después de la primera siega de la primavera para un mejor control de las malezas indicadas en la etiqueta del herbicida Oust en bahiagrass en crecimiento activo. Haga esta aplicación una sola vez al año.

PRECAUCIONES: Aplique estas mezclas de tanque solo en bahiagrass bien establecido, donde puede tolerarse algún daño o decoloración temporales.

Renovación de céspedes

Este producto controla la mayoría de la vegetación existente antes de la renovación del césped o de establecer céspedes cultivados para semilla o tepes. Para lograr máximo control de la vegetación existente, demore la siembra o la colocación de césped hasta determinar si se produce algún crecimiento de partes de plantas subterráneas. Cuando se necesita repetir las aplicaciones, debe permitirse el crecimiento suficiente de las plantas antes de volver a aplicar este producto. La aplicación en verano o en otoño proporciona un mejor control de los pastos de estación cálida, como el bermudagrass. Para el césped controlado, aplique este producto después de dejar de cortar el césped regularmente por lo menos una vez de manera que crezca lo suficiente para que la solución de rocío sea interceptada por las plantas.

Este producto no tiene actividad residual en el suelo y no afectará las plantas, semillas o tepes sembrados en el área después de la aplicación.

Puede utilizarse un equipo de mano para el tratamiento localizado de vegetación no deseada que crezca en el césped existente. Se puede usar aplicación al voleo o tratamiento localizado con rociador de mano para controlar restos de tepes o de otra vegetación no deseada después de cosechar los tepes.

PRECAUCIONES: No remueva la tierra ni las partes de la planta que estén bajo tierra antes de aplicar este producto. La labranza y las técnicas de renovación como corte vertical, perforación o rebanado deben esperar por lo menos 7 días después de la aplicación a fin de permitir la absorción adecuada de este herbicida en las partes de la planta que estén bajo tierra.

RESTRICCIONES: Si el total de proporciones de aplicación es 2.25 cuartos de galón de este producto por acre o menos, no se requiere período de espera entre la aplicación y la utilización como forraje o pastura del ganado. Si la proporción es mayor de 2.25 cuartos de galón por acre, retire el ganado doméstico antes de aplicar y espere 8 semanas después de la aplicación para utilizar como pastura o para cosechar.

Segado químico

Este producto se puede usar para inhibir el crecimiento de pastos perennes y anuales para servir como sustituto de la siega.

Pastos perennes – aplique 5 onzas líquidas de este producto por acre para inhibir el crecimiento de Kentucky bluegrass o 6 onzas líquidas para inhibir tall fescue, fine fescue, orchardgrass, quackgrass o reed canarygrass en 10 a 40 galones de solución de rocío por acre después que los pastos hayan reverdecido hasta por lo menos 75 por ciento de verde en la primavera, o de 7 a 10 días después de segar, cuando haya suficiente recrecimiento para proporcionar una altura deseable para regular el crecimiento. Utilice el segado químico únicamente en las áreas donde se puede tolerar cierto daño o decoloración temporales en pastos perennes.

Pastos anuales – aplique de 3 a 4 onzas líquidas de este producto en 10 a 40 galones de solución de rocío por acre para inhibir el crecimiento de algunos pastos anuales, como annual ryegrass, wild barley y wild oats en crecimiento activo en pasto grueso en bordes de carreteras o en otras áreas industriales y antes de que las inflorescencias estén en la etapa de desarrollo de bota. Esta aplicación puede causar daños a los pastos anuales deseados.

PRECAUCIONES: Utilice esta producto para el segado químico únicamente en las áreas donde se puede tolerar cierto daño o decoloración temporales en pastos perennes y anuales.

12.2 Malezas anuales

Resulta más fácil controlar las malezas anuales cuando son pequeñas y están en crecimiento activo. El desarrollo de nuevas hojas indica crecimiento activo.

Para control total o parcial de las malezas anuales indicadas en esta sección cuando tienen menos de 6 pulgadas de alto o longitud de estolón y están en crecimiento activo, aplique 24 onzas líquidas de este producto por acre. Si tienen más de 6 pulgadas de alto o longitud de estolón, o crecen lentamente bajo condiciones de estrés, aumente la proporción de aplicación de 1 a 4 cuartos de galón por acre, dependiendo de la altura de la maleza y la gravedad de las malas condiciones de crecimiento.

Para aplicación usando un rociador manual con una técnica de rocío para mojar, aplique una solución de este producto al 0.5 por ciento a malezas anuales de menos de 6 pulgadas de altura o de longitud de estolón antes de la formación de inflorescencias en pasto o de la formación de brotes en malezas de hoja ancha. Para controlar las malezas anuales que tienen más de 6 pulgadas de alto o incluso malezas más pequeñas que crecen en condiciones de estrés, use una solución del 0.75 al 1.5 por ciento.

Aplique la concentración máxima de este producto dentro de este rango para malezas difíciles de controlar o para controlar malezas con una altura mayor a las 24 pulgadas.

Para controlar malezas anuales usando un aplicador de mano por goteo controlado (CDA), aplique una solución de 15 por ciento de este producto (de 19 a 20 onzas líquidas de este producto por galón de solución de rocío) a una velocidad de flujo de 2 onzas líquidas de solución de rocío por minuto y caminando a una velocidad de 1.5 millas por hora (1 cuarto de galón de solución de rocío por acre). Si usa el aplicador por goteo controlado montado en un vehículo, aplique la cantidad requerida de este producto como se indica en esta sección en 2 a 15 galones de agua por acre.

Para obtener mejor control, no pode, corte, labre, queme ni altere la vegetación en el área de aplicación por un mínimo de 3 días después de la aplicación.

Este producto no tiene actividad residual en el suelo y no controla la emergencia de nuevas malezas anuales a partir de semillas. Aplicaciones subsiguientes de este producto serán necesarias para

ESPECIES DE MALEZAS

Anoda, spurred	Cheatgrass
Balsam apple[1]	Cheeseweed (Malva parviflora)
Barley	Chervil
Barley, little	Chickweed
Barnyardgrass	Cocklebur
Bassia, fivehook	Copperleaf, hophornbeam
Bittercress	Copperleaf, Virginia
Bluegrass, annual	Coreopsis, plains/tickseed
Bluegrass, bulbous	Corn
Brome, downy	Crabgrass
Brome, Japanese	Cupgrass, woolly
Broomsedge	Dwart dandelion
Buttercup	Eclipta
Castor bean[2]	False dandelion
False flax, small-seed	Puncturevine
Fiddleneck	Purslane, common
Filaree	Pusley, Florida
Fleabane, annual	Ragweed, common
Fleabane, hairy (Conyza bonariensis)	Ragweed, giant
Fleabane, rough	Rice, red
Foxtail	Rocket, London
Foxtail, Carolina	Rocket, yellow
Geranium, Carolina	Rye
Goatgrass, jointed	Ryegrass
Goosegrass	Sandbur, field
Groundsel, common	Sesbania, hemp
Henbit	Shattercane
Horseweed/Marestail (Conyza canadensis)	Shepherd's-purse
Itchgrass	Sicklepod
Johnsongrass, seedling	Signalgrass, broadleaf
Junglerice	Smartweed, ladysthumb
Knotweed	Smartweed, Pennsylvania
Kochia	Sorghum, grain (milo)
Lambsquarters	Sowthistle, annual
Lettuce, prickly	Spanish needles[3]
Mannagrass, eastern	Speedwell, corn
Mayweed	Speedwell, purslane
Medusahead	Sprangletop
Morning glory (Ipomoea spp)	Spurge, annual
Mustard, blue	Spurge, prostrate
Mustard, tansy	Spurge, spotted
Mustard, tumble	Spurry, umbrella
Mustard, wild	Starthistle, yellow
Nightshade, black	Stinkgrass
Oats	Sunflower
Panicum, browntop	Teaweed / Prickly sida
Panicum, tall	Thistle, Russian
Panicum, Texas	Velvetleaf
Pennycress, field	Wheat
Pepperweed, Virginia	Wild oats
Pigweed	Witchgrass

[1] Para controlar balsam apple, aplique este producto usando equipo de mano solamente.

[2] Se puede lograr el control de castor bean también inyectando 4 mililitros de este producto concentrado (sin diluir) por planta en la parte inferior del tallo principal.

[3] Para controlar Spanish needles, aplique 48 onzas líquidas de este producto por acra.

12.3 Malezas perennes

Se puede obtener un mejor control de las malezas perennes cuando se aplica este producto a las malezas objetivo que están pequeñas y en crecimiento activo. El desarrollo de nuevas hojas indica crecimiento activo. Si debe aplicar este producto a malezas más grandes o a malezas que crecen lentamente bajo condiciones de estrés, aplique en una proporción o concentración de solución de rocío hacia el extremo superior del rango especificado.

Si las malezas fueron segadas o labradas, no aplique este producto hasta que las plantas hayan reanudado el crecimiento activo y llegado a la etapa de crecimiento recomendada o hayan crecido lo suficiente para que la solución de rocío sea interceptada por las plantas. Para obtener mejor control, no pode, corte, labre, queme ni altere la vegetación en el área de aplicación por un mínimo de 7 días después de la aplicación.

Para controlar las malezas perennes indicadas en esta etiqueta usando equipo de mochila o de mano y una técnica de aplicación de bajo volumen, aplique una solución de 4 a 8 por ciento de este producto sobre la corona de la planta objetivo para cubrir el 50 por ciento del follaje superior de la planta.

Para controlar malezas perennes usando un aplicador de mano por goteo controlado (CDA), aplique una solución de 15 a 30 por ciento de este producto (de 19 a 38 onzas líquidas de este producto por galón de solución de rocío)

a una velocidad de flujo de 2 onzas líquidas de solución de rocío por minuto y caminando a una velocidad de 0.75 millas por hora (de 2 a 4 cuartos de galón de solución de rocío por acre). Si usa el aplicador por goteo controlado montado en un vehículo, aplique la cantidad requerida de este producto como se indica en la siguiente tabla, en 2 a 15 galones de agua por acre.

Este producto debe aplicarse en otoño antes de una helada agresiva.

Este producto no tiene actividad en el suelo y no controla la emergencia de malezas perennes a partir de semillas, raíces, rizomas o tubérculos subterráneos latentes presentes en el suelo en el momento de la aplicación. Se necesitará más de una aplicación de este producto para el control continuo de malezas que emergen después de la aplicación.

TABLA DE PROPORCIONES PARA MALEZAS PERENNES

Especies de malezas	Proporción (cuartos de galón de producto comercial por acre)	Concentración del producto (% por volumen en el tanque de mezcla)
Alfalfa*	0.7	1.5
Alligatorweed*	3	1.3

Aplique este producto cuando la mayoría de las plantas objetivo estén en floración. Puede ser necesaria más de una aplicación para el control total.

Anise (fennel)	1.5 – 3	1 – 1.5
Bahiagrass	2.3 – 3.75	1.5
Beachgrass, European	–	3.5

Aplique una solución al 3.5 por ciento de este producto usando una técnica de rocío para mojar o una solución al 8 por ciente usando una técnica de aplicación de bajo volumen. Pueden obtenerse mejores resultados cuando se realiza la aplicación a malezas objetivo que estén en crecimiento activo en etapa de desarrollo de bota a floración. Aplique antes de que las hojas pierdan más del 50 por ciento del color verde en otoño. Observe el sitio de la aplicación y vuelva a aplicar este producto a las malezas objetivo que quedaron, si es necesario, antes de volver a sembrar el área con la vegetación deseada. Para el control selectivo de European beachgrass, aplique una solución de 33.3 por ciento de este producto que contenga de 1 a 2.5 por ciento de un surfactante no iónico durante el período de crecimiento activo usando un aplicador con enjugador. Obtendrá un mejor control al maximizar la cantidad de hojas individuales que tienen contacto con el aplicador con enjugador o dando una segunda pasada en sentido contrario.

Evite el contacto de la solución herbicida con la vegetación deseable.

Bentgrass*	1	1.5
Bermudagrass	4	1.5

Aplique cuando tenga inflorescencias.

Bermudagrass, agua (knotgrass)	1	1.5
Bindweed, campo	2.3 – 3.75	1.5

Para controlar, aplique de 3 a 3.75 cuartos de galón de este producto por acre como aplicación al voleo al oeste del río Mississippi y de 2.3 a 3 cuartos de galón por acre al este del río Mississippi cuando bindweed esté en plena floración o después. Para obtener mejores resultados, aplique a finales del verano o en otoño.

Bittersweet, Oriental	2.25	2

Para control de oriental bittersweet, aplique este producto como aplicación al voleo en 30 a 40 galones de solución de rocío que contenga 0.25 por ciento de un surfactante no iónico y 0.1 por ciento de organosilicona no iónica por acre. Use una concentración de 0.5 a 2 por ciento por volumen de surfactante no iónico cuando use un rociador manual y la técnica de rocío para mojar. Para obtener mejores resultados, asegúrese de cubrir completamente la planta objetivo con la solución de rocío.

TABLA DE PROPORCIONES PARA MALEZAS PERENNES

Especies de malezas	Proporción (cuartos de galón de producto comercial por acre)	Concentración del producto (% por volumen en el tanque de mezcla)
Bluegrass, Kentucky	1.5 – 2.3	0.75

Aplique cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de bota a floración. Cuando la aplicación se hace antes de la etapa de bota, el control puede verse reducido. En el otoño, aplique el tratamiento antes de que las plantas se oscurezcan.

Blueweed, Texas	2.3 – 3.75	1.5

Aplique de 3 a 3.75 cuartos de galón de este producto por acre al oeste del río Mississippi y de 2.3 a 3 cuartos de galón por acre al este del río Mississippi cuando la mayoría de las plantas objetivo estén en plena floración o después. Para obtener mejores resultados, aplique a finales del verano o en otoño.

Brackenfern	2.3 – 3	0.75 – 1

Aplique a las frondas completamente extendidas que tengan por lo menos 18 pulgadas de longitud.

Bromegrass, smooth	1.5 – 2.3	0.75

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de bota a floración. Cuando la aplicación se hace antes de la etapa de bota, el control puede verse reducido. En el otoño, aplique el tratamiento antes de que las plantas se oscurezcan.

Bursage, woolly-leaf	–	1.5
Canarygrass, reed	1.5 – 2.3	0.75

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de bota a floración. Cuando la aplicación se hace antes de la etapa de bota, el control puede verse reducido. En el otoño, aplique el tratamiento antes de que las plantas se oscurezcan.

Cattail	2.3 – 3.75	0.75

Aplique este producto cuando las plantas objetivo estén en crecimiento activo y estén en la etapa de floración temprana o completa o después de esta. Se obtienen mejores resultados cuando las aplicaciones se realizan durante los meses de verano u otoño.

Clover; red, white	2.3 – 3.75	1.5
Cogongrass	2.3 – 3.75	1.5

Aplique este producto a finales del verano o en otoño cuando las plantas de cogongrass tengan por lo menos 18 pulgadas de alte y estén en crecimiento activo. Debido a las etapas de crecimientos irregulares y la naturaleza densa de la vegetación de cogongrass, pueden ser necesarias varias aplicaciones para lograr el control.

TABLA DE PROPORCIONES PARA MALEZAS PERENNES

Especies de malezas	Proporción (cuartos de galón de producto comercial por acre)	Concentración del producto (% por volumen en el tanque de mezcla)
Cordgrass	2 – 8	5 – 8

Antes de aplicar este producto para controlar cordgrass, inspeccione la zona para determinar si existen lechos de crustáceos dentro de la zona de aplicación. Si se pretende recolectar crustáceos en la zona, demore la aplicación de este producto hasta después de la recolección o mantenga una zona de transición de 50 pies entre el área de aplicación y los lechos de crustáceos comerciales o no recolecte los crustáceos hasta por lo menos 14 días después de aplicar este producto. Vea las restricciones abajo.

Las condiciones ideales para controlar cordgrass son cuando las plantas no tienen lodo ni desechos y están en crecimiento activo, y se puede conseguir una buena cobertura del rocío. La presencia de desechos o lodo en la superficie de cordgrass reducirá el rendimiento del producto. Para una mejor captación del herbicida, lave las plantas objetivo antes de aplicar y espere como mínimo 4 horas para que las plantas se sequen antes de aplicar este producto. Cuando cordgrass ha sido cortado antes de la aplicación, espere que vuelva a crecer lo suficiente antes de aplicar este producto para asegurar una intercepción y captación adecuadas de este producto. La lluvia o la inmersión de la planta en agua de marea antes de transcurrir 4 horas de la aplicación puede reducir la eficacia de este producto.

Aplique de 2 a 8 cuartos de galón de este producto por acre usando equipo de aplicación terrestre al voleo o con sensor óptico en 5 a 100 galones de solución de rocío o en 5 a 10 galones de solución de rocío por acre si se usa equipo de aplicación aérea.

Aplique una solución de 5 a 8 por ciento de este producto al usar rociadores manuales de mochila o rociador de alto volumen. Realice todas las aplicaciones de este producto para control de cordgrass en una solución de rocío que contenga 0.25% o más (1 o más cuartos de galón por 100 galones de solución de rocío) de un surfactante no iónico u otro coadjuvante que sea compatible con este producto y esté indicado en la etiqueta para usar con herbicidas y aprobado para usar en sitios acuáticos. Para obtener mejores resultados, asegúrese de conseguir una cobertura completa de los macizos de cordgrass.

RESTRICCIONES: Si se mantiene una zona de transición de 50 pies entre el área de aplicación y los lechos de crustáceos comerciales, no hay restricciones a la recolección de crustáceos. Si se aplica dentro de una zona de 50 pies de los lechos de crustáceos comerciales, NO recolecte los crustáceos hasta por lo menos 14 días después de aplicar este producto.

Cutgrass, giant*	3	1

Se necesitará más de una aplicación de este producto para lograr el control, especialmente donde la vegetación esté parcialmente sumergida en el agua. Permita que las malezas que son el objetivo crezcan hasta la etapa de 7 a 10 hojas antes de realizar la siguiente aplicación.

Daffisgrass	2.3 – 3.75	1.5
Dandelion	2.3 – 3.75	1.5
Dock, curly	2.3 – 3.75	1.5
Dogbane, hemp	3	1.5

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de brotación tardía a floración. Para obtener mejores resultados, aplique a finales del verano o en otoño.

Fescue (excepto tall)	2.3 – 3.75	1.5
Fescue, tall	2.3	1

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de crecimiento de bota a floración. Si se aplica antes de la etapa de bota, puede obtenerse un menor control del deseado.

TABLA DE PROPORCIONES PARA MALEZAS PERENNES

Especies de maleza	Cuarto de galón por acre	Por ciento por volumen
Guinea grass	2.3	0.75

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de crecimiento de 7 hojas.

Hemlock, poison	1.5 – 3	0.75 – 1.5

También se puede lograr el control inyectando 5 mililitros de una solución al 5 por ciento de este producto usando un dispositivo de inyección manual en una caña de una hoja por planta, 12 pulgadas por encima de la corona de la raíz.[1] No se requiere surfactante.

Hogweed, giant	–	–

Inyecte 5 mililitros de una solución al 5 por ciento de este producto en una caña de una hoja por planta, 12 pulgadas por encima de la corona de la raíz.[1] No se requiere surfactante.

Horsenettle	2.3 – 3.75	1.5
Horseradish	3	1.5

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de brotación tardía a floración. Para obtener mejores resultados, aplique a finales del verano o en otoño.

Horsetail, field	–	–

Inyecte 0.5 mililitros de este producto por tallo directamente en el tallo de la planta, un segmento por encima de la corona de la raíz.[1] No se requiere surfactante.

Iceplant	1.5	1.5
Iris, yellow flag	–	–

Corte los tallos de flores 8 o 9 pulgadas por encima de la corona de la raíz. Introduzca una aguja inyectora en el centro del tallo y luego retírela lentamente a medida que inyecta 0.5 mililitros de este producto con un inyector manual.[1] No se requiere surfactante.

Ivy; cape, German	1.5 – 3	0.75 – 1.5
Jerusalem artichoke	2.3 – 3.75	1.5
Johnsongrass	1.5 – 2.3	0.75

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de bota a floración o antes de que las plantas se hayan oscurecido en el otoño. Cuando se aplica antes de la etapa de bota, el control puede verse reducido.

Kikuyu grass	1.5 – 2.3	0.75
Knapweed	3	1.5

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de brotación tardía a floración. Para obtener mejores resultados, aplique a finales del verano o en otoño.

TABLA DE PROPORCIONES PARA MALEZAS PERENNES

Especies de maleza	Cuarto de galón por acre	Por ciento por volumen
Knotweed; Bohemian, giant, Japanese	3	2

Aplique 3 cuartos de galón de este producto por acre como aplicación al voleo en 3 a 40 galones de solución de rocío con 0.5 a 1 por ciento por volumen de un surfactante no iónico. Para aplicar usando un rociador de mochila y la técnica de rocío para mojar, aplique una solución al 2 por ciento de este producto que contenga de 0.5 a 2 por ciento por volumen de un surfactante no iónico. Para obtener mejor control, no altere la vegetación en el área de aplicación por un mínimo de 7 días después de la aplicación.

También se puede obtener control al hacer un corte limpio de los tallos justo por debajo del segundo o tercer nodo sobre la superficie y aplicar 0.36 onzas líquidas (10 mililitros) de una solución al 50 por ciento de este producto en agua en el "pozo" o internodo que quede. Asegúrese de que los restos de la parte superior de la planta que se eliminó se recojan y desechen correctamente para evitar que se propaguen nuevas plantas de los retoños. El uso de biobarreras, tales como paneles de cartón, madera contrachapada o plástico, ayudará a evitar la propagación de materia vegetal. La proporción de aplicación total combinada de este producto no puede exceder 8 cuartos de galón por acre.[1] También se puede lograr el control inyectando 5 mililitros de este producto por tallo en el segundo o tercer internodo usando un dispositivo de inyección manual.[1] No se requiere surfactante.

Lantana	–	0.75 – 1

Aplique cuando la mayoría de las plantas se encuentren en la etapa de floración o después de ella. Utilice la concentración más alta de solución de rocío para plantas que han alcanzado la etapa de crecimiento leñoso.

Lespedeza	2.3 – 3.75	1.5
Loosestrife, purple	2	1 – 1.5

Aplique cuando la mayoría de las plantas se encuentren en la etapa de floración o después de ella. Se pueden obtener mejores resultados cuando la aplicación se realiza durante los meses de verano o de otoño. La aplicación en otoño debe hacerse antes de una helada agresiva.

Lotus, American	2	0.75

Aplique cuando la mayoría de las plantas se encuentren en la etapa de floración o después de ella. Se pueden obtener mejores resultados cuando la aplicación se realiza durante los meses de verano o de otoño. La aplicación en otoño debe hacerse antes de una helada agresiva. Puede ser necesaria más de una aplicación de este producto para controlar el recrecimiento de semillas y partes de plantas subterráneas.

Maidencane	3	0.75

Se necesitará más de una aplicación de este producto para lograr el control, especialmente para la vegetación parcialmente sumergida en el agua. Permita que las plantas crezcan hasta la etapa de 7 a 10 hojas antes de realizar la siguiente aplicación.

Milkweed, común	2.3	1.5

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de brotación tardía a floración.

Muhly, wirestem	1.5 – 2.3	0.75

Aplique cuando la mayoría de las plantas objetivo tengan por lo menos 8 pulgadas de alto (etapa de desarrollo de 3 a 4 hojas) y estén en crecimiento activo.

Mullein, común	2.3 – 3.75	1.5
Napiergrass	2.3 – 3.75	1.5

TABLA DE PROPORCIONES PARA MALEZAS PERENNES

Especies de maleza	Cuarto de galón por acre	Por ciento por volumen
Nightshade, silverleaf	2.3 – 3.75	1.5

Aplique de 3 a 3.75 cuartos de galón de este producto por acre como aplicación al voleo al oeste del río Mississippi y de 2.3 a 3 cuartos de galón por acre al este del río Mississippi cuando la mayoría de las plantas objetivo estén en plena floración o después. Se pueden obtener mejores resultados cuando la aplicación se realiza a finales del verano o en otoño, después de la formación de frutos.

Nutsedge; púrpura, amarillo	2.3	0.75

Aplique este producto para controlar las plantas existentes de nutsedge y las nueces inmaduras adjuntas cuando las plantas objetivo están en flor o cuando se pueden encontrar nueces nuevas en las puntas de los rizomas. No se podrán controlar las nueces que todavía no han germinado y será necesario repetir las aplicaciones de este producto para lograr el control a largo plazo.

Orchardgrass	1.5 – 2.3	0.75

Aplique cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de bota a floración. Cuando se aplica antes de la etapa de bota, puede obtenerse un menor control del deseado. En el otoño, aplique el tratamiento antes de que las plantas se oscurezcan.

Pampas grass	2.3 – 3.75	1.5
Para grass	3	0.75

Se necesitará más de una aplicación de este producto para lograr el control total. Permita que las plantas crezcan hasta la etapa de 7 a 10 hojas antes de realizar la siguiente aplicación.

Pepperweed, perenne	3	1.5
Phragmites*	2 – 3.75	0.75 – 1.5

Para el control parcial de phragmites en Florida y en los condados de otros estados que bordean el Golfo de México, aplique 3.75 cuartos de galón de este producto por acre como aplicación al voleo o una solución al 1.5 por ciento usando un rociador de mano. En otras áreas de los EE. UU., aplique de 2 a 3 cuartos de galón por acre como aplicación al voleo o, para control parcial, aplique una solución al 0.75 por ciento usando un rociador de mano. Para obtener mejores resultados, aplique a finales del verano o en otoño cuando las plantas están en crecimiento activo y en plena floración. Debido a la naturaleza densa de la vegetación (que puede impedir la correcta cobertura del rocío) y a las etapas de crecimiento irregulares, puede ser necesaria más de una aplicación de este producto para lograr el control. Los síntomas visuales de control se desarrollarán con lentitud.

Quackgrass	1.5 – 2.3	0.75

Aplique este producto cuando la mayoría de las plantas objetivo tengan por lo menos 8 pulgadas de alto (etapa de desarrollo de 3 a 4 hojas) y estén en crecimiento activo.

Redvine*	1.5	1.5
Reed; común, gigante	3 – 3.75	1.5

Para obtener mejores resultados, aplique a finales del verano o en otoño. También se puede lograr el control inyectando 5 mililitros de este producto concentrado (sin diluir) directamente en el segundo o tercer internodo usando un dispositivo de inyección manual.[1] No se requiere surfactante.

Ryegrass, perenne	1.5 – 2.3	0.75

Aplique este producto cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de crecimiento de bota a floración. Cuando se aplica antes de la etapa de bota, el control puede verse reducido. En el otoño, aplique el tratamiento antes de que el ryegrass se oscurezca.

TABLA DE PROPORCIONES PARA MALEZAS PERENNES		
Especies de malezas	Cuarto de galón por acre	Concentración de solución (% solución)
Salvinia, giant	3 – 3.75	2

Aplique una solución al 2 por ciento de este producto que contenga de 0.5 a 2 por ciento por volumen de un surfactante no iónico aprobado para uso acuático y que contenga por lo menos 70 por ciento de ingrediente activo usando la técnica de rocío para mojar. Para aplicación al voleo, aplique de 3 a 3.75 cuartos de galón de este producto por acre en 3 a 40 galones de solución de rocío que contenga 0.1 por ciento por volumen de organosilicona y 0.25 por ciento de surfactante no iónico o mezcla de rocío coadjuvante (spreader sticker) aprobado para uso acuático. Deje transcurrir al menos 3 días después de la aplicación antes de alterar la vegetación en el área de aplicación. Este producto no controlará plantas que estén completamente sumergidas o que tienen la mayoría de su follaje debajo del agua.

Smartweed, swamp	2.3 – 3.75	1.5
Spatterdock	3	0.75

Aplique cuando la mayoría de las plantas objetivo estén en plena floración. Para obtener mejores resultados, aplique en verano o en otoño.

Spurge, leafy*	–	1.5
Starthistle, amarillo	–	1.5
Sweet potato, wild*	–	1.5

Aplique cuando la mayoría de las plantas objetivo se encuentren en la etapa de floración o después de ella. Puede ser necesaria más de una aplicación para el control total.

Thistle, artichoke	1.5 – 2.3	2

Aplique cuando la mayoría de las plantas objetivo se encuentren en la etapa de brotación o después de ella.

Thistle, Canada	1.5 – 2.3	1.5

Aplique cuando la mayoría de las plantas objetivo se encuentren en la etapa de brotación o después de ella. También puede obtener control con inyecciones al tallo. Corte de 8 a 9 plantas de las más altas en un macizo en la etapa de brotación. Introduzca una aguja inyectora en el centro del tallo y luego retírela lentamente a medida que inyecta 0.5 mililitros de este producto concentrado en el tallo.[1] No requiere surfactante.

Timothy	1.5 – 2.3	1.5

Aplique cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de bota a floración. Si la aplicación se hace antes de la etapa de bota, el control puede verse reducido. En el otoño, aplique el tratamiento antes de que las plantas se oscurezcan.

Torpedograss*	3 – 3.75	0.75 – 1.5

Aplique este producto en una proporción o concentración de solución de rocío menor dentro del rango especificado cuando torpedograss crece en el terreno y en una proporción o concentración mayor dentro del rango cuando está parcialmente sumergido en agua o creciendo como mata flotante. Se necesitarán aplicaciones adicionales de este producto para mantener el control.

Trumpetcreeper*	1.5 – 2.3	1.5
Tules, común	–	1.5

Aplique a las plantas objetivo cuando se encuentren en la etapa de brotación o después de ella. Los síntomas visuales aparecerán lentamente y puede que no aparezcan hasta 3 semanas o más después de la aplicación.

Vaseygrass	2.3 – 3.75	1.5
Velvetgrass	2.3 – 3.75	1.5

TABLA DE PROPORCIONES PARA MALEZAS PERENNES		
Especies de malezas	Cuarto de galón por acre	Concentración de solución (% solución)
Waterhyacinth	2.5 – 3	0.75 – 1

Aplique cuando las plantas objetivo se encuentren en la etapa de floración temprana o después de ella. Los síntomas visuales pueden tardar en aparecer 3 o más semanas después de la aplicación, y la necrosis completa y descomposición de 60 a 90 días después de la aplicación. Si desea obtener los efectos visuales más rápido, use una proporción de aplicación más alta dentro del rango indicado.

Waterlettuce	–	0.75 – 1

Aplique una solución al 1 por ciento de este producto en áreas de infestación severa. Se pueden obtener mejores resultados si se aplica de mediados del verano hasta el invierno. Si se aplica en primavera, es posible que se necesite más de una aplicación para lograr el control.

Waterprimrose	–	0.75

Realice la aplicación a plantas objetivo que se encuentren en etapa de floración o después de ella, pero antes de que cambien de color en el otoño. Para obtener un mejor control es necesaria una cobertura completa.

Wheatgrass, western	1.5 – 2.3	0.75

Aplique cuando la mayoría de las plantas objetivo hayan alcanzado la etapa de desarrollo de bota a floración. Las aplicaciones realizadas antes de la etapa de bota podrían tener menor control. En el otoño, aplique el tratamiento antes de que las plantas se oscurezcan.

* Control parcial

[1] Al usar inyecciones de tallo, el uso total combinado de este producto no debe exceder 8 cuartos de galón por acre por año. A 5 mililitros de producto concentrado (sin diluir) por tallo, 8 cuartos de galón tratarán aproximadamente 1500 tallos por acre por año. La cantidad de tallos que pueden tratarse por acre variará dependiendo del volumen de inyección y de la concentración de este producto en la solución de aplicación.

Otras perennes indicadas en esta etiqueta – Aplique de 2.3 a 3.75 cuartos de galón de este producto por acre como aplicación al voleo o una solución de 0.75 a 1.5 por ciento usando un rociador manual.

12.4 Árboles, enredaderas y matorrales leñosos

Aplique este producto a árboles y matorrales que estén en crecimiento activo después de la expansión completa de las hojas. Use una proporción de aplicación mayor dentro del rango indicado para árboles y matorrales más grandes y/o en áreas de denso crecimiento vegetativo. Para el control de enredaderas, aplique este producto en una proporción de aplicación o concentración de solución de rocío mayor dentro del rango indicado cuando las plantas objetivo hayan alcanzado la etapa de crecimiento leñoso.

Se obtiene un mejor control de árboles y matorrales leñosos cuando se realiza la aplicación a finales del verano o en otoño después de la formación de frutas. Sin embargo, en las zonas áridas, se puede obtener un mejor control cuando la aplicación se realiza en la primavera o a comienzos del verano, cuando los árboles y matorrales tienen mayor contenido de humedad y están florecidos. Se puede anticipar un control deficiente cuando este producto se aplica a árboles y matorrales sometidos a estrés por sequía.

Se aceptan algunos colores otoñales en especies de hoja caduca no deseables al aplicar este producto a árboles y matorrales en el otoño, siempre y cuando no se haya producido una importante caída de las hojas. El rendimiento de este producto podría verse reducido si se aplica después de una helada. Después de aplicar en otoño, es posible que los síntomas no aparezcan antes de las heladas o del envejecimiento.

Para obtener mejores resultados, espere 7 días o más después de la aplicación para podar, cortar, labrar, quemar o eliminar los árboles, enredaderas y matorrales leñosos del sitio de la aplicación. Pueden ser necesarias aplicaciones adicionales de este producto para controlar árboles y matorrales que se regeneren a partir de semillas o partes subterráneas.

MEZCLAS DE TANQUE: Este producto puede aplicarse en cualquier proporción indicada en esta etiqueta en una mezcla de tanque con los siguientes productos para aumentar el espectro de control de malezas herbáceas, árboles, enredaderas y matorrales leñosos. Para el control de las malezas herbáceas, aplique el producto de la mezcla de tanque en la proporción de aplicación o concentración de solución de rocío más baja dentro del rango especificado. Para el control de poblaciones densas o de árboles, enredaderas y matorrales leñosos difíciles de controlar, aumente la proporción de aplicación o la concentración de solución de rocío del producto en la mezcla de tanque hacia el extremo más alto del rango. Consulte las etiquetas de cada producto para conocer los usos aprobados y las proporcienes de aplicación. No todos los productos en mezcla de tanque están aprobados para uso acuático.

Arsenal; Herbicida concentrado para aplicadores Arsenal; Escort XP; Forestry Garlon 4 Specialty; Forestry Garlon XRT Specialty; Garlon 3A Specialty; Garlon 4 Specialty; Garlon 4 Ultra Specialty; Vastlan Specialty; imazapyr; metsulfuron methyl; triclopyr

Asegúrese de que la cantidad correcta del herbicida Garlon esté bien mezclada con agua en el tanque de rociado antes de agregar este producto.

Aplicación a tocones cortados

Este producto se puede usar para controlar rebrotes y retoños de matorrales leñosos y árboles en cualquier sitio indicado en esta etiqueta.

Corte el árbol o matorral leñoso cerca de la superficie de la tierra o del agua y aplique inmediatamente una solución de este producto al 50 o 100 por ciento (sin diluir) a la superficie recién cortada utilizando un aplicador capaz de aplicar este producto a todo el cámbium. La demora en la aplicación puede resultar en un rendimiento inferior. Para obtener mejores resultados, corte el árbol o matorral leñoso durante el período de crecimiento activo y expansión completa de las hojas y aplique este producto. No se necesita surfactante para la aplicación a tocones cortados.

Para controlar tree of heaven (Ailanthus altissima), corte el árbol cerca de la superficie de la tierra y aplique de inmediato una solución al 50 por ciento de este producto (16 onzas líquidas por cuarto de galón de solución) y un 10 por ciento de herbicida Arsenal (de 3 a 4 onzas líquidas por cuarto de galón de solución) en agua a la superficie recién cortada.

NO REALICE UNA APLICACIÓN EN TOCONES CORTADOS CUANDO LAS RAÍCES DE MATORRALES LEÑOSOS O ÁRBOLES DESEABLES PUEDEN ESTAR INJERTADAS EN LAS RAÍCES DEL TOCÓN CORTADO, PORQUE SE PUEDE CAUSAR DAÑO A LOS ÁRBOLES ADYACENTES. Algunos retoños, tallos o árboles pueden compartir el mismo sistema de raíces. Los árboles adyacentes de edad, altura y espaciado similares pueden tener raíces compartidas. Ya sea injertados o compartidos, es probable que se dañen tallos o árboles adyacentes cuando se aplica este producto a uno o más árboles que comparten un sistema común de raíces.

Aplicación de inyección y anillado de matorrales leñosos y árboles

Este producto se puede usar para controlar árboles y matorrales leñosos indicados en esta sección por aplicación de inyección o anillado (frill) en cualquier sitio acuático o terrestre indicado en esta etiqueta.

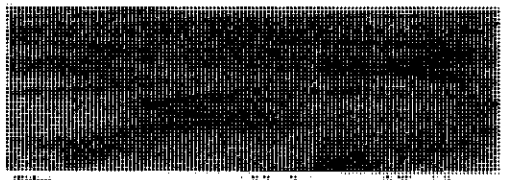
Inyecte o aplique el equivalente 1 mililitro (0.04 onzas líquidas) de este producto por cada 2 ó 3 pulgadas de diámetro del tronco a la altura del pecho (DBH en inglés). Si inyecta este producto en un matorral leñoso o árbol, use equipo capaz de penetrar el tejido vivo de la planta debajo de la corteza. No se requiere surfactante para la inyección directa de este producto en árboles y matorrales leñosos.

Para aplicación con anillado, aplique una solución de 50 a 95 por ciento de este producto en agua con 0.5% o más por volumen de un surfactante no iónico a una incisión anular continua alrededor del árbol o en cortes espaciados uniformemente alrededor del árbol por debajo del nivel de las ramas. A medida que el diámetro del árbol aumenta, pueden obtenerse mejores resultados al aplicar este producto a una incisión anular continua o en cortes menos espaciados. Evite las técnicas de aplicación que permiten

que este producto se escurra de las áreas cortadas o con incisiones. En las especies que segregan savia copiosamente, haga los cortes o incisiones en un ángulo oblicuo para producir un efecto de copa y aplicar una solución al 95 por ciento de este producto con un surfactante no iónico, como se describe antes. Para obtener mejores resultados, realice esta aplicación durante el período de crecimiento activo y después de la expansión completa de las hojas.

Aplicación modificada de alto volumen y bajo volumen con mochila

Para el control total y parcial de árboles, enredaderas y matorrales leñosos indicados en esta etiqueta al usar un rociador de mochila u otro equipo manual y una técnica de aplicación foliar dirigida de bajo volumen, aplique una solución de 4 a 8 por ciento de este producto que contenga de 0.5 a 1 por ciento por volumen de un surfactante no iónico de forma uniforme sobre la corona de la planta para cubrir el 50 por ciento del follaje superior de los árboles, enredaderas y matorrales leñosos no deseados.



Especie	Cantidad por 100 galones de agua (cuartos de galón)	Concentración en aplicación con mochila (% solución)
Alder	1.5 – 3	0.75 – 1.5
Ash*	1.5 – 3.75	0.75 – 1.5
Aspen, quaking	1.5 – 2.3	0.75 – 1.2
Bearclover (Bearmat)*	1.5 – 3.75	0.75 – 1.5
Beech*	1.5 – 3.75	0.75 – 1.5
Birch	1.5	0.75
Blackberry	2.3 – 3	0.75 – 1.2
Blackgum	1.5 – 3.75	0.75 – 1.5
Bracken	1.5 – 3.75	0.75 – 1.5
Broom; French, Scotch	1.5 – 3.75	1.2 – 1.5
Buckwheat, California*	1.5 – 3	0.75 – 1.5
Cascara*	1.5 – 3.75	0.75 – 1.5
Castor bean	1.5 – 3.75	1.5

Además, para controlar, inyecte 4 mililitros de este producto concentrado (sin diluir) por planta directamente en la parte inferior del tallo principal con un dispositivo de inyección manual.1 No requiere surfactante.

Catsclaw*	–	1.2 – 1.5

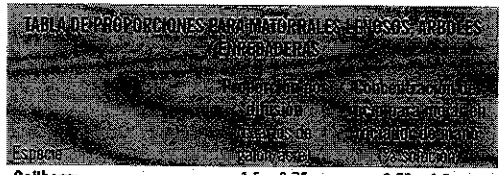
Para control parcial, aplique este producto cuando por lo menos el 50 por ciento de las hojas nuevas estén completamente desarrolladas.

Ceanothus*	1.5 – 3.75	0.75 – 1.5
Chamise*	1.5 – 3.75	0.75
Cerezo; amargo, negro, pin	1.5 – 3.75	1 – 1.5
Cottonwood, eastern	1.5 – 3.75	0.75 – 1.5
Coyote brush	2.3 – 3	1.2 – 1.5

Para controlar, aplique este producto cuando por lo menos el 50 por ciento de las hojas nuevas estén completamente desarrolladas.

Cypress; swamp, bald	1.5 – 3.75	0.75 – 1.5
Deerweed	1.5 – 3.75	0.75 – 1.5
Dewberry	2.3 – 3	0.75 – 1.2
Dogwood*	3 – 3.75	1 – 2
Elderberry	1.5	0.75
Elm*	1.5 – 3.75	0.75 – 1.5
Eucalipto, blue gum	–	1.5

Para controlar nuevos brotes de eucaliptes, aplique este producto usando un rociador manual cuando los nuevos brotes tengan entre 6 a 12 pies de altura. Asegúrese de conseguir una cobertura completa.



Especie	Cantidad por 100 galones de agua (cuartos de galón)	Concentración en aplicación con mochila (% solución)
Gallberry	1.5 – 3.75	0.75 – 1.5
Gorse*	1.5 – 3.75	0.75 – 1.5
Hackberry, western	1.5 – 3.75	0.75 – 1.5
Hasardia*	1.5 – 3	0.75 – 1.5
Hawthorn	1.5 – 2.3	0.75 – 1.2
Hazel	1.5	0.75
Hickory*	3 – 3.75	1 – 2
Honeysuckle	2.3 – 3	0.75 – 1.2
Hornbeam, American*	1.5 – 3.75	0.75 – 1.5
Huckleberry	1.5 – 3.75	0.75 – 1.5
Ivy, poison	3 – 3.75	1.5
Kudzu	3	1.5
Locust, black*	1.5 – 3	0.75 – 1.5
Madrone resprouts (rebrotes)	–	1.5
Magnolia, sweetbay	1.5 – 3.75	0.75 – 1.5
Manzanita*	1.5 – 3.75	0.75 – 1.5
Maple, red	1 – 3.75	0.75 – 1.2

Para controlar, aplique una solución de 0.75 a 1.2 por ciento de este producto usando un rociador manual cuando las hojas estén completamente desarrolladas. Para control parcial, aplique de 1 a 3.75 cuartos de galón por acre en aplicación al voleo.

Maple, sugar	–	0.75 – 1.2

Para controlar, aplique este producto con un rociador manual cuando por lo menos el 50 por ciento de las hojas nuevas estén completamente desarrolladas.

Maple, vine*	1.5 – 3.75	0.75 – 1.5
Monkey flower*	1.5 – 3	0.75 – 1.5
Oak; black, white*	1.5 – 3	0.75 – 1.5
Oak; northern, pin	1.5 – 3	0.75 – 1.2

Para controlar, aplique este producto cuando por lo menos el 50 por ciento de las hojas nuevas estén completamente desarrolladas.

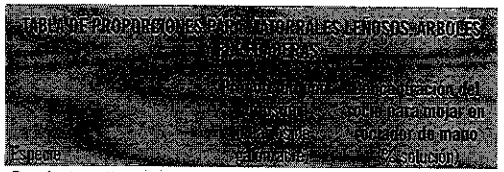
Oak, poison	3 - 3.75	1.5

Puede que tenga que repetir las aplicaciones para lograr el control. La aplicación en otoño debe hacerse antes de que las hojas pierdan su color verde.

Oak, post	2.3 – 3	0.75 – 1.2
Oak, red	–	0.75 – 1.2

Para controlar, aplique este producto con un rociador manual cuando por lo menos el 50 por ciento de las hojas nuevas estén completamente desarrolladas.

Oak, scrub*	1.5 – 3	0.75 – 1.5
Oak, southern red	1.5 – 3.75	1 – 1.5
Orange, Osage	1.5 – 3.75	0.75 – 1.5
Peppertree, Brazilian (Florida holly)*	1.5 – 3.75	1.5
Persimmon*	1.5 – 3.75	0.75 – 1.5
Pine	1.5 – 3.75	0.75 – 1.5
Poplar, amarillo*	1.5 – 3.75	0.75 – 1.5
Prunus	1.5 – 3.75	1 – 1.5



Especie	Cantidad por 100 galones de agua (cuartos de galón)	Concentración del rociador de mano para mojar en aplicación (% solución)
Raspberry	2.3 – 3	0.75 – 1.2
Redbud, eastern	1.5 - 3.75	0.75 - 1.5
Redcedar, eastern	1.5 – 3.75	0.75 – 1.5
Rose, multiflora	1.5	0.75

Realice las aplicaciones antes de que los insectos que se alimentan de hojas deterioren las hojas.

Russian olive*	1.5 – 3.75	0.75 – 1.5
Sage, black	1.5 – 3	0.75
Sage, white*	1.5 – 3	0.75 – 1.5
Sagebrush, California	1.5 – 3	0.75
Salmonberry	1.5	0.75
Saltbush	–	1
Saltcedar*	3 – 3.75	1 – 2

Para el control parcial, aplique una solución de 1 a 2 por ciento de este producto usando un rociador manual o de 3 a 3.75 cuartos de galón por acre en aplicación al voleo. Para controlar, aplique una solución de 1 a 1.5 por ciento de este producto en una mezcla de tanque con herbicida Arsenal o Herbicida concentrado para aplicadores Arsenal usando un rociador manual. Para controlar con aplicación al voleo, aplique 1.5 cuartos de galón de este producto por acre en una mezcla de tanque con una proporción apropiada de herbicida Arsenal o Herbicida concentrado para aplicadores Arsenal para plantas de hasta 6 pies de alto. Para controlar plantas de saltcedar mayores de 6 pies de alto con aplicación al voleo, aplique 3 cuartos de galón de este producto por acre en una mezcla de tanque con una proporción más alta de herbicida Arsenal o Herbicida concentrado para aplicadores Arsenal.

Sassafras*	1.5 – 3.75	0.75 – 1.5
Sea Myrtle	–	1
Sourwood*	1.5 – 3.75	0.75 – 1.5
Sumac; laurel, poison, smooth, sugarbush, winged*	1.5 – 3	0.75 – 1.5
Sweetgum	1.5 – 2.3	0.75 – 1.5
Swordfern*	1.5 – 3.75	0.75 – 1.5
Tallowtree, Chinese	–	0.75
Tan oak (rebrotes)*	–	1.5
Thimbleberry	1.5	0.75
Tobacco, tree*	1.5 – 3	0.75 – 1.5
Toyon*	–	1.5
Trumpetcreeper	1.5 – 2.3	0.75 – 1.2
Vine maple*	1.5 – 3.75	0.75 – 1.5
Virginia creeper	1.5 – 3.75	0.75 – 1.5
Waxmyrtle, southern*	1.5 – 3.75	1.5
Willow	2.3	0.75
Yerba Santa, California*	–	1.5

* Control parcial

Otros árboles y matorrales leñosos indicados en esta etiqueta – Para control parcial, aplique de 1.5 a 3.75 cuartos de galón de este producto por acre como aplicación al voleo o una solución al 0.75 o 1.5 por ciento usando un rociador manual y la técnica de rocío para mojar.

13.0 LIMITES EN LA GARANTÍA Y LA RESPONSABILIDAD

Bayer CropScience LP (la "Compañía") garantiza que este producto concuerda con la descripción química de la etiqueta. HASTA EL GRADO QUE SEA COMPATIBLE CON LA LEGISLACIÓN PERTINENTE, NO SE HACE NINGUNA OTRA GARANTÍA EXPRESA O IMPLÍCITA ACERCA DE LA IDONEIDAD PARA UN USO PARTICULAR O COMERCIABILIDAD. Esta garantía está sujeta también a las condiciones y limitaciones que aquí se indican.

El comprador y todos los usuarios utilizarán este producto únicamente con los propósitos y de acuerdo con la etiqueta de las Instrucciones completas para el uso ("Instrucciones") y notificarán de inmediato a la Compañía si tienen alguna reclamación que se base en un contrato, negligencia, estricta responsabilidad u otros derechos extracontractuales.

Hasta el grado que sea compatible con la legislación pertinente, el comprador y todos los usuarios son responsables por todas las pérdidas, lesiones o daños que resultasen por el uso o manipulación en condiciones que estén más allá del control de esta Compañía, incluyendo sin limitarse a: incompatibilidad con productos que no sean los señalados en las Instrucciones, aplicación o contacto con vegetación que no se quiera destruir, daño a cultivos o la incapacidad del producto para controlar los biotipos de malezas que desarrollan resistencia al glifosato, condiciones climáticas inusuales, condiciones climáticas fuera de los límites que se consideran normales en el lugar de la aplicación y para el período de tiempo en el cual se aplica el producto, así como condiciones climáticas que estén fuera de los límites indicados en las Instrucciones, uso y/o aplicación que no estén explícitamente aconsejadas en las Instrucciones o no sean compatibles con estas, condiciones de humedad que estén fuera de los límites establecidos en las Instrucciones, o la presencia de productos en la tierra o sobre ella, en los cultivos o en la vegetación que se está tratando, diferentes a los indicados en las Instrucciones.

Esta Compañía no garantiza ninguno de los productos reformulados o reempacados de este producto, excepto de acuerdo a los requisitos de la administración de esta Compañía y con el permiso escrito expreso de esta Compañía.

HASTA EL GRADO QUE SEA COMPATIBLE CON LA LEGISLACIÓN PERTINENTE, LA ÚNICA Y EXCLUSIVA COMPENSACIÓN AL USUARIO O COMPRADOR Y EL LÍMITE DE RESPONSABILIDAD DE ESTA COMPAÑÍA O DE CUALQUIER OTRO VENDEDOR POR CUALQUIER PÉRDIDA O POR TODAS LAS PÉRDIDAS, PERJUICIOS O DAÑOS QUE RESULTASEN DEL USO O MANEJO DE ESTE PRODUCTO (INCLUYENDO RECLAMOS QUE SE BASEN EN UN CONTRATO, NEGLIGENCIA, ESTRICTA RESPONSABILIDAD U OTROS DERECHOS EXTRACONTRACTUALES), SERÁ EL PRECIO PAGADO POR EL USUARIO O EL COMPRADOR POR LA CANTIDAD INVOLUCRADA DE ESTE PRODUCTO O, A ELECCIÓN DE ESTA COMPAÑÍA O DE OTRO VENDEDOR, EL REEMPLAZO DE DICHA CANTIDAD, O SI NO SE OBTUVO MEDIANTE COMPRA SE REEMPLAZARÁ DICHA CANTIDAD DEL PRODUCTO. HASTA EL GRADO QUE SEA COMPATIBLE CON LA LEGISLACIÓN PERTINENTE, EN NINGÚN CASO ESTA COMPAÑÍA U OTRO VENDEDOR SERÁN RESPONSABLES POR DAÑOS INCIDENTALES, CONSECUENTES O ESPECIALES.

En el momento de abrir y usar el producto, se asume que el comprador y todos los usuarios han aceptado las condiciones de los LÍMITES EN LA GARANTÍA Y LA RESPONSABILIDAD que no pueden variar por medio de ningún acuerdo verbal o escrito. Si las condiciones son inaceptables, devuelva el producto inmediatamente sin abrir el envase.

En caso de emergencia relacionada con este producto o si necesita ayuda médica, llame por cobrar, de día o de noche, al 1-800-334-7577.

Certainty, Outrider, Roundup, Roundup Custom y su diseño, y TRUEBLUE ADVANTAGE PROVEN RELIABLE SUPPORTED y su diseño, son marcas registradas de Grupo Bayer. Todas las demás marcas registradas son propiedad de sus respectivos dueños. © 2020 Grupo Bayer. Todos los derechos reservados.

Nº. Reg. EPA 524-343

Envasado para:
BAYER CROPSCIENCE LP
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI, 63167 U.S.A.

2D CODE

161018Bv2

Roundup® CUSTOM
FOR AQUATIC & TERRESTRIAL USE

A broad-spectrum postemergence herbicide for aquatic and industrial, turf, ornamental, forestry, roadside, utility rights-of-way, select crop, and other listed terrestrial weed control.

(For a complete list of aquatic and terrestrial use sites, see the Directions for Use section of the attached labeling.)

ACTIVE INGREDIENT:	
*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	53.8%
OTHER INGREDIENTS:	46.2%
	100.0%

*Contains 648 grams of the active ingredient glyphosate, in the form of its isopropylamine salt per liter, or 5.4 pounds per U.S. gallon, which is equivalent to 480 grams of the acid, glyphosate, per liter or 4.0 pounds per U.S. gallon (39.9% by weight).

EPA Reg. No. 524-343 **EPA Est. 524-IA-1**

Keep Out of Reach of Children
CAUTION

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

Not all products listed on this label are registered for use in California.
Check the registration status of each product in California before using.

See Complete Directions for Use attached to this label for complete Agricultural and Non-Agricultural Use Requirements of the Worker Protection Standard, Directions for Use and Limit of Warranty and Liability in English and Spanish.

GROUP 9 HERBICIDE

STORAGE AND DISPOSAL

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage and disposal.

PESTICIDE STORAGE: STORE ABOVE 5°F (-15°C) TO KEEP PRODUCT FROM CRYSTALLIZING. Crystals will settle to the bottom. If allowed to crystallize, warm to 68°F (20°C) to redissolve and roll or shake container or recirculate contents of larger containers to mix well before using. Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination. See individual container label for additional storage conditions, if any.

PESTICIDE DISPOSAL: To avoid wastes, use all material in the container, including rinsate, by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable federal, state and local regulations and procedures.

CONTAINER HANDLING AND DISPOSAL: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in this container. Contact your state regulatory agency to determine allowable practices in your state. Triple rinse or pressure rinse (or equivalent) this container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix-tank and continue to drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix-tank, or store rinsate for later use or disposal. Continue to drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or mix-tank and continue to drain for 10 seconds after the flow begins to drip. Place container so that it can drain directly into application equipment or mix-tank while rinsing, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle into the side of the container and rinse at about 40 PSI for at least 30 seconds. Continue to drain for 10 seconds after the flow begins to drip. Once properly rinsed, some plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest collection site, contact your chemical dealer or Bayer CropScience LP at 1-866-99BAYER (1-866-992-2937). If recycling is not available, dispose of in accordance with federal, state and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

FOR PRODUCT INFORMATION OR ASSISTANCE USING THIS PRODUCT, CALL TOLL-FREE, 1-866-99BAYER (1-866-992-2937)

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT, 1-800-334-7577

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Packed for:
BAYER CROPSCIENCE LP
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI 63167 USA

PLACE BAR CODE HERE
88358092620 1

NET 2.5 GAL

BAYER

SAFETY DATA SHEET

ROUNDUP CUSTOM® FOR AQUATIC & TERRESTRIAL USE

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	ROUNDUP CUSTOM® FOR AQUATIC & TERRESTRIAL USE
Product code (UVP)	86738473
SDS Number	102000037603
EPA Registration No.	524-343

Relevant identified uses of the substance or mixture and uses advised against

Use	Herbicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer Environmental Science A division of Bayer CropScience LP 5000 Centregreen Way, Suite 400 Cary, NC 27513 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

SAFETY DATA SHEET

ROUNDUP CUSTOM® FOR AQUATIC & TERRESTRIAL USE

Hazardous Component Name	CAS-No.	Concentration % by weight
Isopropylamine salt of glyphosate	38641-94-0	53.8

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice — When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation — Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact — Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

Eye contact — Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion — Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms — To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Risks — This product is not a cholinesterase inhibitor.

Treatment — Treatment with atropine and oximes is not indicated. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable — Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable — High volume water jet

Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Oxides of phosphorus
Advice for firefighters	
Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	does not flash
Auto-ignition temperature	No data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Explosivity	Not explosive

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Use personal protective equipment. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt).

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in original container. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in a place accessible by authorized persons only. Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode. Protect from freezing. Partial crystallization may occur on prolonged storage below the minimum storage temperature. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No known occupational limit values.

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Hand protection	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton) Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating,

	drinking, smoking or using the toilet.
Eye protection	Use tightly sealed goggles and face protection.
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	Liquid, clear
Colour	colorless to light yellow or brown
Odour	odourless
Odour Threshold	No data available
pH	4.4 - 4.8 (6.3 %)
Melting point/range	No data available
Boiling Point	No data available
Flash point	does not flash
Flammability	No data available
Auto-ignition temperature	No data available
Minimum ignition energy	Not applicable
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	Not applicable
Lower explosion limit	Not applicable
Vapour pressure	Not applicable
Evaporation rate	No data available
Relative vapour density	No significant volatility.
Relative density	1.206 (20 °C)
Density	1.21 g/cm³ (20 °C)
Water solubility	completely soluble
Partition coefficient: n-	Glyphosate: log Pow: -3.2

octanol/water

Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	Not explosive
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Galvanised steel, Unlined mild steel
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Skin contact, Eye contact, Inhalation
Immediate Effects	
Eye	Not expected to produce significant adverse effects when recommended use instructions are followed.
Skin	Not expected to produce significant adverse effects when recommended use instructions are followed.
Ingestion	Not expected to produce significant adverse effects when recommended use instructions are followed.
Inhalation	Not expected to produce significant adverse effects when recommended use instructions are followed.

Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 5,000 mg/kg Test conducted with a similar formulation. No deaths

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Acute inhalation toxicity	LC50 (Rat) > 4.24 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Highest attainable concentration. No deaths Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (Rabbit) > 5,000 mg/kg Test conducted with a similar formulation. No deaths
Skin corrosion/irritation	No skin irritation (Rabbit) Test conducted with a similar formulation.
Serious eye damage/eye irritation	No eye irritation (Rabbit) Test conducted with a similar formulation.
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test Test conducted with a similar formulation.

Assessment STOT Specific target organ toxicity – single exposure

Glyphosate: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Glyphosate did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Glyphosate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Glyphosate was not carcinogenic in lifetime feeding studies in rats and mice.
Important comment to IARC Listing:, Our expert opinion is that classification as a carcinogen is not warranted.

ACGIH

None.

NTP

None.

IARC

Isopropylamine salt of glyphosate	38641-94-0	Overall evaluation: 2A

OSHA

None.

Assessment toxicity to reproduction

Glyphosate did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Glyphosate did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) > 1,000 mg/l static test; Exposure time: 96 h Test conducted with a similar formulation. LC50 (Lepomis macrochirus (Bluegill sunfish)) > 1,000 mg/l static test; Exposure time: 96 h Test conducted with a similar formulation.
Chronic toxicity to fish	Oncorhynchus mykiss (rainbow trout) flow-through test NOEC: >= 9.63 mg/l The value mentioned relates to the active ingredient glyphosate.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 930 mg/l static test; Exposure time: 48 h Test conducted with a similar formulation.
Chronic toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 12.5 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient glyphosate.
Toxicity to aquatic plants	EbC50 (Raphidocelis subcapitata (freshwater green alga)) 72.9 mg/l static test; Exposure time: 72 h The value mentioned relates to the active ingredient glyphosate. NOEC (Raphidocelis subcapitata (freshwater green alga)) 26.4 mg/l static test; Exposure time: 72 h The value mentioned relates to the active ingredient glyphosate.
Biodegradability	Glyphosate: Not rapidly biodegradable
Koc	Glyphosate: Koc: 6920
Bioaccumulation	Glyphosate: Does not bioaccumulate.
Mobility in soil	Glyphosate: Immobile in soil

Results of PBT and vPvB assessment

PBT and vPvB assessment	Glyphosate: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological	No further ecological information is available.

information

Environmental precautions	Apply this product as specified on the label. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Retain and dispose of contaminated wash water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Do not contaminate water, food, or feed by disposal. Follow all local/regional/national/international regulations.
Contaminated packaging	Follow advice on product label and/or leaflet. Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 524-343
US Federal Regulations
TSCA list
Water 7732-18-5

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No export notification needs to be made.
SARA Title III - Section 302 - Notification and Information
Not applicable.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.

US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients
None.

Environmental
CERCLA
None.
Clean Water Section 307(a)(1)
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

EPA/FIFRA Information:
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

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N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 0 Flammability - 1 Instability - 1 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 0 Flammability - 1 Physical Hazard - 1 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

Revision Date: 09/25/2020

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

Perm-X™ UL 30-30

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

CONTROLS: Adult Mosquitoes, Biting and Non-biting Midges, Black Flies and other outdoor flying insects as listed on this label.

FOR USE AS A: ULV thermal or non-thermal aerosol using ground or aerial equipment in areas including: residential, recreational areas, parks, campsites, woodlands, athletic fields, golf courses, municipalities, playgrounds, and non-crop waste areas and over listed growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas. Refer to label for additional use sites.

SPECIMEN LABEL

ACTIVE INGREDIENTS:

Permethrin	30%
Piperonyl Butoxide	30%
OTHER INGREDIENTS*:	40%
TOTAL:	100%

*(butyl carbityl)(6-propylpiperonyl) ether and related compounds.
**Contains Petroleum Distillate
Contains 2.51 lbs a.i. Permethrin/gallon and 2.51 lbs a.i. Piperonyl Butoxide/gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente. (**TD THE USER:** If you cannot read English, do not use this product until the label has been fully explained to you.)
See inside label booklet for additional Precautionary Statements.

EPA Reg.No. 89459-44
EPA Est. No. 2724-TX-1

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation.

FIRST AID	
If swallowed	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to by a poison control center or doctor. • Oo not give any liquid to the person. • Oo not give anything by mouth to an unconscious person.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice. *(continued)*
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to mouth, if possible. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. You may contact 1-800-248-7763 for emergency medical treatment information. You may also contact 1-800-248-7763 for information including health concerns, medical emergencies or pesticide incidents. *(continued)*	

NOTE TO PHYSICIAN: Contains Petroleum Distillates - vomiting may cause aspiration pneumonia.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are listed below. Mixers, loaders, applicators and other handlers including during mixing/loading, repair and cleaning of equipment and disposal of pesticide must wear the following:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves such as barrier laminate, viton, neoprene rubber or nitrile rubber
- Chemical-resistant apron for mixers/loaders, persons cleaning equipment and persons exposed to the concentrate

In addition to the above PPE, mixers and loaders supporting aerial applications to forests must wear at least a NIOSH-approved respirator with:

- A dust/mist filter with MSHA/NIOSH approval number prefix TC-21C, or any R, P, or HE filter.

See Engineering Controls for additional requirements.

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS

- Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates.

Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control application or by persons under their direct supervision.

Precautions and Use Restrictions

- Apply this product only as specified on this label.
- Apply this product at temperatures greater than 50° F and when wind speed equals or exceeds 1 mph.
- Not for use in metered release systems.
- Not for use in outdoor residential misting systems.
- Do not spray this product on or allow it to drift onto cropland (other than crops listed) or potable water supplies.
- In the treatment of corrals, feedlots, animal confinements/houses, swine lots, poultry ranges and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.
- For hand carried and/or lawn mower foggers: Do not fog wet foliage. Do not fog when wind conditions exceed 10 mph. Only use a clean, well maintained and properly calibrated fogger known to give excellent performance. Fog down wind.
- Do not apply by fixed wing aircraft at a height less than 100 feet or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.
- Apply when wind speed is greater than 1 mph.
- Do not make applications during rain.

Do not retreat site more than once in 3 days. Do not exceed 25 applications at 0.007 lbs permethrin per acre per application or 0.007 lbs PBO per acre per application or 0.18 lbs of permethrin per acre per season or 0.18 lbs PBO per acre per year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

HOW TO APPLY

For proper ground application, mount the fog applicator so that the nozzle is at least 4 ½ feet above ground level and directed out the back of the vehicle. May be applied at speeds of 5 mph up to 20 mph. Failure to follow these label directions may result in reduced effectiveness. For "Aerial Application", refer to the Aerial Application section on this label. PERM-X™ UL 30-30 may be used as is, or diluted with a suitable solvent, i.e., a 60 to 100 second viscosity mineral oil and applied at a rate not to exceed 0.9636 fl oz of PERM-X™ UL 30-30 per acre. Both aerial and ground applications should be made when the wind is less than 10 mph. For exact rates, see the "UNDILUTED" or the "DILUTION" Rates charts on this label. PERM-X™ UL 30-30 is approved for application as an Ultra Low Volume (ULV) Thermal or Non-thermal aerosol (cold fog) to control adult mosquitoes, and other insects as listed on this label, in residential and recreational areas where these insect pests become a problem, such as parks, campsites, woodlands, athletic fields, golf courses, residential area, municipalities, gardens, play grounds, and non-crop waste areas. Treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the fog close to the ground, e.g., cool

temperatures and wind speeds not greater than 10 mph. Applications during the cool hours of night or early morning are usually preferable. Repeat treatment when recommended by Public Health officials, or Mosquito Abatement Districts.

Spray Droplet Size Determination

Ground-Based Application: Spray equipment must be adjusted so that the volume median diameter is less than 30 microns ($D_{v\,0.5}$ < 30 µm) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v\,0.9}$ < 50 µm). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using laser-based equipment must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at ≤200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ($D_{v\,0.5}$ < 60 µm) and that 90% of the spray is contained in droplets smaller than 100 microns ($D_{v\,0.9}$ < 100 µm). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application made at > 200 feet above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns ($D_{v\,0.5}$ < 70 µm) and that 90% of the spray is contained in droplets smaller than 145 microns ($D_{v\,0.9}$ < 145 µm). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

ULV NON-THERMAL AEROSOL (COLD FOG)

To control adult mosquitoes, flies, and gnats (black flies) apply PERM-X™ UL 30-30 using truck-mounted ground ULV (cold fog) equipment with a swath width of 300 feet in areas such as residential, recreational, industrial areas. For best results, apply when insects are most active and conditions are conducive to keeping the fog close to the ground. Apply the undiluted product at flow rates of 0.5472 to 2.1816 fluid ounce per minute at a truck speed of 10 mph. These rates are equivalent to 0.00175 to 0.007 pounds of permethrin a.i. and 0.00175 to 0.007 pounds of piperonyl butoxide a.i. per acre. If a different vehicle speed is used, adjust the flow rate accordingly. An accurate flow control system must be used to ensure proper flow rate. Use the maximum flow rates and application rates listed on this label to treat heavy vegetation or when target insect populations are high. Do not exceed the highest flow rates specified by the manufacturer. PERM-X™ UL 30-30 may also be applied by diluting with 60-100 second mineral oil or another suitable solvent, applied so as not to exceed 0.007 lb a.i. per acre using a swath width of 300 feet for calculation. Refer to the rates chart for suggested rates for diluted use. PERM-X™ UL 30-30 may be used to treat outdoor aggregation and harborage sites including storm drains, underground drainage pipes, and pipe chases.

THERMAL AEROSOL FOGGING

Refer to the DILUTION RATES tables for fogging applications. Droplet size of thermal "fog" will be very small usually in the 0.5 to 1.0 micron range.

TRUCK-MOUNTED - Apply PERM-X™ UL 30-30 diluted or undiluted with suitable thermal fogging equipment. If diluted, use a 60 to 100 second viscosity mineral oil or another suitable non-phytotoxic diluent, to reduce oil requirement and sludge buildup in equipment. Do not exceed the maximum 0.007 lb a.i. permethrin per acre rate. May be applied at speeds of 5 mph up to 20 mph. For use with HAND CARRIED and/or LAWN MOWER FOGGERS, use the same rates of a.i. per acre with a 50 foot swath width at a walking speed of 2 mph. Apply PERM-X™ UL 30-30 at 0.00175 lb to 0.007 lb of a.i. permethrin/a.i. piperonyl butoxide per acre.

USE AS AN INSECT BARRIER
AS AN INSECT BARRIER – USE A "BACKPACK" FOG-TYPE MIST BLOWER

For use in Non-Thermal ULV, motorized, portable, backpack, fog-type mist blower equipment, apply PERM-X™ UL 30-30 with equipment adjusted to deliver ULV particles of 50 to 100 volume median diameter. PERM-X™ UL 30-30 may be applied undiluted or diluted (see Application Rates tables section). If diluted, use a 30 to 100 second viscosity mineral oil, or another, (if recommended by Public Health Officials), suitable non-phytotoxic diluent. Use 0.00175 to 0.007 pound permethrin a.i. per acre at a 50 ft (15.2 m) swath width, while walking at a speed of 2 mph (3.2 kph). Whether applied undiluted or diluted or at a different speed, make sure that the same amount of permethrin a.i. – PBO a.i. is applied/acre.

DIRECTIONS FOR AERIAL APPLICATION

Use aircraft specially equipped and capable of applying Ultra-Low Volumes of PERM-X™ UL 30-30 according to the rate chart on this label. Applications can be made diluted or undiluted but cannot exceed the specified rates of 0.007 lbs permethrin per acre and 0.007 lbs PBO per acre, equivalent to 0.3646 fl oz of undiluted PERM-X™ UL 30-30 per acre. Applications should be made at an altitude of 100 to 300 feet. Apply at airspeed sufficient to deliver the appropriate amount of active ingredient per acre. A forward speed of 150 mph achieving a swath width of 500 feet is recommended. The minimum height (from the ground) for aerial application of this product is 100 feet. Treat when insects are most active and meteorological conditions are conducive to keeping the spray cloud close to the ground. In order to compensate for windy conditions and ensure drift onto the target area, aerial application with aircraft equipped with Global Positioning Systems (GPS) is recommended.

PROHIBITION ON AERIAL USE IN FLORIOA: Not for aerial use in Florida UNLESS specifically authorized by the Bureau of Entomology and Pest Control, Florida Department of Agriculture and Consumer Services.

This product can be applied over specific growing crops prior to harvest and range grasses for the control of adult mosquitoes and biting flies within or adjacent to these areas. Application can only be made where the following crops are present:

Alfalfa, Almonds, Apples, Artichokes, Asparagus, Avocados, Broccoli, Brussel sprouts, Cabbages, Cantaloupes, Cauliflower, Celery, Cherries, Corn (field and pop), Corn (sweet), Eggplants, Filberts (Hazelnuts), Garlic, Horseradish, Lettuce, Onions (dry bulb only), Papayas (FL only), Peaches/ Nectarines, Pears, Bell peppers, Pistachios, Potatoes, Soybeans, Spinach, Tomatoes, and Walnuts.

Cucurbit vegetables, including Chayote (fruit), Chinese wax gourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon and winter melon), Pumpkin,

Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, and winter squash types such as: acorn squash and spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

Leafy Vegetables, including Leafy vegetables (except *brassica*) (Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (roquette), Chervil, Chrysanthemum (edible leaved and garland), Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)).

Conditions and Rates To Use Perm-X™ UL 30-30 Undiluted

Pounds A.I. Per Acre		Application Rates Fluid Ounces per Minute at MPH				Fluid Ounces of Perm-X™ UL 30-30 per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	1.0938	2.1876	3.2814	4.3752	0.3646
0.00350	0.00350	0.5468	1.0938	1.6507	2.1876	0.1823
0.00175	0.00175	0.2736	0.5472	0.8208	1.0944	0.0912

DILUTION RATES FOR PERM-X™ UL 30-30 FOR A 1:4 DILUTION

Mix 1 part PERM-X™ UL 30-30 with 4 parts Suitable Mineral Oil: Apply as follows:

Pounds of A.I. Per Acre		Application Rates Fl Oz Per Minute At Vehicle Speeds				Fl Oz Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	5.3847	10.7694	16.1541	21.5388	1.7949
0.00350	0.00350	2.6925	5.3850	8.0775	10.7700	0.8975
0.00175	0.00175	1.3464	2.6928	4.0932	5.3856	0.4488

DILUTION RATES FOR PERM-X™ UL 30-30 FOR A 1:8 DILUTION

Mix 1 part PERM-X™ UL 30-30 with 8 parts Suitable Mineral Oil: Apply as follows:

Pounds of A.I. Per Acre		Application Rates Fl Oz Per Minute At Vehicle Speeds				Fl Oz Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	9.5457	19.0914	28.6371	38.1828	3.1819
0.00350	0.00350	4.7727	9.5454	14.3181	19.0908	1.5909
0.00175	0.00175	2.3862	4.7730	7.1595	9.5460	0.7955

DILUTION RATES FOR PERM-X™ UL 30-30 FOR A 1:2 DILUTION

Mix 1 part PERM-X™ UL 30-30 with 2 parts Suitable Mineral Oil: Apply as follows:

Pounds of A.I. Per Acre		Application Rates Fl Oz Per Minute At Vehicle Speeds				Fl Oz Finished Spray Per Acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.00700	0.00700	3.2814	6.5628	9.8442	13.1256	1.0938
0.00350	0.00350	1.6407	3.2814	4.9221	6.5628	0.5469
0.00175	0.00175	0.8205	1.6410	2.4615	3.2820	0.2735

STORAGE & DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE AND SPILL PROCEDURES: Store upright at room temperatures. Do not expose to extreme temperatures. In case of spill or leakage, ventilate the area, wear chemical-resistant gloves and footwear. Retrieve and filter the liquid in some manner and use as directed on this label or soak up the liquid with absorbent material such as sawdust, soil, fuller's earth, etc. and dispose of the resulting chemical waste as follows.

PESTICIDE DISPOSAL: Wastes resulting from a spill or use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. **Containers 5 gallons or less:** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with mineral oil (or other solvent used when diluting the product) and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **Containers larger than 5 gallons:** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with mineral oil (or other solvent used when diluting the product). Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, offer for recycling if available, reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded. The Directions for Use of this Product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Central Garden & Pet Company or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Central Garden & Pet Company and Seller harmless for any claims relating to such factors. Central Garden & Pet Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Central Garden & Pet Company, and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, CENTRAL GARDEN & PET COMPANY MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE. To the extent consistent with applicable law, in no event shall Central Garden & Pet Company or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. To the extent consistent with applicable law, **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF CENTRAL GARDEN & PET COMPANY AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF CENTRAL GARDEN & PET COMPANY OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Central Garden & Pet Company and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Central Garden & Pet Company.

Central Garden & Pet Company, 1501 East Woodfield Road, 200W, Schaumburg, Illinois 60173

NOTE: This specimen label is for informational purposes only. All uses may not be approved in all states. See product labeling for use directions.

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VEC 15-026

Safety Data Sheet

Section 1: Identification

Product identifier

Product Name • **Perm-X UL 30-30**

Synonyms • 100208981; 100208982; 100208983; 100208984; EPA Reg. No.: 89459-44

Product Description • Clear amber liquid.

Relevant identified uses of the substance or mixture and uses advised against

Recommended use • Insecticide.

Restrictions on use • Keep out of reach of children. Avoid release to the environment. Avoid contact with skin, eyes, or clothing. Do not take internally.

Details of the supplier of the safety data sheet

Manufacturer • Central Garden & Pet Company

1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173
United States

www.centralmosquitocontrol.com

Emergency telephone number

Manufacturer • 1-800-234-2269

Manufacturer • 1-800-424-9300 - CHEMTREC

Manufacturer (Transportation) • 1-703-527-3887 - Chemtrec - Outside US collect calls accepted

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012 • Acute Toxicity Oral 4
Acute Toxicity Inhalation 4
Specific Target Organ Toxicity Single Exposure 1
Skin Sensitization 1
Aspiration 1

Label elements

OSHA HCS 2012

DANGER

Hazard statements •
Harmful if swallowed
Harmful if inhaled
Causes damage to organs - nervous system.
May cause an allergic skin reaction
May be fatal if swallowed and enters airways

Precautionary statements

Prevention •
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid breathing dust, fume, gas, mist, vapors and/or spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.

Response •
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Do NOT induce vomiting.
Rinse mouth.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF exposed: Call POISON CENTER or doctor/physician.

Storage/Disposal •
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
Avoid release to the environment.
Store locked up.

Other hazards

OSHA HCS 2012

- This product is extremely toxic to aquatic organisms, including fish and invertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Mixtures

Composition		
Chemical Name	**Identifiers**	**%**
Permethrin	**CAS**:52645-53-1	30%
Piperonyl butoxide	**CAS**:51-03-6	30%
Petroleum distillates, hydrotreated (mild) heavy paraffinic	**CAS**:64742-54-7	38.81%
└ Petroleum distillates, hydrotreated (mild) light paraffinic	**CAS**:64742-55-8	*N/A*
Other ingredients	NDA	Balance

Section 4: First-Aid Measures

Description of first aid measures

Inhalation
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin
- IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If irritation or rash occurs, get medical advice/attention.

Eye
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion
- IF SWALLOWED: Immediately call a poison control center or doctor. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

- Causes damage to organs - nervous system. Harmful if inhaled. Harmful if swallowed. May cause an allergic skin reaction in individuals with a sensitivity to piperonyl butoxide. Aspiration hazard. Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
- Contains petroleum distillate vomiting may cause aspiration pneumonia. Treat symptomatically and supportively.

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media
- Water spray, fog or foam.

Unsuitable Extinguishing Media
- Avoid heavy hose streams.

Firefighting Procedures
- Do not use direct stream of water. A direct stream of water may spread fire. Do not allow fire fighting water to escape into waterways or sewers.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- None known.

Hazardous Combustion Products
- Decomposes upon heating to produce toxic vapors/gases which may include oxides of carbon and nitrogen, hydrogen chloride and/or aldehydes.

Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions
- Avoid breathing fumes. Wear appropriate personal protective equipment, avoid direct contact. Keep all sources of ignition away.

Emergency Procedures
- Stop leak if you can do it without risk. Avoid release into the environment. Avoid unnecessary personnel and equipment traffic in the spill area. Do not allow runoff into water, storm drains or drainage ditches. Wear appropriate personal protective equipment (PPE).

Environmental precautions

- Avoid run off to waterways and sewers.

Methods and material for containment and cleaning up

Containment/Clean-up
- Cover liquid spill with sand, earth or other non-combustible absorbent material.

Measures Wear appropriate personal protective equipment, avoid direct contact. Prevent entry into waterways, sewers, basements or confined areas.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- Handle and open container with care. Avoid release to the environment. Do not breathe (dust, vapor or spray mist) Use only in well ventilated areas. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Wear appropriate personal protective equipment, avoid direct contact.

Conditions for safe storage, including any incompatibilities

Storage

- Keep out of reach of children. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep from freezing. Store away from oxidizers strong acids and strong bases.

Incompatible Materials or Ignition Sources

- Strong acids, strong bases, and oxidizing agents.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure controls

Engineering Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Personal Protective Equipment

Pictograms

-

Respiratory

- In case of insufficient ventilation, wear suitable NIOSH approved respiratory protection.

Eye/Face

- Wear chemical splash safety goggles.

Skin/Body

- If prolonged exposure is anticipated, it is recommended for handlers to wear appropriate clothing to prevent skin contact.

Environmental Exposure Controls

- Avoid release to the environment.

Other Information

- See product label for specific use PPE instructions.

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Clear amber liquid.
Color	Amber	Odor	Slight solvent and licorice.
General Properties			
Boiling Point	No data available	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	pH	No data available
Specific Gravity/Relative Density	= 1.0012 Water=1	Water Solubility	Insoluble
Viscosity	18.5 Centipoise (cPs, cP) or mPas @ 40 C(104 F)		
Volatility			

Vapor Pressure	< 1 mmHg (torr) @ 39 F(3.8889 C)	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	260°F (127°C)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- Non-reactive under normal handling and storage conditions.

Chemical stability

- Stable

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Avoid storage with or near toxic substances. Direct sunlight. Excessive heat >110°F.

Incompatible materials

- Heat, strong acids, strong bases and oxidizing agents.

Hazardous decomposition products

- Decomposes upon heating to produce toxic vapors/gases which may include oxides of carbon and nitrogen, hydrogen chloride and/or aldehydes.

Section 11 - Toxicological Information

Information on toxicological effects

Components		
Permethrin (30%)	52645-53-1	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 500 mg/kg; Inhalation-Rat LC50 • 2.65 mg/L 4 Hour(s); Skin-Rabbit LD50 • >2000 mg/kg Irritation: Eye-Rabbit Mild irritation; Skin-Rabbit Essentially non-irritating
Piperonyl butoxide (30%)	51-03-6	**Acute Toxicity:** Ingestion/Oral-Rat • 4300 mg/kg; Inhalation-Rat • >5 mg/L 4 Hour(s); Skin-Rat LD50 • >2000 mg/kg; **Irritation:** Eye-Rabbit • Essentially non-irritating; Skin-Rabbit • Essentially non-irritating

GHS Properties	Classification
Respiratory sensitization	**OSHA HCS 2012** • Classification criteria not met
Serious eye damage/Irritation	**OSHA HCS 2012** • Classification criteria not met
Acute toxicity	**OSHA HCS 2012** • Acute Toxicity - Dermal - Classification criteria not met; Acute Toxicity - Inhalation 4; Acute Toxicity - Oral 4
Aspiration Hazard	**OSHA HCS 2012** • Aspiration 1
Carcinogenicity	**OSHA HCS 2012** • Classification criteria not met

Germ Cell Mutagenicity	**OSHA HCS 2012** • Classification criteria not met
Skin corrosion/Irritation	**OSHA HCS 2012** • Classification criteria not met
Skin sensitization	**OSHA HCS 2012** • Skin Sensitizer 1
STOT-RE	**OSHA HCS 2012** • Classification criteria not met
STOT-SE	**OSHA HCS 2012** • Specific Target Organ Toxicity Single Exposure 1
Toxicity for Reproduction	**OSHA HCS 2012** • Classification criteria not met

Route(s) of entry/exposure
- Inhalation, skin, eye, and ingestion.

Potential Health Effects

Inhalation

Acute (Immediate)
- Harmful if inhaled. Permethrin affects nervous system. Symptoms of overexposure to permethrin include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity.

Chronic (Delayed)
- No data available

Skin

Acute (Immediate)
- May cause an allergic reaction in individuals with a sensitivity to piperonyl butoxide.

Chronic (Delayed)
- No data available

Eye

Acute (Immediate)
- Under normal conditions of use, no health effects are expected.

Chronic (Delayed)
- No data available

Ingestion

Acute (Immediate)
- Harmful if ingested. Permethrin affects nervous system. Symptoms of overexposure to permethrin include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity. Aspiration hazard - small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Chronic (Delayed)
- No data available

Mutagenic Effects
- Permethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests. Piperonyl butoxide was not genotoxic in several tests, including the Ames mutagenicity assay, chromosome aberration in Chinese hamster ovary (CHO) cells, CHO/HGPRT assay with S9 activation and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells.

Carcinogenic Effects
- Permethrin caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver, lungs. The mechanism that triggers tumors in rodents is not relevant for the low exposures encountered under normal use conditions. Piperonyl butoxide is not classified as carcinogen by NTP, IARC and OSHA.

Reproductive Effects
- Permethrin did not cause reproductive toxicity in a two-generation study in rats. Piperonyl butoxide did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits.

Section 12 - Ecological Information

Toxicity

Components		
Permethrin (30%)	52645-53-1	**Aquatic Toxicity-Fish:** 96 Hour(s) LC50 *Blue gill* 0.00079 mg/L [Acute] 96 Hour(s) LC50 *Atlantic silverside* 0.0022 mg/L [Acute] NOEC *Fathead minnow* 0.0003 mg/L [Chronic] NOEC *Sheepshead minnow* 0.00083 mg/L [Chronic] **Aquatic Toxicity-Crustacea:** NOEC *Daphnia magna* 0.000039 mg/L [Chronic] NOEC *Mysid shrimp* 0.000011 mg/L [Chronic] LC50 *Hexagenia bilineuta* 0.0001 mg/L [Acute]

		96 Hour(s) LC50 *Mysid shrimp* 0.000019 mg/L [Acute]
Piperonyl butoxide (30%)	51-03-6	**Aquatic Toxicity-Fish:** LC50 *Rainbow Trout* 1.9 mg/L [Acute] LC50 *Sheephead minnow* 3.94 mg/L [Acute] NOEC *Fathead minnow* 0.04 mg/L [Chronic] **Aquatic Toxicity-Crustacea:** LC50 *Gammarus fasciatus (amphipod)* 0.51 mg/L [Acute] LC50 *Mysid shrimp* 0.49 mg/L [Acute] NOEC *Daphnia magna* 0.03 mg/L [Chronic]

Persistence and degradability

- No data available

Bioaccumulative potential

- Permethrin has a Log Pow of 6.1, but because of the ease with which biological systems degrade the molecule, the potential for bioconcentration and accumulation in the environment is low (BCF = 500). Permethrin: Bioconcentration factor (BCF) 300; Does not bioaccumulate.

Mobility in Soil

- Permethrin has a high affinity for organic matter (Koc = 86,000), there is little potential for movement in soil or entry into groundwater. Permethrin: Immobile in soil.

Other adverse effects

Potential Environmental Effects

- This pesticide is extremely toxic to aquatic organisms including fish and invertebrates. Care should be taken to avoid contamination of the aquatic environment. This product is highly toxic to bees.

Section 13 - Disposal Considerations

Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. Do not allow entry into storm drains, drainage ditches, gutters or surface waters.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. See product label for disposal instructions.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	UN3082	Bulk packaging only: Environmentally hazardous substance, liquid, n.o.s (Permethrin and Piperonyl butoxide)	9	III	Marine Pollutant
IMO/IMDG	UN3082	Packaging 5 L or greater: Environmentally hazardous substance, liquid, n.o.s (Permethrin and Piperonyl butoxide)	9	III	Marine Pollutant
IATA/ICAO	UN3082	Packaging 5 L or greater: Environmentally hazardous substance, liquid, n.o.s (Permethrin and Piperonyl butoxide)	9	III	Acute Aquatic Toxicity

Special precautions for user

- None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- No data available

Other information

IMO/IMDG

- No data available

IATA/ICAO • No data available

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • SARA Title III Section 313, Acute

FIFRA – Pesticide Labeling

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION

Hazard Statements • KEEP OUT OF REACH OF CHILDREN

Precautionary Statements •

Hazards to Humans and Domestic Animals • HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin eyes or clothing. Causes moderate eye irritation.

First Aid • If swallowed • Immediately call a poison control center or doctor • Do not induce vomiting unless told to by a poison control center or doctor • Do not give any liquid to the person • Do not give anything by mouth to an unconscious person If on skin or clothing • Take off contaminated clothing • Rinse skin immediately with plenty of water for 15-20 minutes • Call a poison control center or doctor for treatment advice If in eyes • Hold eye open and rinse slowly and gently with water for 15 20 minutes • Remove contact lenses if present after the first 5 minutes then continue rinsing eye • Call a poison control center or doctor for treatment advice If inhaled • Move person to fresh air • If person is not breathing call 911 or an ambulance then give artificial respiration preferably by mouth to mouth if possible • Call a poison control center or doctor for treatment advice
Note to Physician: Contains petroleum distillate - vomiting may cause aspiration pneumonia.

Environmental Hazards • This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist. This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

Physical or Chemical Hazards • Do not use, pour, spill or store near heat or open flame.

Inventory

Component	CAS	TSCA
Petroleum distillates, hydrotreated (mild) heavy paraffinic	64742-54-7	Yes
Petroleum distillates, hydrotreated (mild)	64742-55-8	Yes

light paraffinic		
Permethrin	52645-53-1	No
Piperonyl butoxide	51-03-6	Yes

United States

Environment

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Petroleum distillates, hydrotreated (mild) heavy paraffinic	64742-54-7	Not Listed
• Permethrin	52645-53-1	1.0 % de minimis concentration
• Piperonyl butoxide	51-03-6	1.0 % de minimis concentration
• Petroleum distillates, hydrotreated (mild) light paraffinic	64742-55-8	Not Listed

Section 16 - Other Information

Revision Date
- 14/December/2015

Last Revision Date
- 14/December/2015

Preparation Date
- 14/December/2015

Disclaimer/Statement of Liability
- The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

Novita Solutions LLC

DRIFT CONTROL

DEPOSITION AID AND DRIFT RETARDANT

ACTIVE INGREDIENTS:

Polyvinyl Polymer (Polyacrylamide)	35.25%
Inert Ingredients	64.75%
TOTAL	**100%**

All ingredients are exempt from tolerance requirements as specified in federal regulation 40 CFR 180.

KEEP OUT OF REACH OF CHILDREN

WARNING /ADVERTENCIA!

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

GHS HAZARDS: May be harmful if swallowed. May cause an allergic skin reaction. Causes eye irritation. May be harmful if inhaled. GHS PRECAUTIONS: Keep out of reach of children. Read label before use. Keep container tightly closed. Keep only in original container. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do then continue rinsing cautiously. If eye irritation persists: Get medical advice/attention.

DO NOT FREEZE. PRODUCT WILL CAUSE A SLIP HAZARD.

FIRST AID

Call a poison center or doctor to specify the appropriate emergency medical advice.
Have the product with you when calling a poison control center or doctor, or going for treatment.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present, after the first five minutes, then continue cautiously rinsing eye. If eye irritation persists: Get medical advice/attention.

IF ON SKIN OR CLOTHING: Take off contaminated clothing and wash it before reuse. Wash with plenty of soap and water for several minutes. If skin irritation occurs: Get medical advice or attention.

IF SWALLOWED: Unless advised otherwise by a poison control center or doctor, have person rinse mouth with water, if able. Do not give anything by mouth to an unconscious person. DO NOT INDUCE VOMITING.

IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth to mouth if possible.

GENERAL INFORMATION

NOVITA DRIFT CONTROL is an effective, easy-to-use adjuvant for deposition improvement and drift retardation in spraying operations. **NOVITA DRIFT CONTROL** is designed for general use in standard ground and aerial applications and is fully compatible with a wide variety of spray configurations including those with new A.I. and other specialized drift reduction nozzles. Further, **NOVITA DRIFT CONTROL** is compatible in tank mix application with a broad spectrum of crop protection pesticides, including the complete range of all branded and generic glyphosate formulations.

DIRECTIONS FOR USE

Dosages may be adjusted to compensate for environmental conditions or mechanical factors. Lower dosages may be used when spraying under calm winds, slow application speeds, low pressures, and lower boom heights with nozzles closer to the target. The greater the shear on the spray boom nozzle head, the greater the spray droplet fragmentation, which produces fines (mists) that may drift to non-targeted areas or evaporate. For best results in aerial application, use state-of-the-art techniques, such as pressure less than 45 psi and nozzles oriented 45 degrees back to straight back.

MIXING

NOVITA DRIFT CONTROL is very concentrated and performs effectively at ultra-low use rates even as low as 1-4 oz. per 100 gal. of water. Start with low dosage rates and increase as needed. A thickened or "stringy" solution indicates that too much **NOVITA DRIFT CONTROL** has been used.

Step 1. Select proper dosage for the spraying operation. Step 2. Fill mix tank with water, pesticide, fertilizer, surfactant / additives and agitate. Step 3. Shake bottle well before using. Step 4. For best mixing results, either (1) inject **NOVITA DRIFT CONTROL** liquid into the suction side of the feeder or recirculating pump to obtain adequate dispersion of the polymer throughout the pesticide solution, or (2) slowly add **NOVITA DRIFT CONTROL** liquid to the agitating tank mix at the area of highest turbulence. Step 5. Continue to agitate mix tank for at least three minutes before spraying. Step 6. Follow all cleanup precautions on label of pesticide used. Follow governmental procedures for disposal of pesticide spray solution.

DDSAGE CHART

Spray Pressure	Nozzle Orientation	NOVITA DRIFT CONTROL DOSAGE
Aerial applied below 45 psi	Straight Back 45° Angle Back	2 - 6 oz. / 100 gals. 4 - 8 oz. / 100 gals.
Ground Application Low (below 30 psi)	Flat Fan, Flooding Off-Center	1 - 4 oz. / 100 gals. 3 - 5 oz. / 100 gals.
Medium (30 - 50 psi)	Flat Fan, Flooding Off-Center Spray Guns	3 - 4 oz. / 100 gals. 4 - 6 oz. / 100 gals. 5 - 8 oz. / 100 gals.
High (over 50 psi)	Spray Guns	8 - 32 oz. / 100 gals.

Higher spray pressure or greater agitation requires higher rates to maintain good drift control. If unacceptable drift is still occurring, add additional **NOVITA DRIFT CONTROL** in increments of 1 oz. per 100 gal. of spray solution.

STORAGE AND DISPOSAL

STORAGE: Store in a cool well-ventilated place. Keep in original container tightly closed. Do not reuse empty container. Do not store with food, feed, or other material to be used or consumed by humans or animals. Do not contaminate water supplies. For optimal storage, store between 40° and 90° F.

DISPOSAL: Do not contaminate water, food or feed by storage or disposal. Dispose of contents container to an approved waste disposal facility in accordance with all federal, state and local regulations. Triple rinse (or equivalent) adding rinse water to application tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by local regulations. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at www.acrecycle.org.

WARRANTY

Novita Solutions, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Novita Solutions, LLC MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANT-ABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. Inherent Risks of Use: It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Novita Solutions, LLC or the seller. All such risks shall be assumed by buyer. Limitation of Remedies: The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Novita Solutions, LLC's election, one of the following: 1. Refund of purchase price paid by buyer or user for product bought, or 2. Replacement of amount of product used Novita Solutions, LLC shall not be liable for losses or damages resulting from handling or use of this product unless Novita Solutions, LLC is promptly notified of such loss or damage in writing. In no case shall Novita Solutions, LLC be liable for consequential or incidental damages or losses. The terms of the "Warranty Disclaimer" above and this "Limitation of Remedies" cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Novita Solutions, LLC or the seller is authorized to vary or exceed the terms of the "Warranty Disclaimer" or this "Limitation of Remedies" in any manner.

NET CONTENTS:

- ☐ 2.5 U.S. Gallons (9.46 liters)
- ☐ 30 Gallons (113.55 liters)
- ☐ 270 Gallons (1022.06 liters)

Distributed By: Novita Solutions, LLC
4621 E University Drive
Prosper, TX 75078

SAFETY DATA SHEET

Novita Drift Control

SDS DATE: 09/21/2017

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Alligare Drift Control

DISTRIBUTOR: Novita Solutions, LLC
ADDRESS: 9 N. 8th Street, Opelika, AL 36801

EMERGENCY CHEMTREC PHONE: US: 1-800-424-9300 International: 1-202-483-7616

CHEMICAL NAME: Proprietary mixture
CHEMICAL FAMILY: Anionic polyacrylamide polymer emulsion
CHEMICAL FORMULA: Mixture

PRODUCT USE: Deposition aid/drift control

SECTION 1 NOTE: None

SECTION 2: HAZARDOUS INGREDIENTS

GHS Ratings:

Toxicity Categories

Skin corrosive/ irritation	Category 2
Eye damage/irritation	Category 2B

Signal Word: WARNING

GHS Hazards
H303 May be harmful if swallowed
H315 Causes skin irritation
H320 Causes eye irritation

Do Not Freeze
Product will cause a slip hazard

GHS Precautions
P102 Keep out of reach of children
P103 Read label before use
P233 Keep container tightly closed
P234 Keep only in original container
P260 Do not breathe dust/fume/gas/mist/vapors/spray
P264 Wash thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P280 Wear protective gloves/protective clothing/ eye protection/ face protection
P331 Do not induce vomiting
P362 Take off contaminated clothing and wash it before reuse
P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do then continue rinsing cautiously
P337+313 If eye irritation persists: Get medical advice/attention
P332+313 If skin irritation persists: Get medical advice/attention

SECTION 3: HAZARDS IDENTIFICATION

INGREDIENT	CAS NO.	% WT
Distillates, petroleum, hydrotreated light	64742-47-8	20 – 30%
Proprietary	Proprietary	1 – 5%
Proprietary	Proprietary	1 – 5%
Proprietary	Proprietary	1 – 5%

NOTE: Product does NOT contain any pesticides or pest control agents

SECTION 3 NOTES: These specific chemical identity and /or exact percentage (concentration) of composition has been withheld as a trade secret.

CARCINOGENICITY
OSHA: No **ACGIH:** No **NTP:** No **IARC:** No **OTHER:** No

SAFETY DATA SHEET

Novita Drift Control

SDS DATE: 09/21/2017

SECTION 4: FIRST AID MEASURES

EYE CONTACT- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present, after the first 5 minutes, then continue cautiously rinsing eye. Have the product container with you when calling a poison control center or doctor, or going for treatment. If eye irritation persists: Get medical advice/attention.

SKIN CONTACT - IF ON SKIN OR CLOTHING: Take off contaminated clothing and wash it before reuse. Wash with plenty of soap and water. Call a poison center, doctor, chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. If skin irritation occurs: Get medical advice or attention.

INGESTION - IF SWALLOWED: Unless advised otherwise by a poison control center or doctor, have person rinse mouth with water, if able. Do not give anything by mouth to an unconscious person. Immediately call a poison center, doctor, chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. DO NOT INDUCE VOMITING

INHALATION - IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth to mouth if possible.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES: None

SECTION 5: FIRE FIGHTING MEASURES

NFPA HAZARD CLASSIFICATION

HEALTH: 2 **FLAMMABILITY:** 0 **REACTIVITY:** 0 **OTHER:** -

IN CASE OF FIRE: Use Foam, Dry Chemical, CO2, Water Spray to extinguish.

SPECIAL FIRE FIGHTING PROCEDURES: Use alcohol-type or universal-type foams on larger fires. Smaller fires should be extinguished with carbon dioxide or dry chemical. Do not use water or foam directly on the fire. Use self-contained breathing apparatus with fighting any fire in an enclosed area.

UNUSUAL FIRE AND EXPLOSION HAZARDS: May be ignited by heat, sparks or flames. Vapors may travel to a source of ignition and flash back. Containers may explode in heat of fire.

HAZARDOUS DECOMPOSITION PRODUCTS: During combustion, oxides of carbon

SECTION 5 NOTES: None

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Surround and absorb all spills. Material should be collected and disposed in proper manner. Dike the area to prevent spill from spreading. Spilled material should be absorbed onto an inert material and scooped up. Flush spill area with water thoroughly until slipperiness is gone. Soak up spill with a suitable absorbent. Sweep up absorbed material and place in a chemical waste container for disposal. Wear suitable protective equipment.

SECTION 6 NOTES: Any amount, even very small amounts, of product combined with water is an extreme slip hazard. Do not add water until absorbent material has been applied to spills.

SECTION 7: HANDLING AND STORAGE

HANDLING Keep out of reach of children. Read label before use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Wear protective gloves/protective clothing/eye protection/face protection.

STORAGE: Store in a cool well-ventilated place. Keep in original container tightly closed. Do not reuse empty container. Do not store with food, feed, or other material to be used or consumed by humans or animals. Do not contaminate water supplies. For optimal storage, store between 40° and 90° F. Do Not Freeze.

SECTION 7 NOTES: None

SAFETY DATA SHEET

Novita Drift Control

SDS DATE: 09/21/2017

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

	OSHA		ACGIH		NIOSH	
	PEL	STEL	PEL	STEL	PEL	STEL
Petroleum distillate hydrotreated 64742-47-8	500ppm	120 mg/m3				

VENTILATION: Normal room ventilation (mechanical) or outdoor use should be satisfactory.

RESPIRATORY PROTECTION: Wear a NIOSH/OSHA approved respirator, approved for use with propionic acid, if necessary.

EYE PROTECTION: Chemical goggles and face shield

SKIN PROTECTION: Wear protective gloves, long-sleeved shirts and pants.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Eye wash and safety shower should be easily accessible

WORK HYGIENIC PRACTICES: Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse.

EXPOSURE GUIDELINES: If exposed, see section 4 for acute exposure first aid.

SECTION 8 NOTES: None

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Milky, White, and Viscous

ODOR: Hydrocarbon
ORDER THRESHOLD; Not known

PHYSICAL STATE: Liquid

pH AS SUPPLIED: Not applicable
pH (Other): 6-8 upon dilution in water

INITIAL BOILING POINT: **F:** Unknown
C: Unknown

BOILING POINT RANGE: **F:** Unknown
C: Unknown

MELTING POINT: **F:** Unknown
C: Unknown

FREEZING POINT: **F:** Unknown
C: Unknown

FLASH POINT: **F:** >200
C: >93

METHOD USED: PMCC

FLAMMABILITY (solid, gas): Not applicable

FLAMMABLE LIMITS IN AIR, UPPER: Unknown
(% BY VOLUME) **LOWER:** Unknown

VAPOR PRESSURE (mmHg): **@** Unknown
F: Unknown
C: Unknown

VAPOR DENSITY (AIR = 1): **@** Unknown
F: Unknown
C: Unknown

RELATIVE DENSITY: 1.037 to 1.063

EVAPORATION RATE: Unknown
BASIS (butyl acetate=1):

SOLUBILITY IN WATER: Limited by viscosity

PARTITION COEFFICIENT: n-octanol/water): Unknown

AUTO-IGNITION TEPERATURE: Unknown

DECOMPOSITION TEMPERATURE: Unknown

VISCOSITY: **@** 500 – 2500 cps
F: 104
C: 40

SECTION 9 NOTES: Value are not product specifications.
Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

SAFETY DATA SHEET

Novita Drift Control

SDS DATE: 09/21/2017

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable ◉ Unstable ○

CONDITIONS TO AVOID (STABILITY): None Known

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Under fire conditions, oxides of carbon and nitrogen

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID (POLYMERIZATION): None known

SECTION 10 NOTES: None

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

MIXTURE TOXICITY:
LD50 Acute oral toxicity >5000mg/kg (Rat)
LD50 Acute dermal toxicity >2000mg/kg (Rabbit)
Acute eye Irritation (Rabbit) effects cleared in 7 days
Acute Dermal irritation (Rabbit) 4.0 based on a 72 hour observation

COMPONENT TOXICITY None

SECTION 11 NOTES: None

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:

ALGAE TEST RESULTS **Duration: 72 hr**
Test: Growth Inhibition (OECD 201)
Species: Green Algae (Selenastrum capricornutum)
>100 mg/l IC50 Information based on a structurally similar material.

FISH TEST RESULTS **Duration: 96 hr.**
Test: Acute toxicity, freshwater (OECD 203)
Species: Rainbow Trout (Oncorhyncus mykiss)
120 mg/l LC50

Test: Acute toxicity, freshwater (OECD 203) **Duration: 96 hr**
Species: Zebra Fish (Brachydanio rerio)
>100 mg/l LC50 Information based on a structurally similar material

INVERTEBRATE TEST RESULTS **Duration: 48 hr**
Test: Acute Immobilization (OECD 202)
Species: Water Flea (Daphnia magna)
>100 mg/l EC50 Information based on a structurally similar material

DEGRADATION
Test: CO2 Evolution: Modified Sturm (OECD 301B)
The polymeric ingredient is not readily biodegradable. The large polymer size is incompatible with transport across biological membranes and diffusion; the bioconcentration factor is therefore considered to be zero.

ECOTOXICITY: Not available

BIOACCUMULATIVE POTENTIAL: Not available

MOBILITY IN SOIL: Not available

OTHER ADVERSE EFFECTS: Not available

SECTION 12 NOTES: None

SAFETY DATA SHEET

SDS DATE: 09/21/2017

Novita Drift Control

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Do not contaminate water, food or feed by storage or disposal. Dispose of contents / container to an approved waste disposal facility in accordance with all federal, state and local regulations.

CONTAINER DISPOSAL: Triple rinse (or equivalent) adding rinse water to application tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by local regulations.

RCRA HAZARD CLASS: None

SECTION 13 NOTES: None

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

DOT Shipping Description: Not Regulated

U.S. Surface Freight Classification: ADHESIVES, ADJUVANTS, SPREADERS OR STICKERS (NMFC 4610; CLASS: 60)
Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

OTHER AGENCIES: None

SECTION 14 NOTES: None

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): Mixture not listed

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not Regulated

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Not Regulated

311/312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS:
This product contains no substances subject to the reporting requirements of Section 313 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) or 40 CFR Part 372 in concentrations above the de minimis concentration level.

CAS Number	Chemical Name	Concentration
Mixture	Glycol ethers (fraction of product matching EPA definition)	1.00-2.99

STATE REGULATIONS: California proposition 65: This product contains a detectable amount of ethylene oxide, which is known to the state of California to cause cancer and/or reproductive toxicity.

Ethoxylated products may contain residual amounts of ethylene oxide (EO) which can accumulate in the container headspace and be released into the ambient environment. This process is enhanced when the product is agitated, as during tank car loading and unloading, and blending operations. Ethylene oxide causes tumors in laboratory animals. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Level (PEL) for EO is 1 ppm for an eight-hour time weighted average exposure. The standard regulates occupational exposure to EO from all sources, including products containing residual EO. It is the responsibility of the employer to comply with OSHA ethylene oxide standard (29) CFR 1910.1047).

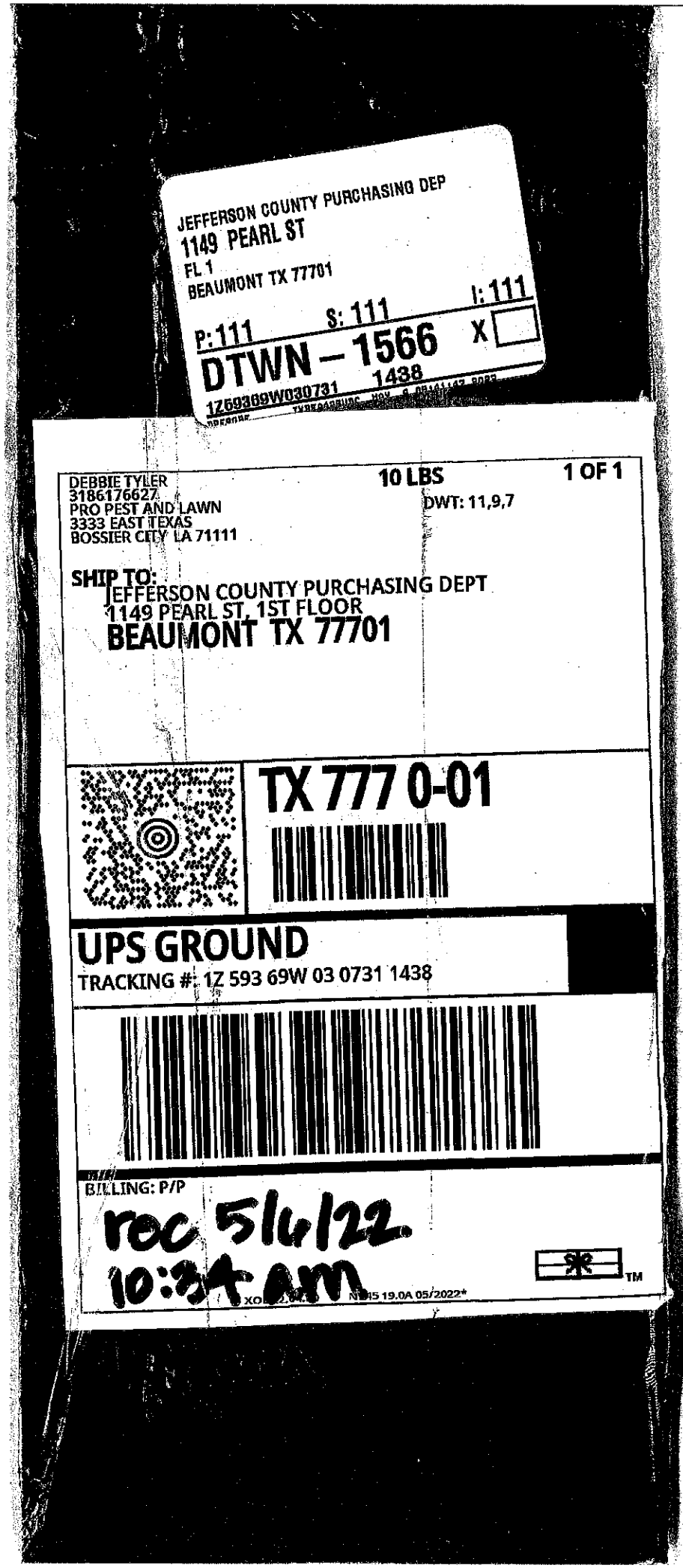
INTERNATIONAL REGULATIONS: None

SECTION 15 NOTES: None

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: None

DISCLAIMER: The recommendation for safe handling and protection procedures is believed to be generally suitable for the standard uses of this compound. However, each user should identify his intended uses of this material and determine whether they are appropriate. All data included in this document is released as typical values and should not be utilized to determine the suitability of this material for a particular use or purpose. No warranty, either expressed or implied, is hereby made, nor do we give permission, inducement, or recommendations to practice any patented invention without a license. All data is offered for consideration, investigation and verification purposes only.


JEFFERSON COUNTY PURCHASING DEP
1149 PEARL ST
FL 1
BEAUMONT TX 77701
P: 111
S: 111
I: 111
DTWN – 1566
X
1438
1Z69369W030731
DEBBIE TYLER
3186176627
PRO PEST AND LAWN
3333 EAST TEXAS
BOSSIER CITY LA 71111
10 LBS
1 OF 1
DWT: 11,9,7
SHIP TO:
JEFFERSON COUNTY PURCHASING DEPT
1149 PEARL ST, 1ST FLOOR
BEAUMONT TX 77701
TX 777 0-01
UPS GROUND
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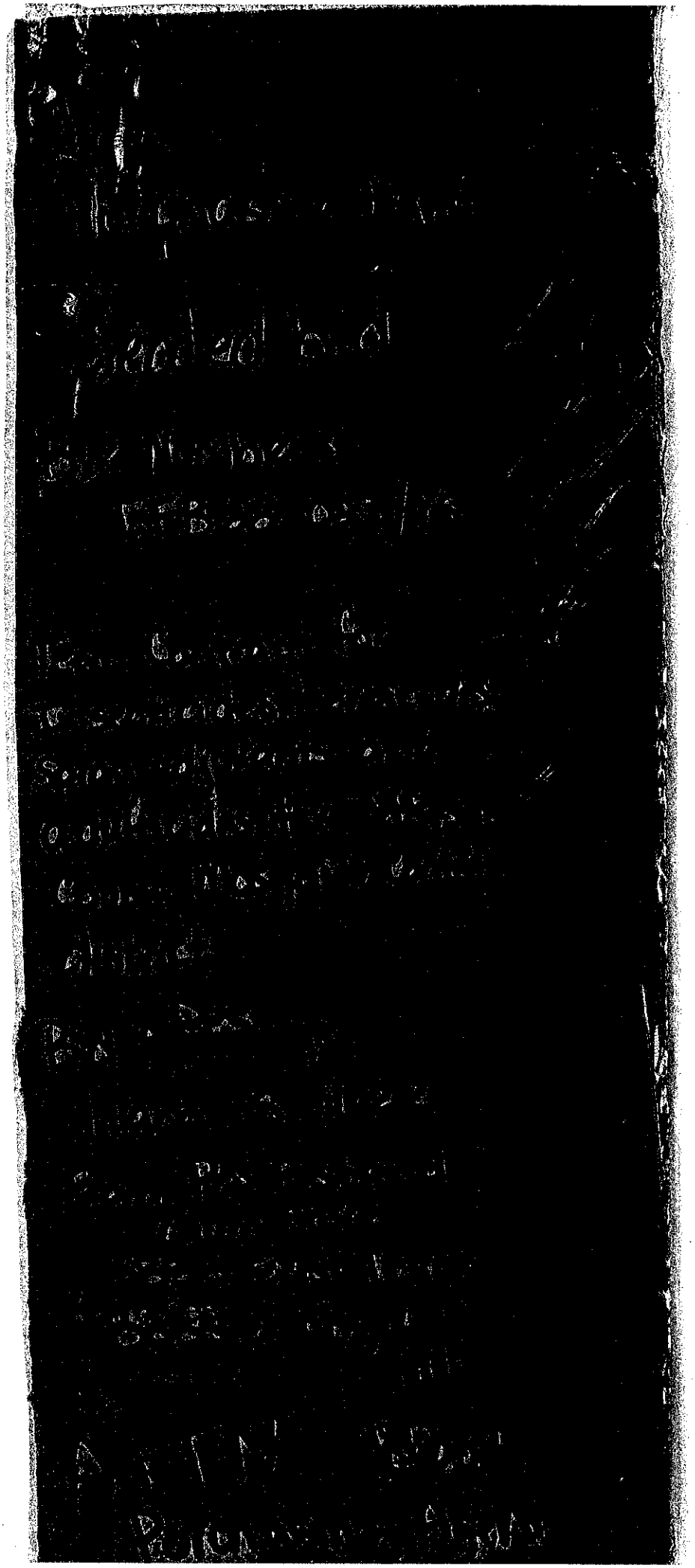

Original

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street, 1st Floor, Beaumont, TX 77701 409-835-8593 Fax 409-835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

April 12, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for **IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and three (3) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District**
BID NO:	**IFB 22-023/YS**
DUE DATE/TIME:	**11:00 AM CT, Wednesday, May 11, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these requirements should be directed to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provisions of services. Individuals requiring special accommodations are requested to contact our office at 409-835-8593 to make arrangements no later than seven (7) calendar days prior to the submittal deadline. Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

Publish: Beaumont Enterprise & Port Arthur News – April 13, 2022 and April 20, 2022

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Bid Submissions:

Bidder is responsible for submitting: One (1) original and three (3) bid copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to see if addenda or additional instructions have been posted. Failure to return all required forms could result in a response being declared as non-responsive. https://www.co.jefferson.tx.us/Purchasing/

Instructions to Bidders

1. Bid Submission

Bids must be submitted in complete original form by mail or messenger to the following address:

Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Late bids will not be accepted and will be returned unopened to the bidder.

All bids submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

Bidder shall submit bid in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the Bid Number, Bid Name, Bid Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Bidder is responsible for submitting:

- **One (1) Original Bid Copy and (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.**

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

https://www.co.jefferson.tx.us/Purchasing/

DEADLINE FOR QUESTIONS:

The deadline for asking questions in writing or requesting additional information (in writing or in person) is 5:00 pm, Thursday, April 28, 2022.

2. Bid Submissions During Time of Inclement Weather, Disaster, or Emergency

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3. Courthouse Security

Bidders are advised that all visitors to the Courthouse must pass through Security. **Bidders planning to hand deliver bids must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal.** Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures recommended by the CDC within its facilities. Visitors to the courthouse will be required to wear a mask within the courthouse.

Bidders are strongly urged to plan accordingly.

4. Preparation of Bids

The bid shall be legibly printed in ink or typed.

The County requests that bid submissions NOT be bound by staples or glued spines.

If a unit price or extension already entered is to be altered, it shall be crossed out and initialed in ink by the bidder.

The bid shall be legally signed and shall include the complete address of the bidder.

Jefferson County is exempt from Federal and State Sales Taxes, and such taxes shall not be included in bid prices.

5. Signatures

All bids, notifications, claims, and statements must be signed by an individual authorized to bind the bidder. The individual signing certifies, under penalty of perjury, that he or she has the legal authorization to bind the bidder.

6. County Holidays – 2021:

January 18, 2021	Martin Luther King, Jr. Day	Monday
February 15, 2021	President's Day	Monday
April 2, 2021	Good Friday	Friday
May 31, 2021	Memorial Day	Monday
July 5, 2021	Independence Day	Monday
September 6, 2021	Labor Day	Monday
November 11, 2021	Veteran's Day	Thursday
November 25 & 26, 2021	Thanksgiving	Thursday & Friday
December 23 & 24, 2021	Christmas	Thursday & Friday
December 31, 2021	New Year's	Friday

7. Rejection or Withdrawal

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within 90 days after opening date.

8. Emergency/Declared Disaster Requirements

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

9. Award

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group,

whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial nonconformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment. In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

10. Contract

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

11. Waiver of Subrogation

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

12. Fiscal Funding

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

13. Bid Results

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

14. Changes and Addenda to Bid Documents

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

15. Specifications

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate.

All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

16. Delivery

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

17. Interpretation of Bid and/or Contract Documents

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

18. Currency

Prices calculated by the bidder shall be stated in U.S. dollars.

19. Pricing

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

20. Notice to Proceed/Purchase Order

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

21. Certification

By signing the offer section of the Offer and Acceptance page, bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The bidder hereby certifies that the individual signing the bid is an authorized agent for the bidder and has the authority to bind the bidder to the contract.

22. Definitions

"County" – Jefferson County, Texas.

"Contractor" – The bidder whose proposal is accepted by Jefferson County.

23. Minority-Women Business Enterprise Participation

It is the desire of Jefferson County to increase the participation of Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

General Conditions of Bidding and Terms of Contract

By execution of this document, the vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. Bidding

1.1 Bids. All bids must be submitted on the bid form furnished in this package.

1.2 Authorized Signatures. The bid must be executed personally by the vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the vendor shall accompany the bid to become a valid bid.

1.3 Late Bids. Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 Withdrawal of Bids Prior to Bid Opening. A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 Withdrawal of Bids after Bid Opening. Bidder agrees that its offer may not be withdrawn or cancelled by the vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 Bid Amounts. Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 Exceptions and/or Substitutions. All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 Alternates. The Invitation for Bid and/or specifications may expressly allow bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 Descriptions. Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 Bid Alterations. Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 Tax Exempt Status. Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 Quantities. Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 Bid Award. Award of contract shall be made to the most responsible, responsive bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 Silence of Specifications for Complete Units. All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 Addenda. Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 General Bid Bond/Surety Requirements. Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 General Insurance Requirements. Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 Responsiveness. A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 Responsible Standing of Bidder. To be considered for award, bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 Confidential/Proprietary Information

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 Public Bid Opening. Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. Performance

2.1 Design, Strength, and Quality. Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 Age and Manufacture. All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 Delivery Location. All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 a.m. to 4:00 p.m., Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 Delivery Schedule. Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 Delivery Charges. All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 Installation Charges. All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 Operating Instructions and Training. Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 Storage. Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 Compliance with Federal, State, County, and Local Laws. Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA. The bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 Patents and Copyrights. The successful vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 Samples, Demonstrations and Testing. At Jefferson County's request and direction, bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the bidder/vendor.

2.13 Acceptability. All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 Maintenance. Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 Material Safety Data Sheets. Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 Evaluation. Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. Purchase Orders and Payment

3.1 Purchase Orders. A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 Invoices. All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 Prompt Payment. In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful bidder(s) is required to pay subcontractors within ten (10) days after the successful bidder receives payment from the County.

3.4 Funding. Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. Contract

4.1 Contract Definition. The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful bidder and Jefferson County.

4.2 Change Order. No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 Price Re-determination. A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 Termination. Jefferson County reserves the right to terminate the contract for default if the bidder breached any of the terms therein, including warranties of bidder or if the bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies

which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the bidder in default.

4.5 Conflict of Interest. Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 Injuries or Damages Resulting from Negligence. Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 Interest by Public Officials. No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 Warranty. The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.9 Uniform Commercial Code. The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.10 Venue. This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.11 Sale, Assignment, or Transfer of Contract. The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.12 Silence of Specifications. The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

Federal Emergency Management Agency (FEMA)
MANDATED CONTRACT PROVISIONS

1. REMEDIES

a. Standard. Contracts for more than the simplified acquisition threshold, currently set at $250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. See 2 C.F.R. Part 200, Appendix II(A).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

2. TERMINATION FOR CAUSE AND CONVENIENCE

a. Standard. All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity, including the manner by which it will be affected and the basis for settlement. See 2 C.F.R. Part 200, Appendix II(B).

b. Applicability. This requirement applies to all FEMA grant and co-operative agreement programs.

3. EQUAL EMPLOYMENT OPPORTUNITY

If applicable, exact language below in subsection 3.d is required.

a. Standard. Except as otherwise provided under 41 C.F.R. Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. §60- 1.4(b), in accordance with Executive Order 11246, Equal Employment Opportunity (30 Fed. Reg. 12319, 12935, 3 C.F.R. Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, Amending Executive Order 11246 Relating to Equal Employment Opportunity, and implementing regulations at 41 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See 2 C.F.R. Part 200, Appendix II(C).

b. Key Definitions.

i. Federally Assisted Construction Contract. The regulation at 41 C.F.R. § 60-1.3 defines a "federally assisted construction contract" as any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.

ii. Construction Work. The regulation at 41 C.F.R. § 60-1.3 defines "construction work" as the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

c. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

d. Required Language. The regulation at 41 C.F.R. Part 60-1.4(b) requires the insertion of the following contract clause.

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's non-compliance with the non-discrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any sub-contract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it

participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24,1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

4. DAVIS-BACON ACT

a. Standard. All prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction). See 2 C.F.R. Part 200, Appendix II(D). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week.

b. Applicability. The Davis-Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Non-profit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It DOES NOT apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must do the following:

i. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

ii. Additionally, pursuant 2 C.F.R. Part 200, Appendix II(D), contracts subject to the Davis-Bacon Act, must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). The Copeland Anti-Kickback Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA.

iii. Include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction").

COMPLIANCE WITH THE DAVIS-BACON ACT:

a. All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) and the requirements of 29C.F.R.pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable.

b. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.

c. Additionally, contractors are required to pay wages not less than once a week.

5. COPELAND ANTI-KICKBACK ACT

a. Standard. Recipient and subrecipient contracts must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

b. Applicability. This requirement applies to all contracts for construction or repair work above $2,000 in situations where the Davis-Bacon Act also applies. It DOES NOT apply to the FEMA Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). Each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA. Additionally, in accordance with the regulation, each contractor and subcontractor must furnish each week a statement with respect to the wages paid each of its employees engaged in work covered by the Copeland Anti-Kickback Act and the Davis Bacon Act during the preceding weekly payroll period. The report shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work.

COMPLIANCE WITH THE COPELAND "ANTI-KICKBACK ACT":

a. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

b. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. §5.12."

6. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

a. Standard. Where applicable (see 40 U.S.C. §§ 3701-3708), all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II(E). Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Further, no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous.

b. Applicability. This requirement applies to all FEMA contracts awarded by the non-federal entity in excess of $100,000 under grant and cooperative agreement programs that involve the employment of mechanics or laborers. It is applicable to construction work. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open
market, or contracts for transportation or transmission of intelligence.

The regulation at 29 C.F.R. § 5.5(b) provides contract clause language concerning compliance with the Contract Work Hours and Safety Standards Act. FEMA suggests including the following contract clause: Compliance with the Contract Work Hours and Safety Standards Act.

> **(1) Overtime requirements.** No contractor or subcontractor contracting for any Part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
>
> **(2) Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
>
> **(3) Withholding for unpaid wages and liquidated damages.** Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
>
> **(4) Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

7. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

a. Standard. If the FEMA award meets the definition of "funding agreement" under 37C.F.R. § 401.2(a) and the non-Federal entity wishes to enter into a contract with a small business firm or non-profit organization regarding the substitution of parties, assignment or performance of experimental,
developmental, or research work under that "funding agreement," the non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA. See 2 C.F.R. Part 200, Appendix II(F).

b. Applicability. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

c. Funding Agreements Definition. The regulation at 37 C.F.R. § 401.2(a) defines "funding agreement" as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

8. CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

a. Standard. If applicable, contracts must contain a provision that requires the contractor to agree to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). Violations must be reported to FEMA and the Regional Office of the Environmental Protection Agency. See 2 C.F.R. Part 200, Appendix II(G).

b. Applicability. This requirement applies to contracts awarded by a non-Federal entity of amounts in excess of $150,000 under a federal grant.

CLEAN AIR ACT:

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

2. The contractor agrees to report each violation to Jefferson County and understands and agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT:

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

2. The contractor agrees to report each violation to Jefferson County agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

9. DEBARMENT AND SUSPENSION

a. Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

c. Requirements.

i. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. See 2

C.F.R. Part 200, Appendix II(H); and 2 C.F.R. § 200.213. A contract award must not be made to parties listed in the SAM Exclusions. SAM Exclusions is the list maintained by the General Services Administration that contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. SAM exclusions can be accessed at www.sam.gov. See 2 C.F.R. § 180.530.

ii. In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. This includes parties that receive Federal funding indirectly, such as contractors to recipients and subrecipients. The key to the exclusion is whether there is a "covered transaction," which is any non-procurement transaction (unless excepted) at either a "primary" or "secondary" tier. Although "covered transactions" do not include contracts awarded by the Federal Government for purposes of the non-procurement common rule and DHS's implementing regulations, it does include some contracts awarded by recipients and subrecipients.

iii. Specifically, a covered transaction includes the following contracts for goods or services:

1. The contract is awarded by a recipient or subrecipient in the amount of at least $25,000.

2. The contract requires the approval of FEMA, regardless of amount.

3. The contract is for federally-required audit services.

4. A subcontract is also a covered transaction if it is awarded by the contractor of a recipient or subrecipient and requires either the approval of FEMA or is in excess of $25,000.

The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified.

SUSPENSION AND DEBARMENT:

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by the County. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the County, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

10. BYRD ANTI-LOBBYING AMENDMENT

a. Standard. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. FEMA's regulation at 44 C.F.R. Part 18 implements the requirements of 31 U.S.C. § 1352 and provides, in Appendix A to Part 18, a copy of the certification that is required to be completed by each entity as described in 31 U.S.C. § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the Federal awarding agency.

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs. Contractors that apply or bid for a contract of $100,000 or more under a federal grant must file the required certification. See 2 C.F.R.Part 200, Appendix II(I); 31 U.S.C. § 1352; and 44 C.F.R. Part 18.
Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

c. Required Certification.

If applicable, contractors must sign and submit to the non-Federal entity the **"Certification Regarding Lobbying" Form** included within these bid specifications.

11. PROCUREMENT OF RECOVERED MATERIALS

a. Standard. A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. See 2 C.F.R. Part 200, Appendix II(J); and 2 C.F.R. §200.322.

b. Applicability. This requirement applies to all contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.

c. Requirements. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired by the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

1. Competitively within a timeframe providing for compliance with the contract performance schedule;

2. Meeting contract performance requirements; or

3. At a reasonable price.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:
https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Although FEMA does not currently require additional provisions, FEMA recommends the following:

1. ACCESS TO RECORDS

a. Standard. All recipients, subrecipients, successors, transferees, and assignees must acknowledge and agree to comply with applicable provisions governing DHS access to records, accounts, documents, information, facilities, and staff. Recipients must give DHS/FEMA access to, and the right to examine and copy, records, accounts, and other documents and sources of information related to the federal financial assistance award and permit access to facilities, personnel, and other individuals and information as may be necessary, as required by DHS regulations and other applicable laws or program guidance. See DHS Standard Terms and Conditions: Version 8.1 (2018). Additionally, Section 1225 of the Disaster Recovery Reform Act of 2018 prohibits FEMA from providing reimbursement to any state, local, tribal, or territorial government, or private non-profit for activities made pursuant to a contract that purports to prohibit audits or internal reviews by the FEMA administrator or Comptroller General.

ACCESS TO RECORDS:

The following access to records requirements apply to this contract:

(1)The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

(2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.

(4) In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

2. CHANGES

a. Standard. To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

b. Applicability. FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

3. DHS SEAL, LOGO, AND FLAGS

a. Standard. Recipients must obtain permission prior to using the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials. See DHS Standard Terms and Conditions: Version 8.1 (2018).

b. Applicability. FEMA recommends that all non-Federal entities place in their contracts a provision that a contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

"The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval."

4. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

a. Standard. The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

b. Applicability. FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

c. "This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

5. NO OBLIGATION BY FEDERAL GOVERNMENT

a. Standard. FEMA is not a party to any transaction between the recipient and its contractor. FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

6. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

a. Standard. Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

Special Requirements/Instructions

The following requirements and instructions **supersede** General Requirements where applicable.

1. Bid Requirement

Each bidder shall ensure that required parts of the bid are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Bidder is responsible for submitting:

One (1) Original Bid Copy and three (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

All bids shall be tightly sealed in an opaque envelope or box and plainly marked "SEALED BID."

The outside of the envelope or box shall also include: Bid Number, Bid Name, Bid Due Date, Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB. All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

2. Vendor Registration: SAM (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

Bidders are strongly encouraged to review their firm's SAM (System for Award Management) status prior to Bid Submission.

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission)

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission) – CONTINUED

FORM 1295 Exemptions:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law? The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement. A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and o any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

Upon entering into a contract or professional agreement, the Jefferson County Purchasing Department will submit a request to the Vendor to both:

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department.

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/clf_info_form1295.htm

4. Multiple Vendor Award

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

5. Delivery

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

6. Payment

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to: Jefferson County Auditing Department, Attention: Accounts Payable, 1149 Pearl Street, 7th floor, Beaumont, TX 77701.

7. Usage Reports

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases

to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

8. Insurance

The contractor (including any and all subcontractors as defined in Section 9.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation	Statutory Coverage (See Section 9 Below)

9. Workers' Compensation Insurance

9.1 Definitions:

9.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

9.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

9.1.3 **Persons providing services ou the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

9.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

9.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – refer to Section 8 above.

9.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

9.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

9.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

9.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

9.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

9.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

9.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

9.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

9.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

9.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

9.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

9.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

9.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

9.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

9.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

9.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

9.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs 9.1. – 9.7., with the certificates of coverage to be provided to the person for whom they are providing services.

9.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements

will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

9.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

Minimum Specifications

The following requirements and specifications **supersede** General Requirements where applicable. Contact Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us, regarding any questions or comments. Please reference bid number IFB 22-023/YS.

Scope

Vendor shall provide Insecticides, Herbicides, Spray Adjuvants, and Adulticides for the Jefferson County Mosquito Control District subject to the terms and conditions stated for an initial period **beginning on or about date of award.**

Bidders shall attach to bid form, a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Prices quoted shall be F.O.B. Jefferson County Mosquito Control District, Jefferson County Airport, 1st Street, Nederland, TX. Bidder bears freight charges. All prices must be written in ink or typewritten.

Quote unit prices extended to lump sum prices. The basis of the award will be the unit prices quoted. The County reserves the right to increase or decrease the quantity purchased based on weather conditions and availability of funds.

The County reserves the right to make the award to one (1) successful bidder or per line item.

Purchase orders for insecticides, herbicides, adjuvants, and adulticides will be released to the successful bidder(s) **on an as-needed basis. MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Refer questions of a commercial nature to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us; and questions of a technical nature to Denise Wheeler, Director, Jefferson County Mosquito Control, wheeler@co.jefferson.tx.us.

A price re-determination may be considered by Jefferson County only at the twelve (12) month and twenty-four (24) month anniversary dates of the contract. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

Approximate Annual Usage

No promise is made or implied for quantities that will be purchased. Orders will be placed on an **as-needed basis** for the duration of the contract. Purchase Orders will be released to the successful bidder(s) as required. **MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Contract

This bid, when properly accepted by Jefferson County Commissioners' Court, shall constitute a contract equally binding between the successful bidder and Jefferson County. No different or additional terms will become a part of this contract.

The brand name references are for description only, and are not intended to exclude other herbicides or adjuvants of equal quality. Bidders desiring to substitute items may do so provided brand name is **indicated on Bid Form**. Change of container size may disqualify bid. Dilution ratio will be a factor in award of chemicals.

Bidders shall attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Item	Description
1	**MSMA herbicide** – to contain 6.00 lb. MSMA (Mono-sodium Acid Methanearsonate) plus surfactant per gallon
2	**Tordon 101** – to contain 10.2% 4-amino3,5,6-trichloropicolinic acid (picloram), tri-isopropanolomine salt 39.6% 2,4-Dichlorophenoxyacetric acid, tri-isopropanolomiane salt.
3	**Roundup herbicide or equivalent** – to contain 41.0% by weight Isopropylamine Salt of Glyphosate
4	**Rodeo herbicide or equivalent** – to contain 53.5% by weight Isopropylamine Salt of Glyphosate
5	**Nalco Trol II or equivalent** – water soluble spray drift control agent
6	**Aqua-King or equivalent** – product must be a non-ionic aquatic surfactant approved for use in the State of Texas, contain 90% active ingredient (excluding alcohols, fatty acids, oils ethylene glycol or diethylene glycol), a minimum of 80% surfactant load, possess an HLB (hydrophilic to lipophilic balance) ratio of 12 to 17, a maximum of 10% isopropyl alcohol, have a flash point greater than 200 degrees F., and contain an anti-foaming agent that will provide instantaneous foam breakdown when agitation ceases.
7	**Malathion insecticide** – concentrate to contain a minimum of 9.9 lb. of malathion per gallon (96.5% by weight active ingredient). Product offered must have current approval in Texas for both aerial and ground ULV application against adult mosquitoes. Bulk shipments only.
8	**Bio Mist 3-15 ULV** - ACTIVE INGREDIENTS Permethrin (3-phenoxyphenyl) methyl (+/-) cis, trans3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate.....3.0% Piperonyl Butoxide*.....15.0% OTHER INGREDIENTS**..... 82.0% 100.0% Contains 0.222 pounds of Permethrin and 1.113 pounds of PBO per gallon Contains petroleum distillate *Ordered as 275 gallon containers. **Successful bidder will deliver full containers and pick up empty containers at no additional charge.
9	**Envion 30/30 insecticide or equivalent** - water compatible concentrate in 2.52 lb. Permethrin (30.0% by weight) and 2.52 lb. Piperonyl Butoxide (30.0% by weight) per gallon. Product offered must have current approval in Texas for aerial and ground ULV application against adult mosquitoes.

Bidder Information Form

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.

Bidder's Company/Business Name: Rentokil North America, Inc DBA Target Specialty Products

Bidder's TAX ID Number: 23-1568350

Contact Person: David Herter and Kirsti Rodney **Title:** Vector Specialist/ Vector Customer Service Representative

Phone Number (with area code): 318-254-3330 or 225-999-8307

Alternate Phone Number if available (with area code): 225-291-6164

Fax Number (with area code): 225-351-8862

Email Address: david.herter@target-specialty.com & kirsti.rodney@target-specialty.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

1225 N. Post Oak Rd
Address
Houston, TX 77055
City, State, Zip Code

Bidder: Complete & Return this Form with Offer.

OFFER AND ACCEPTANCE FORM

OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer. We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

Rentokil North America, Inc DBA Target Specialty Products
Company Name

1225 N. Post Oak Rd
Address

Houston, TX 77055
City State Zip

Signature of Person Authorized to Sign

Kirsti Rodney
Printed Name

Vector Customer Service Representative
Title

For clarification of this offer, contact:

Kirsti Rodney and David Herter
Name

225-999-8307 or 318-254-3330 225-351-8862
Phone Fax

david.herter@target-specialty.com & kirsti.rodney@target-specialty.com
E-mail

Bidder: Complete & Return this Form with Offer.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. Contract Term: One (1) year from date of award with an option to renew for four (4) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

Countersigned:

Jeff R. Branick
County Judge

Date

Attest:

Laurie Leister
County Clerk

Bidder: Complete & Return this Form with Offer.

Bid Form

Item	Est Qty. (Gal.)	Description	Brand bid	MSDS Labels Attached	Price per Gallon	Total Price
1	700	MSMA Herbicide – 2.5 gal. container	MSMA 2.5 gallon		$ No Bid	$
2	700	Tordon 101 Herbicide or equivalent – 2.5 gal. container	Tordon RTU 2.5 gallon		$ No Bid	$
3	700	Roundup Herbicide or equivalent – 2.5 gal. container	Round up pro 2.5 gallon		$ No Bid	$
4	100	Rodeo Herbicide or equivalent – 2.5 gal. container	Rodeo 30 gallon		$ No Bid	$
5	100	Nalco Trol II or equivalent – 2.5 gal. (or smaller) container	No Bid		$ No Bid	$
6	400	Aqua-King Surfactant or equivalent – 2.5 gal. (or smaller) container	Big sir 90		$ No Bid	$
7	20,000	Malathion Insecticide – **bulk shipment only**	No Bid		$ No Bid	$
8	1,100	Bio Mist 3-15 ULV – 275 gal containers	Deltagard Permanone RTU		$ 224.00 $ 38.25	$ 246,400.00 $42,075.00
9	600	Envion 30/30 insecticide – 2.5 gal. containers	Aquaperm-x Aqua-Reslin		$ 108.44 $ 100.00	$ 65,064.00 $ 60,000.00

Bidders must attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Acknowledgment of Addenda (if any):

Addendum 1 _____ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

Bidder: Complete & Return this Form with Offer.

Vendor References Form

Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

THIS FORM MUST BE RETURNED WITH YOUR BID.

REFERENCE ONE

Government/Company Name: Harris County Mosquito Control

Address: 330 Old Spanish Trail, Building D, Houston Tx 77021

Contact Person and Title: Chris Fredregill

Phone: 713-440-4800 Fax:

Email Address: Chris.fedregill@phs.hctx.net Contract Period: 6/2011 to 6/2013, 6/2013 to 6/2018 6/2018 to Present

Scope of Work: Contract For Mosquito Control Insecticides and Diluent Oils

REFERENCE TWO

Government/Company Name: Dallas County Health Department Mosquito Control Director

Address: 1506 E. Langdon Rd., Dallas, TX 75241

Contact Person and Title: Scott Sawli, Entomologist/ Mosquito Control Director

Phone: 972-225-8993 Fax: 713-440-4795

Email Address: Scott.sawlis@dallascounty.org Contract Period: 01/2014 to Present

Scope of Work: Mosquito Control Equipment and Insecticides

REFERENCE THREE

Government/Company Name: Orange County Mosquito Control

Address: 123 South 6th Street, Orange County TX 77630

Contact Person and Title: Patrick Beebe, Director of Mosquito Control

Phone: 409-883-5717 Fax: 409-882-5333

Email Address: Contract Period: 2019-Present

Scope of Work: Mosquito and Weed Control Chemicals

Bidder: Complete & Return this Form with Offer.

Signature Page

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

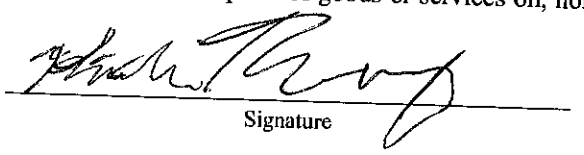
Would bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions?..... **Yes** ☑ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Rentokil North America, Inc DBA Target Specialty Products
Bidder (Entity Name)


Signature

1225 N. Post Oak Rd
Street & Mailing Address

Kirsti Rodney
Print Name

Houston, TX 77055
City, State & Zip

04/22/2022
Date Signed

318-254-3330 or 225-999-8307
Telephone Number

225-351-8862
Fax Number

david.herter@target-specialty.com & kirsti.rodney@target-specialty.com
E-mail Address

Bidder: Complete & Return this Form with Offer.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

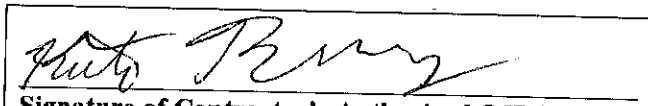
1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

Kirsti Rodney/ Vector Customer Service Representative

Name and Title of Contractor's Authorized Official *(Please Print)*

04/22/2022

Date

Bidder: Complete & Return this Form with Offer.

Conflict of Interest Questionnaire

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Rentokil North America, Inc DBA Target Specialty Products

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

N/A

Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☑ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☑ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☑ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4

Signature of vendor doing business with the governmental entity

04/22/2022

Date

Adopted 8/7/2015

Bidder: Complete & Return this Form with Offer.

Local Government Officer

Conflicts Disclosure Statement – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

Note: This Form is for Office Use Only.

Good Faith Effort (GFE) Determination Checklist

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

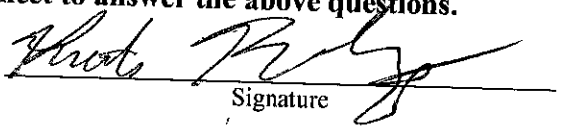
Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .

☐ Yes	☑ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?
☐ Yes	☑ No	2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☑ No	3. **Provide** HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☑ No	4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders?
☐ Yes	☑ No	5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?
☑ Yes	☐ No	6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid. If necessary, please use a separate sheet to answer the above questions.

Kirsti Rodney
Printed Name of Authorized Representative


Signature

Vector Customer Service Representative
Title

04/22/2022
Date

Bidder: Complete & Return this Form with Offer.

Notice of Intent (NOI) to Subcontract with

Historically Underutilized Business (HUB)

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: Rentokil North America, Inc DBA Target Specialty Products HUB: p Yes p No

Address: 1225 N. Post Oak Rd (Street) Houston (City) TX (State) 77055 (Zip)

Phone (with area code): 318-254-3330 David or 225-999-8307 Kirsti Fax (with area code): 225-351-8862

Project Title & No.: Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticies for Jefferson County Mosquito Control District IFB 22-023/YS

Prime Contract Amount: $ Not Specified

HUB Subcontractor Name: N/A

HUB Status (Gender & Ethnicity): No Gender or Ethnicy Status, EEO Report Available Upon Request

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: 1225 N. Post Oak Rd (Street) Houston (City) TX (State) 77055 (Zip)

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: NA

Rentokil North America, Inc DBA Target Specialty Products	[signature]	04/22/2022
Printed Name of Contractor Representative	Signature of Representative	Date
N/A	N/A	N/A
Printed Name of HUB	Signature of Representative	Date

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB) Subcontracting Participation Declaration Form

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Prime Contractor: Rentokil North America, Inc DBA Target Specialty Products HUB: ☐ Yes ☑ No

HUB Status (Gender & Ethnicity): No Gender or Ethnicity Status, EEO Report Available Upon Request

Address: 1225 N. Post Oak Rd (Street) Houston (City) TX (State) 77055 (Zip)

Phone (with area code): 318-254-3330 David or 225-999-8307 Kirsti Fax (with area code): 225-351-8862

Project Title & No.: Term Contract for Herbicides IFB/RFP No.: IFB 22-023/YS

Total Contract: $ Not Specified Total HUB Subcontract(s): $

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUCONTRACTOR DISCLOSURE

HUB Subcontractor Name: N/A

HUB Status (Gender & Ethnicity): No Gender or Ethnicity Status, EEO Report Available Upon Request

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: 1225 N. Post Oak Rd (Street) (City) (State) (Zip)

Contact person: David Herter and Kirsti Rodney Title: Vector Specialist/ Vector Customer Service Representative

Phone (with area code): 318-254-3330 David or 225-999-8307 Kirsti Fax (with area code): 225-351-8862

Proposed Subcontract Amount: $ Not Specified Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: N/A

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB) Subcontracting Participation Declaration Form

HUB SUBCONTRACTOR DISCLOSURE

PART I: Continuation Sheet **(Duplicate as Needed)**

HUB Subcontractor Name: N/A

HUB Status (Gender & Ethnicity): N/A

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: N/A (Street) N/A (City) N/A (State) N/A (Zip)

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

N/A

HUB Subcontractor Name: N/A

HUB Status (Gender & Ethnicity): N/A

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: N/A (Street) N/A (City) N/A (State) N/A (Zip)

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

<u>Bidder</u>: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☑ Other: Nothing to Subcontract

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☑ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that bidder is the apparent low bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: N/A

Address: N/A (Street) N/A (City) N/A (State) N/A (Zip)

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

Subcontractor Name: N/A

Address: N/A (Street) N/A (City) N/A (State) N/A (Zip)

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Subcontractor Name: N/A

Address: N/A (Street) N/A (City) N/A (State) N/A (Zip)

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

Subcontractor Name: N/A

Address: N/A (Street) N/A (City) N/A (State) N/A (Zip)

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required.** I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Kirsti Rodney

Title: Vector Customer Service Representative

Signature:

Date: 04/22/2022

E-mail address: kirsti.rodney@target-specialty.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): David Herter and Kirsti Rodney

Title: Vector Specialist/ Vector Customer Service Representative

Date: 04/22/2022

E-mail address: david.herter@target-specialty.com & kirsti.rodney@target-specialty.com

Bidder: Complete & Return this Form with Offer.

Residence Certification/Tax Form

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Nonresident bidder" refers to a person who is not a resident.

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☑ I certify that Rentokil North America, Inc DBA Target Specialty Products [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ (city and state).

Taxpayer Identification Number (T.I.N.):	23-1568350
Company Name submitting bid/proposal:	Rentokil North America, Inc DBA Target Specialty Products
Mailing address:	1225 N. Post Oak Rd, Houston TX,
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

Bidder: Complete & Return this Form with Offer.

House Bill 89 Verification

I, Kirsti Rodney, the undersigned representative of (company or business name) Rentokil North America, Inc DBA Target Specialty Products (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and

2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

4-26-22
Date

On this 26th day of April, 2022, personally appeared Kirsti Rodney, the above named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

CORTNEY FLOYD
Notary Public
State of Louisiana
Notary ID # 131865
My Commission Is for Life

Notary Signature

April 26, 2022
Date

Bidder: Complete & Return this Form with Offer.

Senate Bill 252 Certification

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

Rentokil North America, Inc DBA Target Specialty Products
Company Name

IFB 22-023/YS
IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

Bidder: Complete & Return this Form with Offer.

Bid Affidavit

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Louisiana COUNTY OF East Baton Rouge

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Louisiana,

on this day personally appeared Kirsti Rodney (name), who

after being by me duly sworn, did depose and say:

"I, Kirsti Rodney (name) am a duly authorized officer of/agent

for Rentokil North America, Inc DBA Target Specialty Products (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Rentokil North America, Inc DBA Target Specialty Products (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of bidder: 11730 Airline Highway Baton Rouge, LA 70817

Fax: 225-351-8862 Telephone# 225-999-8307

by: Kirsti Rodney (print name) Title: Vector Customer Service Representative

Signature: Kirsti Rodney

SUBSCRIBED AND SWORN to before me by the above-named Kirstie Rodney on

this the 26th day of April, 2022.

CORTNEY FLOYD
Notary Public
State of Louisiana
Notary ID # 131865
My Commission is for Life

Notary Public in and for the State of Louisiana

Bidder Shall Return Completed Form with Offer.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 9/17/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Edgewood Partners Insurance Center
200 Glenridge Point Parkway
Suite 400
Atlanta GA 30342

CONTACT NAME: Certificate Unit
PHONE (A/C, No, Ext): 404-439-8000 **FAX (A/C, No):**
E-MAIL ADDRESS: certificate@epicbrokers.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : ACE American Insurance Company	22667
INSURER B : ACE Property & Casualty Insurance Company	20699
INSURER C : Arch Insurance Company	11150
INSURER D : Arch Indemnity Insurance Company	30830
INSURER E :	
INSURER F :	

INSURED RENTOKI-01
Rentokil North America, Inc.
dba Target Specialty Products (REN210)
1125 Berkshire Blvd., Suite 150
Wyomissing PA 19610

COVERAGES **CERTIFICATE NUMBER:** 1215479809 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			OGLG27240331	10/1/2021	10/1/2022	EACH OCCURRENCE	$ 5,000,000
	CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 5,000,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 5,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 5,000,000
	X POLICY [X] PRO-JECT [X] LOC						PRODUCTS - COMP/OP AGG	$ 5,000,000
	OTHER:							$
C C	AUTOMOBILE LIABILITY			31CAB1044401	10/1/2021	10/1/2022	COMBINED SINGLE LIMIT (Ea accident)	$ 2,000,000
	X ANY AUTO			31CAB1044501	10/1/2021	10/1/2022	BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
B	X UMBRELLA LIAB [X] OCCUR			XOOG27239420	10/1/2021	10/1/2022	EACH OCCURRENCE	$ 5,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 5,000,000
	DED X RETENTION $ 10,000							$
C D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N	N/A		31WCI1044201	10/1/2021	10/1/2022	X PER STATUTE OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBEREXCLUDED? [N] (Mandatory in NH)			34WCI1044301	10/1/2021	10/1/2022	E.L. EACH ACCIDENT	$ 2,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 2,000,000
							E.L. DISEASE - POLICY LIMIT	$ 2,000,000
A	Errors & Omissions Liability			OGLG27240331	10/1/2021	10/1/2022	Each Incident/Agg	5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Evidence of Insurance

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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ORIGIN ID:OPLA (225) 348-7760

TARGET SPECIALTY PRODUCTS
11730 AIRLINE HWY

BATON ROUGE, LA 70817
UNITED STATES US

SHIP DATE: 09MAY22
ACTWGT: 2.50 LB
CAD: 6997156/SSF02300

BILL THIRD PARTY

Part # 156297-[illegible] REV 03/23

TO JEFFERSON COUNTY PURCHASING
DPT: ATTN: PURCHASING AGENT
1149 PEARL STREET
1ST FLOOR
BEAUMONT TX 77701

REC. 5/10/22
10:45am

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

TRK# 0201 2729 3334 7512

TUE - 10 MAY 10:30A
PRIORITY OVERNIGHT

XA BPTA

77701
TX-US IAH

" TCD 22-032 /LC

Jefferson County Purchasing
Department ATTN: Purchasing Agent
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Sealed Bid #JCFB 22-023/YS
Term Contract for Insecticides, Herbicides, Spray Adjuvants,
Adulticides for Jefferson County Mosquito Control District
Due Date: 11:00am CT, Wednesday, May 11th, 2022

Original635

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street, 1st Floor, Beaumont, TX 77701 409-835-8593 Fax 409-835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

April 12, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for **IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and three (3) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District**
BID NO:	**IFB 22-023/YS**
DUE DATE/TIME:	**11:00 AM CT, Wednesday, May 11, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these requirements should be directed to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provisions of services. Individuals requiring special accommodations are requested to contact our office at 409-835-8593 to make arrangements no later than seven (7) calendar days prior to the submittal deadline. Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

Publish: Beaumont Enterprise & Port Arthur News – April 13, 2022 and April 20, 2022

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Bid Submissions:

Bidder is responsible for submitting: One (1) original and three (3) bid copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to see if addenda or additional instructions have been posted. Failure to return all required forms could result in a response being declared as non-responsive. https://www.co.jefferson.tx.us/Purchasing/

Instructions to Bidders

1. Bid Submission

Bids must be submitted in complete original form by mail or messenger to the following address:

Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Late bids will not be accepted and will be returned unopened to the bidder.

All bids submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

Bidder shall submit bid in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the Bid Number, Bid Name, Bid Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Bidder is responsible for submitting:

- **One (1) Original Bid Copy and (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.**

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

https://www.co.jefferson.tx.us/Purchasing/

DEADLINE FOR QUESTIONS:

The deadline for asking questions in writing or requesting additional information (in writing or in person) is 5:00 pm, Thursday, April 28, 2022.

2. Bid Submissions During Time of Inclement Weather, Disaster, or Emergency

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3. Courthouse Security

Bidders are advised that all visitors to the Courthouse must pass through Security. **Bidders planning to hand deliver bids must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal.** Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures recommended by the CDC within its facilities. Visitors to the courthouse will be required to wear a mask within the courthouse.

Bidders are strongly urged to plan accordingly.

4. Preparation of Bids

The bid shall be legibly printed in ink or typed.

The County requests that bid submissions NOT be bound by staples or glued spines.

If a unit price or extension already entered is to be altered, it shall be crossed out and initialed in ink by the bidder.

The bid shall be legally signed and shall include the complete address of the bidder.

Jefferson County is exempt from Federal and State Sales Taxes, and such taxes shall not be included in bid prices.

5. Signatures

All bids, notifications, claims, and statements must be signed by an individual authorized to bind the bidder. The individual signing certifies, under penalty of perjury, that he or she has the legal authorization to bind the bidder.

6. County Holidays – 2021:

January 18, 2021	Martin Luther King, Jr. Day	Monday
February 15, 2021	President's Day	Monday
April 2, 2021	Good Friday	Friday
May 31, 2021	Memorial Day	Monday
July 5, 2021	Independence Day	Monday
September 6, 2021	Labor Day	Monday
November 11, 2021	Veteran's Day	Thursday
November 25 & 26, 2021	Thanksgiving	Thursday & Friday
December 23 & 24, 2021	Christmas	Thursday & Friday
December 31, 2021	New Year's	Friday

7. Rejection or Withdrawal

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within 90 days after opening date.

8. Emergency/Declared Disaster Requirements

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

9. Award

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group,

whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial nonconformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment. In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

10. Contract

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

11. Waiver of Subrogation

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

12. Fiscal Funding

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

13. Bid Results

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

14. Changes and Addenda to Bid Documents

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

15. Specifications

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate.

All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

16. Delivery

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

17. Interpretation of Bid and/or Contract Documents

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

18. Currency

Prices calculated by the bidder shall be stated in U.S. dollars.

19. Pricing

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

20. Notice to Proceed/Purchase Order

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

21. Certification

By signing the offer section of the Offer and Acceptance page, bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The bidder hereby certifies that the individual signing the bid is an authorized agent for the bidder and has the authority to bind the bidder to the contract.

22. Definitions

"County" – Jefferson County, Texas.

"Contractor" – The bidder whose proposal is accepted by Jefferson County.

23. Minority-Women Business Enterprise Participation

It is the desire of Jefferson County to increase the participation of Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

General Conditions of Bidding and Terms of Contract

By execution of this document, the vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. Bidding

1.1 Bids. All bids must be submitted on the bid form furnished in this package.

1.2 Authorized Signatures. The bid must be executed personally by the vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the vendor shall accompany the bid to become a valid bid.

1.3 Late Bids. Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 Withdrawal of Bids Prior to Bid Opening. A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 Withdrawal of Bids after Bid Opening. Bidder agrees that its offer may not be withdrawn or cancelled by the vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 Bid Amounts. Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 Exceptions and/or Substitutions. All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 Alternates. The Invitation for Bid and/or specifications may expressly allow bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 Descriptions. Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 Bid Alterations. Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 Tax Exempt Status. Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 Quantities. Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 Bid Award. Award of contract shall be made to the most responsible, responsive bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 Silence of Specifications for Complete Units. All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 Addenda. Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 General Bid Bond/Surety Requirements. Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 General Insurance Requirements. Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 Responsiveness. A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 Responsible Standing of Bidder. To be considered for award, bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 Confidential/Proprietary Information

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 Public Bid Opening. Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. Performance

2.1 Design, Strength, and Quality. Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 Age and Manufacture. All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 Delivery Location. All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 a.m. to 4:00 p.m., Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 Delivery Schedule. Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 Delivery Charges. All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 Installation Charges. All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 Operating Instructions and Training. Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 Storage. Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 Compliance with Federal, State, County, and Local Laws. Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA. The bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 Patents and Copyrights. The successful vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 Samples, Demonstrations and Testing. At Jefferson County's request and direction, bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the bidder/vendor.

2.13 Acceptability. All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 Maintenance. Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 Material Safety Data Sheets. Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 Evaluation. Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. Purchase Orders and Payment

3.1 Purchase Orders. A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 Invoices. All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 Prompt Payment. In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful bidder(s) is required to pay subcontractors within ten (10) days after the successful bidder receives payment from the County.

3.4 Funding. Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. Contract

4.1 Contract Definition. The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful bidder and Jefferson County.

4.2 Change Order. No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 Price Re-determination. A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 Termination. Jefferson County reserves the right to terminate the contract for default if the bidder breached any of the terms therein, including warranties of bidder or if the bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies

which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the bidder in default.

4.5 Conflict of Interest. Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 Injuries or Damages Resulting from Negligence. Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 Interest by Public Officials. No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 Warranty. The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.9 Uniform Commercial Code. The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.10 Venue. This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.11 Sale; Assignment, or Transfer of Contract. The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.12 Silence of Specifications. The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

Federal Emergency Management Agency (FEMA)
MANDATED CONTRACT PROVISIONS

1. REMEDIES

a. Standard. Contracts for more than the simplified acquisition threshold, currently set at $250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. See 2 C.F.R. Part 200, Appendix II(A).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

2. TERMINATION FOR CAUSE AND CONVENIENCE

a. Standard. All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity, including the manner by which it will be affected and the basis for settlement. See 2 C.F.R. Part 200, Appendix II(B).

b. Applicability. This requirement applies to all FEMA grant and co-operative agreement programs.

3. EQUAL EMPLOYMENT OPPORTUNITY

If applicable, exact language below in subsection 3.d is required.

a. Standard. Except as otherwise provided under 41 C.F.R. Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. §60- 1.4(b), in accordance with Executive Order 11246, Equal Employment Opportunity (30 Fed. Reg. 12319, 12935, 3 C.F.R. Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, Amending Executive Order 11246 Relating to Equal Employment Opportunity, and implementing regulations at 41 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See 2 C.F.R. Part 200, Appendix II(C).

b. Key Definitions.

i. Federally Assisted Construction Contract. The regulation at 41 C.F.R. § 60-1.3 defines a "federally assisted construction contract" as any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.

ii. Construction Work. The regulation at 41 C.F.R. § 60-1.3 defines "construction work" as the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

c. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

d. Required Language. The regulation at 41 C.F.R. Part 60-1.4(b) requires the insertion of the following contract clause.

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's non-compliance with the non-discrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any sub-contract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it

participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24,1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

4. DAVIS-BACON ACT

a. Standard. All prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction). See 2 C.F.R. Part 200, Appendix II(D). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week.

b. Applicability. The Davis-Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Non-profit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It DOES NOT apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must do the following:

i. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

ii. Additionally, pursuant 2 C.F.R. Part 200, Appendix II(D), contracts subject to the Davis-Bacon Act, must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). The Copeland Anti-Kickback Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA.

iii. Include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction").

COMPLIANCE WITH THE DAVIS-BACON ACT:

a. All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) and the requirements of 29C.F.R.pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable.

b. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.

c. Additionally, contractors are required to pay wages not less than once a week.

5. COPELAND ANTI-KICKBACK ACT

a. Standard. Recipient and subrecipient contracts must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

b. Applicability. This requirement applies to all contracts for construction or repair work above $2,000 in situations where the Davis-Bacon Act also applies. It DOES NOT apply to the FEMA Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). Each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA. Additionally, in accordance with the regulation, each contractor and subcontractor must furnish each week a statement with respect to the wages paid each of its employees engaged in work covered by the Copeland Anti-Kickback Act and the Davis Bacon Act during the preceding weekly payroll period. The report shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work.

COMPLIANCE WITH THE COPELAND "ANTI-KICKBACK ACT":

a. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

b. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. §5.12."

6. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

a. Standard. Where applicable (see 40 U.S.C. §§ 3701-3708), all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II(E). Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Further, no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous.

b. Applicability. This requirement applies to all FEMA contracts awarded by the non-federal entity in excess of $100,000 under grant and cooperative agreement programs that involve the employment of mechanics or laborers. It is applicable to construction work. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open
market, or contracts for transportation or transmission of intelligence.

The regulation at 29 C.F.R. § 5.5(b) provides contract clause language concerning compliance with the Contract Work Hours and Safety Standards Act. FEMA suggests including the following contract clause: Compliance with the Contract Work Hours and Safety Standards Act.

> **(1) Overtime requirements.** No contractor or subcontractor contracting for any Part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
>
> **(2) Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
>
> **(3) Withholding for unpaid wages and liquidated damages.** Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
>
> **(4) Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

7. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

a. Standard. If the FEMA award meets the definition of "funding agreement" under 37C.F.R. § 401.2(a) and the non-Federal entity wishes to enter into a contract with a small business firm or non-profit organization regarding the substitution of parties, assignment or performance of experimental,
developmental, or research work under that "funding agreement," the non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA. See 2 C.F.R. Part 200, Appendix II(F).

b. Applicability. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

c. Funding Agreements Definition. The regulation at 37 C.F.R. § 401.2(a) defines "funding agreement" as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

8. CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

a. Standard. If applicable, contracts must contain a provision that requires the contractor to agree to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). Violations must be reported to FEMA and the Regional Office of the Environmental Protection Agency. See 2 C.F.R. Part 200, Appendix II(G).

b. Applicability. This requirement applies to contracts awarded by a non-Federal entity of amounts in excess of $150,000 under a federal grant.

CLEAN AIR ACT:

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

2. The contractor agrees to report each violation to Jefferson County and understands and agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT:

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

2. The contractor agrees to report each violation to Jefferson County agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

9. DEBARMENT AND SUSPENSION

a. Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

c. Requirements.

i. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. See 2

C.F.R. Part 200, Appendix II(H); and 2 C.F.R. § 200.213. A contract award must not be made to parties listed in the SAM Exclusions. SAM Exclusions is the list maintained by the General Services Administration that contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. SAM exclusions can be accessed at www.sam.gov. See 2 C.F.R. § 180.530.

ii. In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. This includes parties that receive Federal funding indirectly, such as contractors to recipients and subrecipients. The key to the exclusion is whether there is a "covered transaction," which is any non-procurement transaction (unless excepted) at either a "primary" or "secondary" tier. Although "covered transactions" do not include contracts awarded by the Federal Government for purposes of the non-procurement common rule and DHS's implementing regulations, it does include some contracts awarded by recipients and subrecipients.

iii. Specifically, a covered transaction includes the following contracts for goods or services:

1. The contract is awarded by a recipient or subrecipient in the amount of at least $25,000.

2. The contract requires the approval of FEMA, regardless of amount.

3. The contract is for federally-required audit services.

4. A subcontract is also a covered transaction if it is awarded by the contractor of a recipient or subrecipient and requires either the approval of FEMA or is in excess of $25,000.

The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified.

SUSPENSION AND DEBARMENT:

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by the County. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the County, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

10. BYRD ANTI-LOBBYING AMENDMENT

a. Standard. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. FEMA's regulation at 44 C.F.R. Part 18 inplements the requirements of 31 U.S.C. § 1352 and provides, in Appendix A to Part 18, a copy of the certification that is required to be completed by each entity as described in 31 U.S.C. § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the Federal awarding agency.

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs. Contractors that apply or bid for a contract of $100,000 or more under a federal grant must file the required certification. See 2 C.F.R.Part 200, Appendix II(I); 31 U.S.C. § 1352; and 44 C.F.R. Part 18.
Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

c. Required Certification.

If applicable, contractors must sign and submit to the non-Federal entity the **"Certification Regarding Lobbying" Form** included within these bid specifications.

11. PROCUREMENT OF RECOVERED MATERIALS

a. Standard. A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. See 2 C.F.R. Part 200, Appendix II(J); and 2 C.F.R. §200.322.

b. Applicability. This requirement applies to all contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.

c. Requirements. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired by the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

1. Competitively within a timeframe providing for compliance with the contract performance schedule;

2. Meeting contract performance requirements; or

3. At a reasonable price.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:
https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Although FEMA does not currently require additional provisions, FEMA recommends the following:

1. ACCESS TO RECORDS

a. Standard. All recipients, subrecipients, successors, transferees, and assignees must acknowledge and agree to comply with applicable provisions governing DHS access to records, accounts, documents, information, facilities, and staff. Recipients must give DHS/FEMA access to, and the right to examine and copy, records, accounts, and other documents and sources of information related to the federal financial assistance award and permit access to facilities, personnel, and other individuals and information as may be necessary, as required by DHS regulations and other applicable laws or program guidance. See DHS Standard Terms and Conditions: Version 8.1 (2018). Additionally, Section 1225 of the Disaster Recovery Reform Act of 2018 prohibits FEMA from providing reimbursement to any state, local, tribal, or territorial government, or private non-profit for activities made pursuant to a contract that purports to prohibit audits or internal reviews by the FEMA administrator or Comptroller General.

ACCESS TO RECORDS:

The following access to records requirements apply to this contract:

(1)The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

(2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.

(4) In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

2. CHANGES

a. Standard. To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

b. Applicability. FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

3. DHS SEAL, LOGO, AND FLAGS

a. Standard. Recipients must obtain permission prior to using the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials. See DHS Standard Terms and Conditions: Version 8.1 (2018).

b. Applicability. FEMA recommends that all non-Federal entities place in their contracts a provision that a contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

"The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval."

4. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

a. Standard. The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

b. Applicability. FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

c. "This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

5. NO OBLIGATION BY FEDERAL GOVERNMENT

a. Standard. FEMA is not a party to any transaction between the recipient and its contractor. FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

6. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

a. Standard. Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

Special Requirements/Instructions

The following requirements and instructions **supersede** General Requirements where applicable.

1. Bid Requirement

Each bidder shall ensure that required parts of the bid are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Bidder is responsible for submitting:

One (1) Original Bid Copy and three (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

All bids shall be tightly sealed in an opaque envelope or box and plainly marked "SEALED BID."

The outside of the envelope or box shall also include: Bid Number, Bid Name, Bid Due Date, Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB. All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

2. Vendor Registration: SAM (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

Bidders are strongly encouraged to review their firm's SAM (System for Award Management) status prior to Bid Submission.

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission)

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

3. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission) – CONTINUED

FORM 1295 Exemptions:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law? The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement. A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and o any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

Upon entering into a contract or professional agreement, the Jefferson County Purchasing Department will submit a request to the Vendor to both:

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department.

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

4. Multiple Vendor Award

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

5. Delivery

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

6. Payment

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to: Jefferson County Auditing Department, Attention: Accounts Payable, 1149 Pearl Street, 7th floor, Beaumont, TX 77701.

7. Usage Reports

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases

to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

8. Insurance

The contractor (including any and all subcontractors as defined in Section 9.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation	Statutory Coverage (See Section 9 Below)

9. Workers' Compensation Insurance

9.1 Definitions:

9.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

9.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

9.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

9.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

9.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – refer to Section 8 above.

9.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

9.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

9.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

9.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

9.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

9.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

9.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

9.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

9.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

9.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

9.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

9.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

9.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

9.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

9.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

9.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

9.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs 9.1. – 9.7., with the certificates of coverage to be provided to the person for whom they are providing services.

9.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements

will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

9.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

Minimum Specifications

The following requirements and specifications **supersede** General Requirements where applicable. Contact Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us, regarding any questions or comments. Please reference bid number IFB 22-023/YS.

Scope

Vendor shall provide Insecticides, Herbicides, Spray Adjuvants, and Adulticides for the Jefferson County Mosquito Control District subject to the terms and conditions stated for an initial period **beginning on or about date of award.**

Bidders shall attach to bid form, a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Prices quoted shall be F.O.B. Jefferson County Mosquito Control District, Jefferson County Airport, 1st Street, Nederland, TX. Bidder bears freight charges. All prices must be written in ink or typewritten.

Quote unit prices extended to lump sum prices. The basis of the award will be the unit prices quoted. The County reserves the right to increase or decrease the quantity purchased based on weather conditions and availability of funds.

The County reserves the right to make the award to one (1) successful bidder or per line item.

Purchase orders for insecticides, herbicides, adjuvants, and adulticides will be released to the successful bidder(s) **on an as-needed basis. MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Refer questions of a commercial nature to Yea-Mei Sauer, Assistant Purchasing Agent, ysauer@co.jefferson.tx.us; and questions of a technical nature to Denise Wheeler, Director, Jefferson County Mosquito Control, wheeler@co.jefferson.tx.us.

A price re-determination may be considered by Jefferson County only at the twelve (12) month and twenty-four (24) month anniversary dates of the contract. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

Approximate Annual Usage

No promise is made or implied for quantities that will be purchased. Orders will be placed on an **as-needed basis** for the duration of the contract. Purchase Orders will be released to the successful bidder(s) as required. **MINIMUM ORDERS ARE NOT ACCEPTABLE.**

Contract

This bid, when properly accepted by Jefferson County Commissioners' Court, shall constitute a contract equally binding between the successful bidder and Jefferson County. No different or additional terms will become a part of this contract.

The brand name references are for description only, and are not intended to exclude other herbicides or adjuvants of equal quality. Bidders desiring to substitute items may do so provided brand name is **indicated on Bid Form.** Change of container size may disqualify bid. Dilution ratio will be a factor in award of chemicals.

Bidders shall attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Item	Description
1	**MSMA herbicide** – to contain 6.00 lb. MSMA (Mono-sodium Acid Methanearsonate) plus surfactant per gallon
2	**Tordon 101** – to contain 10.2% 4-amino3,5,6-trichloropicolinic acid (picloram), tri-isopropanolomine salt 39.6% 2,4-Dichlorophenoxyacetric acid, tri-isopropanolomiane salt.
3	**Roundup herbicide or equivalent** – to contain 41.0% by weight Isopropylamine Salt of Glyphosate
4	**Rodeo herbicide or equivalent** – to contain 53.5% by weight Isopropylamine Salt of Glyphosate
5	**Nalco Trol II or equivalent** – water soluble spray drift control agent
6	**Aqua-King or equivalent** – product must be a non-ionic aquatic surfactant approved for use in the State of Texas, contain 90% active ingredient (excluding alcohols, fatty acids, oils ethylene glycol or diethylene glycol), a minimum of 80% surfactant load, possess an HLB (hydrophilic to lipophilic balance) ratio of 12 to 17, a maximum of 10% isopropyl alcohol, have a flash point greater than 200 degrees F., and contain an anti-foaming agent that will provide instantaneous foam breakdown when agitation ceases.
7	**Malathion insecticide** – concentrate to contain a minimum of 9.9 lb. of malathion per gallon (96.5% by weight active ingredient). Product offered must have current approval in Texas for both aerial and ground ULV application against adult mosquitoes. Bulk shipments only.
8	**Bio Mist 3-15 ULV** - ACTIVE INGREDIENTS Permethrin (3-phenoxyphenyl) methyl (+/-) cis, trans3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate.....3.0% Piperonyl Butoxide*.....15.0% OTHER INGREDIENTS**..... 82.0% 100.0% Contains 0.222 pounds of Permethrin and 1.113 pounds of PBO per gallon Contains petroleum distillate *Ordered as 275 gallon containers. **Successful bidder will deliver full containers and pick up empty containers at no additional charge.
9	**Envion 30/30 insecticide or equivalent** - water compatible concentrate in 2.52 lb. Permethrin (30.0% by weight) and 2.52 lb. Piperonyl Butoxide (30.0% by weight) per gallon. Product offered must have current approval in Texas for aerial and ground ULV application against adult mosquitoes.

Bidder Information Form

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District.

Bidder's Company/Business Name: SiteOne Landscape Supply

Bidder's TAX ID Number: 36-4485550

Contact Person: Bids Department **Title:** _____

Phone Number (with area code): 216-706-9250

Alternate Phone Number if available (with area code): _____

Fax Number (with area code): 248-581-1433

Email Address: bids@SiteOne.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

SiteOne Landscape Supply
Address 1385 East 36th Street
Cleveland, Ohio 44114
City, State, Zip Code

Bidder: Complete & Return this Form with Offer.

OFFER AND ACCEPTANCE FORM

OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer. We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

SiteOne Landscape Supply
1385 East 36th Street
Cleveland, Ohio 44114
Company Name

Address

City State Zip

Monique Potts
Signature of Person Authorized to Sign

Monique Potts
Printed Name

Sr. Bid Representative
Title

For clarification of this offer, contact:

Monique Potts
Name

216-906-9257 248-581-1433
Phone Fax

bids@SiteOne.com
E-mail

Bidder: Complete & Return this Form with Offer.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. Contract Term: One (1) year from date of award with an option to renew for four (4) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. IFB 22-023/YS, Term Contract for Insecticides, Herbicides, Spray Adjuvants, and Adulticides for Jefferson County Mosquito Control District. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

Countersigned:

Jeff R. Branick
County Judge

Date

Attest:

Laurie Leister
County Clerk

Bidder: Complete & Return this Form with Offer.

Bid Form

Item	Est Qty. (Gal.)	Description	Brand bid	MSDS Labels Attached	Price per Gallon	Total Price
1	700	MSMA Herbicide – 2.5 gal. container	DRIXCL	YES	$ 40.94	$ 28658.00
2	700	Tordon 101 Herbicide or equivalent – 2.5 gal. container			$	$ No Bid
3	700	Roundup Herbicide or equivalent – 2.5 gal. container	LESCO PROSECUTOR PRO	YES	$ 40.87	$ 28609.00
4	100	Rodeo Herbicide or equivalent – 2.5 gal. container	Polaris	YES	$ 82.13	$ 8213.00
5	100	Nalco Trol II or equivalent – 2.5 gal. (or smaller) container	NO FOAM A	YES	$ 20.82	$ 2082.00
6	400	Aqua-King Surfactant or equivalent – 2.5 gal. (or smaller) container	LESCO SPREADER STICKER	YES	$ 23.28	$ 9312.00
7	20,000	Malathion Insecticide – **bulk shipment only**	PERMETHRIN UT		$ No	$ Bid
8	1,100	Bio Mist 3-15 ULV – 275 gal containers			$ No	$ Bid
9	600	Envion 30/30 insecticide – 2.5 gal. containers	PERMETHRIN SFR 1.25 gal	YES	$ 86.99	$ 52194.00

Bidders must attach to bid form a current material safety data sheet and current labels for each chemical. Failure to do so may result in rejection of bid.

Acknowledgment of Addenda (if any):

Addendum 1 NONE Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

Bidder: Complete & Return this Form with Offer.

Vendor References Form

Please See Attached

Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

THIS FORM MUST BE RETURNED WITH YOUR BID.

REFERENCE ONE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work: _____

REFERENCE TWO

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work: _____

REFERENCE THREE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work: _____

Bidder: Complete & Return this Form with Offer.

SITEONE LANDSCAPE SUPPLY REFERENCE PAGE

1 Pinellas County Schools — Jena Grage
Company Name — Contact Person
P.O. Box 2942 — Largo — FL — 33779
Street Address — City — State — Zip
(727) 588-6347
Telephone — Fax
Supply and deliver landscaping & Irrigation supplies — $125,000.00 — 6/9/18 – 6/8/19
Products or Services Purchased by the above Reference — Contract Amount & Dates

2 East Baton Rouge – Recreation & Park — Michelle McKee
Company Name — Contact Person
P.O. Box 15887 — Baton Rouge — LA — 70895
Street Address — City — State — Zip
(225) 273-6421
Telephone — Fax
Supply and deliver Landscape supplies — Approx. $30,000 — 10/2017 -10/2018
Products or Services Purchased by the above Reference — Contract Amount & Dates

3 City of Sioux Falls — Scott Rust
Company Name — Contact Person
224 West 9th Street — City of Sioux Falls — SD — 57104
Street Address — City — State — Zip
(605) 367-8013
Telephone — Fax
Supply and deliver landscaping & Irrigation supplies — Approx. $23,500 — 4/25/17 – 4/24/18
Products or Services Purchased by the above Reference — Contract Amount & Dates

Government Agencies That Your Firm Has Done Business With:

All the above

Signature Page

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions?..... **Yes** ☒ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

SiteOne Landscape Supply	Monique Potts
Bidder (Entity Name)	Signature
1385 East 36th Street	Monique Potts
Street & Mailing Address	Print Name
Cleveland, Ohio 44114	5-5-22
City, State & Zip	Date Signed
216-716-9250	248-581-1433
Telephone Number	Fax Number
bids@siteone.com	
E-mail Address	

Bidder: Complete & Return this Form with Offer.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Monique Potts

Signature of Contractor's Authorized Official

Monique Potts - Sr. Bid Representative

Name and Title of Contractor's Authorized Official *(Please Print)*

5-5-22

Date

Bidder: Complete & Return this Form with Offer.

Conflict of Interest Questionnaire

CONFLICT OF INTEREST QUESTIONNAIRE **FORM CIQ**
For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY
Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**
SiteOne Landscape Supply

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**
(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**
NONE
Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?
☐ Yes ☑ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?
☐ Yes ☑ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?
☐ Yes ☑ No

D. Describe each employment or business and family relationship with the local government officer named in this section.
NONE

4 Monique Potts
Signature of vendor doing business with the governmental entity

5-5-22
Date

Adopted 8/7/2015

Bidder: Complete & Return this Form with Offer.

Local Government Officer

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2022-883113

Date Filed:
05/06/2022

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
SiteOne Landscape Supply
Cleveland, OH United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Jefferson County Drainage District No. 6

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
IFB 22-023/YS
Term Contract for Insecticides, Herbicides, Spray Adjuvants and Adulticides

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. [X]

6 UNSWORN DECLARATION

My name is Monique Potts, and my date of birth is 2/10/68.

My address is 1385 East 36th Street, Cleveland, OH, 44114, US.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Cuyahoga County, State of Ohio, on the 5th day of May (month), 2022 (year).

Monique Potts
Signature of authorized agent of contracting business entity
(Declarant)

Conflicts Disclosure Statement – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT — **FORM CIS**

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20_____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath — Printed name of officer administering oath — Title of officer administering oath

Adopted 8/7/2015

Note: This Form is for Office Use Only.

Good Faith Effort (GFE) Determination Checklist

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .

☐ Yes	☑ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?
☐ Yes	☑ No	2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☑ No	3. **Provide** HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☑ No	4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders?
☐ Yes	☑ No	5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?
☐ Yes	☑ No	6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.** Supplying & delivering product only. No subcontracting use.

If "No" was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

Monique Potts
Printed Name of Authorized Representative

Monique Potts
Signature

Sr. Bid Representative
Title

5-5-22
Date

Bidder: Complete & Return this Form with Offer.

Notice of Intent (NOI) to Subcontract with

Historically Underutilized Business (HUB)

N/A

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: p Yes p No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: N/A

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

_____ _____ _____
Printed Name of Contractor Representative Signature of Representative Date

_____ _____ _____
Printed Name of HUB Signature of Representative Date

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

Bidder: Complete & Return this Form with Offer.

N/A

Historically Underutilized Business (HUB) Subcontracting Participation Declaration Form

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☐ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB) Subcontracting Participation Declaration Form

N/A

HUB SUBCONTRACTOR DISCLOSURE

PART I: Continuation Sheet **(Duplicate as Needed)**

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

<u>Bidder</u>: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☒ Other: No subcontracting use. Supply & deliver product only.

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☒ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that bidder is the apparent low bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Bidder: Complete & Return this Form with Offer.

N/A

Historically Underutilized Business (HUB) Subcontracting Participation Declaration Form

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required.** I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Monique Potts

Title: Sr. Bid Representative

Signature: Monique Potts

Date: 5-5-22

E-mail address: bids@SiteOne.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): Same as above

Title: _____

Date: _____

E-mail address: _____

Bidder: Complete & Return this Form with Offer.

Residence Certification/Tax Form

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Nonresident bidder" refers to a person who is not a resident.

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☐ I certify that _____ [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☒ I certify that SiteOne Landscape Supply [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ (city and state).

Taxpayer Identification Number (T.I.N.):	36-4485550
Company Name submitting bid/proposal:	SiteOne Landscape Supply
Mailing address:	1385 East 36th Street Cleveland, Ohio 44114
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

Bidder: Complete & Return this Form with Offer.

House Bill 89 Verification

I, Monique Potts, the undersigned representative of (company or business name) SiteOne Landscape Supply (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and

2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Monique Potts
Signature of Company Representative

5-5-22
Date

On this 5th day of May, 2022, personally appeared Monique Potts, the above named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

Rosalin Santiago
Notary Signature

ROSALIN SANTIAGO
Notary Public - State of Ohio
Recorded in Cuyahoga County
My Commission Expires 12-15-24

5-5-22
Date

Bidder: Complete & Return this Form with Offer.

Senate Bill 252 Certification

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

SiteOne Landscape Supply

Company Name

22-023/YS

IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

Bidder: Complete & Return this Form with Offer.

Bid Affidavit

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Ohio COUNTY OF Cuyahoga

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Ohio,

on this day personally appeared Monigue Potts (name), who

after being by me duly sworn, did depose and say:

"I, Monigue Potts (name) am a duly authorized officer of/agent

for SiteOne Landscape Supply (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said SiteOne Landscape Supply (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of bidder: SiteOne Landscape Supply
1385 East 36th Street
Cleveland, Ohio 44114

Fax: 248-581-1433 Telephone# 216-706-9250

by: Monigue Potts (print name) Title: Sr. Bid Representative

Signature: Monigue Potts

SUBSCRIBED AND SWORN to before me by the above-named Monigue Potts on

this the 5th day of May, 2022.

Rosalin Santiago
Notary Public in and for
the State of Ohio

NOTARY PUBLIC STATE OF OHIO

ROSALIN SANTIAGO
Notary Public - State of Ohio
Recorded in Cuyahoga County
My Commission Expires 12-25-24

Bidder Shall Return Completed Form with Offer.

Drexel

MSMA 6.6

MSMA Liquid

MSMA liquid herbicide for selective postemergent weed control on Cotton, Golf courses and Sod farms, and Highway Rights-of-way.

ACTIVE INGREDIENT:

Monosodium acid methanearsonate	51.0%
OTHER INGREDIENTS:	49.0%
TOTAL:	100.0%

Total Arsenic (as elemental) all in water soluble form is 23.61%. (Contains 6.6 lbs. MSMA per gallon.)

KEEP OUT OF REACH OF CHILDREN

CAUTION

See FIRST AID Below

EPA Reg. No. 19713-41
EPA Est. No. 19713-XX-XXX **Net Content:____**

FIRST AID

IF SWALLOWED:
- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

IF IN EYES:
- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- *Call a poison control center or doctor for further treatment advice.*

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed. May cause irritation of eyes, nose, throat, and skin. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are polyethylene or polyvinyl chloride. If you want more options, follow the

(Continued)

PRECAUTIONARY STATEMENTS (Cont.)

instructions for category A on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves, and shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

USER SAFETY RECOMMENDATIONS

Users should: 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning equipment or disposal of wastes. Do not contaminate water used by wildlife or aquatic life or water used for domestic or irrigation purposes.

USE INFORMATION

MSMA 6.6 herbicide is useful for selective postemergent weed control, particularly for grassy weeds in Cotton, Highway Rights-of-Way, Golf courses, and Sod farms. Its activity is enhanced by addition of a suitable surfactant, cleared for application to growing crops, to the spray solution. Best results are obtained on young actively growing weeds at air temperature above 70°F.

This product applied properly will kill or control noxious weeds susceptible to MSMA such as:

Bahiagrass	Fall panicum	Oats (wild)
Barnyardgrass	Fiddleneck	Pigweed
Beggartick (hairy)	Florida beggarweed	Puncturevine
Brachiaria *spp.*	Foxtail	Purslane (common)
Broomsedge	(green and yellow)	Ragweed
Chickweed	Goosegrass	Sandbur
Cocklebur	Guineagrass	Sicklepod
Crabgrass	Jimsonweed	Spurge
(smooth and large)	Johnsongrass	Watergrass
Dallisgrass	Morningglory	Witchgrass
Dandelion	Mustard (wild)	Wood sorrel
Dayflower	Nutsedge	

Manufactured By:
Drexel Chemical Company
P.O. BOX 13327, MEMPHIS, TN 38113-0327
SINCE 1972

41SP-0809*

Drexel

SAFETY DATA SHEET

DREXEL MSMA 6.6 MSMA LIQUID

Section 1: Material Identification

Product Name: Drexel MSMA 6.6 MSMA Liquid

EPA Reg No.: 19713-41

CAS NO: 2163-80-6

Formula: CH_4AsO_3Na

Company: Drexel Chemical Company
1700 Channel Avenue
Memphis, TN 38106

Synonyms: Monosodium Acid Methanearsonate
MSMA

Identifiers:

EINECS:	218-495-9
RTECS:	PA2625000
DOT label:	non-regulated

Emergency Telephone Number:

CHEMTREC	Drexel Chemical Co.
Tel: 1-800-424-9300	901-774-4370

This product is an EPA FIFRA registered pesticide. Some of the classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Please see **Section 15. REGULATORY INFORMATION** for explanation.

Section 2: Hazard Identification

(As defined by the OSHA Hazard Communication Standard, 29)

GHS Classification	Acute Inhalation	Category 4
	Skin Irritation	Category 2
	Aquatic acute toxicity	Category 2
	Corrosive to metals	Category 1
GHS Label Elements		
Signal word	Warning	

Hazard statement

Harmful if inhaled
Causes skin irritation
Moderately toxic to aquatic life
May be corrosive to metals

Precautionary statement

Prevention

Avoid breathing vapors or mist. Use only outdoors or in a well-ventilated area. Wash exposed skin thoroughly after handling. Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR") or Polyvinyl chloride ("PVC" or "vinyl").
Prevent from entering into ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Keep only in original container. May react with aluminum, zinc or steel.

Response

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call Poison Control Center of Doctor if you feel unwell.
If on skin: Wash with plenty of water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands. Absorb spillage to prevent material damage.

Storage

Store in a cool, dry, well ventilated, and secure area designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Do not store in excessive heat. Do not store near children, food, foodstuffs, drugs or potable water supplies.
Store in corrosive resistant high density polyethylene container.

Disposal

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities.

Section 3: Composition Information

Components	% By Wt.	OSHA PEL:	ACGIH TLV:
Active Ingredient:			
Monosodium Acid Methanearsonate	51.3%	N/Av	0.5 mg/m^3
Inert Ingredients:	48.7%	N/A	N/A

Section 4: First-Aid Measures

Eye Contact: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes for at least 10 minutes. Obtain medical attention without delay, preferably from an ophthalmologist

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Rinse mouth with water and have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. Have product label with you when calling a poison control center or doctor.

Skin Contact: Immediately flush skin with water while removing contaminated clothing and shoes. Wash exposed areas with soap and water. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician: This product has low oral, dermal, and inhalation toxicity. If swallowed, gastric lavage using an endotracheal tube may be preferred to vomiting. Literature recommendations for arsenic poisoning call for chelation therapy with BAL or d-penicillin. Persons with sensitivity to penicillin may suffer an allergic reaction. BAL is recommended for persons allergic to penicillin.

Section 5: Fire Fighting Measures

Fire Hazards: Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Thermal decomposition during a fire can produce fumes and irritating gases.

Flammability classification (OSHA 29 CFR 1910.1200): Non-combustible.
Flash point: Non-combustible (Aqueous Formulation).
Lower flammable limit (% by volume): NA
Upper flammable limit (% by volume): NA

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Evacuate the area and fight the fire from upwind at a safe distance to avoid hazardous vapors or decomposition products. Dike and collect fire-extinguishing water to prevent environmental damage and excessive waste runoff.

Firefighting media: Use dry chemical or carbon dioxide when fighting fires involving this product. Do not use water or foam, as this may spread material.

Special Protective Equipment for Firefighters:
Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Use full face shield and operate in positive pressure mode. Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections. **Avoid contact with aluminum equipment (i.e. ladders, etc.) as this will create arsine gas.**

Hazardous Combustion Products: May generate toxic fumes and smoke.

(NFPA):	Health:	Flammability:	Reactivity:
	3	0	0

Section 6: Accidental Release Measures

Steps to be taken if Material is Released or Spilled:

- Contain spilled material if possible. Small spills: Absorb with suitable absorbent and sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Drexel Chemical Co. for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

Personal Precautions:

- Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Section 7: Handling and Storage

KEEP OUT OF REACH OF CHILDREN

Handling: **General Handling:** Avoid contact with eyes, skin, and clothing. Wash thoroughly with soap and water after handling. Do not swallow. Avoid breathing vapor. Use with adequate ventilation. Wear long-sleeved shirt, long pants, chemical resistant footwear, socks plus a chemical resistant apron when handling. Keep away from heat, sparks and flame. See Section 8, Exposure Controls and Personal Protection.

Storage: Store in a cool, dry, ventilated and secure area designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Do not store in excessive heat. Do not store near children, food, foodstuffs, drugs or potable water supplies.

Section 8: Exposure Controls/ Personal Protection

Exposure Limits: TLV MSMA 0.5 mg/m^3

Personal Protection:

Eye/Face Protection: Wear safety glasses with side shields or chemical splash goggles to prevent vapors or mists from entering the eyes. If using a full face shield, always sue safety glasses or goggles along with the face shield to ensure adequate protection of the eyes.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR") or Polyvinyl chloride ("PVC" or "vinyl"). NOTICE:

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. When handling in enclosed areas, when large quantities of mists are generated or prolonged exposure is possible in excess of the TLV, use a respirator with either an organic vapor-removing

cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefixTC-14G).

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face with soap and water before smoking or eating.

Engineering Controls:

Ventilation: When handling this product proper ventilation is required to maintain exposure below the TLV. Ventilate all transport vehicles prior to unloading. Facilities storing or utilizing this material should be equipped with and eyewash facility and safety shower.

Section 9: Physical and Chemical Properties

Physical State:	Liquid
Color:	Light green
Odor:	Slight garlic odor
Flash Point:	Non-combustible
Vapor Pressure (mmHg):	N/Av
Boiling Point:	>212°F
Vapor Density (air = 1):	0.6
Bulk Density (H_2O = 1):	12.50 lbs./gal.
Freezing Point:	N/Av
Solubility in water:	Complete
pH:	5 – 6.5
Viscosity:	N/Av
Vapor Density:	0.6
% Volatiles	Approx. 45%

Section 10: Stability and Reactivity

Stability/Instability:	Thermally stable at typical use temperatures and in closed containers.
Conditions to Avoid:	Avoid heat of open flame. Avoid high temperatures above 130°F (54.4°C).
Incompatible Materials:	Avoid contact with: Reducing agents such as aluminum and zinc.
Hazardous Polymerization:	Will not occur
Thermal Decomposition:	Hazardous decomposition products can include and are not limited to: Arsine gas.

Section 11: Toxicological Information

Acute Toxicity

Ingestion:

- LD50, (rat): 2,833 mg/kg

Dermal:

- LD50, (rabbit): >2,500 mg/kg

Inhalation:

- LC50, (4h), (rat): >2.2 mg/l

Eye Irritation (rabbit):

- Not a primary irritant.

Skin Irritation (rabbit):

- Slight irritant.

Sensitization Skin:

- Non-sensitizer (guinea pigs).

Chronic Toxicity: Exposure below levels of concern.

Carcinogenicity: Not listed as carcinogenic in humans by IARC, NTP and OSHA.

Teratogenicity, mutagenicity, and other reproductive effects: None known

Section 12: Ecological Information

Information provided for Monosodium Acid Methanearsonate.

ENVIRONMENTAL FATE:

- Slightly toxic to fish, aquatic invertebrates and aquatic plants. Practically non-toxic in bees. Moderately toxic to birds.

Persistence and Degradability:

- Immobilized by binding to soil particles and not easily leached to groundwater except in sandy soils. Arsenic is persistent in the environment.

Aquatic Toxicity:

- Rainbow Trout: 96 hour LC50: >167 mg/L
- Bluegill 96 hour LC50: >51 mg/L
- Daphnia magna: 48 hour EC50: 77.5 mg/L

Bees: LD50: 68 µg/bee

Bird Toxicity: Bobwhite Quail LD50: 425 mg/kg

Section 13: Disposal Considerations

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws,

Section 14: Transport Information

DOT: Non-Regulated-See 49 CFR 173.132 (b) (3) & 1712.1-1 Appendix A

IMDG: Consult appropriate IMDG regulations for shipment requirements in the Maritime shipping modes.

ICAO/IATA: Consult appropriate ICAO/IATA regulations for shipment requirements in the Air modes.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material

Section 15: Regulatory Information

OSHA Hazard Communication Standard:

- **Arsenic is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.**
- **EPA FIFRA INFORMATION**
  This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemical. The hazard information required on the pesticide label is listed out below. The pesticide label also includes other important information, including directions for use.
- **EPA/CERCLA Reportable Quantity**: None Known

SARA/TITLE III:

- **Sec 302: Extremely Hazardous Substance Notification**: This material is not known to contain any Extremely Hazardous Substances.
- **Sec. 311/312. Hazard Categories:** Immediate health hazard
  Chronic health hazard
- **Section 313 Toxic Chemical(s):** Arsenic Compounds
- **RCA Waste Code: Not applicable**

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

- This product is not listed.

Toxic Substances Control Act (TSCA):

- All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

Section 16: Other Information

Drexel Chemical Company recommends that each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown below. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

Date Issued: May 3, 2015

BACK COVER
(Last Page)

6.5"

Weed Species	Broadcast Rate (QT/A)	Ready-Mixed Spray-to-Wet % Solution
Alder	3 - 4	1 - 1.5
Ash*	2 - 5	1 - 2
Aspen, quaking	2 - 3	1 - 1.5
Bearclover (Bearmat)*	2 - 5	1 - 2
Beech*	2 - 5	1 - 2
Birch	2	1
Blackberry	3 - 4	1 - 1.5
Blackgum	2 - 5	1 - 2
Bracken	2 - 5	1 - 2
Broom, French, Scotch	2 - 5	1.5 - 2
Buckwheat, California*	2 - 4	1 - 2
Cascara*	2 - 5	1 - 2
Catsclaw*	—	1 - 1.5
Ceanothus*	2 - 5	1 - 2
Chamise*	2 - 5	2
Cherry, bitter, black, pin	2 - 3	1 - 1.5
Coyote brush	3 - 4	1.5 - 2
Deerweed	2 - 5	1
Dogwood*	2 - 5	1 - 2
Elderberry	2	1
Elm*	2 - 5	1 - 2
Eucalyptus	—	2
Gorse*	2 - 5	1 - 2
Hasardia*	2 - 4	1 - 2
Hawthorn	2 - 3	1 - 1.5
Hazel	2	1
Hickory*	2 - 5	1 - 2
Honeysuckle	3 - 4	1 - 1.5
Hornbeam, American*	2 - 5	1 - 2
Kudzu	4	2
Locust, black*	2 - 4	1 - 2
Madrone resprants*	—	2
Manzanita*	2 - 5	1 - 2
Maple, red	2 - 4	1 - 1.5
Maple, sugar	—	1 - 1.5
Monkey flower*	2 - 4	1 - 2
Oak, black, white*	2 - 4	1 - 2
Oak, post	3 - 4	1 - 1.5
Oak, northern, pin	2 - 5	1 - 1.5
Oak, scrub*	2 - 4	1 - 1.5
Oak, southern red	2 - 3	1 - 1.5
Peppertree, Brazilian (Florida holly)*	2 - 5	1 - 2
Persimmon*	2 - 5	1 - 2
Pine	2 - 5	1 - 2
Poison ivy	4 - 5	2
Poison oak	4 - 5	2
Poplar, yellow*	2 - 5	1 - 2
Redbud, eastern	2 - 5	1 - 2
Rose, multiflora	2	1
Russian olive*	2 - 5	1 - 2
Sage, black	2 - 4	1
Sage, white*	2 - 4	1 - 2
Sage brush, California	2 - 4	1
Sahnonberry	2	1
Saltcedar*	2 - 5	1 - 2
Sassafras*	2 - 5	1 - 2
Sourwood*	2 - 5	1 - 2
Sumac, laurel, poison, smooth, sugarbush, winged*	2 - 4	1 - 2
Sweetgum	2 - 5	1 - 1.5
Swordfern*	2 - 5	1 - 2
Tallowtree, Chinese	—	1
Tan oak resprouts*	—	2
Thimbleberry	2	1
Tobacco, tree*	2 - 4	1 - 2
Toyon*	—	2
Trumpetcreeper	2 - 3	1 - 1.5
Vine maple*	2 - 5	1 - 2
Virginia creeper	2 - 5	1 - 2
Wisteria, southern*	2 - 5	1 - 2
Willow	2	1
Yerba Santa*	—	2

*Partial control

9.0 CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully and completely. It is impossible to eliminate all risks inherently associated with the use of this product. To the extent consistent with applicable law, Buyer and/or User assume all risks of ineffectiveness or other unintended consequences or damages that may result from conditions outside or beyond the control of LESCO, Inc. including but not limited to, such factors as manner of use or application, weather or weather conditions outside the range considered normal at the application site or for the time period in which the product is applied, the presence of other materials, incompatible products, or other influencing factors which are beyond the control of LESCO, Inc. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and/or User, and Buyer and/or User agrees to hold LESCO, Inc. harmless for any claims relating to such factors.

[redacted]

LESCO, Inc. offers this product, and Buyer and/or User accepts it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of LESCO, Inc.

LESCO and Prosecutor are registered trademarks and the sweeping design is a trademark of LESCO Technologies, LLC.

All trademarks are the property of their respective companies.

This product is protected by U.S. Patent Nos. 5,688,856; 5,703,015; 6,048,793; 6,121,199; 6,121,200. No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-536-10404

#069208 2.5 Gal.
#069259 2 x 2.5 Gal.
#069259 30 Gal.

Distributed by:
LESCO, INC.
1385 East 36th Street
Cleveland, OH 44114-4114 U.S.A.

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BOOK OUTSIDE

7.125"

FRONT COVER
(Page 1)

6.875"

GROUP 9 HERBICIDE

LESCO®

PROSECUTOR®

Non-Selective Herbicide

™

Complete Directions for Use

The complete broad-spectrum postemergence herbicide for industrial, turf and ornamental weed control.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION IS LIKELY TO RESULT.

ACTIVE INGREDIENT	
*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	41.0%
OTHER INGREDIENTS	59.0%
	100.0%

*Contains 480 grams per liter or 4 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per liter or 3 pounds per U.S. gallon of the acid, glyphosate. Read the entire label before using this product.

Keep out of reach of children.

CAUTION! See inside for additional Precautions

FIRST AID

IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or physician for treatment advice.

• Have the product container or label with you when calling a poison control center or physician, or going for treatment.
• This product is identified as LESCO® Prosecutor® PRO Non-Selective Herbicide, EPA Reg. No. 524-536-10404.
• In case of an emergency involving this product, or for medical assistance, call collect, day or night, (314) 694-4000.

Read the entire label before using this product.
Use only according to label instructions.
Read the "CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. LESCO, INC. DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION.

EPA Reg. No. 524-536-10404 2018-

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SPEC 99341-1 Dieline PPN 40113S6-127

Description: 2.5G New Style BOOKLET ONLY r1			NOTES	LEGEND
Supplied for: Monsanto Ag	File No.: T01218		Measurements are in inches. EcoSlim	Copy Image Area Cut/Fold Lines
Finished Size: 7.125" (W) x 6.875" (H)	Supercedes: N/A			
Date: 6/1/17	Supplied By: CCL Label Memphis			
Application: Illustrator CS6	Prepared By: BM			

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SAFETY DATA SHEET

LESCO® PROSECUTOR® PRO HERBICIDE

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	LESCO® PROSECUTOR® PRO HERBICIDE
Product code (UVP)	86725800
SDS Number	102000037600

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Herbicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer Environmental Science A division of Bayer CropScience LP 5000 Centregreen Way, Suite 400 Cary, NC 27513 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Acute toxicity(Inhalation): Category 4

Labelling in accordance with regulation HCS 29CFR §1910.1200

Signal word: Warning

Hazard statements
Harmful if inhaled.

Precautionary statements
Avoid breathing mist/ vapours/ spray.

SAFETY DATA SHEET

LESCO® PROSECUTOR® PRO HERBICIDE

Use only outdoors or in a well-ventilated area.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Isopropylamine salt of glyphosate	38641-94-0	41.0
Surfactant blend (proprietary)		>=7.0 – <=13.0

The specific chemical identity and/or concentration range is being withheld because it is trade secret information.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation
Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact
Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

Eye contact
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms
To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Risks
This product is not a cholinesterase inhibitor.

Treatment	Treatment with atropine and oximes is not indicated. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Oxides of phosphorus

Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	does not flash
Auto-ignition temperature	452 °C / 845.6 °F
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Explosivity	Not explosive

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Use personal protective equipment. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt).

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in original container. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in a place accessible by authorized persons only. Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode. Protect from freezing. Partial crystallization may occur on prolonged storage below the minimum storage temperature. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No known occupational limit values.

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton) Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Eye protection	Use tightly sealed goggles and face protection.
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	Liquid, clear
Colour	light yellow to amber
Odour	sweet
Odour Threshold	No data available
pH	4.4 - 5.0 (8 %)
Melting point/range	No data available
Boiling Point	No data available
Flash point	does not flash
Flammability	No data available
Auto-ignition temperature	452 °C
Minimum ignition energy	Not applicable
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	Not applicable
Lower explosion limit	Not applicable
Vapour pressure	25 mmHg (24 °C)

Evaporation rate	No data available
Relative vapour density	No data available
Relative density	1.169 (20 °C)
Density	1.17 g/cm³ (20 °C)
Water solubility	completely miscible
Partition coefficient: n-octanol/water	Glyphosate: log Pow: -3.2
Viscosity, dynamic	73.2 cps
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	Not explosive
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Galvanised steel, Unlined mild steel
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Skin contact, Eye contact, Inhalation
Immediate Effects	
Eye	May cause eye irritation.
Skin	Not expected to produce significant adverse effects when recommended use instructions are followed.
Ingestion	Not expected to produce significant adverse effects when recommended use instructions are followed.

Inhalation	May be harmful if inhaled.

Information on toxicological effects

Acute oral toxicity	LD50 (Rat) 5,108 mg/kg Test conducted with a similar formulation.
Acute inhalation toxicity	LC50 (Rat) 2.9 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (Rat) > 5,000 mg/kg Test conducted with a similar formulation. No deaths
Skin corrosion/irritation	No skin irritation (Rabbit) Test conducted with a similar formulation.
Serious eye damage/eye irritation	Slight irritant effect - does not require labelling. (Rabbit) Test conducted with a similar formulation.
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test Test conducted with a similar formulation.

Assessment STOT Specific target organ toxicity – single exposure

Glyphosate: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Glyphosate did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Glyphosate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Glyphosate was not carcinogenic in lifetime feeding studies in rats and mice.
Important comment to IARC Listing:, Our expert opinion is that classification as a carcinogen is not warranted.

ACGIH

None.

NTP

None.

IARC

Isopropylamine salt of glyphosate	38641-94-0	Overall evaluation: 2A

OSHA

None.

Assessment toxicity to reproduction

Glyphosate did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Glyphosate did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

The toxicological data refer to a similar formulation.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 5.4 mg/l static test; Exposure time: 96 h
	LC50 (Lepomis macrochirus (Bluegill sunfish)) 7.3 mg/l static test; Exposure time: 96 h
Chronic toxicity to fish	Oncorhynchus mykiss (rainbow trout) flow-through test NOEC: >= 9.63 mg/l The value mentioned relates to the active ingredient glyphosate.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 11 mg/l static test; Exposure time: 48 h
Chronic toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 12.5 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient glyphosate.
Toxicity to aquatic plants	ErC50 (Skeletonema costatum) 13.5 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient glyphosate.
Biodegradability	Glyphosate: Not rapidly biodegradable
Koc	Glyphosate: Koc: 6920
Bioaccumulation	Glyphosate: Does not bioaccumulate.
Mobility in soil	Glyphosate: Immobile in soil

Results of PBT and vPvB assessment

PBT and vPvB assessment	Glyphosate: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No further ecological information is available.
Environmental precautions	Apply this product as specified on the label. Do not apply directly to water, to areas where surface water is present

or to intertidal areas below the mean high water mark.
Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.
Retain and dispose of contaminated wash water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Do not contaminate water, food, or feed by disposal. Follow all local/regional/national/international regulations.
Contaminated packaging	Follow advice on product label and/or leaflet. Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

SECTION 15: REGULATORY INFORMATION

US Federal Regulations
TSCA list

Water	7732-18-5
Polyethylene glycol	25322-68-3

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No export notification needs to be made.
SARA Title III - Section 302 - Notification and Information
Not applicable.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.

SAFETY DATA SHEET

LESCO® PROSECUTOR® PRO HERBICIDE

US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Polyethylene glycol	25322-68-3	MN

Environmental
CERCLA
None.
Clean Water Section 307(a)(1)
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

EPA/FIFRA Information:
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Causes moderate eye irritation.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations

SAFETY DATA SHEET

LESCO® PROSECUTOR® PRO HERBICIDE

WHO World health organisation

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Instability - 1 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1 Flammability - 1 Physical Hazard - 1 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

Revision Date: 08/06/2020

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

SAFETY DATA SHEET **Polaris® Herbicide**

Nufarm

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Polaris® Herbicide**
EPA Reg. No.: 228-534
Product Type: Herbicide

Company Name: Nufarm Americas Inc.
11901 S. Austin Avenue
Alsip, IL 60803
1-800-345-3330

Telephone Numbers: **For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night: 1-800-424-9300**
For Medical Emergencies Only, Call 1-877-325-1840

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not exactly the same as on the FIFRA label. Certain sections are superseded by federal law governed by EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

2. HAZARDS IDENTIFICATION

PHYSICAL HAZARDS:
Not hazardous

HEALTH HAZARDS:
Not hazardous

ENVIRONMENTAL HAZARDS:
Not hazardous

SIGNAL WORD:
None Required

HAZARD STATEMENTS:
Not hazardous in accordance with 29CFR 1910.1200 (Hazcom 2012)

PRECAUTIONARY STATEMENTS
Use with appropriate protective equipment.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	% BY WEIGHT
Isopropylamine Salt of Imazapyr	81510-83-0	22 – 23.3
Other Ingredients	Trade Secret	Trade Secret

Synonyms: 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

If Inhaled: Move person to fresh air. Seek medical attention if symptoms develop.
If in Eyes: Hold eye open and rinse slowly and gently with water for sever minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Seek medical attention if irritation persists.
If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water Seek medical attention if irritation persists.
If Swallowed: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. Seek medical attention if symptoms develop
Most Important symptoms/effects, acute and delayed: None expected.

Indication of Immediate medical attention and special treatment if needed: Immediate medical attention is not generally required. For ingestion there is no specific antidote available. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use media that is suitable for the surrounding fire.
Special Fire Fighting Procedures: Firefighters should wear NIOSH approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.
Unusual Fire and Explosion Hazards: This product is not flammable or combustible. If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.
Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as oxides of carbon, hydrogen and nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.
Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.
Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.
Methods for Cleanup and Disposal: Pump any free liquid into an appropriate closed container. Absorb residues with an inert material and place in a suitable container for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.
Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

HANDLING:
Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Spray solutions of this product should be mixed, stored, and applied only in stainless steel, fiberglass, plastic, and plastic-lined steel containers. DO NOT mix, store, or apply this product or spray solutions of this product in unlined steel (except stainless steel) containers or spray tanks.

STORAGE:
Do not store below 10° F. Do not contaminate water, food, or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:
Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:
Eye/Face Protection: To avoid contact with eyes, wear chemical goggles or shielded safety glasses. **Skin Protection:** To avoid contact with skin wear long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves made of any waterproof material Washing facilities should be readily accessible to the work area.
Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.
General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

	OSHA		ACGIH		
Component	TWA	STEL	TWA	STEL	Unit
Imazapyr	NE	NE	NE	NE	
Other Ingredients	NE	NE	NE	NE	

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Blue liquid
Odor:	Faint ammonia like
Odor threshold:	No data available
pH:	6.26 (1% w/w dilution in DIW)
Melting point:	No data available
Initial boiling point and boiling range	No data available
Flash point:	>212° F (>100° C)
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	1.057 g/mL @ 20° C
Solubility(ies):	No data available
Partition coefficient: n-octanol/water:	No data available
Autoignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	3.766 cSt @20° C; 1.988 cSt @ 40° C
VOC Emission Potential (%):	-0.13 (TGA)

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.
Chemical Stability: This material is stable under normal handling and storage conditions.
Possibility of Hazardous Reactions: Will not occur
Conditions to Avoid: Excessive heat. Do not store near heat or flame. Do not mix or store this product or solutions of this product in unlined steel containers
Incompatible Materials: Strong oxidizing agents: bases and acids.
Hazardous Decomposition Products: Under fire conditions may produce gases such as oxides of carbon, hydrogen and nitrogen.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eye contact, Skin contact
Eye Contact: Minimally irritating. May cause irritation, redness and tearing.
Skin Contact: Slightly toxic and no more than mildly irritating based on toxicity studies.
Ingestion: Low toxicity based on toxicity studies.
Inhalation: Low toxicity based on toxicity studies.
Delayed, immediate and chronic effects of exposure: None expected.
Toxicological Data:
Data from laboratory studies conducted on Imazapyr Technical:
Oral: Rat LD_{50}: >5,000 mg/kg
Dermal: Rabbit LD_{50}: >5,000 mg/kg
Inhalation: Rat 4-hr LC_{50}: >2.07 mg/l (no mortalities highest dose attainable)
Eye Irritation: Rabbit: Minimally irritating (MMTS= 6.0)
Skin Irritation: Rabbit: Slightly irritating (PDII=0.8)
Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.

Subchronic (Target Organ) Effects: For imazapyr, no adverse effects at approximately 1,700 mg/kg/day (highest dose tested).
Carcinogenicity / Chronic Health Effects: Imazapyr did not cause cancer in laboratory animals. EPA has classified imazapyr as a Group E (evidence of non-carcinogenicity for humans) carcinogen.
Reproductive Toxicity: The results of animal studies with imazapyr gave no indication of a fertility impairing effect.
Developmental Toxicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies with imazapyr.
Genotoxicity: For imazapyr, no mutagenic effect was found in various tests with microorganisms and mammals.

Assessment Carcinogenicity: None listed with ACGIH, IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity:
Data on Imazapyr:

96-hour LC_{50} Bluegill:	>100 mg/l	Bobwhite Quail 8-day Dietary LC_{50}:	>5,000 ppm
96-hour LC_{50} Rainbow Trout:	>100 mg/l	Bobwhite Quail Oral LD_{50}:	>2,150 mg/kg
48-hour EC_{50} Daphnia:	>100 mg/l	Mallard Duck 8-day Dietary LC_{50}:	>5,000 ppm
14-day EC_{50} Duckweed:	0.024 mg/l	Mallard Duck Oral LD_{50}:	>2,150 mg/kg
7-day EC_{50} Green Algae:	71 mg/l	Honey Bee LD_{50}:	>100 mg/bee

Environmental Fate:
Imazapyr is degraded by microbial metabolism and can be relatively persistent in soils. It has an average half-life in soils that ranges from 2 weeks to 5 months. Half-lives tend to be shorter in forest litter and soils. Imazapyr is water-soluble and variably binds to organic materials in the soils. Although the potential to leach is high, leaching is limited under typical field conditions. In water, imazapyr can be rapidly degraded by photolysis with a half-life averaging 2 days. Due to its rapid photodegradation by sunlight, water contamination by imazapyr is generally not of concern.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling and Disposal:

Nonrefillable Containers 5 Gallons or Less: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable containers larger than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of

the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers larger than 5 gallons: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this SDS.

DOT
Not Regulated

IMDG
Not Regulated

IATA
Not Regulated

15. REGULATORY INFORMATION

EPA FIFRA INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION. No human or domestic animal hazard statements are required. Follow instructions for Personal Protective Equipment and User Safety Recommendations.

U.S. FEDERAL REGULATIONS

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:
Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):
Not hazardous

Section 313 Toxic Chemical(s):
None

Reportable Quantity (RQ) under U.S. CERCLA:
None

RCRA Waste Code:
Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

State Information:
Other state regulations may apply. Check individual state requirements.

California Proposition 65: Not Listed.

16. OTHER INFORMATION

National Fire Protection Association (NFPA) Hazard Rating:
Rating for this product: Health: 1 **Flammability:** 0 **Reactivity:** 0
Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

Date of Issue: April 12, 2015 **Supersedes:** October 16, 2013

Polaris is a registered trademark of Nufarm Americas Inc.

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical Product
NO FOAM® A
CA Reg. No.: 1050775-50015
Common Name: Surfactant (Adjuvant).
Chemical Description: Liquid mixture of nonionic surfactants.
TSCA/CAS No.: This product is a mixture — there is no specific CAS number.

Manufactured By
Creative Marketing & Research
P. O. Box 35000
Fresno, CA 93745-5000

Emergency Phone Numbers
Emergency Telephone: DAYS: (559) 499-2100 EVES: (559) 994-9144
CHEMTREC (24-Hour Emergency Number): (800) 424-9300
EPA National Response Center: (800) 424-8802

SECTION 2. HAZARDOUS INGREDIENTS

CHEMICAL	CAS NO.	%	TLV OR PEL	RQ (lbs)
Alkyl phenol ethoxylate	9016-45-9	66.0	N.A.*	N.A.
Isopropyl Alcohol	67-63-0	19.0	400 ppm (PEL)	N.A.

* N.A. - Not Available.

SECTION 3. EMERGENCY/HAZARDS OVERVIEW

Viscous, orange liquid. Avoid contact with strong alkalies at high temperatures, acids, oxidizing agents, or materials reactive with hydroxyl compounds. Burning may result in formation of carbon oxides. Contain any liquid runoff. Not D.O.T. regulated.

HEALTH: 2 REACTIVITY: 0 FLAMMABILITY: 1 ENVIRONMENT: 1

(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)

SECTION 4. FIRST AID

Eyes: Immediately flush eyes with plenty of water and get medical attention.
Skin: Immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. If irritation persists, seek medical attention.
Ingestion: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water. If so advised by a physician or Poison Control Center, induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.
Inhalation: Remove victim to fresh air.

SECTION 5. FIRE AND EXPLOSION HAZARDS

Flash Point:	101°F.
Test Method:	ASTM-D93
LEL Flammable Limits:	Not pertinent.
UEL Flammable Limits:	Not pertinent.
Autoignition Temperature:	Not pertinent.
Flammability Classification:	None.
Known Hazardous Products of Combustion:	None.
Properties that Initiate/Contribute to Intensity of Fire:	None.
Potential For Dust Explosion:	None.
Reactions that Release Flammable Gases or Vapors:	Not known.
Potential For Release of Flammable Vapors:	None.
Unusual Fire & Explosion Hazards:	Burning may result in formation of carbon oxides.
Extinguishing Media:	Foam, CO_2, dry chemical, water.
Special Firefighting Procedures:	Wear positive pressure, self-contained breathing apparatus and goggles. Avoid smoke inhalation. Contain any liquid runoff.

SECTION 6. SPILLS AND LEAKS

Containment:	Prevent product spillage from entering drinking water supplies or streams.
Clean Up:	Collect liquid or absorb onto absorbent material and package for disposal.
Evacuation:	Not necessary.

SECTION 7. STORAGE AND HANDLING

Storage:	Store in plastic or stainless steel container in a cool, well-ventilated, dry place at temperatures above 40°F. Do not store near food or feeds. Do not stack pallets more than two (2) high.
Transfer Equipment:	Transfer product using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc.
Work/Hygienic Practices:	Harmful if swallowed. May cause irritation of eyes, nose, throat and skin. Avoid contact with eyes, skin and clothing. Avoid breathing spray mist. Remove contaminated clothing and wash thoroughly before reuse. Do not contaminate feed and foodstuffs.

SECTION 8. PERSONAL PROTECTIVE EQUIPMENT

Eyes:	Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.
Skin:	Impervious gloves and clothes.
Respiratory:	Not normally needed. If use generates an aerosol mist or respiratory irritation, use NIOSH-approved dust/mist respirator (such as 3M #8710).
Ventilation:	Recommended but no TLV established.

SECTION 9. PHYSICAL AND CHEMICAL DATA

Appearance:	Viscous, orange liquid.
Odor:	Mild alcohol odor.
pH:	6.8
Vapor Pressure:	0.75 (psi)
Vapor Density (Air=1):	>1.0
Boiling Point:	95°C (203°F)
Freezing Point:	Not available.
Water Solubility:	Miscible.
Density:	8.76 lbs./gal.
Evaporation Rate:	Not available.
Viscosity:	Not available.
% Volatile:	Not available.
Octanol/Water Partition Coefficient:	Not available.
Saturated Vapor Concentration:	Not available.

SECTION 10. STABILITY AND REACTIVITY

Stability:	Stable.
Conditions To Avoid:	Avoid contact with strong alkalies at high temperatures, acids, oxidizing agents, or materials reactive with hydroxyl compounds.
Incompatibility:	Not available.
Hazardous Decomposition Products:	Burning may result in formation of carbon oxides.
Hazardous Polymerization:	Will not occur.

SECTION 11. POTENTIAL HEALTH EFFECTS

Acute Effects:

Eyes:	Slight to moderate irritant. Vapors or mist may cause redness and burning.
Skin:	Slight irritant, especially from prolonged exposure. Causes redness, drying and cracking. LD_{50} (Rabbit) > 2000 kg/mg.
Ingestion:	May cause abdominal discomfort, nausea, and diarrhea. LD_{50} (Rat) > 3300 kg/mg.
Inhalation:	None expected but aerosol mist may cause mild irritation of nasal mucous membranes.
Subchronic Effects:	None known.
Chronic Effects:	None known.

SECTION 12. ECOLOGICAL INFORMATION

Algal/Lemna Growth Inhibition:	Not known.
Toxicity to Fish and Invertebrates:	Rainbow trout LC_{50} = 3.3 mg/l, NOEL <1.0 mg/L; Bluegill LC_{50} = 6.0 mg/L, NOEL = 1.8 mg/l; Dahpnia magna LC_{50} = 7.3 mg/l, NOEL = 3.2 mg/l.
Toxicity to Plants:	Not known.
Toxicity in Birds:	Not known.

SECTION 13. DISPOSAL

Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents in accordance with state and local regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal.

SECTION 14. TRANSPORTATION

D.O.T. PROPER SHIPPING DESCRIPTION:	Not D.O.T. Regulated.
OTHER SHIPPING INFORMATION:	Adhesives, Adjuvants, Spreaders or Stickers, Liquid. NMFC Item 4612, LTL Class 60

SECTION 15. REGULATORY INFORMATION

CERCLA: None.
SARA TITLE III, Section 313 Toxic Chemicals: Isopropyl alcohol (9.0%).
PROPOSITION 65 (CA): None.

SECTION 16. OTHER

All information appearing in this document was based on data provided by third party sources and was compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act. The information is believed to be accurate as of the preparation date, but is not warranted as being the final authority in the use of this product. This information does not purport to be legal or medical advice.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wear long sleeved shirt, long pants, shoes plus socks and chemical resistant gloves made of any waterproof material when mixing or handling concentrate. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

FIRST AID

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a Poison Control Center or doctor for treatment advice.

IF ON SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice.

IF SWALLOWED: Call a Poison Control Center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a Poison Control Center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably mouth-to-mouth if possible. Call a Poison Control Center or doctor for further treatment advice.

Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment.

CONDITIONS OF SALE AND WARRANTY

Creative Marketing & Research, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated when used in accordance with the use directions under normal conditions. Creative Marketing & Research, Inc. neither makes, nor authorizes any agent or representative to make, any other warranties, express or implied, including fitness or merchantability.

The directions for use of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as timing and method of application, weather and crop conditions, presence of other materials, or other influencing factors, all of which are beyond the control of Creative Marketing & Research, Inc. and Seller. Buyer and user acknowledge and assume all risks and liability resulting from the handling, storage and use of this material not in strict accordance with directions given herewith. In no case shall Creative Marketing & Research, Inc. or the Seller be liable for consequential, special, indirect, or incidental damages or losses resulting from the handling or use of this product. The foregoing is a condition of sale by Creative Marketing & Research, Inc. and is accepted as such by the Buyer.

NO FOAM A

SPREADER - ACTIVATOR

NONIONIC SURFACTANT
FOR TERRESTRIAL / AQUATIC USE SITES

PRINCIPAL FUNCTIONING AGENTS:

Alkyl phenol ethoxylate, Isopropanol, and Fatty acids	90%
CONSTITUENTS INEFFECTIVE AS SPRAY ADJUVANT:	10%
TOTAL:	100%

CA Reg. No. 1050775-50015

KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panel for additional Precautionary Statements

NET CONTENTS: ___ GALLONS / ___ LITERS

Manufactured by

CREATIVE MARKETING & RESEARCH, INC.
P.O. Box 35000 - Fresno, CA 93745-5000
(559) 499-2100

DIRECTIONS FOR USE

NO FOAM A is used to give optimum wetting and spreading of insecticides, miticides, fungicides, herbicides and growth regulating hormones. NO FOAM A may be used on agricultural, forestry, turf and ornamental, industrial, structural and non-cropland sites. NOT FOR AQUATIC USE IN WASHINGTON.

NO FOAM A is formulated from materials which do not tend to burn foliage or leave harmful residues. Use of correct quantity for smooth wetting reduces the possibility of spot injury from large pesticide droplets.

Read and follow the precautions, restrictions and recommendations on the labels of pesticides used with NO FOAM A. Use according to the most restrictive label directions for each product in any tank mix.

COMPATIBILITY: NO FOAM A is compatible with most pesticides. However, if the desired combination has not been previously used, a compatibility test is recommended.

MIXING: Shake well before using. Fill spray tank ½ full of water and begin agitation. Add the recommended amount of NO FOAM A. Add pesticides as directed by label or in the following sequence and continue filling tank: (1) Dry flowables or water dispersing granules, (2) Wettable powders, (3) Flowables, (4) Solutions, (5) Emulsifiable concentrates. Continue agitation until spray solution is completely mixed. Continuous agitation of finished spray is recommended. If spray solution has been allowed to stand, thoroughly agitate and remix before application.

RECOMMENDATIONS: Proper quantity to use will vary with the type of equipment, water volume per acre, temperature, type of foliage to be wet, and the pesticide formulation. Also, higher rates than those below may be used if recommended by pesticide labeling. Follow pesticide label directions. However, do not add this product at a rate which exceeds 5% of the finished spray volume.

AIR or GROUND: Use 4-32 fl.oz. per 100 gallons of finished spray solution. For improved efficacy, use at least 4 fl.oz. per acre when finished spray volume is less than 20 gallons per acre. For backpack or hand held sprayers, use ½ fl. oz. per gallon of finished spray solution.

FOR USE WITH AQUATIC HERBICIDES: Use 1-2 quarts per 100 gallons of finished spray solution. Consult the pesticide label for proper rates and volumes.

STORAGE AND DISPOSAL

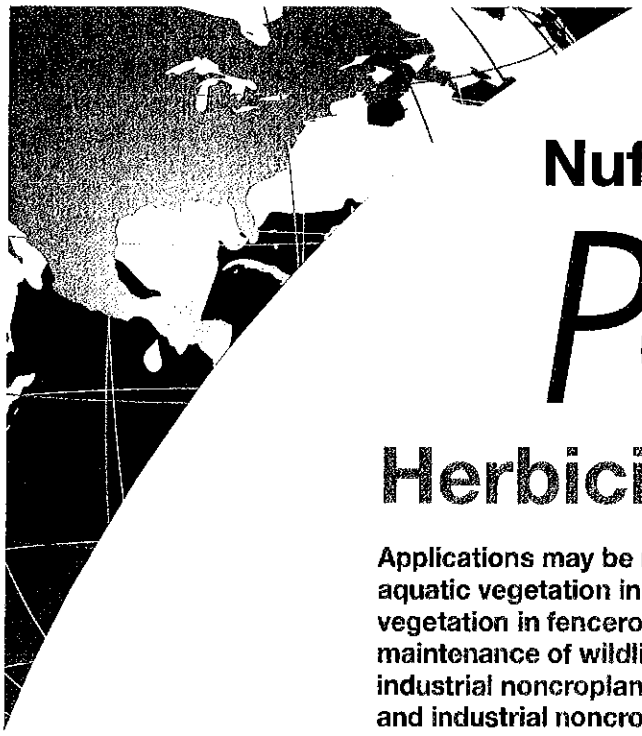
DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL

STORAGE: Store in original container away from children, animals, foods, feeds and seeds. Handle in accordance with Precautionary Statements. In the event of spillage or leakage, soak up the material with absorbent clay, sand, sawdust or other absorbent material. Scrape up and dispose in accordance with Product Disposal.

PRODUCT DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent) during mixing and loading. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state or local ACRC recycler, visit the ACRC web page at www.acrecycle.org. Decontaminated containers may also be disposed of in a sanitary landfill.

0180/0306(08)



Nufarm POLARIS®

Herbicide

Applications may be made for the control of undesirable emergent and floating aquatic vegetation in estuarine marine surface water. For the control of undesirable vegetation in fencerows, non-irrigation ditch banks, for establishment and maintenance of wildlife openings, grass pastures and rangeland, unimproved industrial noncropland Bermudagrass and Bahiagrass, under certain paved areas, and industrial noncropland areas including railroad, utility, pipeline and highway rights-of-way, utility plant sites, petroleum tank farms, pumping installations, storage areas, non-irrigation ditchbanks, roads, transmission lines, and industrial bareground areas.

ACTIVE INGREDIENT:	
Isopropylamine salt of imazapyr: (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid)*	27.7%
OTHER INGREDIENTS:	72.3%
TOTAL:	100.0%

*Equivalent to 22.62% 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid or 2 pounds acid per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION / PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300

For Medical Emergencies Only, Call (877) 325-1840

Have the product container label with you when calling a poison control center or doctor or going for treatment.

EPA Reg. No. 228-534

Manufactured for
Nufarm Americas Inc.
150 Harvester Drive
Burr Ridge, IL 60527

Nufarm

LESCO®

Spreader Sticker

Nonionic Surfactant

Excellent Wetting Ability and Increased Contact Time on the Target

- Used with Most Insecticides, Fungicides, Herbicides and Wettable Powders
- Creates a Uniform Distribution of Spray Mix
- Increases Pesticide Coverage and Penetration of Target Plants

PRINCIPAL FUNCTIONING AGENTS:	
Glycerine, Alkylaryl Ethoxylate, Diethylene Glycol	80%
Constituents Ineffective as a Spray Adjuvant	20%
TOTAL	100%

WARNING. KEEP OUT OF REACH OF CHILDREN. See additional precautionary statements and directions for use on back of container. Read the entire label carefully before using this product.

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PRECAUTIONARY STATEMENTS
Causes skin irritation. Causes serious eye irritation. Keep out of reach of children. Read label before use. Keep container tightly closed. Keep only in original container. Avoid breathing dust, fume, gas, mist, vapors, or spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.
Personal Protective Equipment: Wear protective gloves/ protective clothing/ eye protection/ face protection.

FIRST AID
Have the product container with you when calling a poison control center or doctor, or going for treatment. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do then continue rinsing. If eye irritation persists: Get medical advice or attention. **IF ON SKIN OR CLOTHING:** Take off contaminated clothing and wash it before reuse. Wash with plenty of soap and water for several minutes. **IF SWALLOWED:** Unless advised otherwise by a poison control center or doctor, have person rinse mouth with water, if able. Do not give anything by mouth to an unconscious person. **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth to mouth if possible.

GENERAL INFORMATION
LESCO® Spreader Sticker is a high quality, general purpose nonionic surfactant that can be used with most insecticides, fungicides, herbicides and wettable powders. LESCO Spreader Sticker improves performance of active spray ingredients by giving them more uniform distribution and better wetting of the plant surface.

- Lower surface tension of the tank mix allows spray droplets to spread upon contact
  - Increased contact area drives pesticide actives into the plant faster
  - Allows water to penetrate hydrophobic surfaces, ensuring delivery of actives
- LESCO Spreader Sticker meets pesticide label requirements for an 80/20 surfactant

DIRECTIONS FOR USE (NOT FOR AQUATIC USE)
Follow the instructions on all pesticide labels. The user must either have previous experience with the specific tank mix being used or must conduct phytotoxicity tests and a jar test with the specific tank mix in order to determine product compatibility.

Although LESCO Spreader Sticker may usually be added almost anytime during the mixing process, it is strongly recommended that it be added after all other tank mix additives and actives are added. Certainly, any solid formulations must be added and thoroughly mixed into the tank water before adding this or any other liquid products to the tank.

Add LESCO Spreader Sticker as a surfactant last before the final addition of water in the recommended level in the chart below.

USE RATES

Applications	LESCO Spreader Sticker per gal. of Spray Mix
Insecticides	½-1 tsp. (½- 1 oz. per 5 gal.)
Fungicides	½ 1 tsp. (½-1 oz. per 5 gal.)
Herbicides	½-1 oz.
Acaricides	½-1 tsp. (½-1 oz. per 5 gal.)
Defoliants	½-1 oz.
Desiccants	½-1 oz.
Wettable powders	½-1 oz.

Different conditions may cause some variation in the amount of this product required. Use the least amount of LESCO Spreader Sticker needed to perform effectively.

STORAGE AND DISPOSAL
STORAGE: Store in a cool well-ventilated place. Keep in original container tightly closed. Do not reuse empty container. Do not store with food, feed, or other material to be used or consumed by humans or animals. Do not contaminate water supplies. Store between 40° and 90° F.

DISPOSAL: Do not contaminate water, food or feed by storage or disposal. Dispose of contents in container to an approved waste disposal facility in accordance with all federal, state and local regulations. Triple rinse (or equivalent) adding rinse water to application tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by local regulations. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at www.acrecycle.org.

CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully and completely. It is impossible to eliminate all risks inherently associated with the use of this product. To the extent consistent with applicable law, Buyer and/or User assume all risks of ineffectiveness or other unintended consequences or damages that may result from conditions outside or beyond the control of LESCO, Inc. including but not limited to, such factors as manner of use or application, weather or weather conditions outside the range considered normal at the application site or for the time period in which the product is applied, the presence of other materials, incompatible products, or other influencing factors which are beyond the control of LESCO, Inc. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and/or User, and Buyer and/or User agrees to hold LESCO, Inc. harmless for any claims relating to such factors.

LESCO, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with the Directions for Use under normal use conditions. To the extent consistent with applicable law, this warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of LESCO, Inc. and Buyer and/or User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LESCO, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE BUYER AND/OR USER AND THE EXCLUSIVE LIABILITY OF LESCO, INC. FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF LESCO, INC. REPLACEMENT OF THE PRODUCT, OR IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL LESCO, Inc., BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

LESCO, Inc. offers this product, and Buyer and/or User accepts it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of LESCO, Inc.

Information concerning the raw materials composing this product can be obtained by writing to: LESCO, Inc., Attn: RA Dept., 1385 East 36th St., Cleveland, OH 44114, referring to the item number found on this bag. Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.htm.

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LESCO.com
1.800.347.4272

Manufactured for: LESCO, Inc.
1385 East 36th St.
Cleveland, OH 44114

Net Contents: 55 gal. (206 L) #400509

5319-4

Lesco Spreader Sticker

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : Lesco Spreader Sticker

Product code : 80310

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

Lesco, Inc.
1385 East 36th St.
Cleveland, 44114-4114

1.4. Emergency telephone number

Emergency number : 1-800-424-9300
ChemTrec

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Liq. Not classified
Carc. Not classified
Aquatic Acute 2 H401

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H401 - Toxic to aquatic life

Precautionary statements (GHS-US) : P273 - Avoid release to the environment
P501 - Dispose of contents/container to ...

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

Lesco Spreader Sticker

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store aways from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage temperature : >= 25 (5 - 42) °C >=77 F (40-107 F) DO NOT FREEZE

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Respiratory protection	: Wear appropriate mask.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: amber.
Odour	: Characteristic odour.
Odour threshold	: No data available
pH	: >= 5.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: <= 0 °C
Boiling point	: >= 100 °C
Flash point	: None
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: >= 1.04 g/ml
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content : <= 10 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified pH: >= 5.5
Serious eye damage/irritation	: Not classified pH: >= 5.5
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified.
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life.

12.2. Persistence and degradability

Lesco Spreader Sticker	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Lesco Spreader Sticker	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to ...

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

ADR

Transport document description :

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

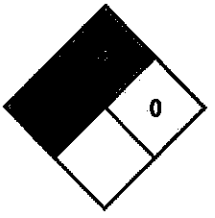
Aquatic Acute 2	Hazardous to the aquatic environment — AcuteHazard, Category 2
Carc. Not classified	Carcinogenicity Not classified
Flam. Liq. Not classified	Flammable liquids Not classified
H401	Toxic to aquatic life

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

NFPA specific hazard : None



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HMIS III Rating

Health	: 0 Minimal Hazard - No significant risk to health
Flammability	: 0 Minimal Hazard
Physical	: 0 Minimal Hazard
Personal Protection	: B

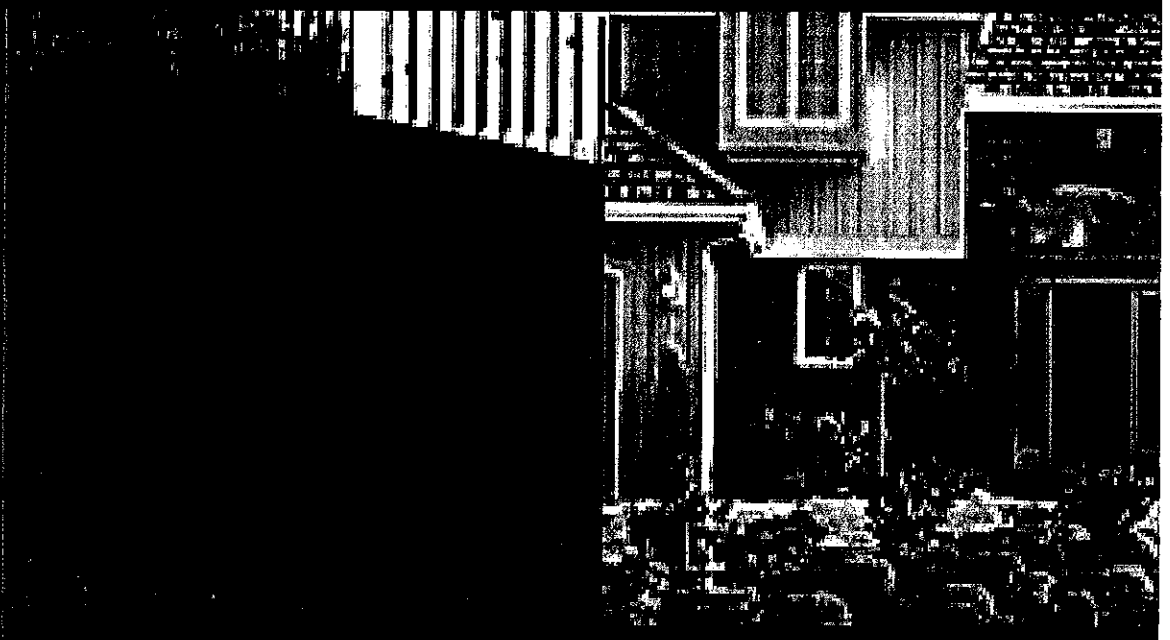
SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Martin's®

PERMETHRIN SFR

Termiticide/Insecticide



For use by commercial applicators as insecticide on ornamentals grown in greenhouse and interiorscapes, for perimeter insect control on lawns, ornamental trees and shrubs around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields, and for use on buildings/structures.

For control of subterranean termites: For use by individuals/firms licensed or registered by the state to apply termiticide products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the pest control regulatory agency of your state prior to use of this product.

0 72693 04505 7

SAFETY DATA SHEET
Martin's Permethrin SFR

SECTION 1: IDENTIFICATION

Product Name:	Martin's Permethrin SFR
EPA Registration No.:	70506-6-53883
Recommended Use:	Insecticide; See product label for a complete list of uses and use sites.
Restrictions on Use:	See product label for any restrictions on the use of this product.
Chemical Family:	Pyrethroid
Chemical Name of Active Ingredient(s):	Permethrin
Manufactured for:	Control Solutions, Inc. 5903 Genoa-Red Bluff Pasadena, TX 77507

FOR FIRE, SPILL, AND/OR LEAK EMERGENCIES CONTACT: CHEMTREC 1-800-424-9300
FOR MEDICAL EMERGENCIES AND HEALTH AND SAFETY INQUIRIES CONTACT: Safety Call 1-866-897-8050

SECTION 2: HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW: Amber liquid with a mild petroleum odor.

OSHA HCS CLASSIFICATION (29 CFR 1910.1200)

Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1B
Aspiration Toxicity	Category 1

Signal Word: DANGER

Hazard Statement(s):
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
May be fatal if swallowed and enters airways.

Precautionary Statement(s):

Prevention:
Do not handle until all safety precautions have been read and understood.
Wear cold insulating gloves/face shield/eye protection.
Do not get in eyes, on skin, or on clothing.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.

Response:
IF EXPOSED OR CONCERNED: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention/advice. Wash contaminated clothing before reuse.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Storage: Store locked up

Disposal: Dispose of contents/container in accordance with Federal, state and local regulations.

SECTION 3: COMPOSTION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Permethrin	52645-53-1	36.8%
Hydrocarbon solvent	Proprietary	>15.0%

*Ingredients not listed or listed with a weight % range are considered a trade secret and are withheld under 29 CFR 1910.1200(i).

SECTION 4: FIRST AID MEASURES

IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF ON SKIN:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 1 5 to 20 minutes. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
IF INGESTED:	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed: Allergic skin reaction. For paresthesia, Vitamin E topical application is highly effective.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Foam, dry chemical, carbon dioxide or water spray

Unsuitable Extinguishing Media: Water jet

Hazardous Combustion Products: Thermal decomposition may produce toxic carbon and nitrogen oxides, chlorine and/or hydrogen chloride.

Special Protective Equipment & Precautions: Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Foam and/or dry chemical are preferred to minimize environmental contamination. If water is used, dike and collect water to prevent run-off. Wear self-contained breathing apparatus and full fire-fighting turn-out gear (Bunker gear).

Unusual Fire & Explosion Hazards: None known

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: See Section 8 for personal protection equipment.

Environmental Precautions: Keep spilled material and any rinsate from contaminating soil or from entering sewage and drainage systems and bodies of water.

Methods for Containment: Isolate the spill area. Keep unnecessary and unprotected personnel from entering. Absorb small spills with sand, vermiculite or other inert absorbent. Dike large spills using absorbent or impervious material such as clay or sand.

Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify and scrape up for disposal.

Methods for Clean-up: Place contaminated material in appropriate container for disposal. After removal, flush contaminated area thoroughly with water. Pick up wash liquid with additional absorbent and place in a disposable container. Do not put spilled material back in the original container.

Other Information: None known

SECTION 7: HANDLING AND STORAGE

Handling: RECOMMENDATIONS ARE INTENDED FOR MANUFACTURING, PACKAGING AND COMMERCIAL BLENDING WORKERS. PESTICIDE APPLICATORS AND WORKERS must refer to the product label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Handle and open container in a manner as to prevent spillage. Do not eat, drink or smoke while handling this product. Immediately wash off accidental splashes of the concentrate or spray mixture from skin, clothing and out of eyes. Keep away from open flames, hot surfaces and sources of ignition. Check that all equipment is properly bonded and grounded. Use spark resistant tools. Remove and wash contaminated clothing before re-use.

Storage: **See pesticide label for full information on product storage.** Do not contaminate water, food or feed by storage of this product. Store away from sources of heat, out of direct sunlight and away from incompatible materials. Pesticides should be stored in secured areas away from children and animals.

Storage Temperature (Min/Max): Not determined

Product Incompatibilities: Strong oxidizing agents

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Users of a pesticide product must refer to the product label for personal protective equipment requirements.

Exposure Guidelines:

COMPONENT	OSHA PEL	ACGIH TLV	NIOSH REL
Hydrocarbon solvent	TWA: 500 ppm TWA: 2900 mg/m3	TWA: 100 ppm	

Engineering Controls: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.

Respiratory Protection: In areas of poor ventilation, use a NIOSH approved respirator with cartridges/canisters approved for pesticides.

Eye Protection: Chemical goggles or safety glasses and full-face shield.

Protective Gloves: Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile, neoprene rubber, polyvinyl chloride (PVC) or Viton.

Other Protective Clothing: Long-sleeved shirt, long pants and shoes plus socks.

General Safety Measures: Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately after handling this product. Wash outside of gloves before removing. Discard clothing and other absorbent materials that

have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Amber liquid	**Upper/Lower Flammability Limits:**	Not determined
Odor:	Mild petroleum	**Vapor Pressure:**	Not determined
Odor Threshold:	Not determined	**Vapor Density:**	Not determined
pH (1% dispersion):	4.9	**Relative Density (@24°C):**	1.039 (typical)
Melting /Freezing Point:	5.9°C/43°F	**Solubility:**	Not determined
Boiling Point/Range:	Not determined	**Partition Coefficient:**	Not determined
Flash Point:	44°C/111°F	**Auto-ignition Temperature:**	Not determined
Evaporation Rate:	Not determined	**Decomposition Temperature:**	Not determined
Flammability:	Not applicable	**Viscosity:**	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	No hazardous chemical reactions known.
Chemical Stability:	Stable under normal storage and handling conditions.
Possibility of Hazardous Reactions:	No potential for hazardous reactions known.
Conditions to Avoid:	Excessive heat, sources of ignition
Incompatible Materials:	None known
Hazardous Decomposition Products:	Thermal decomposition may produce toxic carbon and nitrogen oxides, chlorine, hydrogen chloride.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Eye contact, Skin contact, Inhalation, Ingestion
Symptoms of Exposure:	Allergic skin reaction, respiratory irritation (including rhinitis, sneezing, cough and scratchy throat).
Oral LD_{50}:	777 mg/kg (Estimated based upon component data)
Dermal LD_{50}:	Not calculated on final mixture. Prolonged exposure to permethrin might result in paresthesia (tingling sensation), which is reversible within 12 hours.
Inhalation LC_{50}:	Not calculated on final mixture. The clinical manifestations of inhalation exposure to permethrin are confined to the upper respiratory tract and include rhinitis, sneezing, cough and scratchy throat.
Eye Irritation/Damage:	Not anticipated to cause eye irritation based upon component data.
Skin Corrosion/Irritation:	Not anticipated to cause skin irritation based upon component data.
Skin Sensitization:	In repeat patch tests in humans, dermal applications of permethrin at 1% for up to 9 days did not result in irritation or sensitization.

Chronic/Subchronic Toxicity:	No data available
Mutagenicity:	No data available
Reproductive Toxicity:	No data available
Neurotoxicity:	No data available
Target Organs:	Kidney, Respiratory System, Eyes, Skin, Central Nervous System (CNS)
Aspiration Hazard:	Hydrocarbon solvent makes aspiration hazard a possibility.

Carcinogenicity: See below.

Chemical Name	ACGIH	IARC	NTP	OSHA
Permethrin		3		

SECTION 12: ECOLOGICAL INFORMATION

Environmental Hazards Statement from FIFRA Regulated Pesticide Label:
This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

ECOTOXICITY DATA:

Fish Toxicity: Permethrin: Rainbow trout 96 hour LC50 = 2.5 µg/L
Bluegill sunfish 95 hour LC50 = 1.8 µg/L

Aquatic Invertebrate Toxicity: No data available

Aquatic Plant Toxicity: No data available

Avian Toxicity: Permethrin: Japanese quail oral LD50 = 23,000 mg/kg
Mallard duck oral LD50 = 11,257 mg/kg

Honeybee Toxicity: No data available

ENVIRONMENTAL EFFECTS:

Persistence and Degradability: Permethrin has a moderate rate of degradation in soil.

Bioaccumulation: Permethrin has a low Pow (6.5) but a low potential to bioconcentrate (BCF = 500) due to the ease with which it is metabolized.

Mobility: Due to its high affinity for organic matter, there is little potential for Permethrin movement in soil or entry into groundwater.

Other Adverse Effects: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: **Refer to the pesticide label for full information on disposal.** Pesticide wastes are toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

Container Disposal: **Refer to the pesticide label for full information on disposal.** When possible, triple rinse the container and offer for recycling if available.

RCRA Characteristics: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

SECTION 14: TRANSPORTATION INFORMATION

DOT (Ground):	Not regulated as per 173.150(f) when shipped by highway in non-bulk (below 119 gallon) containers. When shipped in containers of greater than or equal to 119 gallons: UN1993, Flammable liquid, n.o.s. (Hydrocarbon), 3, PGIII
IMDG (Sea):	UN1993, Flammable liquid, n.o.s. (Hydrocarbon), 3, PGIII, Marine Pollutant
IATA (Air):	UN1993, Flammable liquid, n.o.s. (Hydrocarbon), 3, PGIII, Marine Pollutant

SECTION 15: REGULATORY INFORMATION

Labeling Requirements Under FIFRA: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION
Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove contaminated clothing and wash before reuse.

TSCA Inventory: This product is exempt from TSCA inventory listing requirements as it is solely for FIFRA regulated use.

SARA Title III Information:

Section 302 – Extremely hazardous substances: None

Section 311/312 – Hazard Categories: Chronic (Delayed)

Section 313 – This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS Number	Weight %
Permethrin	52645-53-1	36.8%

CERCLA – This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Chemical Name	CAS Number	RQ	Quantity of Finished Product
None listed			

CALIFORNIA PROPOSITION 65:

Chemical Name	CAS Number	Prop 65 Category(ies)
None listed		

U.S. STATE RIGHT-TO-KNOW REGULATIONS:

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Permethrin	X	X	
Hydrocarbon solvent	X	X	X

SECTION 16: OTHER INFORMATION

NFPA	Health Hazards 3	Flammability 2	Instability 1	Special Hazards – None

Disclaimer: Control Solutions, Inc. believes the information presented herein is accurate and correct as of the document date. The presented information is based upon available data from reliable sources. Control Solutions, Inc. makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

Revision Date: March 6, 2017
Document Superseded: May 8, 2015
Revision Note: Update to match supplier SDS dated February 9, 2016

ORIGIN ID:BRLA (800) 321-9329
MONIQUE POTTS
SITEONE LANDSCAPE SUPPLY
1385 EAST 36TH STREET

CLEVELAND, OH 44114
UNITED STATES US

SHIP DATE: 06MAY22
ACTWGT: 1.00 LB
CAD: 106709827/INET4490

BILL SENDER

TO **PURCHASING DEPARTMENT**
JEFFERSON COUNTY
1149 PEARL ST. 1ST FLOOR

BEAUMONT TX 77701
(409) 835-8593 REF: SEALED BID IFB 22-023/YS
INV:
PO: DEPT:

577J5/1BL3/FE4A

FedEx Express

MON - 09 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7767 9216 4567**

XA BPTA

77701
TX-US **IAH**

rec 5/5/22
Yoanet
10:00 am

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ental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry,
ious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Industrial and Commercial Mechanical
TACLA23943C
4445 Westpark Drive
Beaumont, TX 77705
Phone (409) 842-3737
Fax (409) 842-3738

May 12, 2022
Jefferson County Ford Park South Cooling Tower Replacement

Quote Number: 2022-0510610CR

COMMISSIONERS COURT JEFFERSON COUNTY, TEXAS

ICM is pleased to submit a quote for the following:

- Isolate water from existing tower and drain/disconnect
- Provide and install new Marley model MD5010SLF two cell cooling tower
- Haul away and dispose of old tower
- Make necessary electrical modifications for new equipment
- Make all necessary piping modifications for new equipment
- Start new system and check for proper operation

Notes: Building controls integration into new tower to be performed by current building controls provider.

Base Tower Construction/Equipment: Series 300 stainless steel casing, framing, and collection basin Quiet fan with aluminum blades Marley designed belt drive Motor outside airstream with Marley designed driveshaft 12 mil PVC modular film fill, 4ft (1219mm) depth Triple-pass 17 mil PVC drift eliminators designed and manufactured by SPX CTI certification per STD-201 HDG steel fan guard Collection Basin Connections and Accessories: (2) 8 in (203 mm) pumped flow side suction outlet(s) (1) 3 inch (76.2mm) diameter drain with separate 3 inch (76.2mm) diameter overflow in each cell Flumes for equalization between cells are included 1 in (25.4 mm) water make-up float valve(s) in all cells with outlets Distribution System and Accessories: (1) 8 in (203 mm) inlet connection on Face A per cell Series 300 stainless steel header box and PVC branch arms with polypropylene spray nozzles with grommet connection for ease of removal Maintenance & Maintenance Access Features: Tower is designed in accordance with OSHA safety standards Control Systems: (1) IMI 685A Mechanical sw, DPDT, manual reset + 30' cord vibration cutoff switch per cell.

The proposed price is: ***$ 207,000.00 (Two Hundred Seven Thousand Dollars)***

Industrial and Commercial Mechanical is an awarded vendor for Region V ESC "HVAC Capital Equipment, Supplies, and/or Services #20140501. The below pricing is per the awarded rates.

Prices are firm for thirty (30) days. Taxes are excluded and will be billed extra. Work to be performed on straight time basis and will begin upon receipt of a mutually agreed Purchase Order referencing the subject proposal.

Thank you for your request for this proposal. We would appreciate the opportunity to provide these services.

Regards,

Corey Rigby

ACCEPTED BY: _____

DATE: 05/17/2022

ATTEST _____
DATE May 17, 2022

Service Sales Representative
409-937-0331
crigby@ic-mechanical.com
Industrial & Commercial Mechanical

TACLA 23943C – Regulated by the Texas Department of Licensing and Regulation
PO Box 12157
Austin, TX 78711
1-800-803-9202, 512-463-6599

MEMORANDUM

TO: COMMISSIONERS COURT

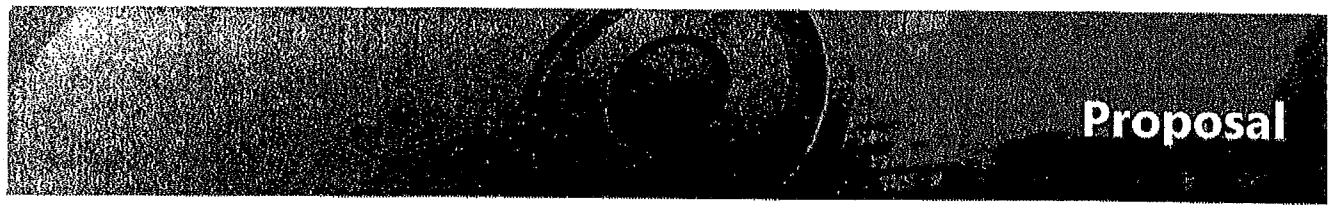
FROM: **FRAN LEE**

SUBJECT: BUDGET TRANSFER

DATE: MAY 9, 2022

The following budget transfer for the 58th District Court is necessary for additional cost for sound system upgrades:

120-2033-412-3084	Minor Equipment	$2,000	
120-2033-412-1095	Education Pay		$2,000



Sound System

58th Court

Presented By:

Goodyear Home Technology
8117 Gladys #103
Beaumont, TX 77706 United States
409 833 4800

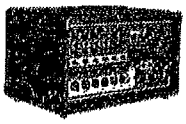
Goodyear Home Technology
Audio/Video ... and MORE!

Number: GOODY-2420
Modified: 5/4/2022
Revision: 0

Goodyear Home Technology

Unassigned

Unassigned



1 **Peavey Peavey PVi 6500** $499.95

The Peavey PVi 6500 is a revolutionary all-in-one powered mixer with everything a musician needs: six combination XLR and 1/4" inputs using Peavey's award-winning mic preamps, and 400 watts of peak power for crystal-clear audio reproduction.

1 **Shure BXL 24** $389.95

Shure BLX® Wireless Systems combine professional-quality sound with simple setup and an intuitive interface for legendary audio performance right out of the box. Precision-built and available in a variety of configurations, it's the most accessible way to own the stage.

Unassigned Total:	**$889.90**
Unassigned Total:	**$889.90**
Project Subtotal:	**$889.90**

Project Summary

Equipment:	**$889.90**
Misc. Parts Adjustment:	**$26.70**
Labor:	**$980.00**
Grand Total:	**$1,896.60**

Client: _____ **Date** _____

Contractor: **Goodyear Home Technology** **Date** _____

* Price Includes Accessories

Jefferson County

Public Health Department
Ezea D. Ede, M.D.
County Health Authority

MEMORANDUM

Date: May 9, 2022

To: Fran Lee, 1st Assistant County Auditor

Cc: file

From: Candice Ford, Administrative Operations Manager

RE: Transfer Funds

Upon the completion of the Vector Security system upgrade it was found that one camera in the Unit I lobby will need to be installed as well as an angle back box to the door station outside. This upgrade will allow the receptionist to have a clear view of the front door and who is entering the building. It is vital to the security of the building. The cost of the materials and labor are $500.00.

From:

120-5074-441.60.02	Computer Equipment	$500.00

To:

120-5074-441.60-18	Power Tools	$500.00

Thank you for presenting this request to the Commissioners Court for approval.

Candice Ford
Administrative Operations Manager

Jefferson County

Public Health Department
Ezea D. Ede, M.D.
County Health Authority

MEMORANDUM

Date: May 9, 2022

To: Fran Lee, 1st Assistant County Auditor

Cc: file

From: Candice Ford, Administrative Operations Manager

RE: Transfer Funds

Due to the damage sustained to the steps of the Mobile Medical Unit they will need to be replaced. We are requesting a transfer of 8,100 for the materials and labor cost to replace the steps.

From:

120-5079-442.50.80	Administrative Services	$8,100.00

To:

120-5079-442.60-07	Automobiles	$8,100.00

Thank you for presenting this request to the Commissioners Court for approval.

Candice Ford
Administrative Operations Manager

Jefferson County
District Clerk's Office
1085 Pearl Street
Room 203
Beaumont, TX 77701
409-835-8580
Fax 409-835-8527

Family Law Division
409-835-8653

Child Support
P. O. Box 3586
Beaumont, TX 77704
409-835-8425

Jamie Smith
District Clerk

Dear Fran,

I am requesting to transfer $360.00 from account 864-0000-414-50-62 (travel) to account 864-0000-414-30-84 (minor equipment) for the purchase of a desktop printer for our Family Law Department.

Respectfully,

Jamie Smith

Jamie Smith
Jefferson County District Clerk

NAME	AMOUNT	CHECK NO.	TOTAL
ROAD & BRIDGE PCT.#1			
SPIDLE & SPIDLE	7,052.31	495092	
ENTERGY	864.78	495111	
M&D SUPPLY	10.59	495121	
SCOOTER'S LAWNMOWERS	156.53	495136	
S.E. TEXAS BUILDING SERVICE	325.00	495141	
VULCAN MATERIALS CO.	2,935.18	495154	
HLAVINKA EQUIPMENT COMPANY	52.00	495207	
ADVANCE AUTO PARTS	28.59	495234	
FUNCTION 4 LLC	31.00	495257	
			11,455.98**
ROAD & BRIDGE PCT.#2			
CITY OF NEDERLAND	63.57	495101	
ENTERGY	674.59	495111	
MUNRO'S	20.00	495124	
SETZER HARDWARE, INC.	2.68	495137	
AT&T	102.21	495147	
TRI-CITY FASTENER & SUPPLY	19.02	495152	
FUNCTION 4 LLC	31.00	495257	
IMAGE 360 BEAUMONT	143.04	495265	
GULF COAST	7,801.01	495271	
			8,857.12**
ROAD & BRIDGE PCT. # 3			
CITY OF PORT ARTHUR - WATER DEPT.	43.37	495100	
MUNRO'S	249.15	495124	
W. JEFFERSON COUNTY M.W.D.	33.25	495156	
TEXAS GAS SERVICE	184.26	495189	
CENTERPOINT ENERGY RESOURCES CORP	44.17	495199	
ASCO	440.00	495237	
A-1 MAIDA FENCE COMPANY	1,200.00	495248	
FUNCTION 4 LLC	62.00	495257	
GULF COAST	828.05	495271	
			3,084.25**
ROAD & BRIDGE PCT.#4			
ABLE FASTENER, INC.	22.41	495086	
BEAUMONT TRACTOR COMPANY	484.89	495096	
ENTERGY	17.65	495111	
M&D SUPPLY	382.88	495121	
MUNRO'S	281.57	495124	
OVERHEAD DOOR CO.	266.45	495126	
SCOOTER'S LAWNMOWERS	163.15	495136	
SOUTHEAST TEXAS WATER	139.45	495143	
UNITED STATES POSTAL SERVICE	5.08	495180	
INTERSTATE ALL BATTERY CENTER - BMT	542.80	495218	
JEFFERSON COUNTY CREDIT CARDS	663.44	495226	
ASCO	507.29	495237	
MARTIN MARIETTA MATERIALS	903.13	495250	
FUNCTION 4 LLC	52.00	495257	
O'REILLY AUTO PARTS	148.86	495266	
NORTH & EAST TX CTY JUDGES & COMM	225.00	495280	
BEVERLY PUGH	18.72	495290	
			3,497.89**
ENGINEERING FUND			
VERIZON WIRELESS	200.90	495175	
VERIZON WIRELESS	114.69	495176	
UNITED STATES POSTAL SERVICE	2.32	495180	
CANON SOLUTIONS AMERICA INC	159.72	495235	
FUNCTION 4 LLC	62.00	495257	
			539.63**
PARKS & RECREATION			
ENTERGY	1,757.76	495111	
W. JEFFERSON COUNTY M.W.D.	27.67	495155	
PARKER LUMBER	217.87	495224	
SAM'S CLUB DIRECT	454.30	495232	
GULF COAST	1,620.70	495271	
			4,078.30**
GENERAL FUND			
TAX OFFICE			

NAME	AMOUNT	CHECK NO.	TOTAL
HERNANDEZ OFFICE SUPPLY, INC.	232.92	495116	
UNITED STATES POSTAL SERVICE	588.40	495180	
JEFFERSON COUNTY CREDIT CARDS	3,183.93	495226	
FUNCTION 4 LLC	155.00	495257	
			4,160.25*
COUNTY HUMAN RESOURCES			
UNITED STATES POSTAL SERVICE	3.57	495180	
FUNCTION 4 LLC	31.00	495257	
			34.57*
AUDITOR'S OFFICE			
CASH ADVANCE ACCOUNT	2,286.21	495119	
SOUTHEAST TEXAS WATER	34.95	495144	
UNITED STATES POSTAL SERVICE	.46	495180	
FUNCTION 4 LLC	31.00	495257	
			2,352.62*
COUNTY CLERK			
OFFICE DEPOT	6.25	495125	
UNITED STATES POSTAL SERVICE	234.65	495180	
SIERRA SPRING WATER CO. - BT	81.85	495181	
FUNCTION 4 LLC	433.00	495257	
NAGARA	89.00	495291	
			844.75*
COUNTY JUDGE			
FRED JACKSON	128.70	495212	
JEFFERSON COUNTY CREDIT CARDS	240.00	495226	
FUNCTION 4 LLC	31.00	495257	
			399.70*
RISK MANAGEMENT			
UNITED STATES POSTAL SERVICE	6.76	495180	
JEFFERSON COUNTY CREDIT CARDS	580.00	495226	
FUNCTION 4 LLC	31.00	495257	
			617.76*
COUNTY TREASURER			
UNITED STATES POSTAL SERVICE	139.51	495180	
FUNCTION 4 LLC	62.00	495257	
			201.51*
PRINTING DEPARTMENT			
FUNCTION 4 LLC	350.00	495257	
LINDENMEYR MUNROE	1,000.00	495279	
			1,350.00*
PURCHASING DEPARTMENT			
OFFICE DEPOT	307.28	495125	
UNITED STATES POSTAL SERVICE	80.56	495180	
FUNCTION 4 LLC	31.00	495257	
			418.84*
GENERAL SERVICES			
ELECTRICAL SPECIALTIES, INC.	25.00	495088	
CASH ADVANCE ACCOUNT	25.00	495119	
TEXAS ASSN. OF COUNTIES - TAC	2,830.00	495149	
TEXAS WORKFORCE COMMISSION	15,934.52	495150	
INTERFACE EAP	1,323.00	495160	
ADVANCED STAFFING	117.00	495161	
CHARTER COMMUNICATIONS	2,442.76	495287	
			22,697.28*
DATA PROCESSING			
FUNCTION 4 LLC	31.00	495257	
			31.00*
VOTERS REGISTRATION DEPT			
UNITED STATES POSTAL SERVICE	189.90	495180	
FUNCTION 4 LLC	31.00	495257	
			220.90*
ELECTIONS DEPARTMENT			

NAME	AMOUNT	CHECK NO.	TOTAL
UNITED STATES POSTAL SERVICE	492.53	495180	
SIERRA SPRING WATER CO. - BT	44.42	495181	
FUNCTION 4 LLC	31.00	495257	
			567.95*
DISTRICT ATTORNEY			
PAUL ARVIZO	21.00	495087	
DALLAS CHILDRENS ADVOCACY CENTER	650.00	495104	
KEITH HAWKES	1,260.76	495115	
JEFFERSON CTY. DISTRICT ATTORNEY	16,660.00	495118	
TRIANGLE BLUE PRINT CO., INC.	152.25	495151	
RENE MULHOLLAND	21.00	495153	
UNITED STATES POSTAL SERVICE	176.28	495180	
JEFFERSON COUNTY CREDIT CARDS	470.00	495226	
TRANSUNION RISK AND ALTERNATIVE	160.00	495246	
FUNCTION 4 LLC	155.00	495257	
SONNY ECKHART	345.00	495292	
			20,071.29*
DISTRICT CLERK			
UNITED STATES POSTAL SERVICE	487.12	495180	
FUNCTION 4 LLC	31.00	495257	
			518.12*
CRIMINAL DISTRICT COURT			
UNITED STATES POSTAL SERVICE	8.56	495180	
KIMBERLY R. BROUSSARD	204.76	495214	
JEFFERSON COUNTY CREDIT CARDS	25.97	495226	
FUNCTION 4 LLC	62.00	495257	
			301.29*
58TH DISTRICT COURT			
SOUTHEAST TEXAS WATER	34.95	495145	
JEFFERSON COUNTY CREDIT CARDS	99.00	495226	
FUNCTION 4 LLC	31.00	495257	
			164.95*
60TH DISTRICT COURT			
UNITED STATES POSTAL SERVICE	.53	495180	
FUNCTION 4 LLC	31.00	495257	
			31.53*
136TH DISTRICT COURT			
UNITED STATES POSTAL SERVICE	.46	495180	
FUNCTION 4 LLC	31.00	495257	
			31.46*
172ND DISTRICT COURT			
FUNCTION 4 LLC	31.00	495257	
			31.00*
252ND DISTRICT COURT			
WENDELL RADFORD	800.00	495130	
NATHAN REYNOLDS, JR.	2,412.50	495131	
JOHN D WEST	800.00	495169	
UNITED STATES POSTAL SERVICE	9.74	495180	
RYAN GERTZ	13,907.98	495222	
FUNCTION 4 LLC	62.00	495257	
			17,992.22*
279TH DISTRICT COURT			
ALISA RAUMAKER, CSR	153.45	495093	
ANITA F. PROVO	882.58	495129	
NATHAN REYNOLDS, JR.	605.00	495131	
RANDY SHELTON	330.00	495138	
SOUTHEAST TEXAS WATER	33.95	495146	
KEVIN S. LAINE	325.00	495162	
GERMER PLLC	1,212.49	495164	
UNITED STATES POSTAL SERVICE	.46	495180	
JOEL WEBB VAZQUEZ	110.00	495196	
KIMBERLY PHELAN, P.C.	110.00	495203	
TONYA CONNELL TOUPS	605.00	495209	
JASON ROBERT NICKS	275.00	495223	

NAME	AMOUNT	CHECK NO.	TOTAL
JONATHAN L. STOVALL	550.00	495228	
LINDSAY LAW FIRM, PLLC	198.00	495229	
REALTIME REPORTING SERVICES INC.	2,108.80	495230	
BRITTANIE HOLMES	220.00	495233	
MATUSKA LAW FIRM	440.00	495243	
FUNCTION 4 LLC	31.00	495257	
			8,190.73*
317TH DISTRICT COURT			
TARA SHELANDER	1,500.00	495244	
FUNCTION 4 LLC	31.00	495257	
			1,531.00*
JUSTICE COURT-PCT 1 PL 1			
UNITED STATES POSTAL SERVICE	28.84	495180	
FUNCTION 4 LLC	31.00	495257	
			59.84*
JUSTICE COURT-PCT 1 PL 2			
UNITED STATES POSTAL SERVICE	18.97	495180	
FUNCTION 4 LLC	31.00	495257	
			49.97*
JUSTICE COURT-PCT 4			
MCNEILL INSURANCE AGENCY	71.00	495123	
FUNCTION 4 LLC	31.00	495257	
			102.00*
JUSTICE COURT-PCT 6			
UNITED STATES POSTAL SERVICE	46.26	495180	
FUNCTION 4 LLC	31.00	495257	
			77.26*
JUSTICE OF PEACE PCT. 8			
FUNCTION 4 LLC	31.00	495257	
			31.00*
COUNTY COURT AT LAW NO.1			
UNITED STATES POSTAL SERVICE	7.84	495180	
FUNCTION 4 LLC	31.00	495257	
			38.84*
COUNTY COURT AT LAW NO. 2			
DONALD BOUDREAUX	300.00	495098	
BRUCE W. COBB	250.00	495103	
JOHN E MACEY ATTORNEY AT LAW PLLC	250.00	495122	
MARVA PROVO	550.00	495128	
JUDGE MASON MARTIN	716.50	495159	
JOHN D WEST	650.00	495169	
UNITED STATES POSTAL SERVICE	12.52	495180	
JOEL WEBB VAZQUEZ	750.00	495196	
LAURIE PEROZZO	500.00	495220	
FUNCTION 4 LLC	31.00	495257	
THE SAMUEL FIRM, PLLC	250.00	495269	
CARRIER & ALLISON LAW GROUP PC	250.00	495278	
LAW OFFICE OF GILES R COLE & ASSOC	400.00	495281	
			4,910.02*
COUNTY COURT AT LAW NO. 3			
TODD W LEBLANC	400.00	495089	
UNITED STATES POSTAL SERVICE	4.61	495180	
LANGSTON ADAMS	300.00	495188	
FUNCTION 4 LLC	31.00	495257	
			735.61*
COURT MASTER			
FUNCTION 4 LLC	31.00	495257	
BUDDIE J HAHN	940.47	495272	
RICHARD D HUGHES ATTORNEY AT LAW	1,450.00	495277	
			2,421.47*
MEDIATION CENTER			
FUNCTION 4 LLC	31.00	495257	
			31.00*
COMMUNITY SUPERVISION			

NAME	AMOUNT	CHECK NO.	TOTAL
FUNCTION 4 LLC	124.00	495257	
			124.00*
SHERIFF'S DEPARTMENT			
FED EX	86.87	495106	
GT DISTRIBUTORS, INC.	343.77	495108	
ENTERGY	740.47	495111	
JEFFERSON CTY. SHERIFF'S DEPARTMENT	855.00	495117	
MCNEILL INSURANCE AGENCY	71.00	495123	
OFFICE DEPOT	126.58	495125	
AT&T	136.28	495147	
UNITED STATES POSTAL SERVICE	1,790.23	495180	
TRISTAR RISK MANAGEMENT	302.28	495201	
JEFFERSON COUNTY CREDIT CARDS	560.00	495226	
FUNCTION 4 LLC	310.00	495257	
THE MONOGRAM SHOP	15.00	495258	
JERRY THORTON	150.00	495274	
			5,487.48*
CRIME LABORATORY			
FISHER SCIENTIFIC	869.04	495107	
W.W. GRAINGER, INC.	648.30	495109	
HENRY SCHEIN, INC.	108.45	495135	
JEFFERSON COUNTY CREDIT CARDS	153.31	495226	
SURVEY MONKEY	372.00	495242	
FUNCTION 4 LLC	31.00	495257	
SAP AMERICA, INC	495.00	495284	
			2,677.10*
JAIL - NO. 2			
BOB BARKER CO., INC.	432.90	495095	
BEAUMONT TRACTOR COMPANY	23.69	495096	
CITY OF BEAUMONT - WATER DEPT.	16.00	495099	
COASTAL WELDING SUPPLY	375.77	495102	
KIRKSEY'S SPRINT PRINTING	24.95	495120	
MCNEILL INSURANCE AGENCY	71.00	495123	
OVERHEAD DOOR CO.	1,053.25	495126	
SHERWIN-WILLIAMS	526.85	495140	
AT&T	30.24	495147	
WORTH HYDROCHEM	390.00	495157	
TRAILER HITCH DEPOT	180.00	495167	
COOK'S CORRECTIONAL KITCHEN EQUIP	527.89	495183	
LOWE'S HOME CENTERS, INC.	161.36	495186	
NORTH SHORE SUPPLY COMPANY	1,724.00	495192	
ALLIED ELECTRICAL SYSTEMS&SOLUTIONS	380.00	495217	
WORLD FUEL SERVICES	3,838.51	495221	
JEFFERSON COUNTY CREDIT CARDS	173.42	495226	
MATERA PAPER COMPANY INC	11,746.05	495238	
GALLS LLC	1,251.30	495249	
PEPPERBALL	203.00	495253	
FUNCTION 4 LLC	217.00	495257	
THE MONOGRAM SHOP	97.50	495258	
CORRHEALTH LLC	43,112.12	495262	
LASALLE CORRECTIONS VI LLC	32,384.00	495267	
TRINITY SERVICES GROUP INC	55,970.80	495270	
			154,911.60*
JUVENILE PROBATION DEPT.			
WILLIE DAVIS	140.99	495091	
FED EX	35.80	495105	
EDWARD B. GRIPON, M.D., P.A.	450.00	495110	
CHERYL TARVER	23.40	495158	
UNITED STATES POSTAL SERVICE	112.26	495180	
FUNCTION 4 LLC	93.00	495257	
EDWIN JAY FRANK	185.45	495263	
			1,040.90*
JUVENILE DETENTION HOME			
FLOWERS FOODS	130.62	495193	
BEN E KEITH FOODS	4,054.67	495194	
VANSCHECA SANDERS-CHEVIS	500.00	495205	
ATTABOY TERMITE & PEST CONTROL	72.10	495219	
FUNCTION 4 LLC	31.00	495257	

NAME	AMOUNT	CHECK NO.	TOTAL
ADVANTAGE INTERESTS INC	770.00	495260	
			5,558.39*
CONSTABLE PCT 1			
MCNEILL INSURANCE AGENCY	142.00	495123	
RALPH'S INDUSTRIAL ELECTRONICS	8.92	495133	
UNITED STATES POSTAL SERVICE	23.04	495180	
FUNCTION 4 LLC	31.00	495257	
			204.96*
CONSTABLE-PCT 4			
DISH NETWORK	77.69	495206	
JEFFERSON COUNTY CREDIT CARDS	79.98	495226	
FUNCTION 4 LLC	31.00	495257	
			188.67*
CONSTABLE-PCT 6			
UNITED STATES POSTAL SERVICE	14.25	495180	
FUNCTION 4 LLC	31.00	495257	
			45.25*
CONSTABLE PCT. 8			
FUNCTION 4 LLC	31.00	495257	
			31.00*
COUNTY MORGUE			
FORENSIC MEDICAL	1,440.00	495268	
			1,440.00*
AGRICULTURE EXTENSION SVC			
JEFFERSON COUNTY CREDIT CARDS	15.77	495226	
DAVID OATES	250.00	495251	
FUNCTION 4 LLC	31.00	495257	
HALLEE M SEWELL	214.45	495285	
			511.22*
HEALTH AND WELFARE NO. 1			
UNITED STATES POSTAL SERVICE	66.00	495180	
FUNCTION 4 LLC	62.00	495257	
			128.00*
HEALTH AND WELFARE NO. 2			
ENTERGY	70.00	495114	
MCKESSON MEDICAL-SURGICAL INC	146.00	495165	
FUNCTION 4 LLC	62.00	495257	
			278.00*
NURSE PRACTITIONER			
FUNCTION 4 LLC	31.00	495257	
			31.00*
ENVIRONMENTAL CONTROL			
OFFICE DEPOT	27.90	495125	
US POSTAL SERVICE	348.00	495184	
FUNCTION 4 LLC	31.00	495257	
			406.90*
INDIGENT MEDICAL SERVICES			
LOCAL GOVERNMENT SOLUTIONS LP	3,773.00	495210	
CARDINAL HEALTH 110 INC	52,294.43	495239	
			56,067.43*
MAINTENANCE-BEAUMONT			
CITY OF BEAUMONT - LANDFILL	41.50	495094	
M&D SUPPLY	23.33	495121	
SANITARY SUPPLY, INC.	2,313.00	495134	
ACE IMAGEWEAR	235.96	495139	
S.E. TEXAS BUILDING SERVICE	25,381.80	495141	
LOWE'S HOME CENTERS, INC.	36.09	495186	
AT&T GLOBAL SERVICES	5,475.82	495190	
FUNCTION 4 LLC	31.00	495257	
L&W SUPPLY CORPORATION	28.00	495264	
			33,566.50*
MAINTENANCE-PORT ARTHUR			

NAME	AMOUNT	CHECK NO.	TOTAL
BELL FENCE MFG. CO.	77.69	495097	
ENTERGY	5,026.85	495111	
TEXAS GAS SERVICE	78.73	495189	
ATTABOY TERMITE & PEST CONTROL	134.43	495219	
JEFFERSON COUNTY CREDIT CARDS	136.41	495226	
FUNCTION 4 LLC	93.00	495257	
SUMMIT FIRE & SECURITY	76.00	495282	
			5,623.11*
MAINTENANCE-MID COUNTY			
CITY OF NEDERLAND	21.40	495101	
ENTERGY	2,148.82	495111	
FUNCTION 4 LLC	31.00	495257	
CHARTER COMMUNICATIONS	49.83	495289	
			2,251.05*
SERVICE CENTER			
ACTION AUTO GLASS	619.80	495090	
SPIDLE & SPIDLE	3,712.33	495092	
MUNRO'S	259.56	495124	
PHILPOTT MOTORS, INC.	100.94	495127	
AT&T	68.14	495147	
FASTENAL	199.08	495163	
JEFFERSON CTY. TAX OFFICE	7.50	495170	
JEFFERSON CTY. TAX OFFICE	7.50	495171	
JEFFERSON CTY. TAX OFFICE	7.50	495172	
JEFFERSON CTY. TAX OFFICE	7.50	495173	
JEFFERSON CTY. TAX OFFICE	7.50	495174	
VOYAGER FLEET SYSTEM, INC.	34,871.83	495191	
BUMPER TO BUMPER	15.90	495197	
ROBERT'S TEXACO XPRESS LUBE	77.00	495213	
AMERICAN TIRE DISTRIBUTORS	881.70	495215	
MIGHTY OF SOUTHEAST TEXAS	374.21	495231	
DENNIS LOWE	508.90	495252	
FUNCTION 4 LLC	31.00	495257	
			41,757.89*
VETERANS SERVICE			
FUNCTION 4 LLC	62.00	495257	
			62.00*
			403,610.18**
MOSQUITO CONTROL FUND			
ENTERGY	380.40	495111	
MUNRO'S	78.44	495124	
PETROLEUM SOLUTIONS, INC.	177.24	495195	
JEFFERSON COUNTY CREDIT CARDS	1,025.31	495226	
FUNCTION 4 LLC	31.00	495257	
KATHERINE RUTH-PRITCHARD	799.15	495283	
			2,491.54**
FAMILY GROUP CONFERENCING			
FUNCTION 4 LLC	31.00	495257	
			31.00**
J.C. FAMILY TREATMENT			
BEAUMONT OCCUPATIONAL SERVICE, INC.	69.90	495185	
			69.90**
SECURITY FEE FUND			
ALLIED UNIVERSAL SECURITY SERVICES	9,197.61	495273	
			9,197.61**
LAW LIBRARY FUND			
FUNCTION 4 LLC	31.00	495257	
			31.00**
EMPG GRANT			
JEFFERSON COUNTY CREDIT CARDS	1,695.00	495226	
FUNCTION 4 LLC	31.00	495257	
			1,726.00**
JUVENILE PROB & DET. FUND			

NAME	AMOUNT	CHECK NO.	TOTAL
VERIZON WIRELESS	64.71	495177	
			64.71**
GRANT A STATE AID			
CASH ADVANCE ACCOUNT	1,518.57	495119	
BI INCORPORATED	117.00	495168	
GRAYSON COUNTY DEPT OF JUVENILE	5,930.70	495245	
TCSI, LLC	12,679.68	495275	
RITE OF PASSAGE	4,064.14	495276	
			24,310.09**
COMMUNITY SUPERVISION FND			
CASH ADVANCE ACCOUNT	1,815.87	495119	
OFFICE DEPOT	101.73	495125	
TEXAS WORKFORCE COMMISSION	17,396.96	495150	
UNITED STATES POSTAL SERVICE	61.17	495180	
LOCAL GOVERNMENT SOLUTIONS LP	6,965.00	495210	
JCCSC	520.00	495227	
SAM'S CLUB DIRECT	100.68	495232	
KRISTIN RICHARD	44.63	495236	
FUNCTION 4 LLC	62.00	495257	
CHARTER COMMUNICATIONS	116.49	495288	
			27,184.53**
COMMUNITY CORRECTIONS PRG			
CASH ADVANCE ACCOUNT	376.17	495119	
M&D SUPPLY	10.98	495121	
LOWE'S HOME CENTERS, INC.	186.60	495186	
MAUER'S LAWNMOWER	88.80	495187	
FRED MILLER'S OUTDOOR EQUIPMENT LLC	37.90	495247	
FUNCTION 4 LLC	31.00	495257	
			731.45**
DRUG DIVERSION PROGRAM			
FUNCTION 4 LLC	31.00	495257	
			31.00**
LAW OFFICER TRAINING GRT			
JEFFERSON COUNTY CREDIT CARDS	628.35	495226	
			628.35**
COUNTY RECORDS MANAGEMENT			
UNITED STATES POSTAL SERVICE	1.06	495180	
			1.06**
HURRICANE LEPC GRANTS			
JEFFERSON COUNTY CREDIT CARDS	980.79	495226	
			980.79**
DEPT STATE HEALTH GRANT			
MARCUS LAMBERT	14.04	495286	
			14.04**
HOTEL OCCUPANCY TAX FUND			
AT&T	119.91	495147	
TEXAS WORKFORCE COMMISSION	45.00	495150	
UNITED STATES POSTAL SERVICE	12.82	495180	
FUNCTION 4 LLC	31.00	495257	
			118.73**
DISTRICT CLK RECORDS MGMT			
FUNCTION 4 LLC	62.00	495257	
			62.00**
CAPITAL PROJECTS FUND			
FIRETROL PROTECTION SYSTEMS, INC.	19,350.00	495216	
			19,350.00**
COASTAL RESTORATION PRJCT			
TIM RICHARDSON	9,000.00	495240	
			9,000.00**
AIRPORT FUND			

NAME	AMOUNT	CHECK NO.	TOTAL
ENTERGY	12,475.01	495113	
AT&T	370.38	495147	
UNITED STATES POSTAL SERVICE	1.38	495180	
FUNCTION 4 LLC	62.00	495257	
			12,908.77**
SE TX EMP. BENEFIT POOL			
STANDARD INSURANCE COMPANY	25,679.17	495202	
RELIANCE STANDARD LIFE INSURANCE	6,174.91	495204	
EXPRESS SCRIPTS INC	81,915.72	495261	
			113,769.80**
WORKER'S COMPENSATION FD			
TRISTAR RISK MANAGEMENT	9,045.78	495200	
			9,045.78**
SHERIFF'S FORFEITURE FUND			
CASH ADVANCE ACCOUNT	638.88	495119	
			638.88**
PAYROLL FUND			
JEFFERSON CTY. - FLEXIBLE SPENDING	15,252.00	495065	
CLEAT	288.00	495066	
JEFFERSON CTY. TREASURER	12,758.31	495067	
RON STADTMUELLER - CHAPTER 13	182.31	495068	
INTERNAL REVENUE SERVICE	208.00	495069	
JEFFERSON CTY. ASSN. OF D.S. & C.O.	4,020.00	495070	
JEFFERSON CTY. COMMUNITY SUP.	7,075.90	495071	
JEFFERSON CTY. TREASURER - HEALTH	532,833.07	495072	
JEFFERSON CTY. TREASURER - GENERAL	35.00	495073	
JEFFERSON CTY. TREASURER - PAYROLL	1,879,425.48	495074	
JEFFERSON CTY. TREASURER - PAYROLL	665,039.36	495075	
MONY LIFE INSURANCE OF AMERICA	72.54	495076	
POLICE & FIRE FIGHTERS' ASSOCIATION	1,932.94	495077	
JEFFERSON CTY. TREASURER - TCDRS	778,070.48	495078	
JEFFERSON COUNTY TREASURER	2,992.07	495079	
JEFFERSON COUNTY - TREASURER -	8,080.98	495080	
NECHES FEDERAL CREDIT UNION	34,219.82	495081	
JEFFERSON COUNTY - NATIONWIDE	160,366.89	495082	
SBA - U S DEPARTMENT OF TREASURY	243.94	495083	
CONSERVE	186.92	495084	
INVESCO INVESTMENT SERVICES, INC	806.66	495085	
JEFFERSON CTY. TREASURER - PAYROLL	33,800.25	495293	
			4,137,890.92**
ARPA CORONAVIRUS RECOVERY			
S.E. TEXAS REGIONAL PLANNING	136,800.00	495142	
			136,800.00**
APPELLATE JUDICIAL SYSTEM			
9TH COURT OF APPEALS	4,251.39	495211	
			4,251.39**
MARINE DIVISION			
ENTERGY	746.72	495111	
RITTER @ HOME	793.70	495132	
SETZER HARDWARE, INC.	176.66	495137	
AT&T	87.84	495147	
SUN COAST RESOURCES, INC.	18,572.32	495148	
ADVANCED SYSTEMS & ALARM SERVICES,	60.00	495166	
VERIZON WIRELESS	112.76	495178	
SIERRA SPRING WATER CO. - BT	70.92	495182	
PETROLEUM SOLUTIONS, INC.	2,223.83	495195	
BUMPER TO BUMPER	107.80	495197	
INTERCONTINENTAL JET CORP	45.00	495198	
THE DINGO GROUP-PETE JORGENSON MARI	2,993.71	495208	
JEFFERSON COUNTY CREDIT CARDS	1,297.92	495226	
JAMES UNDERHILL	180.00	495241	
VECTOR SECURITY	44.95	495259	
			27,514.13**
			4,973,966.82***

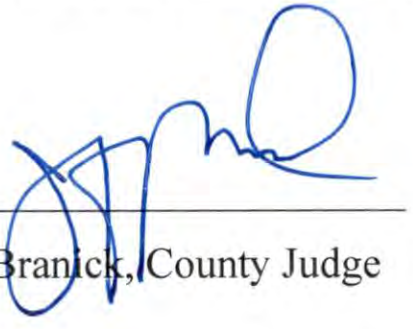
CANVASS OF SPECIAL CONSTITUTIONAL AMENDMENT ELECTION

MAY 7, 2022

I, Jeff Branick, County Judge of Jefferson County, Texas, met with the County Commissioners of Jefferson County sitting as the canvassing board to canvass the Constitutional Amendment, Special, and Joint Election of May 7, 2022 at Beaumont, Texas.

I certify that the figures on the tally sheets correspond with the figures on the returns.

Witness my hand this 17th day of May, 2022.



Jeff Branick, County Judge

AGENDA ITEM **May 3, 2022**

Consider, possibly approve and authorize the County Judge to execute a Tax Abatement Agreement for the Raman Project Facility in/near Beaumont, TX Pursuant to Sec. 312.401, Tax Code (The Property Redevelopment and Tax Abatement Act).

ADITYA BIRLA CHEMICALS (THAILAND) LTD.

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STATE OF TEXAS §
§
COUNTY OF JEFFERSON §

ABATEMENT AGREEMENT FOR PROPERTY LOCATED IN THE RAMAN REINVESTMENT ZONE

Pursuant to Section 312.401 of the Texas Tax Code, this Tax Abatement Agreement (hereinafter referred to as this "AGREEMENT") is made and entered into by and between Jefferson County (hereinafter sometimes referred to as "the COUNTY"), and Aditya Birla Chemicals (USA), LLC (hereinafter sometimes referred to as Aditya or "OWNER").

1. RECITALS

WHEREAS, OWNER possesses interests in taxable real property located within the Raman Reinvestment Zone, the designation of which was implemented by the COUNTY by an Order dated_____, 2022 (hereinafter referred to as the "REINVESTMENT ZONE"; and

WHEREAS, this AGREEMENT is limited to the project to be constructed by OWNER, on various parcels of land located within the Reinvestment Zone, which is described with particularity in Exhibit "A" attached hereto and which will involve construction of a new Chemical Manufacturing Facility and related improvements and infrastructure (hereinafter referred to collectively as the "PROJECT"); and

WHEREAS the COUNTY wishes to encourage OWNER to select Jefferson County as the site for the PROJECT; and

WHEREAS, the REINVESTMENT ZONE is an area within Jefferson County, Texas, which has been designated by Order of this Court, the legal description for which is attached hereto as Exhibit "C." It is understood and agreed that the REINVESTMENT ZONE boundary is subject to revision based on the final construction plan of the PROJECT, and the COUNTY agrees to take the steps necessary to amend the Reinvestment Zone boundary, consistent with such final Project, upon request of Owner.

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NOW, THEREFORE, for the mutual consideration set forth below, the Parties hereto agree as follows:

2. AUTHORIZATION

THIS AGREEMENT IS AUTHORIZED BY THE TEXAS PROPERTY REDEVELOPMENT AND TAX ABATEMENT ACT, TEX. TAX CODE CHAPTER 312, AS AMENDED, AND BY ORDER OF THE JEFFERSON COUNTY COMMISSIONERS COURT ESTABLISHING AND ADOPTING THE RAMAN REINVESTMENT ZONE.

3. DEFINITIONS

For purposes of this AGREEMENT, the following terms shall have the meanings set forth below:

"Abatement" means the full or partial exemption from ad valorem taxes of the value of certain property located in the REINVESTMENT ZONE designated for economic development purposes.

"Affiliate" of any specified person or entity means any other person or entity which, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with such specified person or entity. For purposes of this definition, the term "control" (including the terms "controlled by" and "under common control with") means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such person or entity, whether through the ownership of voting securities, by contract or otherwise.

"Base year", for the parties to this Agreement, is defined as the calendar year in which this Agreement is executed (signed) by all parties hereto.

"Base Year Value" means the taxable value of all industrial realty improvements owned by the property of the Owner and/or its Affiliates within Jefferson County on January 1 preceding the execution of the abatement agreement. OWNER will, in consultation with the Jefferson County Appraisal District, provide the COUNTY with a list of the Jefferson County Appraisal District account numbers identifying the industrial realty improvements owned by the property owner and/or its Affiliates and the taxable value thereof on January 1 preceding the execution of the abatement agreement for use in preparing the schedule to be attached as an exhibit to the abatement agreement before execution specifying the Base Year Value for all purposes of the abatement agreement.

"Completion" as used herein, shall mean, the successful commissioning of the PROJECT and the attainment of reliable operations. OWNER shall certify in writing to the COUNTY when such Completion is attained.

"Eligible Property" means the realty improvements, the on-site buildings, structures, fixed machinery and equipment, storage tanks, process units (including all integral

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components necessary for operations), site improvements, and infrastructure and the permanent office space and related fixed improvements, as defined by the Texas Tax Code but does not include personal tangible property.

"Full-time job", as used herein, shall mean a permanent full-time position that requires at least 1,600 hours of work per year, is not a transferred from another area of the state, is not created to replace a previous employee, and is covered by a group health benefit plan, and pays at least 110% of the county average weekly wage for manufacturing jobs in Jefferson County.

"Ineligible Property" is fully taxable and ineligible for tax abatement and includes land, supplies, inventory, housing, vehicles, improvements for the generation or transmission of electrical energy not wholly consumed by a new facility or expansion; any improvements, including those to produce, store or distribute natural gas, fluids or gasses, which are not integral to the operation of the facility; deferred maintenance, property to be rented or leased, property which has a productive life of less than ten years, or any other property for which abatement is not allowed by state law.

"New Eligible Property" means Eligible Property, the construction of which commences subsequent to the effective date of this AGREEMENT. During the construction phase of the New Eligible Property, the OWNER may make such change orders to the New Eligible Property as are reasonably necessary to accomplish its intended use. It is expressly understood that, notwithstanding anything to the contrary written herein, energy, electricity, manufacturing supplies (e.g. foreign manufactured catalysts), feedstocks, freight, and direct materials that physically become a part of the end product manufactured by the PROJECT) are not subject to the terms of this AGREEMENT.

"Payment in Lieu of Taxes" means if, during the period of this abatement, any Federal or State law provides an additional tax exemption for the property that is already the subject of this Agreement and such exemption results in the reduction of property tax revenue to the COUNTY, Owner agrees to decline that tax exemption during the period of this abatement. If Owner is unable to decline that tax exemption, Owner agrees to pay the taxes, or payment in lieu of taxes, on the reduction of property tax revenue to the COUNTY that is the result of said exemption. Any payment in lieu of taxes shall be due on or before November 15 of the year in which payment is due.

"Taxable Value" for each taxing entity executing an abatement agreement is determined by deducting from the market value of all industrial realty improvements of a property owner and/or its affiliates the amount of any applicable exemptions and abatements granted for that tax year.

4. TERM OF ABATEMENT

This AGREEMENT shall be effective and enforceable upon execution by both parties (which date is herein referred to as the "Effective Date"). The Term of the Abatement pursuant to this AGREEMENT shall begin on January 1, 2024 and shall terminate on December 31, 2028, unless sooner terminated pursuant to other provisions of this

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AGREEMENT. Should OWNER not begin the construction of the PROJECT by December 31, 2022, this AGREEMENT shall be null and void.

5. OWNER REPRESENTATIONS/OBLIGATIONS

In order to receive a tax abatement with respect to a tax year listed on EXHIBIT A: Tax Abatement Schedule," OWNER shall comply with the following:

a. As a result of the PROJECT, and upon its Completion (currently estimated to be not later than the first quarter, 2025, maintain a level of not less than 28 new Full-time jobs (consisting of both permanent direct employee jobs and permanent contractor jobs), using headcount as of April , 2022 as the starting point, relating to the PROJECT during the remaining term of this AGREEMENT; provided, however that OWNER may reduce employment levels due to improved efficiencies or changing economic conditions during the term of this AGREEMENT as long as such employment levels do not fall below 28 full-time jobs for total on site employment by owner during said term. In the event that such employment falls below 28 full-time jobs for total on site employment, Abatement shall be reduced proportionate to such employment decline beginning with the tax year in which the decline occurs and each tax year thereafter per the example calculation cited below where:

A1 = initial Abatement $s
A2 = revised Abatement $s
E1 = _28___ full-time jobs
E2 = revised employee count
A2 = A1 x (E2/E1)

In the event the number of Full-time jobs falls below 28 due to attrition of employees, the Owner shall be given a period of three months ("Attrition Period") therefrom to restore the Full-time job count back to 28. Owner shall not be in breach of this Agreement during such Attrition Period.

b. Report and certify the requisite job levels to the COUNTY, annually during each tax year under this AGREEMENT;

c. Construct the PROJECT with an estimated investment in excess of $25 million;

d. Make available to the COUNTY information concerning the details of contractor bids, every quarter, during the construction phase of the PROJECT under the express understanding that **OWNER** is providing the COUNTY such contractor bid information on a strictly confidential basis so as to maintain the integrity of the competitive bid process;

e. Report and certify to the COUNTY the requisite cost of the PROJECT within 120 days after the Completion of the PROJECT (or 120 days after the Effective Date, whichever is later);

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f. Ensure that qualified local labor, vendors, suppliers, and sub-contractors are given a timely opportunity to bid on contracts for the provision of supplies, goods and services (including engineering and construction services, *e.g.*, piping, electrical, civil, fabrication) in connection with construction of the PROJECT and any turnaround project which is undertaken as part of or in connection with the PROJECT during the term of the abatement period. Such consideration shall be made in good faith without discrimination. For purposes of the foregoing:

i. "Local labor" is defined as those qualified laborers or craftsmen who are residents and domiciliaries of the nine county regions comprised of Jefferson, Orange, Hardin, Jasper, Newton, Liberty, Tyler and Chambers Counties, as well as the Bolivar Peninsula area of Galveston County. "Local vendors" and "local suppliers" shall include only those located or having a principal office in Jefferson County. "Local subcontractors" shall include only those located or having a principal office in Jefferson County.

ii. OWNER agrees to give preference and priority to local manufacturers, suppliers, vendors, contractors and labor, except where not reasonably possible to do so without significant added expense, substantial inconvenience, or sacrifice in operating efficiency. For any such exception in cases involving purchases over $1 million, a justification for such purchase shall be included in OWNER'S annual letter of compliance. OWNER further acknowledges that it is a contractual obligation, under this agreement, of persons receiving property tax abatements to favor local manufacturers, suppliers, contractors, and labor, all other factors being equal. In the event of a breach of this "priority to local" provision, OWNER agrees that the percentage of abatement shall be proportionately reduced in an amount equal to the amount the disqualified contract bears to the total construction cost for the PROJECT.

iii. OWNER agrees that it will provide sufficient notice and information regarding the Project to qualified local contractors to enable them to submit bids for materials in the initial procurement processes, including but not limited PROJECT information provided in job fairs to be conducted by OWNER.

g. Report and certify to the COUNTY, quarterly the total number of dollars spent on local labor, local subcontractors and local vendors/suppliers, as total and percentage compared to total dollars spent in connection with the PROJECT;

h. OWNER, if eligible, will apply for issuance of a Texas Direct Payment Permit (DPP) per RULE §3.288 Direct Payment Procedures and Qualifications of the Texas Administrative Code, then the OWNER will obtain a DPP and issue a DPP exemption certificate in lieu of sales taxes paid to EPC. If at anytime, Owner does not qualify for the DPP, OWNER will place its purchase orders from the Reinvestment Zone and remit use taxes on taxable purchases made for use in the PROJECT directly to the state of Texas.

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i. Not in any way discriminate against or treat disparately union contractors who choose to participate in the competitive bid process relating to work on the PROJECT, nor discriminate against or treat disparately union members who seek employment on the PROJECT; and

j. Encourage and promote the utilization of Historically Underutilized Businesses (HUBs) (also known as Disadvantaged Business Enterprises, or DBEs) by the general contractor engaged by OWNER to construct the PROJECT and any turnaround project which is undertaken as part of or in connection with the PROJECT during the term of the abatement period by ensuring qualified HUB/DBE vendors and contractors are given a timely opportunity to bid on contracts for supplies and services. For purposes of the foregoing:

i. A HUB/DBE is a business owned or controlled by Socially and Economically Disadvantaged Individuals as defined by all applicable federal or state laws and local policies, including Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian Indian Americans, women, and individuals with disabilities.

ii. A HUB/DBE is one that is at least 51 percent owned or controlled by one or more women or Socially and Economically Disadvantaged Individuals or, in the case of a publicly-owned business, one that at least 51 percent of the stock of which is controlled by one or more women or Socially and Economically Disadvantaged Individuals.

iii. A business that has been certified as a HUB/DBE by an agency of the federal government or the State of Texas is presumed to be a HUB/DBE for purposes of Agreement.

iv. Only a HUB/DBE with its principal office in the State of Texas will be recognized as a HUB/DBE for purposes of this Agreement. A list of HUB/DBE vendors/suppliers is maintained in the COUNTY office and a list of same is attached hereto as Exhibit D. As to the use of qualified local and HUB/DBE vendors, suppliers and sub-contractors, OWNER will, at a minimum:

i. Consult with chambers of commerce, minority business associations, trade associations and other regional economic development organizations to identify local and HUB/DBE vendors, suppliers and sub-contractors;
ii. Notify qualified local and HUB/DBE vendors, suppliers and sub-contractors, allowing sufficient time for effective preparation of bids for the planned work to be sub-contracted or materials, supplies or equipment to be purchased;

iii. Provide qualified local and HUB/DBE vendors, suppliers and sub-contractors who are interested in bidding on a subcontract or

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contract for materials, supplies, equipment, or the provision of engineering and construction services and labor adequate information regarding the project as early as is practicable in the bidding process in order to allow the HUB/DBE vendors, suppliers and sub-contractors sufficient time to prepare a bid *(i.e.*, plans, specifications, scope of work, bonding and insurance requirements, and a point of contact within the general/prime contractor);

iv. Negotiate in good faith with interested qualified local and HUB/DBE vendors, suppliers or sub-contractors, and award sub-contracts or contracts for materials, supplies equipment, or the provision of engineering and construction services and labor to local or HUB/DBE vendors, suppliers or sub-contractors when they are the lowest qualified responsive bidder who meets all of the applicable bid specifications; and

Include a provision in OWNER'S contract with the general/prime contractor on the PROJECT which requires the general/prime contractor to read and comply with the terms of this AGREEMENT.

k. Provide access to and authorize the inspection of the Eligible Property by the County's personnel to ensure that the improvements or repairs thereto are made according to the specifications and conditions of this AGREEMENT.

6. VALUE OF ABATEMENT

For each year under this Agreement, the abatement percentage received by OWNER under this AGREEMENT with respect to the value of New Eligible Property, is set forth on attached Exhibit A: "Tax Abatement Schedule"

The Abatement during each year covered by this Agreement shall be the value attributable to the Project multiplied by Abatement Schedule, adjusted by the Base Year Value.

7. QUARTERLY MONITORING MEETINGS

The County Judge, County Commissioners, or their designee(s) shall be allowed to request quarterly monitoring meetings with OWNER on the express condition that they execute a confidentiality agreement prepared by OWNER so as to protect confidential information which may be disclosed to them during or as a result of such monitoring meetings. If one or more quarterly monitoring meetings are held, OWNER agrees to reimburse the COUNTY in an amount not to exceed to $4,000.00 annually for the costs or expenses actually incurred by the COUNTY in monitoring the status of the bidding process every quarter during the construction phase of the PROJECT. OWNER will

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provide the COUNTY with quarterly reports which detail procurement of services, equipment and labor utilized in construction.

8. TAXABILITY

During the period that this AGREEMENT is effective, taxes shall be payable as follows:

a. The value of Ineligible Property shall be fully taxable;

b. The Taxable Value of existing Eligible Property as determined each year shall be fully taxable; and

c. The value of New Eligible Property shall be abated as set forth in Section 6, hereinabove.

9. ADJUSTMENTS TO ABATEMENT FOR BASE YEAR VALUE DECLINE

The Jefferson County Central Appraisal District will establish the certified values of Eligible Property as of January 1, 2022 (year abatement executed) as set forth on attached Exhibit "B," and such values shall be the values used to calculate the Base Year Value as herein defined. If on January 1st of any tax year listed on the "Tax Abatement Schedule" the Taxable Value is less than the Base Year Value, then the abatement of value otherwise available shall be reduced by one dollar for each dollar that the Taxable Value of realty improvements is less than the Base Year Value, except that no such reduction of OWNER's abatement shall be made should any reduction to Taxable Value of OWNER's Eligible Property result from a Force Majeure event.

In the event OWNER reduces its ad valorem taxes on personal property otherwise payable to the COUNTY by participating in a foreign trade zone, then the amount of abated value otherwise available shall be reduced by one dollar for each dollar of tax value reduction attributable to special treatment from trade zone participation. The parties hereto stipulate and agree that they have received certified appraisal value for this property, as calculated by the Jefferson County Central Appraisal District.

It is specifically understood and agreed by OWNER that, if at any time during the effective dates of this Agreement relating to abatement, OWNER files or prosecutes an action in district court to contest the appraised value of any property of OWNER or OWNER's affiliates within Jefferson County for unequal appraisal or revision thereof pursuant to Sec. 42.26, Texas Tax Code, any and all abatements granted by the COUNTY to OWNER or its affiliates shall become null and void and cancelled; provided that, notwithstanding anything contained herein to the contrary, OWNER shall be allowed to contest the fair market value of any of its property used for appraisal purposes without the abatement provided under this Agreement becoming null and void and cancelled.

10. POLLUTION CONTROL EXEMPTION

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The COUNTY understands that OWNER plans (i) to request from the TCEQ a determination under Section 11.31 of the Texas Tax Code that certain property included in the New Eligible Property is pollution control property, and (ii) to apply for an exemption from ad valorem taxes under Section 11.31 of the Texas Tax Code with respect to all or a portion of such property determined by the TCEQ to be pollution control property. The maximum dollar value for equipment that OWNER intends to claim to the TCEQ as exempt from taxation under Section 11.31 is fifteen percent (15%) of cost ("Intended Maximum"), though that number could change as current estimated Project costs are refined. It is understood that the COUNTY would not have agreed to this abatement percentages if it were known that the actual exempt property claimed by OWNER would exceed the Intended Maximum. In the event OWNER ultimately obtains an amount in excess of the Intended Maximum in any year of Abatement under this AGREEMENT (such amount the "Exempt Property Excess"), the percentage of abatement described in the "Abatement Schedule" shall be reduced pro rata so as to reimburse the COUNTY for the total decrease in County tax revenue during the abatement period beginning on January 1, 2024 which is expected to result from the Exempt Property Excess. It is understood and agreed that OWNER will not seek a tax exemption for any equipment or portion of the facility which merely reduces the pollution characteristics of the finished product produced by the facility and that an exemption will only be sought for equipment and technology utilized to reduce pollution at or around the facility.

11. EVENT OF DEFAULT

If either party should default in performing any obligation under this AGREEMENT, the other party shall provide such defaulting party written notice of default and provide the defaulting party with a minimum period of thirty (30) days to cure such default prior to instituting an action for breach or pursuing any other remedy for default, provided however, that, if the default is of such a nature that it cannot, with the exercise of reasonable diligence, be cured within thirty (30) days, then such party shall not be in default so long as such party has commenced such cure within thirty (30) days after receiving written notice of such default and is diligently prosecuting such cure to completion. Subject to providing such notice of default and the aforesaid opportunity to cure same, the party aggrieved by default shall have the right to terminate this AGREEMENT and to pursue any remedy available at law or in equity, for breach hereof. In addition, if a party (the "Affected Party") shall become unable to timely perform any of its obligations under this AGREEMENT, other than any obligation to pay money, as a consequence of a Force Majeure Event, the Affected Party shall be relieved of such obligation (and such failure to timely perform such obligation shall not constitute a default) to the extent that and for so long as (but only to the extent that and only for so long as) it is unable to timely perform such obligation as a consequence of such Force Majeure Event. A "Force Majeure Event" means any of the following: (a) acts of God, earthquakes, tidal waves, lightning, floods, and storms; (b) explosions and fires; (c) strikes and lockouts; (d) wars, riots, acts of the public enemy, civil disturbances, hostilities, sabotage, blockades, insurrections, terrorism, epidemics and pandemics which interrupt the ability to work on site or disrupt the supplies of goods

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and services which would interfere with production.; (e) acts of expropriation, confiscation, nationalization, requisitioning, or other taking; and (f) any other event, condition, or circumstance beyond the reasonable control of the party claiming relief as a consequence thereof; provided, however, that "Force Majeure Event" does not include the inability to make payment or financial distress.

12. RECAPTURE OF TAXES

In the event the COUNTY terminates this AGREEMENT pursuant to the provisions of Section 11 as a result of any event of default by OWNER under such Section 11, including, for the avoidance of doubt, if OWNER fails to make the improvements to the Eligible Property as provided by this AGREEMENT, the COUNTY shall be entitled to recapture and be paid all taxes previously abated by virtue of this AGREEMENT within thirty (30) days of the termination, together with all penalties and interest required by the Texas Property Tax Code.

13. TERMINATION

OWNER shall have the right to terminate this agreement at any time upon thirty (30) days' written notice to the COUNTY and COUNTY shall have the right of recapture per Section 12 above.

14. ASSIGNMENT

OWNER may assign this AGREEMENT, in whole or in part, to a new owner or lessee of the same PROJECT, or a portion thereof, or to an Affiliate of OWNER upon written approval by resolution of the COMMISSIONERS COURT JEFFERSON COUNTY of such assignment, and approval shall not be unreasonably withheld or delayed. It shall not be unreasonable for such COURT to withhold approval if OWNER or the proposed assignee is liable to the COUNTY for outstanding taxes or other obligations.

15. ENTIRE AGREEMENT

The Parties agree that this AGREEMENT contains all of the terms and conditions of the understanding of the Parties relating to the subject matter hereof. All prior negotiations, discussions, correspondence and preliminary understandings between the parties and others relating hereto are superseded by this AGREEMENT.

16. SUCCESSORS AND ASSIGNS

This AGREEMENT shall be binding on and inure to the benefit of the parties, their respective successors and assigns.

16. NOTICE

Any notice and/or statement required and permitted to be delivered shall be deemed delivered by depositing same in the United States mail, certified with return receipt

ADITYA BIRLA CHEMICALS (THAILAND) LTD.

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requested, postage prepaid, addressed to the appropriate party at the following addresses:

OWNER: Kind attn.: Mr. Yuvraj Patil
Unit Head /Joint President, Aditya Birla Chemicals (Thailand) Ltd
Map Ta Phut Industrial Estate, No 2, I-5 Road, Tambol Map Tha Phut, Amphur Muang Rayong
Rayong 21150, Thailand, Tel : +66 (0) 38 685233-4, Fax +66 (0) 38 683982, Email: yuvraj.patil@adityabirla.com

With a copy to: Kind attn.: Mr. Scott Bastian, Vice President, Aditya Birla Chemicals (USA) LLC
7310, Turfway Road, Suite 550, Florence, Kentucky 41042-United States
Office Phone: 1-980-237-4234, Cell Phone: 1-832-544-8647, Email: scott.bastian@adityabirla.com

COUNTY: Hon. Jeff R. Branick, County Judge
Jefferson County Texas
P.O. Box 4025
Beaumont, Texas 77704
(409) 835-8466
(409) 839-2311 (facsimile)

With a copy to: Ms. Kathleen Kennedy, Chief Civil Attorney
Criminal District Attorney
1149 Pearl Street, 3rd Floor
Beaumont, Texas 77701
(409) 835-8550
(409) 835-8573 (facsimile)

Mr. Fred L. Jackson,
First Assistant: Staff Attorney
Jefferson County Courthouse
P. O. Box 4025,
Beaumont, Texas 77704
(409) 835-8466
(409) 839-2311 (facsimile)

17. MERGER

The Parties agree that this AGREEMENT contains all of the terms and conditions of the understanding of the parties relating to the subject matter hereof. All prior negotiations, discussions, correspondence and preliminary understandings between the parties and others relating hereto are superseded by this AGREEMENT.

18. INTERPRETATION

The Parties acknowledge that both have been represented by counsel of their choosing in the negotiation and preparation of this AGREEMENT. Regardless of which party prepared the initial draft of this AGREEMENT, this AGREEMENT shall, in the event of any dispute over its meaning or application, be interpreted without reference to the

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principle of construction favoring the party who did not draft this AGREEMENT under construction.

19. APPLICABLE LAW AND VENUE

This AGREEMENT is made, and shall be construed and interpreted under the laws of the State of Texas and venue shall lie in Jefferson County, Texas.

20. SEVERABILITY

In the event any provision of this AGREEMENT is illegal, invalid, or unenforceable under present or future laws, then, and in that event, it is the intention of the Parties hereto that the remainder of this AGREEMENT shall not be affected thereby, and it is also the intention of the Parties to this AGREEMENT that in lieu of each clause or provision that is found to be illegal, invalid, or unenforceable, a provision be added to this AGREEMENT which is legal, valid, and enforceable and is as similar in terms as possible to the provision found to be illegal, invalid or unenforceable.

Executed in duplicate this the __ day of _____, 20___.

FOR THE COUNTY:

Hon. Jeff R. Branick, County Judge
Jefferson County, Texas

FOR OWNER:

10/05/2022

ADITYA BIRLA CHEMICALS (THAILAND) LTD.

Kind attn.: Mr. Yuvraj Patil
Unit Head /Joint President, Aditya Birla Chemicals (Thailand) Ltd
Map Ta Phut Industrial Estate, No 2, I-5 Road, Tambol Map Tha Phut, Amphur Muang Rayong
Rayong 21150, Thailand, Tel : +66 (0) 38 685233-4, Fax +66 (0) 38 683982, Email: yuvraj.patil@adityabirla.com

EXHIBIT A "Description of Project"

The proposed project is a facility to CONSTRUCT :

Any additional description you desire:

Significant components of the facility would include:
To construct a new chemical facility for production of clean energy.

"Tax Abatement Schedule"

Tax Year		Abatement Percentage
0	2022	0%
0	2023	0%
1	2024	100%
2	2025	90%
3	2026	80%
4	2027	60%

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EXHIBIT B "Base Year Property"

This base year taxable value as certified will be attached, by consent of the parties, when same is calculated and adopted by the Jefferson County Appraisal District.

EXHIBIT C – "Reinvestment Zone Order"

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EXHIBIT D – "List of HUB/ DBE Companies"

Property Owner may acknowledge the County has previously provided this.

Resolution

STATE OF TEXAS § COMMISSIONERS COURT
§
COUNTY OF JEFFERSON § OF JEFFERSON COUNTY, TEXAS

BE IT REMEMBERED at a meeting of Commissioners Court of Jefferson County, Texas, held on the 17 day of May, 2022, on motion made by Darrell Bush, Commissioner of Precinct No. 2, and seconded by Michael Sinegal, Commissioner of Precinct No. 3, the following Resolution was adopted:

WHEREAS, Gina Huebel, has devoted 33½ years of her life to the service of the taxpaying citizens of Jefferson County; and,

WHEREAS, that service was provided through the Office of Assessor-Collector of Taxes for Jefferson County; and,

WHEREAS, Gina Huebel served admirably in the position as Deputy Assessor-Collector of Taxes and Assistant Supervisor for Jefferson County; and,

WHEREAS, Gina Huebel dedicated her talents and services to the sometimes overwhelming task of collecting property taxes. She also used her talent collecting motor vehicle sales tax and license fees through the licensing and titling of motor vehicles, and many other activities necessary for the daily functioning of the County Tax Office;

NOW THEREFORE, BE IT RESOLVED that the Jefferson County Commissioners Court does hereby honor and commend **Gina Huebel** for her dedicated service of Jefferson County and wishes her well in her retirement.

SIGNED this 17 day of May, 2022.

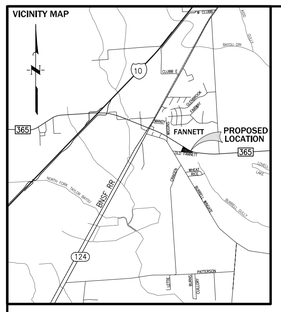
JUDGE JEFF R. BRANICK
County Judge

VERNON PIERCE
Commissioner, Pct. #1

MICHAEL S. SINEGAL
Commissioner, Pct. #3

DARRELL W. BUSH
Commissioner, Pct. #2

EVERETTE D. ALFRED
Commissioner, Pct. #4



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	2864.79'	675.89'	674.32'	S 63°15'45" E	13°31'04"
C2	2864.79'	147.25'	147.24'	S 57°58'34" E	2°56'42"
C3	2864.79'	203.97'	203.93'	S 61°29'18" E	4°04'46"
C4	2864.79'	324.66'	324.49'	S 66°46'29" E	6°29'36"

LEGEND & ABBREVIATIONS

ROW	RIGHT-OF-WAY
POB	POINT OF BEGINNING
JCOPR	JEFFERSON COUNTY OFFICIAL PUBLIC RECORDS
●	SET 5/8" IRON ROD ("JAMA GROUP")

SCALE: 1" = 40'

MANUEL CHIRINO LEAGUE
ABSTRACT NO. 10

FND 1/2" IRON ROD
N 56°41'09" W 292.73'
FND 1/2" IRON ROD
FND 3/8" IRON ROD
S 86°31'10" E 0.18'
N 56°32'46" W 106.04'
FND 2" IRON PIPE
112.47'
S 56°35'36" E 399.49'
F.M. HIGHWAY 365
15' DRAINAGE EASEMENT (SEE NOTE 18)
137.83'
137.83'
11.36'
FND 2" IRON PIPE
C2
10' UTILITY EASEMENT
15' DRAINAGE EASEMENT (SEE NOTE 18)
C3
C1
C4
LOWER NECHES VALLEY AUTHORITY CANAL
N 14°13'48" E 433.00'
S 05°40'41" W 375.85'
S 05°40'41" W 311.72'
S 05°40'41" W 247.60'
S 05°40'41" W 176.97'
50' DETENTION POND EASEMENT
#11732
LOT 4
1.235 ACRES
NG ELEV=19.6'
#11692
LOT 3
0.963 ACRES
NG ELEV=19.1'
#11642
LOT 2
0.783 ACRES
NG ELEV=18.8'
#11602
LOT 1
0.689 ACRES
NG ELEV=18.6'
COMALANDER HOLDINGS, LLC
CALLED 4.37 ACRES
SPECIAL WARRANTY DEED
OCTOBER 5, 2021
C.F. NO. 2021034982
JCOPR
AREA RESERVED FOR DETENTION POND
0.912 ACRES
(SEE NOTE 18)
FND 5/8" IRON ROD
N 84°04'11" W 278.38'
FND 2" IRON PIPE
N 84°10'45" W 101.25'
FND 2" IRON PIPE
163.95'
10' UTILITY EASEMENT
122.00'
122.00'
N 84°19'19" W 1047.29'
142.00'
187.95'
10' UTILITY EASEMENT
309.39'
OLD FANNETT LOVELL LAKE ROAD
POB
FND 2" IRON PIPE
N:13,912,055.06
E:3,477,151.76

GENERAL NOTES

1. All horizontal control is referenced to the Texas State Plane Coordinate System, Lambert Projection, North American datum of 1983 (NAD 83), South Central Zone (U.S. Survey Foot).
2. This survey does not provide any determination concerning wetlands, fault lines, toxic waste or any other environmental issues. Such matters should be directed by the client or prospective purchaser to an expert consultant.
3. According to Map No. 48035 0265 C of the Federal Emergency Management Agency's Flood Insurance Rate Maps for Jefferson County, Texas (Unincorporated Areas), dated August 6, 2002, the subject tract is situated within: Zone "X", defined as areas determined to be outside the 500-year floodplain. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor. Location of the subject tract on said maps were determined by scale. JAMA Group, LLC does not warrant nor subscribe to the accuracy or scale of said maps.
4. Research for Adjoiner Tracts was performed by JAMA Group, LLC.
5. No portion of this subdivision or other development within this subdivision may begin until all Jefferson County development requirements have been met.
6. This subdivision does not lie within the Planning Area of any extra territorial jurisdiction.
7. This subdivision lies within the boundaries of the Hamshire-Fannett Independent School District.
8. No structure in this subdivision shall be occupied until connected to a public sewer system or to an on-site wastewater system, which has been approved by Jefferson County.
9. No structure in this subdivision shall be occupied until connected to an individual water supply, state approved community water system, or engineered rainwater collection system.
10. All existing pipeline easements within the limits of the subdivision have been shown.
11. All drainage easements shown hereon shall be kept clear of fences, buildings, plantings, and other obstructions to the operation and maintenance of the drainage facilities.
12. This subdivision plat was prepared without the benefit of a current Commitment for Title Insurance or Abstractor's Certificate and therefore easements or encumbrances may exist which are not shown hereon. No research of the Public Records of Jefferson County regarding these easements or encumbrances was performed by JAMA Group, LLC.
13. Trees and or vegetation with a potential growth height of more than 20' are prohibited within the 10' Utility Easement. Failure to comply will result in removal of trees/vegetation by Electric Utility Company. All utility easements shown hereon include the right to trim overhanging trees and shrubs located in the property belonging to or being apart of this addition.
14. There shall be no driveways in the State Highway ROW without permits from Texas Department of Transportation.
15. Lot owners shall not be allowed to install culverts or surface drain systems to replace the open ditch system fronting their lot(s) other than allowed by the County for Driveways.
16. Each lot and structure are required to have the same owner.
17. West Jefferson County Municipal Water District, an approved public water supply system, has adequate quantity to supply the subdivision and provisions have been made to provide service to each lot in accordance with the policies of the water supply system.

_____
Water Supply Representative

18. Electric utility service will be provided by: ENTERGY TEXAS, INC.
Telephone utility service will be provided by: AT&T
Gas utility service will be provided by: N/A
Water utility service will be provided by: WEST JEFFERSON COUNTY MUNICIPAL WATER DISTRICT
Sewer utility service will be provided by: N/A
Cable utility service will be provided by: N/A
19. Jefferson County will not be responsible for any future maintenance of site drainage facilities including but not limited to site drainage ditches, detention ponds, associated outfalls. All future maintenance of facilities and easements will be the responsibility of the property owner(s). Ditch, pond, outfall, and drainage easement are to be maintained by the property owner(s).

STATE OF TEXAS
COUNTY OF JEFFERSON

I, MICHELLE FALGOUT, COUNTY ENGINEER OF JEFFERSON COUNTY, DO HEREBY CERTIFY THAT THE PLAT OF THIS SUBDIVISION COMPLIES WITH ALL EXISTING RULES AND REGULATIONS OF THIS OFFICE AS ADOPTED BY COMMISSIONERS' COURT OF JEFFERSON COUNTY, TEXAS.

_____
COUNTY ENGINEER

STATE OF TEXAS
COUNTY OF JEFFERSON

APPROVED BY THE COMMISSIONERS COURT OF JEFFERSON COUNTY, TEXAS ON

THE ____ DAY OF _____ 2022, AUTHORIZING THE FILING FOR RECORD OF THIS PLAT. JEFFERSON COUNTY ASSUMES NO OBLIGATION FOR THE MAINTENANCE OF STREETS, ROADS, DRAINAGE, OR ANY OTHER IMPROVEMENTS.

_____
COMMISSIONER, PRECINCT 1

_____
COMMISSIONER, PRECINCT 2

_____
COMMISSIONER, PRECINCT 3

_____
COMMISSIONER, PRECINCT 4

_____
COUNTY JUDGE

STATE OF TEXAS
COUNTY OF JEFFERSON

I, _____, COUNTY CLERK OF JEFFERSON COUNTY, TEXAS DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN

MY OFFICE ON _____ DAY OF _____, 2022 AT ____ ____

O'CLOCK __M. AND DULY RECORDED ON THE _____ DAY OF _____, 2022 AT ____O'CLOCK __M. IN CLERK'S FILE

NO. _____JEFFERSON COUNTY OFFICIAL PUBLIC RECORDS.

_____
COUNTY CLERK
JEFFERSON COUNTY, TEXAS

SURVEYOR'S CERTIFICATION

WE, JAMA GROUP, LLC ACTING BY AND THROUGH MICHAEL KETHAN, A REGISTERED PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT THE DRAWING SHOWN HEREON IS A TRUE AND CORRECT REPRESENTATION OF A SURVEY MADE ON THE GROUND, UNDER MY SUPERVISION, BEING SITUATED IN THE MANUEL CHIRINO SURVEY, A-10 OF JEFFERSON COUNTY, TEXAS.

SURVEYED: OCTOBER 1, 2021

_____
MICHAEL KETHAN
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5709

SUBSCRIBED AND SWORN TO BEFORE ME BY MICHAEL KETHAN AND GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____DAY OF _____, 2022.

_____
NOTARY PUBLIC
A NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS.

MY COMMISSION EXPIRES: _____

STATE OF TEXAS
COUNTY OF JEFFERSON

KNOW ALL MEN BY THESE PRESENTS, THAT I, CHRIS COMALANDER, OWNER OF A CALLED 4.37 ACRE TRACT OUT OF THE MANUEL CHIRINO LEAGUE, ABSTRACT NO. 10, JEFFERSON COUNTY, TEXAS, DO HEREBY SUBDIVIDE SAID PROPERTY TO BE KNOWN AS THE STOCKYARDS OUT OF THE MANUEL CHIRINO LEAGUE, ABSTRACT NO. 10, JEFFERSON COUNTY, TEXAS IN ACCORDANCE WITH THE PLAT SHOWN HEREON, SUBJECT TO ANY AND ALL EASEMENTS AND RESTRICTIONS HERETO FORE GRANTED AND DEDICATE TO THE PUBLIC THE STREETS AND EASEMENTS SHOWN HEREON.

THIS IS TO CERTIFY THAT I, CHRIS COMALANDER, OWNER OF A CALLED 4.37 ACRE TRACT HAVE COMPLIED WITH OR WILL COMPLY WITH THE EXISTING REGULATIONS HERETOFORE ON FILE WITH THE JEFFERSON COUNTY ENGINEER AND ADOPTED BY THE COMMISSIONER'S COURT OF JEFFERSON COUNTY.

WITNESS OUR HAND IN JEFFERSON COUNTY, TEXAS THIS THE _____ DAY OF _____, 2022.

_____
CHRIS COMALANDER

SUBSCRIBED AND SWORN TO BEFORE ME BY MICHAEL STONE PETIT AND GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ DAY OF _____, 2022.

_____
NOTARY PUBLIC
A NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS.

MY COMMISSION EXPIRES: _____

LEGAL DESCRIPTION

Being a 4.583 of an acre tract of land as situated in the Manuel Chirino League, Abstract No. 10 of Jefferson County, Texas and being all of a called 4.37 acre tract as conveyed to Comalander Holdings, LLC by a Special Warranty Deed dated October 5, 2021 and filed for record under Clerk's File No. 2021034982 of the Jefferson County Official Public Records. Said 4.583 acre tract being more particularly described by metes and bounds as follows:

BEGINNING at a 2-inch iron pipe found at the intersection of the south right-of-way of F.M. Highway 365 with the north right-of-way with Old Fannett Lovell Lake Road for the east corner of the herein described tract and the east corner of said Comalander Holdings, LLC called 4.37 acre tract. Said place of beginning has a Texas State Plane Coordinate System, Lambert Projection, North American datum of 1983 (NAD 83), South Central Zone (U.S. Survey Foot) value of North: 13,912,055.06 and East: 3,477,151.76;

THENCE, North 84°19'19" West, a distance of 1047.29 feet, along the north right-of-way of said Old Fannett Lovell Lake Road and the south line of said Comalander Holdings, LLC called 4.37 acre tract, to a 2-inch iron pipe found for the southwest corner of same and the southwest corner of the herein described tract, same being located in the east line of an apparent 100-feet wide Lower Neches Valley Authority canal, from which a 2-inch iron pipe found in the west line of same bears North 84°10'45" West, a distance of 101.25 feet;

THENCE, North 14°13'48" East, a distance of 433.00 feet, along the west line of said Comalander Holdings, LLC called 4.37 acre tract and the east line of said Lower Neches Valley Authority canal, to a 2-inch iron pipe found in the south right-of-way of said F.M. Highway 365 for the northwest corner of the herein described tract and the northwest corner of said Comalander Holdings, LLC called 4.37 acre tract, from which a 1/2-inch iron rod found in the west line of said Lower Neches Valley Authority canal bears North 56°32'46" West, a distance of 106.04 feet;

THENCE, South 56°35'36" East, a distance of 399.49 feet, along the south right-of-way of said F.M. Highway 365 and the north line of said Comalander Holdings, LLC called 4.37 acre tract, to a 2-inch iron pipe found for an angle corner of same, an angle corner of the herein described tract, and a beginning point of a curve to the left;

THENCE, in a southeasterly direction, along the south right-of-way of said F.M. Highway 365, the south line of said Comalander Holdings, LLC called 4.37 acre tract, and said curve to the left, having a radius of 2864.79 feet, an arc length of 675.89 feet, a delta angle of 13°31'04", and a chord bearing and distance of South 63°15'45" East 674.32 feet, to the PLACE OF BEGINNING, CONTAINING 4.583 acres of land in Jefferson County, Texas.

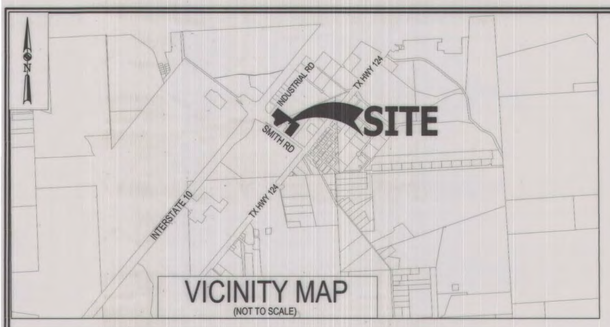
REQUIRED CLEAR SPACE FOR AN OSSF (ON SITE SEWAGE FACILITY)				
TYPE OF FACILITY	USAGE RATE-GALLONS PER DAY (WITHOUT WATER SAVING DEVICES)	REQUIRED CLEAR AREA FOR OSSF (IN SQUARE FEET)	USAGE RATE-GALLONS PER DAY (WITH WATER SAVING DEVICES)	REQUIRED CLEAR AREA FOR OSSF (IN SQUARE FEET)
SINGLE FAMILY (1-2 BEDROOMS) LESS THAN 1500 SQ. FT.	225	6428.57	180	5142.86
SINGLE FAMILY (32 BEDROOMS) LESS THAN 2500 SQ. FT.	300	8571.43	240	6857.15
SINGLE FAMILY (4 BEDROOMS) LESS THAN 3500 SQ. FT.	375	10714.29	300	8571.43
SINGLE FAMILY (5 BEDROOMS) LESS THAN 4500 SQ. FT.	450	12857.14	360	10285.72
SINGLE FAMILY (6 BEDROOMS) LESS THAN 5500 SQ. FT.	525	15000.00	420	12000.00

FINAL PLAT
OF
THE STOCKYARDS
OUT OF THE
MANUEL CHIRINO LEAGUE
ABSTRACT NO. 10
JEFFERSON COUNTY, TEXAS
OCTOBER 2021

JAMA GROUP LLC
2860 IH-10 E
Beaumont, Texas 77703
Office (409) 899-5050
TBPLS Firm #10130400

A PLAT AND REPLAT INTO QUIKTRIP 7943 ADDITION

AN 8.848 ACRE TRACT OF LAND, OUT OF THE T & N.O.R.R. CO. SURVEY NO. 21, ABSTRACT 261, JEFFERSON COUNTY, TEXAS AND BEING ALL OF A CALLED 8.848 ACRE TRACT OF LAND AS DESCRIBED OF RECORD IN DOCUMENT NO. 2021044494 OF THE OFFICIAL PUBLIC RECORDS OF JEFFERSON COUNTY, TEXAS.



VICINITY MAP
(NOT TO SCALE)

I, KYLE L. PRESSLER AM AUTHORIZED (OR REGISTERED) UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING AND HEREBY CERTIFY THAT THE ABOVE SUBDIVISION IS TRUE AND ACCURATE; WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND; THAT, EXCEPT AS SHOWN ALL BOUNDARY CORNERS, ANGLE POINTS, POINTS OF CURVATURE AND OTHER POINTS OF REFERENCE HAVE BEEN MARKED WITH IRON (OR OTHER OBJECTS OF A PERMANENT NATURE) PIPES OR RODS HAVING AN OUTSIDE DIAMETER OF NOT LESS THAN FIVE EIGHTHS (5/8) INCH AND A LENGTH OF NOT LESS THAN THREE (3) FEET; AND THAT THE PLAT BOUNDARY CORNERS HAVE BEEN TIED TO THE TEXAS COORDINATE SYSTEM OF 1983, SOUTH CENTRAL ZONE.

STATE OF TEXAS
KYLE L. PRESSLER
6528
REGISTERED
PROFESSIONAL
LAND SURVEYOR

KYLE L. PRESSLER
REGISTERED PROFESSIONAL LAND SURVEYOR #6528
MATKINHOOVER ENGINEERING & SURVEYING

CERTIFICATE OF COUNTY APPROVAL, TO WIT:

STATE OF TEXAS
COUNTY OF JEFFERSON

APPROVED BY THE COMMISSIONERS COURT OF JEFFERSON COUNTY, TEXAS ON THE_____DAY OF _____A.D., 20___, AUTHORIZED THE FILING FOR RECORD OF THE THIS PLAT. JEFFERSON COUNTY ASSUMES NO OBLIGATIONS FOR THE MAINTENANCE OF STREETS, ROADS, DRAINAGE OR ANY OTHER IMPROVEMENTS.

_____ COMMISSIONER, PRECINCT NO. 1 JEFFERSON COUNTY, TEXAS

_____ COMMISSIONER, PRECINCT NO. 2 JEFFERSON COUNTY, TEXAS

_____ COMMISSIONER, PRECINCT NO. 3 JEFFERSON COUNTY, TEXAS

_____ COMMISSIONER, PRECINCT NO. 4 JEFFERSON COUNTY, TEXAS

_____ COUNTY JUDGE JEFFERSON COUNTY, TEXAS

LEGEND

J.C.D.R.	JEFFERSON COUNTY DEED RECORDS
J.C.O.P.R.	JEFFERSON COUNTY OFFICIAL PUBLIC RECORDS
NO.	NUMBER
℄	CENTER LINE
●	SET 5/8" IRON ROD
⊕	SET COTTON SPINDLE (BENCHMARK)
◎	FOUND 1/2" IRON ROD
○	FOUND 1" IRON ROD
◓	FOUND 5/8" IRON ROD
⊠	FOUND TXDOT TYPE 1 MONUMENT
	EXISTING 5' CONTOUR
	EXISTING 1' CONTOUR

SURVEYOR'S NOTES

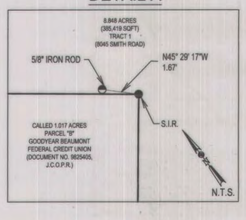
1. BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM ESTABLISHED FOR THE TEXAS SOUTH CENTRAL ZONE 4204, NORTH AMERICAN DATUM (NAD) OF 1983.
2. REFERENCED PROPERTY IS IN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN AS SHOWN ON FEMA FLOOD MAP 255 OF 600, COMMUNITY PANEL NO. 4803850255 C, DATED AUGUST 6, 2002.
3. VERTICAL RELIEF WAS MADE FROM AN ON THE GROUND SURVEY, CONTOURS SHOWN HEREON ARE AT 1' INTERVALS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), GEOID 12A. SITE VERTICAL WAS ESTABLISHED BY USING THE TRIMBLE VRS NETWORK.

STATE OF TEXAS
COUNTY OF JEFFERSON

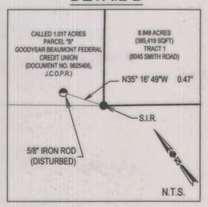
I, _____, COUNTY CLERK OF JEFFERSON COUNTY, TEXAS DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING WITH IT CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE ____DAY OF _____, 20___, AT _____ O'CLOCK __. M., AND DULY RECORDED ON THE ____DAY OF _____, 20___, AT _____ O'CLOCK __. M., IN THE PLAT RECORDS OF JEFFERSON COUNTY, TEXAS IN FILE NO. _____.

_____
COUNTY CLERK
JEFFERSON COUNTY, TEXAS

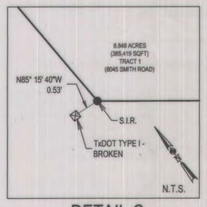
DETAIL A



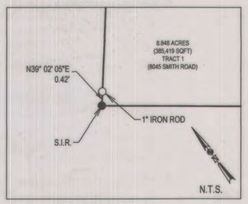
DETAIL B



DETAIL C



DETAIL D



FIELD NOTES FOR AN 8.848 ACRE TRACT OF LAND

AN 8.848 ACRE TRACT OF LAND, OUT OF THE T & N.O.R.R. CO. SURVEY NO. 21, ABSTRACT 261, JEFFERSON COUNTY, TEXAS AND BEING A PORTION OF A CALLED 31.0368 ACRE TRACT OF LAND AS DESCRIBED IN DOCUMENT NO. 2017020524 OF THE OFFICIAL PUBLIC RECORDS OF JEFFERSON COUNTY, TEXAS, SAID 31.0368 ACRE TRACT ALSO BEING A PORTION OF LOT 7 OF THE INDUSTRIAL SITES - SECTION 1 SUBDIVISION OF RECORD IN VOLUME 10, PAGE 118 OF THE MAP RECORDS OF JEFFERSON COUNTY, TEXAS, A PORTION OF A CALLED 6.118 ACRE TRACT OF LAND AS DESCRIBED IN DOCUMENT NO. 2017020527, A PORTION OF A CALLED 9.774 ACRE TRACT OF LAND AS DESCRIBED IN DOCUMENT NO. 2017020526, A PORTION OF A CALLED 10.729 ACRE TRACT OF LAND, ALL OF THE OFFICIAL PUBLIC RECORDS OF JEFFERSON COUNTY, TEXAS. SAID 8.848 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A SET 1/2" IRON ROD WITH A RED PLASTIC CAP STAMPED "MATKIN HOOVER ENG. & SURVEY" IN THE SOUTHEAST RIGHT-OF-WAY LINE OF INDUSTRIAL ROAD, A 100' RIGHT-OF-WAY, AS SHOWN ON SAID INDUSTRIAL SITES - SECTION 1 SUBDIVISION PLAT, IN THE NORTHWEST LINE OF SAID LOT 7 AND SAID 31.0368 ACRE TRACT, AND FOR THE NORTH CORNER OF THE TRACT DESCRIBED HEREIN, FROM WHICH A FOUND ½" IRON ROD IN THE SOUTHEAST RIGHT-OF-WAY LINE OF INDUSTRIAL ROAD AND FOR AN ANGLE IN THE NORTHWEST LINE OF SAID 31.0368 ACRE TRACT BEARS, N 39° 02' 05" E, A DISTANCE OF 777.81 FEET;

THENCE: S 52° 32' 53" E, DEPARTING THE SOUTHEAST RIGHT-OF-WAY LINE OF INDUSTRIAL ROAD, AND INTO AND ACROSS SAID 31.0368 ACRE TRACT, SAID 6.118 ACRE TRACT AND SAID 9.774 ACRE TRACT, A DISTANCE OF 886.46 FEET TO A POINT FOR THE NORTHEAST CORNER OF THE TRACT DESCRIBED HEREIN;

THENCE: S 33° 38' 43" W, CONTINUING INTO AND ACROSS SAID 9.774 ACRE TRACT, A DISTANCE OF 283.60 FEET TO A POINT FOR AN INTERIOR CORNER OF THE TRACT DESCRIBED HEREIN;

THENCE: S 48° 39' 37"" E, CONTINUING INTO AND ACROSS SAID 9.774 ACRE TRACT AND ALSO INTO AND ACROSS SAID 10.729 ACRE TRACT, A DISTANCE OF 245.52 FEET TO A POINT FOR THE MOST EASTERLY CORNER OF THE TRACT DESCRIBED HEREIN;

THENCE: S 37° 27' 07"" W, CONTINUING INTO AND ACROSS SAID 10.729 ACRE TRACT, A DISTANCE OF 213.88 FEET TO A POINT IN THE NORTHEAST RIGHT-OF-WAY LINE OF SMITH ROAD, A 60' RIGHT-OF-WAY, AS CALLED FOR IN VOLUME 1223, PAGE 221 OF THE DEED RECORDS OF JEFFERSON COUNTY, TEXAS, IN THE SOUTHWEST LINE OF SAID 10.729 ACRE TRACT AND FOR THE SOUTH CORNER OF THE TRACT DESCRIBED HEREIN, FROM WHICH A FOUND 1" IRON PIPE IN THE NORTHEAST RIGHT-OF-WAY LINE OF SMITH ROAD AND FOR THE SOUTHEAST CORNER OF SAID 10.729 ACRE TRACT BEARS, S 52° 32' 53" E, A DISTANCE OF 420.62 FEET;

THENCE: N 52° 32' 53"" W, WITH THE NORTHEAST RIGHT-OF-WAY LINE OF SMITH ROAD, THE SOUTHWEST LINE OF SAID 9.774 ACRE TRACT AND SAID 10.729 ACRE TRACT, A DISTANCE OF 446.50 FEET TO A SET 1/2" IRON ROD WITH A RED PLASTIC CAP STAMPED "MATKIN HOOVER ENG. & SURVEY" FOR THE MOST SOUTHERLY CORNER OF A CALLED 1.017 ACRE TRACT OF LAND AS DESCRIBED IN DOCUMENT NO. 9825405 OF THE OFFICIAL PUBLIC RECORDS OF JEFFERSON COUNTY, TEXAS, FOR A SOUTHWESTERLY CORNER OF SAID 9.774 ACRE TRACT AND THE TRACT DESCRIBED HEREIN, FROM WHICH A FOUND 5/8" IRON ROD (DISTURBED) BEARS N 35° 16' 49" W, A DISTANCE OF 0.47 FEET, AND ALSO FROM WHICH A FOUND ½" IRON ROD IN THE NORTHEAST RIGHT-OF-WAY LINE OF SMITH ROAD, AND FOR THE COMMON SOUTH CORNER OF SAID 1.017 ACRE TRACT AND A CALLED 1.00 ACRE TRACT OF LAND AS DESCRIBED IN VOLUME 1812, PAGE 409 OF THE DEED RECORDS OF JEFFERSON COUNTY, TEXAS BEARS, N 52° 32' 53" W, A DISTANCE OF 71.28 FEET;

THENCE: DEPARTING THE NORTHEAST RIGHT-OF-WAY LINE OF SMITH ROAD, AND WITH THE COMMON LINE BETWEEN SAID 9.774 ACRE TRACT AND SAID 1.017 ACRE TRACT, THE FOLLOWING TWO (2) COURSES:

1. N 37° 25' 41" E, A DISTANCE OF 379.72 FEET TO A SET 1/2" IRON ROD WITH A RED PLASTIC CAP STAMPED "MATKIN HOOVER ENG. & SURVEY" FOR A CORNER, FROM WHICH A FOUND 5/8" IRON ROD BEARS, N 45° 29' 17" W, A DISTANCE OF 1.67 FEET, AND
2. N 52° 34' 19" W, A DISTANCE OF 167.91 FEET TO A SET 1/2" IRON ROD WITH A RED PLASTIC CAP STAMPED "MATKIN HOOVER ENG. & SURVEY" FOR A WESTERLY CORNER OF SAID 9.774 ACRE TRACT, IN THE SOUTHEAST LINE OF SAID 6.118 ACRE TRACT, FOR THE NORTH CORNER OF SAID 1.017 ACRE TRACT, AND FOR AN INTERIOR CORNER OF THE TRACT DESCRIBED HEREIN;

THENCE: S 62° 16' 22" W, WITH THE COMMON LINE BETWEEN SAID 6.118 ACRE TRACT, AND SAID 1.017 ACRE TRACT, SAID 1.00 ACRE TRACT AND A CALLED 0.213 ACRE TRACT OF LAND AS DESCRIBED IN SAID DOCUMENT NO. 9825405, A DISTANCE OF 418.29 FEET TO A FOUND 1" IRON PIPE IN THE NORTHEAST RIGHT-OF-WAY LINE OF SMITH ROAD, FOR THE WEST CORNER OF SAID 0.213 ACRE TRACT, THE MOST SOUTHERLY CORNER OF SAID 6.118 ACRE TRACT AND FOR A SOUTHWESTERLY CORNER OF THE TRACT DESCRIBED HEREIN, FROM WHICH A FOUND 1" IRON PIPE IN THE NORTHEAST RIGHT-OF-WAY LINE OF SMITH ROAD, AND FOR THE COMMON SOUTH CORNER OF SAID 0.213 ACRE TRACT AND SAID 1.00 ACRE TRACT BEARS, S 52° 32' 53" E, A DISTANCE OF 92.55 FEET;

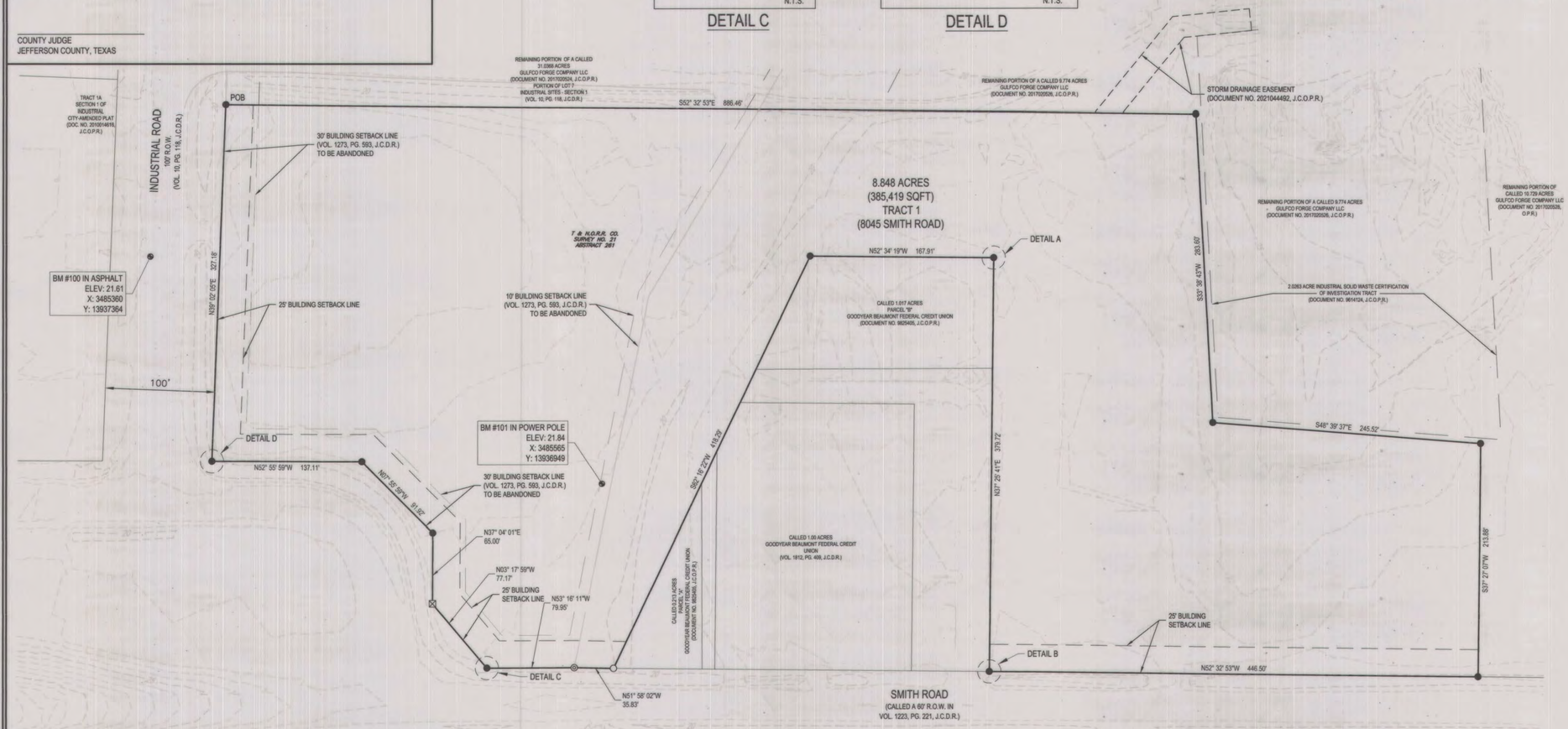
THENCE: N 51° 58' 02" W, WITH THE NORTHEAST RIGHT-OF-WAY LINE OF SMITH ROAD AND THE SOUTHWESTERLY LINE OF SAID 6.118 ACRE TRACT, A DISTANCE OF 35.84 FEET TO A FOUND ½" IRON ROD FOR THE MOST WESTERLY CORNER OF SAID 6.118 ACRE TRACT, THE SOUTH CORNER OF SAID 31.0368 ACRE TRACT AND SAID LOT 7, AND FOR AN ANGLE OF THE TRACT DESCRIBED HEREIN;

THENCE: N 53° 16' 11" W, WITH THE NORTHEAST RIGHT-OF-WAY LINE OF SMITH ROAD AND THE SOUTHWEST LINE OF SAID 31.0368 ACRE TRACT AD LOT 7, A DISTANCE OF 79.95 FEET TO A SET ½" IRON ROD WITH A RED PLASTIC CAP STAMPED "MATKIN HOOVER ENG. & SURVEY" AT THE INTERSECTION OF THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF INTERSTATE HIGHWAY 10, A VARIABLE WIDTH RIGHT-OF-WAY, AS SHOWN ON THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) RIGHT-OF-WAY (R.O.W.) MAP - CSJ NO. 0739-02-005, FOR A SOUTHWESTERLY CORNER OF SAID 31.0368 ACRE TRACT, LOT 7 AND THE TRACT DESCRIBED HEREIN, FROM WHICH A FOUND TXDOT R.O.W. MONUMENT, TYPE I (DISTURBED), BEARS N 85° 15' 40" W, A DISTANCE OF 0.53 FEET;

THENCE: WITH THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF INTERSTATE HIGHWAY 10 AND THE SOUTHWESTERLY LINES OF SAID 31.0368 ACRE TRACT AND LOT 7, THE FOLLOWING FOUR (4) COURSES:

1. N 03° 17' 59" W, A DISTANCE OF 77.17 FEET TO A FOUND TXDOT R.O.W. MONUMENT, TYPE I (BROKEN), FOR A CORNER,
2. N 37° 04' 01" E, A DISTANCE OF 65.00 FEET TO A SET 1/2" IRON ROD WITH A RED PLASTIC CAP STAMPED "MATKIN HOOVER ENG. & SURVEY" FOR A CORNER,
3. N 07° 55' 59" W, A DISTANCE OF 91.92 FEET TO A SET 1/2" IRON ROD WITH A RED PLASTIC CAP STAMPED "MATKIN HOOVER ENG. & SURVEY" FOR A CORNER, AND
4. N 52° 55' 59" W, A DISTANCE OF 137.11 FEET TO A SET ½" IRON ROD WITH A RED PLASTIC CAP STAMPED "MATKIN HOOVER ENG. & SURVEY" AT THE INTERSECTION OF THE SOUTHEAST RIGHT-OF-WAY LINE OF INDUSTRIAL ROAD AND INTERSTATE HIGHWAY 10, FOR THE WEST CORNER OF SAID 31.0368 ACRE TRACT, LOT 7 AND THE TRACT DESCRIBED HEREIN, FROM WHICH A FOUND 1" IRON PIPE BEARS, N 39° 02' 05" E, A DISTANCE OF 0.42 FEET;

THENCE: N 39° 02' 05" E, WITH THE SOUTHEAST RIGHT-OF-WAY LINE OF INDUSTRIAL ROAD, AND THE NORTHWEST LINE OF SAID 31.0368 ACRE TRACT AND LOT 7, A DISTANCE OF 327.18 FEET TO THE POINT OF BEGINNING AND CONTAINING 8.848 ACRES OF LAND SITUATED IN JEFFERSON COUNTY, TEXAS.



SHEET 1 OF 1 MARCH 2022

PLAT PREPARED BY THE FOLLOWING CIVIL ENGINEER AND LAND ENGINEERING FIRM:

MATKINHOOVER ENGINEERING & SURVEYING

P.O. BOX 54
5 SPENCER ROAD SUITE 100
BOERNE, TEXAS 78006
OFFICE: 830.249.0600 FAX:830.249.0099
TEXAS REGISTERED ENGINEERING FIRM F-004512
CIVIL ENGINEERS SURVEYORS LAND PLANNERS CONSTRUCTION MANAGERS CONSULTANTS

SCALE: 1"=60'
0 30' 60' 90' 120'

OWNERSHIP CERTIFICATE:
STATE OF TEXAS COUNTY OF JEFFERSON

KNOW ALL MEN BY THESE PRESENTS, THAT I, MATTHEW D. MILLER, OWNER OF 8.848 ACRES OF LAND OUT OF THE T & N.O.R.R. CO. SURVEY NO. 21, ABSTRACT 261, JEFFERSON COUNTY, TEXAS AS CONVEYED TO ME BY DEED DATED 12/22/2021, AND RECORDED IN COUNTY CLERK'S FILE NO. 2021044494, JEFFERSON COUNTY OFFICIAL PUBLIC RECORDS, DO HEREBY SUBDIVIDE 8.848 ACRES OF LAND OUT OF THE T & N.O.R.R. CO. SURVEY NO. 21, ABSTRACT 261, TO BE KNOWN AS THE QUIKTRIP 7943 ADDITION, IN ACCORDANCE WITH THE PLAT SHOWN HEREON, SUBJECT TO ANY AND ALL EASEMENTS OR RESTRICTIONS HERETO FORE GRANTED AND DO HEREBY
DEDICATE TO THE PUBLIC ANY STREETS AND EASEMENTS SHOWN HEREON.

WITNESS MY HAND, THIS 29th DAY OF March A.D., 2022.

MATTHEW D. MILLER, PRESIDENT
QT SOUTH, LLC

STATE OF TEXAS
COUNTY OF JEFFERSON

BEFORE ME, THE UNDERSIGNED AUTHORITY , ON THIS DAY PERSONALLY APPEARED Matthew D. Miller KNOWN TO ME TO BE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE 29th DAY OF March A.D., 2022

ERIN RACZKOWSKI
Notary Public, State of Texas
Comm. Expires 05-14-2023
Notary ID 132011838

BY _____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

I, _____, COUNTY ENGINEER OF JEFFERSON COUNTY, TEXAS, DO HEREBY CERTIFY THAT THE PLAT OF THIS SUBDIVISION COMPLIES WITH ALL EXISTING RULES AND REGULATIONS OF THIS OFFICE AS ADOPTED BY THE COMMISSIONER'S COURT OF JEFFERSON COUNTY, TEXAS.

_____
COUNTY ENGINEER

DEVELOPMENT REGULATIONS NOTES:
NO CONSTRUCTION OR OTHER DEVELOPMENT WITHIN THIS SUBDIVISION MAY BEGIN UNTIL ALL JEFFERSON COUNTY DEVELOPMENT REQUIREMENTS HAVE BEEN MET.

MUNICIPAL/ETJ NOTE:
A PORTION OF THIS SUBDIVISION LIES WITHIN THE AREA OF EXTRA TERRITORIAL JURISDICTION OF THE CITY OF BEAUMONT.

SCHOOL DISTRICT NOTE:
THIS SUBDIVISION IS WITHIN THE BOUNDARIES OF THE BEAUMONT INDEPENDENT SCHOOL DISTRICT.

UTILITY NOTES:
ELECTRIC SERVICES : ENTERGY
GAS SERVICES : CENTERPOINT ENERGY
TELEPHONE, FIBER AND CABLE SERVICES : AT&T
WATER AND SEWER SERVICE: WEST JEFFERSON COUNTY MUNICIPAL WATER DISTRICT

SEWAGE DISPOSAL NOTE:
NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC SEWER SYSTEM OR TO AN ON-SITE WASTEWATER SYSTEM, WHICH HAS BEEN APPROVED AND PERMITTED BY JEFFERSON COUNTY.

INDIVIDUAL WATER SUPPLY NOTE:
NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO AN INDIVIDUAL WATER SUPPLY, STATE APPROVED COMMUNITY WATER SYSTEM, OR ENGINEERED RAINWATER COLLECTION SYSTEM.

WATER SUPPLY NOTES:
WEST JEFFERSON COUNTY MUNICIPAL WATER DISTRICT, AN APPROVED PUBLIC WATER SUPPLY SYSTEM, HAS ADEQUATE QUANTITY TO SUPPLY THE SUBDIVISION AND PROVISIONS HAVE BEEN MADE TO PROVIDE SERVICE TO EACH LOT IN ACCORDANCE WITH THE POLICIES OF THE WATER SUPPLY SYSTEM .

WEST JEFFERSON COUNTY MUNICIPAL WATER DISTRICT REPRESENTATIVE

PIPELINE EASEMENT NOTE:
ALL VISIBLE PIPELINE EASEMENTS WITHIN THE LIMITS OF THE SUBDIVISION HAVE BEEN SHOWN.

DRAINAGE EASEMENT NOTE:
ALL DRAINAGE EASEMENTS SHOWN HEREON SHALL BE KEPT CLEAR OF FENCES, BUILDINGS, PLANTINGS, AND OTHER OBSTRUCTION TO THE OPERATION AND MAINTENANCE OF THE DRAINAGE FACILITIES.

BENCHMARK NOTE:
BENCHMARK : SHOWN HEREON AS COTTON SPINDLES, LABELED WITH TEXAS STATE PLANE COORDINATES AND ELEVATIONS.

Z:\PROJECTS\QUIKTRIP\7943 - I-10 & Smith Road, Beaumont\Platting\QT 7943 Plat.dwg

Form #2201 Rev. 10/2011	This space reserved for office use
Submit to: **SECRETARY OF STATE** **Government Filings Section** **P O Box 12887** **Austin, TX 78711-2887** **512-463-6334** **512-463-5569 - Fax** **Filing Fee: None**	**STATEMENT OF OFFICER**

Statement

I, Frank R. Rose, do solemnly swear (or affirm) that I have not directly or indirectly paid, offered, promised to pay, contributed, or promised to contribute any money or thing of value, or promised any public office or employment for the giving or withholding of a vote at the election at which I was elected or as a reward to secure my appointment or confirmation, whichever the case may be, so help me God.

Position to Which Elected/Appointed: Jefferson County Drainage District No.3

City and/or County: Jefferson

Execution

Under penalties of perjury, I declare that I have read the foregoing statement and that the facts stated therein are true.

Date: 5/13/22

F. R. K

Signature of Officer

Revised 10/2011

Form #2204 Rev. 10/2011

Submit to:
SECRETARY OF STATE
Government Filings Section
P O Box 12887
Austin, TX 78711-2887
512-463-6334

Filing Fee: None

This space reserved for office use

OATH OF OFFICE

IN THE NAME AND BY THE AUTHORITY OF THE STATE OF TEXAS,

I, Frank R. Rose, do solemnly swear (or affirm), that I will faithfully execute the duties of the office of Jefferson County Drainage District No.3 of the State of Texas, and will to the best of my ability preserve, protect, and defend the Constitution and laws of the United States and of this State, so help me God.

F. R. K

Signature of Officer

State of Texas)
County of Jefferson)

Sworn to and subscribed before me this 13th day of May, 2022.

(seal)

County Judge

Signature of Notary Public or Other Officer Administering Oath

JEFF BRANICK

Printed or Typed Name