



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at [wvOASIS.gov](http://wvOASIS.gov). As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at [WVPurchasing.gov](http://WVPurchasing.gov) with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 5

List View

General Information

Contact

Default Values

Discount

Document Information

Procurement Folder: 509401

Procurement Type: Central Master Agreement

Vendor ID: VS000007617

Legal Name: RED RIVER SPECIALTIES INC

Alias/DBA:

Total Bid: \$0.00

Response Date: 03/13/2019

Response Time: 14:42

SO Doc Code: CRFQ

SO Dept: 0803

SO Doc ID: DOT1900000074

Published Date: 2/26/19

Close Date: 3/14/19

Close Time: 13:30

Status: Closed

Solicitation Description: ADDENDUM 1 6619C038-  
HERBICIDE, ADJUVANT AND

Apply Default Values to Commodity Lines

View Procurement Folder



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

**State of West Virginia  
 Solicitation Response**

**Proc Folder :** 509401

**Solicitation Description :** ADDENDUM 1 6619C038-HERBICIDE, ADJUVANT AND MISC.PRODUCTS

**Proc Type :** Central Master Agreement

Date issued	Solicitation Closes	Solicitation Response	Version
	2019-03-14 13:30:00	SR 0803 ESR03131900000004186	1

VENDOR
VS0000007617 RED RIVER SPECIALTIES INC

**Solicitation Number:** CRFQ 0803 DOT1900000074

**Total Bid :** \$0.00                      **Response Date:** 2019-03-13                      **Response Time:** 14:42:38

**Comments:**

**FOR INFORMATION CONTACT THE BUYER**  
 Crystal Rink  
 (304) 558-2402  
 crystal.g.rink@wv.gov

<b>Signature on File</b>	<b>FEIN #</b>	<b>DATE</b>
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	HERBICIDE, ADJUVANT AND MISCELLANEOUS PRODUCTS	0.00000	EA	\$0.000000	\$0.00

Comm Code	Manufacturer	Specification	Model #
10171700			

<b>Extended Description :</b>	HERBICIDE, ADJUVANT AND MISCELLANEOUS PRODUCTS PER THE ATTACHED PRICING PAGES
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Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Request for Quotation  
 19 - Highways

Proc Folder: 509401

Doc Description: 6619C038-HERBICIDE, ADJUVANT AND MISCELLANEOUS PRODUCTS

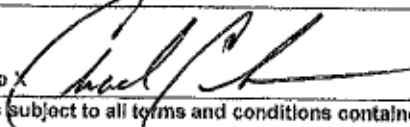
Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2019-02-19	2019-03-14 13:30:00	CRFQ 0803 DOT1900000074	1

**BID RECEIVING LOCATION**  
 BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 26305  
 US

**VENDOR**  
 Vendor Name, Address and Telephone Number:

**FOR INFORMATION CONTACT THE BUYER**  
 Crystal Rink  
 (304) 558-2402  
 crystal.g.rink@wv.gov

Signature  FEIN # 72-1115450 DATE 3/13/2019  
 All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION:**

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DIVISION OF HIGHWAYS, IS SOLICITING BIDS TO ESTABLISH AN OPEN-END CONTRACT FOR HERBICIDE, ADJUVANT AND MISCELLANEOUS PRODUCTS PER THE ATTACHED DOCUMENTS.

INVOICE TO:		SHIP TO:	
VARIOUS AGENCY LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	HERBICIDE, ADJUVANT AND MISCELLANEOUS PRODUCTS	0.00000	EA		

Comm Code	Manufacturer	Specification	Model #
10171700			

Extended Description :  
HERBICIDE, ADJUVANT AND MISCELLANEOUS PRODUCTS  
PER THE ATTACHED PRICING PAGES

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2019-02-26

## INSTRUCTIONS TO VENDORS SUBMITTING BIDS

**1. REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

**2. MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

**3. PREBID MEETING:** The item identified below shall apply to this Solicitation.

A pre-bid meeting will not be held prior to bid opening

A **NON-MANDATORY PRE-BID** meeting will be held at the following place and time:

A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

**4. VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: February 26, 2019 at 10:00 AM EST

Submit Questions to: Crystal Rink

2019 Washington Street, East

Charleston, WV 25305

Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)

Email: Crystal.G.Rink@wv.gov

**5. VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

**6. BID SUBMISSION:** All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.

The bid delivery address is:  
Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:  
BUYER: Crystal Rink  
SOLICITATION NO.: CRFQ DOT1900000074  
BID OPENING DATE: March 14, 2019  
BID OPENING TIME: 1:30 PM EST  
FAX NUMBER: 304-558-3970

The Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. Submission of a response to an Expression or Interest or Request for Proposal is not permitted in wvOASIS.

**For Request For Proposal ("RFP") Responses Only:** In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus n/a convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

- Technical  
 Cost

**7. BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: March 14, 2019 at 1:30 PM EST

Bid Opening Location: Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

**8. ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

**9. BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

**10. ALTERNATE MODEL OR BRAND:** Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

This Solicitation is based upon a standardized commodity established under W. Va. Code § 5A-3-61. Vendors are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firm's bid being rejected.

**11. EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

**12. COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

**13. REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

**14. UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

**15. PREFERENCE:** Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and should include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at:  
<http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

**15A. RECIPROCAL PREFERENCE:** The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. A request form to help facilitate the request can be found at:  
<http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

**16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

**17. WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

**18. ELECTRONIC FILE ACCESS RESTRICTIONS:** Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires, and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

**19. NON-RESPONSIBLE:** The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform, or lacks the integrity and reliability to assure good-faith performance.”

**20. ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

**21. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor’s entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

**DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.**

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled “confidential,” “proprietary,” “trade secret,” “private,” or labeled with any other claim against public disclosure of the documents, to include any “trade secrets” as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

**22. INTERESTED PARTY DISCLOSURE:** West Virginia Code § 6D-1-2 requires that the vendor submit to the Purchasing Division a disclosure of interested parties to the contract for all contracts with an actual or estimated value of at least \$1 Million. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission prior to contract award. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

**23. WITH THE BID REQUIREMENTS:** In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.6. This authority does not apply to instances where state law mandates receipt with the bid.



## GENERAL TERMS AND CONDITIONS:

1. **CONTRACTUAL AGREEMENT:** Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.
2. **DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.
  - 2.1. **"Agency" or "Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
  - 2.2. **"Bid" or "Proposal"** means the vendors submitted response to this solicitation.
  - 2.3. **"Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.
  - 2.4. **"Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.
  - 2.5. **"Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.
  - 2.6. **"Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.
  - 2.7. **"Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
  - 2.8. **"State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
  - 2.9. **"Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

**3. CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

**Term Contract**

**Initial Contract Term:** **Initial Contract Term:** This Contract becomes effective on award and extends for a period of one (1) year(s).

**Renewal Term:** This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

**Alternate Renewal Term** – This contract may be renewed for \_\_\_\_\_ successive \_\_\_\_\_ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

**Delivery Order Limitations:** In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

**Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within \_\_\_\_\_ days.

**Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within \_\_\_\_\_ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that maintenance, monitoring, or warranty services will be provided for \_\_\_\_\_ year(s) thereafter.

**One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

**Other:** See attached.

**4. NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

**5. QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

**Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

**Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

**Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

**One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

**6. EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

**7. REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

**BID BOND (Construction Only):** Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

**PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

**LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

**MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

**LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

Vendor shall have a representative currently holding a valid West Virginia Category 7 certification or Category 11 certification. A copy of certifications shall be provided with bid.

Vendor should have a valid West Virginia Category 12 certification

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

**8. INSURANCE:** The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below and must include the State as an additional insured on each policy prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed in this section.

Vendor must maintain:

- Commercial General Liability Insurance** in at least an amount of: \$1,000,000 (SEE BELOW) per occurrence.
- Automobile Liability Insurance** in at least an amount of: \_\_\_\_\_ per occurrence.
- Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: \_\_\_\_\_ per occurrence.
- Commercial Crime and Third Party Fidelity Insurance** in an amount of: \_\_\_\_\_ per occurrence.
- Cyber Liability Insurance** in an amount of: \_\_\_\_\_ per occurrence.
- Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.
- Pollution Insurance** in an amount of: \_\_\_\_\_ per occurrence.
- Aircraft Liability** in an amount of: \_\_\_\_\_ per occurrence.
- \*\*\*STATE OF WV MUST BE LISTED AS CERTIFICATE HOLDER**
- \*\*\*CERTIFICATE HOLDER SHALL READ AS FOLLOWS:**  
STATE OF WV  
1900 KANAWHA BLVD E, BLDG 5, CHARLESTON, WV 25305
- 
-

Notwithstanding anything contained in this section to the contrary, the Director of the Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

**9. WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

**10. [Reserved]**

**11. LIQUIDATED DAMAGES:** This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

\_\_\_\_\_ for \_\_\_\_\_

Liquidated Damages Contained in the Specifications

**12. ACCEPTANCE:** Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

**13. PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

**14. PAYMENT IN ARREARS:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

**15. PAYMENT METHODS:** Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

**16. TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

**17. ADDITIONAL FEES:** Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

**18. FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

**19. CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

**20. TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.

**21. APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

**22. COMPLIANCE WITH LAWS:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

**SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

**23. ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

**24. MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

**25. WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

**26. SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

**27. ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

**28. WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

**29. STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

**30. PRIVACY, SECURITY, AND CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.



**31. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

**DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.**

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

**32. LICENSING:** In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

**SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

**33. ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

**34. VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

**35. VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

**36. INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

**37. PURCHASING AFFIDAVIT:** In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State, Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

**38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"), provided that both the Other Government Entity and the Vendor agree. Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

**39. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

**40. REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at [purchasing.requisitions@wv.gov](mailto:purchasing.requisitions@wv.gov).

**41. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Revised 01/24/2019

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

**42. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open hearth, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
- c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
- d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

**43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL:** In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a

“substantial labor surplus area”, as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

**44. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE:** W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the vendor must submit to the Agency a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Chad Chambliss Bid Manager  
(Name, Title)  
Chad Chambliss (Bid Manager)  
(Printed Name and Title)  
1324 North Hearne Ave. Ste., 120 Shreveport, LA 71107  
(Address)  
318-425-5944 Fax# 318-227-3032  
(Phone Number) / (Fax Number)  
chad.chambliss@rrsi.com  
(email address)

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Red River Specialties LLC.  
(Company)

Chad Chambliss (Bid Manager)  
(Authorized Signature) (Representative Name, Title)

Chad Chambliss (Bid Manager)  
(Printed Name and Title of Authorized Representative)

3/12/2019  
(Date)

318-425-5944 Fax# 318-227-3032  
(Phone Number) (Fax Number)

ADDENDUM ACKNOWLEDGEMENT FORM  
SOLICITATION NO.: CRFQ DOT1900000074

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

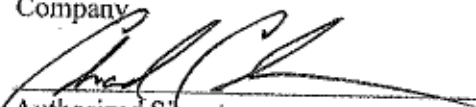
Addendum Numbers Received:

*(Check the box next to each addendum received)*

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2            | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Red River Specialties LLC.  
Company

  
Authorized Signature

3/12/2019  
Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

**REQUEST FOR QUOTATION  
CRFQ DOT1900000074  
Herbicide Products, Adjuvant Products  
and Miscellaneous Products (6619C038)**

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**SPECIFICATIONS**

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways to establish an open-end contract to provide various Herbicide Products, Adjuvant Products and Miscellaneous Products for use at locations throughout the State of WV by the WV Division of Highways.

**This contract shall be effective upon award and shall expire on December 31, 2019. This contract may be renewed for one year at the same price, terms and conditions of the original contract including any subsequent change orders upon the mutual written consent of the WVDOH and the Vendors, until a new contract can be awarded.**

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
- 2.1 **“Contract Item” or “Contract Items” or “Products”** mean the list of items identified in Section 3 below.
- 2.2 **“Pricing Pages”** means the schedule of prices, estimated order quantity, and totals contained in wvOASIS or attached hereto as Exhibit A, B, C and used to evaluate the Solicitation.
- 2.3 **“Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
- 2.4 **“WVDOH”** used throughout this Solicitation means the West Virginia Division of Highways.
- 2.5 **“EPA”** used throughout this Solicitation means Environmental Protection Agency and **“DEP”** used throughout this Solicitation means the WV Department of Environmental Protection and should reference the Federal, State and Local levels of government. Please reference [www.epa.gov](http://www.epa.gov) and [www.dep.wv.gov](http://www.dep.wv.gov).
- 2.6 **“Contractor” or “Vendor”** used throughout this Solicitation and in any cited sections of the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, adopted most current edition, are interchangeable.



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- 2.7 **“Standard Specs”** used throughout this Solicitation means the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, adopted most current edition.

**3. GENERAL REQUIREMENTS:**

- 3.1 **Specifications:** The following sections of the Standard Specs, shall apply to the administration of this contract: Sections 101, 102.4, 102.5, 105.1, 105.3, 105.4, 105.10, 105.11, 105.12, 105.13, 106.3, 106.4, 106.5, 106.6, 106.7, 106.9, 107.1, 107.2, 107.3, 107.14, 107.19, 107.20, 108.8, 109.1, 109.2 and 109.20.

A hard copy of the current Standard Specs may be purchased at a cost of \$20.00 (\$15.00 for the 2017 book plus \$5.00 for the latest edition) using the Attachment A Standard Specifications Order Form and sent to:

West Virginia Division of Highways  
Contract Administration  
Building 5, Room 722  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305  
(Phone) 304-558-2885

A free electronic copy of the Standard Specs may be obtained by sourcing:  
<http://www.transportation.wv.gov/highways/contractadmin/specifications/2017StandSpec/Pages/default.aspx>

- 3.2 **Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

**Contract Items furnished under this contract shall conform to the physical and chemical properties set forth in the EPA registration of the product provided to the WVDOH by the Vendor.**

3.2.1 **Contract Item:**

3.2.1.1 **Herbicide Products:** Contract Items DOH-1H through DOH-39H shall be Herbicide products. Product Trade Name is requested; however, the Vendor may bid an “or equal” item. Exhibit A.

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**and Miscellaneous Products (6619C038)**

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**3.2.1.2 Adjuvant Products:** Contract Items DOH-1A through DOH-12A shall be Adjuvant products. Product Trade Name, where applicable, is requested; however, the Vendor may bid an "or equal" item. Exhibit B.

**3.2.1.4 Miscellaneous Products:** Contract Items DOH-1M through DOH-6M shall be Miscellaneous products. Product Trade Name, where applicable, is requested; however, the Vendor may bid an "or equal" item. Exhibit C.

**3.2.2 Product Trade Name and "Or Equal" Items:**

Vendors may bid any or all of the products listed on the Pricing Pages. Vendors may bid Product Trade Name requested, where applicable, or bid an "or equal" item.

The Vendor shall provide the Product Trade Name and EPA Registration Number for each item that the Vendor is bidding. The Vendor shall provide this information on the Pricing Page for every item bid whether the Vendor is providing the requested Product Name or an "or equal" product.

**The WVDOH will not assume the Product Name and/or the EPA Registration Number for any item bid, by any Vendor.**

The Vendor shall provide the label from the "or equal" Contract Item bid, with their bid package, to eliminate any confusion. The WVDOH reserves the right to request additional information to determine if "or equal" products meet the required specifications.

NOTE 1: Equivalency, chemical name or equivalent, shall mean equal and not necessarily identical. "Or equal" items shall be evaluated as to meeting the contract specifications. The final determination of equivalency to the required specifications will be made by the WVDOH.

Vendor should be available to provide any additional documentation required by the WVDOH during the evaluation and equivalency process.

- 3.3 Restricted and Non-Restricted Herbicides:** Herbicide products which have been declared RESTRICTED in their use by the EPA must be applied under the supervision of a licensed Herbicide applicator. The WVDOH reserves the right to

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**Herbicide Products, Adjuvant Products**  
**and Miscellaneous Products (6619C038)**

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disallow the use of RESTRICTED Herbicides when non-restricted Herbicides are available to achieve the same objective.

- 3.4 **Training and Technical Assistance:** In order for a Vendor to be awarded a contract for any Contract Item requested, the Vendor shall have a representative, currently holding a valid Category 7 certification or a Category 11 certification in West Virginia who is to provide training and technical assistance as required or upon the request of the WVDOH. Each Vendor shall provide the name, certification number and telephone number of at least one representative on the Information Attachment Form. A copy of the same representative's current Category 7 certification or Category 11 certification in West Virginia shall be submitted with the Vendor's bid package. The Vendor's failure to submit a copy of the representative's certification, with their bid package, shall result in the total disqualification of the Vendor's bid.

Vendors are encouraged to visit the WV Department of Agriculture's site <http://wvplants.wvda.us/index.aspx> to confirm your representative's current registration.

The Vendor should have a valid Category 12 certification in West Virginia.

**4. CONTRACT AWARD:**

- 4.1 **Contract Award:** The Contract is intended to provide Agencies with a purchase price on all Contract Items listed on the Pricing Pages. A Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for which their bid is low, provided that the Vendor has provided the Product Trade Name and the EPA Registration Number for each product bid, where applicable. Failure to list this information will result in the disqualification of the Vendor's bid on that Contract Item.

- 4.1.1 The successful Vendor shall furnish two product labels, for each product awarded, whether Product Name requested or "or equal", to the WVDOH. The labels shall provide pertinent information regarding product storage and handling.

The successful Vendor shall supply the proper testing procedures to determine the presence and concentration of the Herbicide in flowing water. This shall be provided to:

WVDOH

**REQUEST FOR QUOTATION**  
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**and Miscellaneous Products (6619C038)**

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Materials Control, Soil and Testing Division  
190 Dry Branch Road  
Charleston, WV 25306

- 4.2 Pricing Pages:** Vendor should complete the Pricing Pages by providing a Unit Cost per each Contract Item bid according to each Contract Item's identified Unit of Measure whether by gallon, quart, pound, ounce, each, etc. Vendors may NOT modify or change the Unit of Measure of any item. Vendors may bid any or all Contract Items. Vendor shall complete the Pricing Pages according to Section 3.2.2 of these specifications. Failure to provide the required Product Trade Name and EPA Registration Number information will result in Vendor's bid being disqualified for that Contract Item.

Vendor **shall** complete the Information Attachment Form as requested in Section 3.2.2 of these specifications.

The Vendor's bid package shall include the Pricing Pages, the Information Attachment Form, a copy of the Vendor's Technical Representative's Category 7 certification or Category 11 certification in West Virginia and product labels for any "or equal" product bid.

The Pricing Pages contain a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Vendor should electronically enter the information into the Pricing Pages through wvOASIS, if available, or as an electronic document. In most cases, the Vendor can request an electronic copy of the Pricing Pages for bid purposes by sending an email request to the following address: [Crystal.G.Rink@wv.gov](mailto:Crystal.G.Rink@wv.gov)

**5. ORDERING AND PAYMENT:**

- 5.1 Ordering:** Vendor shall accept orders through wvOASIS, by regular mail, facsimile, e-mail, or any other written forms of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

**REQUEST FOR QUOTATION**  
**CRFQ DOT1900000074**  
**Herbicide Products, Adjuvant Products**  
**and Miscellaneous Products (6619C038)**

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Delivery Orders may be issued to the awarded vendor according to each Contract Item's description line item. There is no minimum or maximum order quantity.

- 5.2 Payment:** Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia. The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract.

**6. DELIVERY AND RETURN:**

- 6.1 Delivery Time:** Vendor shall deliver standard orders within twenty (20) working days after orders are received to the delivery location indicated on the Delivery Order. All shipments are F.O.B delivery to the WVDOH location. Vendor shall deliver emergency orders within an agreed upon alternative time frame by the WVDOH and the Vendor after orders are received. Vendor shall ship all orders in accordance with the above schedule. There is no minimum or maximum order quantity.

- 6.1.1 Acceptance:** With each delivery to the WVDOH, the Vendor shall certify that the products delivered conform to the properties described in that product's EPA registration. Material failing to comply with the quality requirement will not be accepted.

- 6.2 Late Delivery:** The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

- 6.3 Delivery Payment/Risk of Loss:** Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.

**REQUEST FOR QUOTATION**  
**CRFQ DOT1900000074**  
**Herbicide Products, Adjuvant Products**  
**and Miscellaneous Products (6619C038)**

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**6.4 Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

**6.5 Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

**7. VENDOR DEFAULT:**

**7.1** The following shall be considered a vendor default under this Contract.

**7.1.1** Failure to provide Contract Items in accordance with the requirements contained herein.

**7.1.2** Failure to comply with other specifications and requirements contained herein.

**7.1.3** Failure to comply with any laws, rules and ordinances applicable to the Contract Services provided under this Contract.

**7.1.4** Failure to remedy deficient performance upon request.

**7.2** The following remedies shall be available to Agency upon default.

**7.2.1** Immediate cancellation of the Contract.

**7.2.2** Immediate cancellation of one or more Delivery Orders issued under this Contract.

**7.2.3** Any other remedies available in law or equity.

**REQUEST FOR QUOTATION**  
**CRFQ DOT1900000074**  
**Herbicide Products, Adjuvant Products**  
**and Miscellaneous Products (6619C038)**

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**8. MISCELLENOUS:**

- 8.1 No Substitutions:** The Vendor shall supply only Contract Items submitted in response to the Solicitation unless a contract modification is approved in accordance with the provisions contained in this Contract.
- 8.2 Vendor Supply:** The Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, the Vendor certifies that it can supply the Contract Items contained in its bid response.
- 8.3 Reports:** The Vendor shall provide quarterly reports and annual summaries to the Agency showing the Contract Items purchased, quantities of Contract Items purchased and the total dollar value of the Contract Items purchased. The Vendor shall also provide reports, upon request, showing the Contract Items purchased during the term of this Contract, the quantity purchased for each of those Contract Items and the total value of purchases for each of those Contract Items. Failure to supply such reports may be grounds for cancellation of this Contract.
- 8.4 Contract Manager:** During its performance of this Contract, the Vendor must designate and maintain a primary contract manager responsible for overseeing the Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. The Vendor should list its Contract manager and his or her contact information below.

**Contract Manager:** Greg Ressler (Area Sales Manager)  
**Telephone Number:** 317-753-7740  
**Fax Number:** 317-536-3760  
**Email Address:** greg.ressler@rrsi.com



**West Virginia Department of Transportation  
Division of Highways**

**Standard Specifications Order Form**

**Ordering Instructions:**

Copies of the *2017 Standard Specifications Roads and Bridges* and latest **Supplemental Specifications** may be purchased by completing this form, indicating the number of books desired, along with proper mailing and billing information.

Submit completed form by e-mail [DOHSpecifications@wv.gov](mailto:DOHSpecifications@wv.gov), or mail to:  
 Contract Administration Division  
 1900 Kanawha Boulevard East  
 Building Five, Room 840  
 Charleston, WV 25305

**Order Form:**

Delivery Method (check one):      Pick-up                       Mail  (S&H fees apply – see below)  
 Payment Method (check one):      Invoice                       Check  (payable to: WV Division of Highways)

Number of Copies	Title	Price Each	Total
	<b>2017 Standard Specifications Roads and Bridges</b>	\$15.00	
	<b>Supplemental Specifications, Latest Edition</b>	\$5.00	
Shipping and Handling (S&H) *			
* 1-9 Items = \$5.00    10+ Items = \$10.00			
<b>Total Amount Due</b>			

NOTICE: The *2017 Standard Specifications Roads and Bridges* and *Supplemental Specifications* are available free of charge on the [Specifications Webpage](#).

**Customer Information:**

Company Name: \_\_\_\_\_  
 ATTENTION: \_\_\_\_\_  
 Street Address: \_\_\_\_\_  
 City, State, Zip Code: \_\_\_\_\_  
 Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ e-mail: \_\_\_\_\_

For Office Use Only (Do not write in the space below)				
Order Filled By:			Date:	
REC ORG	AUTH	ACT	OBJ	P/N
0064	COTH126	126	021	N



**INFORMATION ATTACHMENT FORM**

Per Section 3.4 of the contract specifications, the Vendor **shall** provide the name, certification number and telephone number of at least one representative holding a current Category 7 certification or a Category 11 certification in West Virginia, who shall be available to provide training and technical assistance as required or upon the request of the WVDOH.

Please provide that representative's name, certification number and phone number in the space provided below.

NAME: Greg Ressler

CERTIFICATION NUMBER: 245458 (IN License)

TELEPHONE NUMBER: 317-753-7740

(Optional) EMAIL ADDRESS: greg.ressler@rrsi.com

A **COPY** OF THE REPRESENTATIVE'S CATEGORY 7 CERTIFICATION OR CATEGORY 11 CERTIFICATION **SHALL** BE SUBMITTED WITH BID SUBMISSION.

I am including a copy of Greg Ressler's Indiana certification in-case your states have reciprocity of licenses. If not Greg will get the necessary WV license if awarded.

## West Virginia Ethics Commission



### Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

*"Business entity"* means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

*"Interested party"* or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

*"State agency"* means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

*This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: [ethics@wv.gov](mailto:ethics@wv.gov); website: [www.ethics.wv.gov](http://www.ethics.wv.gov).*

West Virginia Ethics Commission  
**Disclosure of Interested Parties to Contracts**

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: \_\_\_\_\_ Address: \_\_\_\_\_  
\_\_\_\_\_

Name of Authorized Agent: \_\_\_\_\_ Address: \_\_\_\_\_  
\_\_\_\_\_

Contract Number: \_\_\_\_\_ Contract Description: \_\_\_\_\_

Governmental agency awarding contract: \_\_\_\_\_

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (*attach additional pages if necessary*):

**1. Subcontractors or other entities performing work or service under the Contract**

Check here if none, otherwise list entity/individual names below.

**2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)**

Check here if none, otherwise list entity/individual names below.

**3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)**

Check here if none, otherwise list entity/individual names below.

Signature: \_\_\_\_\_ Date Signed: \_\_\_\_\_

**Notary Verification**

State of \_\_\_\_\_, County of \_\_\_\_\_;

I, \_\_\_\_\_, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
Notary Public's Signature

**To be completed by State Agency:**

Date Received by State Agency: \_\_\_\_\_

Date submitted to Ethics Commission: \_\_\_\_\_

Governmental agency submitting Disclosure: \_\_\_\_\_

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

**ALL CONTRACTS:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Red River Specialties LLC.

Authorized Signature:  Date: 3/12/2019

State of Louisiana

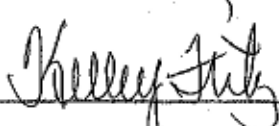
County of Caddo, to-wit:

Taken, subscribed, and sworn to before me this 15<sup>th</sup> day of March, 2019.

My Commission expires For Life, 2019.

AFFIX SEAL HERE

NOTARY PUBLIC



*Purchasing Affidavit (Revised 01/19/2018)*  
KELLEY FRITZ  
NOTARY PUBLIC  
CADDO PARISH - LOUISIANA  
COMMISSION IS FOR LIFE  
NOTARY ID# 61782



**OFFICE OF INDIANA STATE CHEMIST**

Purdue University  
175 S. University St.  
West Lafayette, Indiana 47907-2063

**VALID CATEGORIES**

5, 6

**ØØDHQ8**

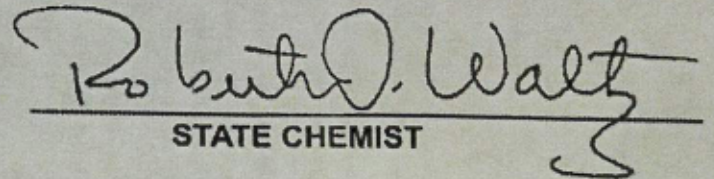
RED RIVER SPECIALTIES INC  
4325 W 200 N  
TIPTON IN 46072-8562

**COMMERCIAL PESTICIDE BUSINESS LICENSE**

This authorizes the company listed hereon to engage in for-hire pesticide use business in the categories listed on this form. It is valid in these categories only as long as applicator(s) currently licensed with this business hold valid certification(s) as listed.

**LICENSE NUMBER: 245458**

**EXPIRATION DATE: 12/31/2019**

  
**STATE CHEMIST**



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Request for Quotation  
 19 -- Highways

Proc Folder: 509401

Doc Description: ADDENDUM 1 6619C038-HERBICIDE, ADJUVANT AND MISC.PRODUCTS

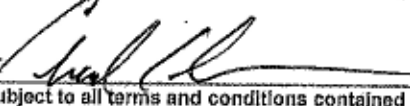
Proc Type: Central Master Agreement

Date issued	Solicitation Closes	Solicitation No	Version
2019-02-26	2019-03-14 13:30:00	CRFQ 0803 DOT1900000074	2

**BID RECEIVING LOCATION:**  
 BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR:**  
 Vendor Name, Address and Telephone Number:

**FOR INFORMATION CONTACT THE BUYER**  
 Crystal Rink  
 (304) 558-2402  
 crystal.g.rink@wv.gov

Signature  FEIN # 72-1115450 DATE 3/13/2019

All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION:**

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DIVISION OF HIGHWAYS, IS SOLICITING BIDS TO ESTABLISH AN OPEN-END CONTRACT FOR HERBICIDE, ADJUVANT AND MISCELLANEOUS PRODUCTS PER THE ATTACHED DOCUMENTS.

INVOICE TO:		SHIP TO:	
VARIOUS AGENCY LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	HERBICIDE, ADJUVANT AND MISCELLANEOUS PRODUCTS	0.00000	EA		

Comm Code	Manufacturer	Specification	Model #
10171700			

Extended Description :  
HERBICIDE, ADJUVANT AND MISCELLANEOUS PRODUCTS  
PER THE ATTACHED PRICING PAGES

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2019-02-26



**SOLICITATION NUMBER:** CRFQ DOT1900000074

**Addendum Number:** 1

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The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

**Applicable Addendum Category:**

- Modify bid opening date and time
- Modify specifications of product or service being sought
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Other

**Description of Modification to Solicitation:**

1. To provide answers to vendor questions

No other changes at this time

Bid opening remains 03/14/2019 at 1:30 PM EST

**Additional Documentation:** Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

**Terms and Conditions:**

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.



# ATTACHMENT A

**ADDENDUM #1-HERBICIDE, ADJUVANT, & MISCELLANEOUS PRODUCTS**

Addendum #1            CRFQ DOT1900000074

To respond to vendor posed questions:

Question #1            I noticed that Attachment A (Spec Book Order Form) appears to be a new document for the WVDOH solicitation. Is it a requirement for Nutrien to purchase this item in order to participate in the event?

Response to Question #1: Purchasing the Attachment A (Spec Book Order Form) isn't a requirement to participate in the event. In accordance with Section 3.1 General Specifications, a copy of the current Standard Specs may be ordered if the vendor so chooses.

**3. GENERAL REQUIREMENTS:**

**3.1 Specifications:** The following sections of the Standard Specs, shall apply to the administration of this contract: Sections 101, 102.4, 102.5, 105.1, 105.3, 105.4, 105.10, 105.11, 105.12, 105.13, 106.3, 106.4, 106.5, 106.6, 106.7, 106.9, 107.1, 107.2, 107.3, 107.14, 107.19, 107.20, 108.8, 109.1, 109.2 and 109.20.

A hard copy of the current Standard Specs may be purchased at a cost of \$20.00 (\$15.00 for the 2017 book plus \$5.00 for the latest edition) using the Attachment A Standard Specifications Order Form and sent to:

West Virginia Division of Highways  
Contract Administration  
Building 5, Room 722  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305  
(Phone) 304-558-2885

A free electronic copy of the Standard Specs may be obtained by sourcing:  
<http://www.transportation.wv.gov/highways/contractadmin/specifications/2017StandSpec/Pages/default.aspx>

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: DOT1900000074**

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

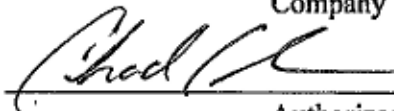
(Check the box next to each addendum received)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2            | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Red River Specialties LLC.

Company



Authorized Signature

3/13/2019

Date

**NOTE:** This addendum acknowledgment should be submitted with the bid to expedite document processing.  
Revised 6/8/2012

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** ELITE PREMIER RED

**DISTRIBUTOR:** Red River Specialties, Inc.

**ADDRESS:** 1324 N. Hearne Ave., Ste 120, Shreveport, LA 71107

**EMERGENCY CHEMTREC PHONE:** US: 1-800-424-9300 International: 1-202-483-7616

**CHEMICAL NAME:** Petroleum Distillate & Emulsifier

**CHEMICAL FAMILY:** Petroleum Hydrocarbon Oil

**CHEMICAL FORMULA:** Mixture

**PRODUCT USE:** Basal Oil

**SECTION 1 NOTES:** None

## SECTION 2: HAZARDOUS INGREDIENTS

### GHS RATINGS:

#### TOXICITY CATEGORIES

Acute toxicity (Inhalation) Category 3



**SIGNAL WORD: DANGER**

**GHS HAZARDS:** H303 May be harmful if swallowed.  
 H317 May cause an allergic skin reaction.  
 H331 Toxic if inhaled.

**GHS PRECAUTIONS:** P102 Keep out of reach of children.  
 P234 Keep only in original container.  
 P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
 P264 Wash hands thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301+312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
 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.  
 P311 Call a POISON CENTER or doctor/physician.  
 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.  
 P403+233 Store in a well ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P501 Dispose of contents in container to an approved waste disposal facility in accordance with all local /regional/national/international regulations.

**SECTION 2 NOTES:** None

## SECTION 3: HAZARDS IDENTIFICATION

INGREDIENT	CAS NO.	% WT
Aliphatic oil	64742-46-7	90 – 100%
Proprietary	Proprietary	1 – 5%
Distillates, petroleum, hydrotreated light	64742-53-6	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

## SECTION 4: FIRST AID MEASURES

**EYE CONTACT- IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do then continue rinsing. Have the product container with you when calling a poison control center or doctor, or going for treatment.

**SKIN CONTACT - IF ON SKIN OR CLOTHING:** Take off contaminated clothing and wash it before reuse. Wash with plenty of soap and water for several minutes. Call a poison center, doctor, chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice.

**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. Call a poison center, doctor, chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice if you feel unwell.

**INHALATION - 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.

### NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

**SECTION 4 NOTES:** None

## SECTION 5: FIRE FIGHTING MEASURES

### NFPA HAZARD CLASSIFICATION

HEALTH: 1      FLAMMABILITY: 1      REACTIVITY: 0      OTHER: -

**IN CASE OF FIRE:** Carbon dioxide, dry chemical, and chemical foam or water fog.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus when fire fighting in confined space.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Can be made to burn (Flash point greater than 200° F).

**HAZARDOUS DECOMPOSITION PRODUCTS:** Combustion may produce carbon monoxide and asphyxiates.

**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. Soak up spill with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. Wear suitable protective equipment.

**SECTION 6 NOTES:** None

## SECTION 7: HANDLING AND STORAGE

**HANDLING:** Keep out of reach of children. Read label before use. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**STORAGE:** Store locked up. 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.

**SECTION 7 NOTES:** None

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES

**VENTILATION:** Use only outdoors or in a well ventilated area.

**RESPIRATORY PROTECTION:** Not necessary unless ventilation is inadequate. Then use OSHA or NIOSH approved respirator, as appropriate.

**EYE PROTECTION:** Chemical goggles

**SKIN PROTECTION:** Chemical gloves, long-sleeved shirts and pants and protective gear if prolonged contact is unavoidable.

**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:** Red, clear

**ODOR:** Mild

**ORDER THRESHOLD:** Not known

**PHYSICAL STATE:** Liquid

**PH AS SUPPLIED:** Not applicable

**PH (OTHER):**

**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):**

**FLAMMABLE LIMITS IN AIR, UPPER:** Unknown      **LOWER:** Unknown  
 (% BY VOLUME)

**VAPOR PRESSURE (mmHg): @**      F: Unknown      C: Unknown

**VAPOR DENSITY (AIR = 1): @**      F: Unknown      C: Unknown

**RELATIVE DENSITY:** 0.850 to 0.868

**EVAPORATION RATE:** Unknown

**BASIS (butyl acetate=1):**

**SOLUBILITY IN WATER:** Dispersible

**PARTITION COEFFICIENT:** n-octanol/water; Unknown

**AUTO-IGNITION TEMPERATURE:** Unknown

**DECOMPOSITION TEMPERATURE:** Unknown

**VISCOSITY: @** Not determined      F: Unknown      C: Unknown

**SECTION 9 NOTES:** Values 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.

## SECTION 10: STABILITY AND REACTIVITY

**STABILITY:** Stable

**CONDITIONS TO AVOID (STABILITY):** Excessive heat.

**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong oxidizing agents.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Combustion may produce carbon monoxide and asphyxiates.

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID (POLYMERIZATION):** None known

**SECTION 10 NOTES:** None



# Safety Data Sheet

SDS DATE: 02/07/2015 - SUPERSEDES: NONE

## SECTION 11: TOXICOLOGICAL INFORMATION

**TOXICOLOGICAL INFORMATION:** None

**MIXTURE TOXICITY:** Inhalation Toxicity: 5.08mg/L

**COMPONENT TOXICITY:** Not available

**SECTION 11 NOTES:** None

## SECTION 12: ECOLOGICAL INFORMATION

**ECOLOGICAL INFORMATION:** None

**ECOTOXICITY:** Not available

**BIOACCUMULATIVE POTENTIAL:** Not available

**MOBILITY IN SOIL:** Not available

**OTHER ADVERSE EFFECTS:** Not available

**SECTION 12 NOTES:** None

## SECTION 13: DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHOD:** 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 local/regional/national/international 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: TRANSPORTATION 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:** None

**INTERNATIONAL REGULATIONS:** None

**SECTION 15 NOTES:** None

## SECTION 16: OTHER INFORMATION

**OTHER INFORMATION:** None

**PREPARATION INFORMATION:** Prepared on 02/07/15

**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.

**Red River Specialties, Inc.**  
1324 N. Hearne Ave., Ste 120  
Shreveport, LA 71107

# Aqua Neat<sup>®</sup>

## Aquatic Herbicide

**FOR USE ON EMERGED AQUATIC WEEDS AND BRUSH IN AQUATIC SITES. FOR USE IN FORESTRY (INCLUDING WEED CONTROL IN CHRISTMAS TREE PLANTATIONS), RIGHTS-OF-WAY, HABITAT RESTORATION AREAS, NON-CROP AND OTHER LISTED APPLICATION SITES.**

**ACTIVE INGREDIENT:**

Glyphosate, N-(phosphonomethyl)glycine,  
in the form of its isopropylamine salt\* ..... 53.8%

**OTHER INGREDIENTS:**..... 46.2%

**TOTAL:**..... 100.0%

\*Contains 648 grams per litre or 5.4 pounds per U.S. gallon of the active ingredient, glyphosate, in the form of its isopropylamine salt. Equivalent to 480 grams per litre or 4 pounds per U.S. gallon of the acid, glyphosate.

**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 FIRST AID AND  
ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or  
Exposure, Call CHEMTREC  
(800) 424-9300

For Medical Emergencies Only,  
Call (877) 325-1840

EPA Reg. No. 228-365

Manufactured for  
Nufarm Americas Inc.  
150 Harvester Drive  
Burr Ridge, IL 60527



**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION / PRECAUCION**

Harmful if inhaled. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse. Wash thoroughly with soap and water after handling.

<b>FIRST AID</b>	
<b>IF INHALED</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>HOT LINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.	

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

Applicators and other handlers must wear long-sleeved shirt and long pants and 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 exists, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Control Statements:** 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)], the handler PPE requirements may be reduced or modified as specified in the WPS.

<b>USER SAFETY RECOMMENDATIONS</b>
<p><b>Users Should:</b></p> <ul style="list-style-type: none"><li>• Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.</li><li>• Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</li></ul>

**ENVIRONMENTAL HAZARDS**

For aquatic uses, do not contaminate water when 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.

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.

In case of, SPILL OR LEAK, soak up and remove to a landfill. Do not contaminate water when disposing of equipment washwaters or rinsate.

**PHYSICAL OR CHEMICAL HAZARDS**

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic and 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 the entire label before using this product. Use strictly in accordance with label precautionary statements and directions.



### **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 protection 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, shoes plus socks, and chemical-resistant gloves Category A (such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber) > 14 mils.

### **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 to prevent transfer of this product onto desirable vegetation.

### **PRODUCT INFORMATION**

**DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL OR CURRENT SUPPLEMENTAL LABELING ISSUED BY MANUFACTURER.**

This product, a water-soluble liquid, mixes readily with water and nonionic surfactant to be applied as a foliar spray after dilution and thoroughly mixing with water in accordance with label instructions for the control or destruction of many herbaceous and woody plants. Always use the higher rate of this product per acre within the specified range when vegetation is heavy or dense. When treating dense multi-canopied sites or woody vegetation or difficult-to-control herbaceous or woody plants.

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 brush species may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow the activity of this product and delay visual effects of control. 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.

Unless otherwise directed on this label, delay application until vegetation has emerged and reached the stages described for control of such vegetation under the "WEEDS CONTROLLED" section of this label.

Unemerged plants arising from unattached underground rhizomes or root stocks of perennials or brush will not be affected by the spray and will continue to grow. For this reason best control of most perennial weeds or brush is obtained when treatment is made at late growth stages approaching maturity.

Always use the higher rate of this product per acre within the specified range when vegetation is heavy or dense.

Do not treat weeds or brush under poor growing conditions such as drought stress, disease or insect damage, as reduced control may result. Reduced results may also occur when treating weeds or brush heavily covered with dust.

Reduced control may result when applications are made to any weed or brush species that have been mowed, grazed or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfall or irrigation occurring within 6 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours after application may wash the product off the foliage and a repeat treatment may be required.

Mixing this product with herbicides or other materials not instructed in this label may result in reduced performance. However, unless otherwise prohibited on this label or the label of an intended tank mix product may be applied in combination with any herbicide registered for the same site, timing, and method of application. Observe the most restrictive label statements of various tank mix products used. **TO THE FULLEST EXTENT PERMITTED BY LAW, BUYER AND ALL USERS ARE RESPONSIBLE FOR ALL LOSS OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF MIXTURES OF THIS PRODUCT OR OTHER MATERIALS THAT ARE NOT EXPRESSLY SPECIFIED IN THIS LABEL.**

For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

When this product comes in contact with soil (on the soil surface or as suspended soil or sediment in water) it is bound to soil particles. Under labeled use situations, once this product is bound to soil particles, it is not available for plant uptake and will not harm off-site vegetation where roots grow into the treatment area or if the soil is transported off-site. Under labeled use conditions, the strong affinity of this product to soil particles prevents this product from leaching out of the soil profile and entering ground water. The affinity between this product and soil particles remains until this product is degraded, which is primarily a biological degradation process carried out under both aerobic and anaerobic conditions by soil micro flora.

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. Read **“WARRANTY DISCLAIMER”** and **“LIMITATION OF LIABILITY”** before buying or using. If items are not acceptable, return at once unopened. Buyer and all users are responsible for all loss or damage in connection with the use of handling of mixtures of this product or other materials that are not expressly specified in this label.

For more product information, call toll-free 1 -800-852-5234.

### **ATTENTION**

AVOID CONTACT WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS, OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, SINCE 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 plant or crop injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow spray drift to occur. 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. When not in use, keep container closed to prevent spills and contamination.

### **MIXING AND APPLICATION INSTRUCTIONS**

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES. HAND-GUN APPLICATIONS SHOULD BE PROPERLY DIRECTED TO AVOID SPRAYING DESIRABLE PLANTS. NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS WATER FROM PONDS AND UNLINED DITCHES.

### **TANK MIXTURES**

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance. 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 one-half full with water and start agitation.
3. 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.
4. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
5. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted SLOWLY through the screen into the tank. Continue agitation.
6. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
7. Where nonionic surfactant is recommended, add this to the spray tank before completing the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water soluble liquid followed by surfactant.

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. To prevent or minimize foam, avoid the use of mechanical agitators, place the filling hose below the surface of the spray solution, terminate by-pass and return lines at the bottom of the tank and if needed use an approved anti-foam or defoaming agent.

Screen size in nozzle or line strainers should be no finer than 50 mesh. Carefully select proper nozzle to avoid spraying a fine mist. For best results with conventional ground application equipment, use flat fan nozzles.

Clean sprayer and parts immediately after using this product by thoroughly flushing with water.

For best results with conventional ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

When using this product, mix 2 or more quarts of a nonionic surfactant per 100 gallons of spray solution. Use a nonionic surfactant labeled for use with herbicides. The surfactant must contain 50 percent or more active ingredient.

Always read and follow the manufacturer's surfactant label instructions for best results.

These surfactants should not be used in excess of 1 quart per acre when making broadcast applications.

Colorants or marking dyes approved for use with herbicides may be added to spray mixtures of 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 label instructions.

Clean sprayer and parts immediately after using this product by thoroughly flushing with water and dispose of rinsate according to labeled use or disposal instructions.

Carefully observe all cautionary statements and other information appearing in the surfactant label.

## APPLICATION EQUIPMENT AND TECHNIQUES

This product may be applied with the following application equipment:

**Aerial** - Fixed Wing and Helicopter

**Broadcast Spray**

**Controlled Droplet Applicator (CDA)** - Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

**Hand-Held and High-Volume Spray Equipment\*** - Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, lances and other hand-held 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 Equipment** - Recirculating sprayers and wiper applicators. See the appropriate part of this section for specific instructions and rates of application.

## APPLICATION INFORMATION

Observe the following directions to minimize off-site movement during aerial application of this herbicide. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor, and aerial applicator.

### AERIAL EQUIPMENT

Use the specified rates of this product and surfactant in 3 to 20 gallons of water per acre as a broadcast spray, unless otherwise specified. See the "WEEDS CONTROLLED" section of this label for specific rates. Unless otherwise specified, do not exceed 1.5 pints per acre. Aerial applications of this product may only be made as specified in this label.

**AVOID DRIFT - DO NOT APPLY DURING LOW-LEVEL INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH WILL ALLOW 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.**

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which 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 instructions.

Drift control additives may be used. When a drift control additive is used, read and carefully observe the precautionary statements and all other information appearing in the additive label.

**Ensure uniform application** - To avoid streaked, uneven or overlapped application, use appropriate marking devices.

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 ARE MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

For use of this product by air in California see additional instructions in "FOR AERIAL APPLICATION IN CALIFORNIA ONLY" Section.

### FOR AERIAL APPLICATION IN CALIFORNIA ONLY

**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 SEVERE DAMAGE OR DESTRUCTION MAY RESULT.**

#### Written Directions

A written direction **MUST** be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written direction **MUST** state the proximity of surrounding crops, and that conditions of each manufacturer's applicable product label(s) and this label have been satisfied.

#### Aerial Applicator Training and Equipment

Aerial application of this herbicide 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.

#### Application 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.

#### Aquatic and Other Noncrop Sites

When applied as directed and under the conditions described in the "Weeds Controlled" section of the label booklet for this product, this herbicide will control or partially control the labeled weeds growing in the following industrial, recreational and public areas, or other similar sites.

**Aquatic Sites-including all bodies of fresh and brackish water which may be flowing, nonflowing or transient. This includes lakes, rivers, streams, ponds, seeps, irrigation and drainage ditches, canals, reservoirs, estuaries and similar sites.**

If aquatic sites are present in the noncrop areas and are part of the intended treatment, read and observe the following directions: There is no limit on the use of treated water for irrigation, recreation or domestic purposes.

Consult local state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.

**NOTE:** 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. 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 application.

This product does not control plants which are completely submerged or have a majority of their foliage underwater.

**AVOID DRIFT - DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH WILL ALLOW 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.**

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 ONLY**

From February 15 through March 31 only. For aerial application outside of these dates, refer to the "FOR AERIAL APPLICATION IN CALIFORNIA ONLY" section printed above.

**APPLICABLE AREA**

This supplement only applies to the area contained inside the following boundaries within Fresno County, California only.

North: Fresno County line

South: Fresno County line

East: State Highway 99

West: Fresno County line

**BOOM EQUIPMENT**

For control of weed or brush species listed in this label using conventional boom equipment - Use the specified rates of this product and surfactant in 3 to 30 gallons of water per acre as a broadcast spray, unless otherwise specified. See the "WEEDS CONTROLLED" section of this label for specific rates. As density of vegetation increases, spray volume should be increased within the specified range to ensure complete coverage. Carefully select correct nozzle 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 EQUIPMENT**

Use Coarse Sprays Only

**For control of weeds listed in this label using knapsack sprayers or high-volume spraying equipment utilizing handguns or other suitable nozzle arrangements** - Prepare a 0.75 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 in this label.

Applications should be made on a spray-to-wet basis. Spray coverage should be uniform and complete. Do not spray to point of runoff.

This product may be used as a 5 to 8 percent solution plus 0.5 to 1 fluid ounce non-ionic surfactant per gallon spray solution 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. 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 zig-zag 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. Small, open-branched trees need only be treated from one side. If the foliage is thick or there are multiple root sprouts, applications must be made from several sides to ensure adequate spray coverage.

For use in knapsack sprayers, it is suggested that the specified amount of this product be mixed with water in a large container. Fill sprayer with the mixed solution and add the correct amount of surfactant.

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 PRODUCT					
	0.75%	1.0%	1.25%	1.5%	5.0%	8.0%
1 Gallon	1.0 fl. oz.	1.33 fl. oz.	1.66 fl. oz.	2.0 fl. oz.	6.0 fl. oz.	10.25 fl. oz.
25 Gallons	1.5 pts.	1.0 qt.	1.25 qts.	1.5 qts.	5.0 qts.	2.0 gals.
100 Gallons	3.0 qts.	1.0 gals.	1.25 gals.	1.5 gals.	5.0 gals.	8.0 gals.

2 Tablespoons = 1 fluid ounce

**SELECTIVE EQUIPMENT**

For terrestrial application, this product may be applied through a shielded applicator, or a wiper applicator after dilution and thorough mixing with water to listed weeds growing in any non-crop site specified on this label.

- A shielded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide.
- A wiper applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution.

**AVOID CONTACT WITH DESIRABLE VEGETATION.**

This section summarizes the general weed control spectrum and rates of application for this herbicide. Additional information specific to individual use patterns is detailed in following sections.

**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. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most operating nozzles on the boom must not exceed 3/4 the length of the rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downward 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 Aerial Drift Reduction Advisory Information.

**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 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 manufacturer's 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. Higher pressure reduces droplet size and does not improve canopy protection.
- **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 produces larger droplets than other orientations. 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 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 must 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).

## WEEDS CONTROLLED

### ANNUAL WEEDS

Apply to actively growing annual grasses and broadleaf weeds.

Allow at least 3 days after application before disturbing treated vegetation. After this period the weeds may be mowed, tilled or burned. See "DIRECTIONS FOR USE", "PRODUCT INFORMATION" and "MIXING AND APPLICATION INSTRUCTIONS" for labeled uses and specific application instructions.

**Broadcast Application** - Use 1-1/2 pints of this product per acre plus 2 or more quarts of a nonionic surfactant per 100 gallons of spray solution, if weeds are less than 6 inches tall. If weeds are greater than 6 inches tall, use 2-1/2 pints of this product per acre plus 2 or more quarts of an approved nonionic surfactant per 100 gallons of spray solution.

**Hand-Held, High-Volume Application** - Use a 3/4 percent solution of this product in water plus 2 or more quarts of a nonionic surfactant per 100 gallons of spray solution and apply to foliage of vegetation to be controlled.

When applied as directed under the conditions described in this label, this product plus nonionic surfactant WILL CONTROL the following ANNUAL WEEDS:

#### Balsamapple\*\*

*Momordica charantia*

#### Barley

*Hordeum vulgare*

#### Barnyardgrass

*Echinochloa crus-galli*

#### Bassia, fivehook

*Bassia hyssopifolia*

#### Bluegrass, annual

*Poa annua*

#### Bluegrass, bulbous

*Poa bulbosa*

#### Brome\*

*Bromus* spp.

#### Buttercup

*Ranunculus* spp.

#### Cheat

*Bromus secalinus*

#### Chickweed, mouseear

*Cerastium vulgatum*

#### Cocklebur

*Xanthium strumarium*

#### Corn, volunteer

*Zea mays*

#### Crabgrass

*Digitaria* spp.

#### Dwarf dandelion

*Krigia cespitosa*

#### False dandelion

*Krigia cespitosa*

#### Falseflax, smallseed

*Camelina microcarpa*

#### Fiddleneck\*

*Amsinckia* spp.

#### Flax leaf fleabane\*

*Conyza bonariensis*

#### Fleabane

*Erigeron* spp.

#### Foxtail

*Setaria* spp.

#### Foxtail, Carolina

*Alopecurus carolinianus*

#### Groundsel, common

*Senecio vulgaris*

#### Horseweed/Marestail

*Conyza canadensis*

#### Kochia\*

*Kochia scoparia*

#### Lambsquarters, common

*Chenopodium album*

#### Lettuce, prickly\*

*Lactuca serriola*

#### Morningglory

*Ipomoea* spp.

#### Mustard, blue

*Chorispora tenella*

#### Mustard, tansy

*Descurainia pinnata*

#### Mustard, tumble

*Sisymbrium altissimum*

#### Mustard, wild

*Sinapis arvensis*

#### Oats, wild

*Avena fatua*

#### Panicum\*

*Panicum* spp.

(continued)

**Pennycress, field**  
*Thlaspi arvense*  
**Pigweed, redroot**  
*Amaranthus retroflexus*  
**Pigweed, smooth**  
*Amaranthus hybridus*  
**Ragweed, common\***  
*Ambrosia artemisiifolia*  
**Ragweed, giant\***  
*Ambrosia trifida*  
**Rocket, London**  
*Sisymbrium irio*  
**Rye**  
*Secale cereale*  
**Ryegrass, Italian\***  
*Lolium multiflorum*

**Sandbur, field**  
*Cenchrus* spp.  
**Shattercane**  
*Sorghum bicolor*  
**Shepherd's-purse**  
*Capsella bursa-pastoris*  
**Signalgrass, broadleaf**  
*Brachiaria platyphylla*  
**Smartweed, Pennsylvania**  
*Polygonum pennsylvanicum*  
**Sowthistle, annual\***  
*Sonchus oleraceus*  
**Spanishneedles\***  
*Bidens bipinnata*  
**Spurry, umbrella**  
*Holosteum umbellatum*

**Stinkgrass**  
*Eragrostis ciliaris*  
**Sunflower\***  
*Helianthus annuus*  
**Thistle, Russian**  
*Salsola kali*  
**Velvetleaf\***  
*Abutilon theophrasti*  
**Wheat**  
*Triticum aestivum*  
**Witchgrass**  
*Panicum capillare*

\*Apply 3 pints of this product per acre.

\*\*Apply with hand-held equipment only.

Annual weeds will generally continue to germinate from seed throughout the growing season. Repeat treatments will be necessary to control later germinating weeds.

#### PERENNIAL WEEDS

Apply this product as follows to control or destroy most vigorously growing perennial weeds. Unless otherwise directed, allow at least 7 days after application before disturbing vegetation.

See individual control instructions for specific weeds following the table. For other perennials listed on this label, apply 4-1/2 to 7-1/2 pints of product per acre as a broadcast spray or as a 3/4 to 1-1/2 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached early head or early bud stage of growth.

Add 2 or more quarts of a nonionic surfactant per 100 gallons of spray solution to the rates of this product given in this list. See the "PRODUCT INFORMATION", "DIRECTIONS FOR USE" and "MIXING AND APPLICATION" sections in this label for specific uses and application instructions.

NOTE: If weeds have been mowed or tilled, do not treat until regrowth has reached the recommended stages. Fall treatments must be applied before a killing frost.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed.

When applied as specified under the conditions described, this product plus surfactant WILL CONTROL the following PERENNIAL WEEDS:

**Alfalfa**  
*Medicago sativa*  
**Alligatorweed\***  
*Alternanthera philoxeroides*  
**Anise/Fennel**  
*Foeniculum vulgare*  
**Artichoke, Jerusalem**  
*Helianthus tuberosus*  
**Bahiagrass**  
*Paspalum notatum*  
**Bermudagrass**  
*Cynodon dactylon*  
**Bindweed, field**  
*Convolvulus arvensis*  
**Bluegrass, Kentucky**  
*Poa pratensis*  
**Blueweed, Texas**  
*Helianthus ciliaris*  
**Brackenfern**  
*Pteridium* spp.  
**Bromegrass, smooth**  
*Bromus inermis*

**Canarygrass, reed**  
*Phalaris arundinacea*  
**Cattail**  
*Typha* spp.  
**Clover, red**  
*Trifolium pratense*  
**Clover, white**  
*Trifolium repens*  
**Cogongrass**  
*Imperata cylindrica*  
**Cordgrass**  
*Spartina* spp.  
**Cutgrass, giant\***  
*Zizaniopsis miliacea*  
**Dallisgrass**  
*Paspalum dilatatum*  
**Dandelion**  
*Taraxacum officinale*  
**Dock, curly**  
*Rumex crispus*  
**Dogbane, hemp**  
*Apocynum cannabinum*

**Fescue**  
*Festuca* spp.  
**Fescue, tall**  
*Festuca arundinacea*  
**Guineagrass**  
*Panicum maximum*  
**Hemlock, poison**  
*Conium maculatum*  
**Horsenettle**  
*Solanum carolinense*  
**Horseradish**  
*Armoracia rusticana*  
**Ice Plant**  
*Mesembryanthemum crystallinum*  
**Johnsongrass**  
*Sorghum halepense*  
**Kikuyugrass**  
*Pennisetum clandestinum*  
**Knapweed**  
*Centaurea repens*  
**Lantana**  
*Lantana camara*

(continued)



**Lespedeza: common, services**

*Lespedeza striata*  
*Lespedeza cuneata*

**Loosestrife, purple**

*Lythrum salicaria*

**Lotus, American**

*Nelumbo lutea*

**Maidencane**

*Panicum hematomon*

**Milkweed**

*Asclepias* spp.

**Muhly, wirestem**

*Muhlenbergia frondosa*

**Mullein, common**

*Verbascum thapsus*

**Napiergrass**

*Pennisetum purpureum*

**Nightshade, silverleaf**

*Solanum elaeagnifolium*

**Nutsedge: purple, yellow**

*Cyperus rotundus*

*Cyperus esculentus*

**Orchardgrass**

*Dactylis glomerata*

**Pampas grass**

*Cortaderia jubata*

**Paragrass**

*Brachiaria mutica*

**Phragmites\*\***

*Phragmites* spp.

**Quackgrass**

*Agropyron repens*

**Reed, giant**

*Arundo donax*

**Ryegrass, perennial**

*Lolium perenne*

**Smartweed, swamp**

*Polygonum coccineum*

**Spatterdock**

*Nuphar luteum*

**Starthistle, yellow**

*Centaurea solstitialis*

**Sweet potato, wild\***

*Ipomoea pandurata*

**Thistle, artichoke**

*Cynara cardunculus*

**Thistle, Canada**

*Cirsium arvense*

**Timothy**

*Phleum pratense*

**Torpedograss\***

*Panicum repens*

**Tules, common**

*Scirpus acutus*

**Vaseygrass**

*Paspalum urvillei*

**Velvetgrass**

*Holcus* spp.

**Waterhyacinth**

*Eichornia crassipes*

**Waterlettuce**

*Pistia stratiotes*

**Waterprimrose**

*Ludwigia* spp.

**Wheatgrass, western**

*Agropyron smithii*

\*Partial control.

\*\*Partial control in southeastern states. See specific instructions below.

**Alligatorweed** - Apply 6 pints of this product per acre as a broadcast spray or as a 1-1/4 percent solution with hand-held equipment to provide partial control of alligatorweed. Apply when most of the target plants are in bloom. Repeat applications will be required to maintain such control.

**Bermudagrass** - Apply 7-1/2 pints of this product per acre as a broadcast spray or as a 1-1/2 percent solution with hand-held equipment. Apply when target plants are actively growing and when seedheads appear.

**Bindweed, field/Silverleaf Nightshade/Texas Blueweed** - Apply 6 to 7-1/2 pints of this product per acre as a broadcast spray west of the Mississippi River and 4-1/2 to 6 pints of this product per acre east of the Mississippi River. With hand-held equipment, use a 1-1/2 percent solution. Apply when target plants are actively growing and are at or beyond full bloom. For silverleaf nightshade, best results can be obtained when application is made after berries are formed. Do not treat when weeds are under drought stress. New leaf development indicates active growth. For best results apply in late summer or fall.

**Brackenfern** - Apply 4-1/2 to 6 pints of this product per acre as a broadcast spray or as a 3/4 to 1 percent solution with hand-held equipment. Apply to fully expanded fronds which are at least 18 inches long.

**Cattail** - Apply 4-1/2 to 6 pints of this product per acre as a broadcast spray or as a 3/4 percent solution with hand-held equipment. Apply when target plants are actively growing and are at or beyond the early-to-full bloom stage of growth. Best results are achieved when application is made during the summer or fall months.

**Cogongrass** - Apply 4-1/2 to 7-1/2 pints of this product per acre as a broadcast spray. Apply when cogongrass is at least 18 inches tall and actively growing in late summer or fall. Allow 7 or more days after application before tillage or mowing. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

**Cordgrass** - Apply 4-1/2 to 7-1/2 pints of this product per acre as a broadcast spray or as a 1 to 2 percent solution with hand-held equipment. Schedule applications in order to allow 6 hours before treated plants are covered by tidewater. The presence of debris and silt on the cordgrass plants will reduce performance. It may be necessary to wash targeted plants prior to application to improve uptake of this product into the plant.

**Cutgrass, giant** - Apply 6 pints of this product per acre as a broadcast spray or as a 1 percent solution with hand-held equipment to provide partial control of giant cutgrass. Repeat applications will be required to maintain such control, especially where vegetation is partially submerged in water. Allow for substantial regrowth to the 7- to 10-leaf stage prior to retreatment.

**Dogbane, hemp/Knapweed/Horseradish** - Apply 6 pints of this product per acre as a broadcast spray or as a 1-1/2 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached the late bud-to-flower stage of growth. For best results, apply in late summer or fall.

**Fescue, tall** - Apply 4-1/2 pints of this product per acre as a broadcast spray or as a 1 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached the boot-to-head stage of growth. When applied prior to the boot stage, less desirable control may be obtained.

**Guineagrass** - Apply 4-1/2 pints of this product per acre as a broadcast spray or as a 3/4 percent solution with hand-held equipment. Apply when target plants are actively growing and when most have reached at least the 7-leaf stage of growth.



**Johnsongrass/Bluegrass, Kentucky/Bromegrass, smooth/Canarygrass, reed/Orchardgrass/Ryegrass, perennial/Timothy/Wheatgrass, western** - Apply 3 to 4-1/2 pints of this product per acre as a broadcast spray or as a 3/4 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached the boot-to-head stage of growth. When applied prior to the boot stage, less desirable control may be obtained. In the fall, apply before plants have turned brown.

**Lantana** - Apply this product as a 3/4 to 1 percent solution with hand-held equipment. Apply to actively growing Lantana at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

**Loosestrife, purple** - Apply 4 pints of this product per acre as a broadcast spray or as a 1 to 1-1/2 percent solution using hand-held equipment. Treat when plants are actively growing at or beyond the bloom stage of growth. Best results are achieved when application is made during summer or fall months. Fall treatments must be applied before a killing frost.

**Lotus, American** - Apply 4 pints of this product per acre as a broadcast spray or as a 3/4 percent solution with hand-held equipment. Treat when plants are actively growing at or beyond the bloom stage of growth. Best results are achieved when application is made during summer or fall months. Fall treatments must be applied before a killing frost. Repeat treatment may be necessary to control regrowth from underground parts and seeds.

**Maidencane/Paragrass** - Apply 6 pints of this product per acre as a broadcast spray or as a 3/4 percent solution with hand-held equipment. Repeat treatments will be required, especially to vegetation partially submerged in water. Under these conditions, allow for regrowth to the 7- to 10-leaf stage prior to retreatment.

**Milkweed, common** - Apply 4-1/2 pints of this product per acre as a broadcast spray or as a 1-1/2 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached the late bud-to-flower stage of growth.

**Nutsedge: purple, yellow** - Apply 4-1/2 pints of this product per acre as a broadcast spray, or as a 3/4 percent solution with hand-held equipment to control existing nutsedge plants and immature nutlets attached to treated plants. Apply when target 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.

**Pampasgrass** - Apply a 1-1/2 percent solution of this product with hand-held equipment when plants are actively growing.

**Phragmites** - For partial control of phragmites in Florida and the counties of other states bordering the Gulf of Mexico, apply 7-1/2 pints per acre as a broadcast spray or apply a 1-1/2 percent solution with hand-held equipment. In other areas of the U.S., apply 4 to 6 pints per acre as a broadcast spray or apply a 3/4 percent solution with hand-held equipment for partial control. For best results, treat during late summer or fall months when plants are actively growing and in full bloom. Due to the dense nature of the vegetation, which may prevent good spray coverage and uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

**Quackgrass/Kikuyugrass/Muhly, wirestem** - Apply 3 to 4-1/2 pints of this product per acre as a broadcast spray or as a 3/4 percent solution with hand-held equipment when most quackgrass or wirestem muhly is at least 8 inches in height (3- to 4-leaf stage of growth) and actively growing. Allow 3 or more days after application before tillage.

**Reed, giant/ice plant** - For control of giant reed and ice plant, apply a 1-1/2 percent solution of this product with hand-held equipment when plants are actively growing. For giant reed, best results are obtained when applications are made in late summer to fall.

**Spatterdock** - Apply 6 pints of this product per acre as a broadcast spray or as a 3/4 percent solution with hand-held equipment. Apply when most plants are in full bloom. For best results, apply during the summer or fall months.

**Sweet potato, wild** - Apply this product as a 1-1/2 percent solution using hand-held equipment. Apply to actively growing weeds that are at or beyond the bloom stage of growth. Repeat applications will be required. Allow the plant to reach the recommended stage of growth before retreatment.

**Thistle: Canada, artichoke** - Apply 3 to 4-1/2 pints of this product per acre as a broadcast spray or as a 1-1/2 percent solution with hand-held equipment for Canada thistle. To control artichoke thistle, apply a 2 percent solution as a spray to wet application. Apply when target plants are actively growing and are at or beyond the bud stage of growth.

**Torpedograss** - Apply 6 to 7-1/2 pints of this product per acre as a broadcast spray or as a 3/4 to 1-1/2 percent solution with hand-held equipment to provide partial control of torpedograss. Use the lower rates under terrestrial conditions, and the higher rates under partially submerged or a floating mat condition. Repeat treatments will be required to maintain such control.

**Tules, common** - Apply this product as a 1-1/2 percent solution with hand-held equipment. Apply to actively growing plants at or beyond the seedhead stage of growth. After application, visual symptoms will be slow to appear and may not occur for 3 or more weeks.

**Waterhyacinth** - Apply 5 to 6 pints of this product per acre as a broadcast spray or apply a 3/4 to 1 percent solution with hand-held equipment. Apply when target plants are actively growing and at or beyond the early bloom stage of growth. After application, visual symptoms may require 3 or more weeks to appear with complete necrosis and decomposition usually occurring within 60 to 90 days. Use the higher rates when more rapid visual effects are desired.

**Waterlettuce** - For control, apply a 3/4 to 1 percent solution using hand-held equipment to actively growing plants. Use higher rates where infestations are heavy. Best results are obtained from mid-summer through winter applications. Spring applications may require retreatment.

**Waterprimrose** - Apply this product as a 3/4 percent solution using hand-held equipment. Apply to plants that are actively growing at or beyond the bloom stage of growth, but before fall color changes occur. Thorough coverage is necessary for best control.

**Other perennials listed on this label** - Apply 4-1/2 to 7-1/2 pints of this product per acre as a broadcast spray or as a 3/4 to 1-1/2 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached early head or early bud stage of growth.

## WOODY BRUSH AND TREES

See individual control instructions for specific woody brush and trees to be controlled in the following table. For partial control of other woody brush and trees listed in the table, apply 3 to 7.5 pints of this product per acre as a broadcast spray or as a 0.75 to 10 percent solution with hand-held equipment.

Apply the specified rate of this product plus 2 or more quarts of a nonionic surfactant per 100 gallons of spray solution when plants are actively growing and, unless otherwise directed, after full-leaf expansion. 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.

Applied as a 5 to 8 percent solution as a directed application as described in the "HAND-HELD AND HIGH-VOLUME EQUIPMENT" section, this product will control or partially control all species listed in this section of the label. Use the higher rate of application for dense stands and larger woody brush and trees.

In arid areas, best results are obtained when application is 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. Symptoms may not appear prior to frost or senescence with Fall treatment.

Allow 7 or more days after application before 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.

### Application Rates<sup>1</sup>

METHOD OF APPLICATION	APPLICATION RATE	SPRAY VOLUME (Gallons/Acre)
<b>Broadcast</b> Aerial Ground	1.5 to 7.5 qts./ acre 1.5 to 7.5 qts./ acre	5 to 30 10 to 60
<b>Spray-to-Wet</b> Handgun, Backpack, Mistblower	0.75% to 2.0% by volume	Spray-to-Wet
<b>Low Volume Directed Spray<sup>2</sup></b> Handgun, Backpack, Mistblower	5.0% to 10.0% by volume	Partial Coverage

<sup>1</sup> Where repeat applications are necessary do not exceed 8.0 quarts per acre per year.

<sup>2</sup> For low volume directed spray applications, coverage should be uniform with at least 50 percent of the foliage contacted. For best results, coverage of the top one-half of the plant is important.

NOTE: If brush has been mowed or tilled or trees have been cut, do not treat until regrowth has reached the recommended stage of growth.

When applied as specified under the conditions described, this product plus surfactant CONTROLS or PARTIALLY CONTROLS the following woody brush plants and trees:

#### Alder

*Alnus* spp.

#### Ash\*

*Fraxinus* spp.

#### Aspen, quaking

*Populus tremuloides*

#### Bearclover, Bearmat

*Chamaebatia foliolosa*

#### Birch

*Betula* spp.

#### Blackberry

*Rubus* spp.

#### Broom:

##### French

*Cytisus monspessulanus*

##### Scotch

*Cytisus scoparius*

#### Buckwheat, California\*

*Eriogonum fasciculatum*

#### Cascara\*

*Rhamnus purshiana*

#### Catsclaw\*

*Acacia greggi*

#### Ceanothus

*Ceanothus* spp.

#### Chamise

*Adenostoma fasciculatum*

#### Cherry:

##### Bitter

*Prunus emarginata*

##### Black

*Prunus serotina*

##### Pin

*Prunus pensylvanica*

#### Coyote brush

*Bacharis consanguinea*

#### Creeper, Virginia\*

*Parthenocissus quinquefolia*

#### Dewberry

*Rubus trivialis*

#### Dogwood

*Cornus* spp.

#### Elderberry

*Sambucus* spp.

#### Elm\*

*Ulmus* spp.

#### Eucalyptus, bluegum

*Eucalyptus globules*

#### Hasardia\*

*Haplopappus squamosus*

#### Hawthorn

*Crataegus* spp.

#### Hazel

*Corylus* spp.

#### Hickory

*Carya* spp.

#### Holly, Florida; Brazilian Peppertree

*Schinus terebinthifolius*

#### Honeysuckle

*Lonicera* spp.

#### Hornbeam, American

*Carpinus caroliniana*

**Kudzu**  
*Pueraria lobata*  
**Locust, black\***  
*Robinia pseudoacacia*  
**Manzanita**  
*Arctostaphylos* spp.  
**Maple:**  
**Red\*\***  
*Acer rubrum*  
**Sugar**  
*Acer saccharum*  
**Vine\***  
*Acer circinatum*  
**Monkey Flower\***  
*Mimulus guttatus*  
**Oak:**  
**Black\***  
*Quercus velutina*  
**Northern pine**  
*Quercus palustris*  
**Post**  
*Quercus stellata*  
**Red**  
*Quercus rubra*  
**Southern red**  
*Quercus falcata*  
**White\***  
*Quercus alba*

**Persimmon\***  
*Diospyros* spp.  
**Poison Ivy**  
*Rhus radicans*  
**Poison Oak**  
*Rhus toxicodendron*  
**Poplar, yellow\***  
*Liriodendron tulipifera*  
**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*  
**Salt cedar\***  
*Tamarix* spp.  
**Saltbush, Sea myrtle**  
*Baccharis halimifolia*

**Sassafras**  
*Sassafras albidum*  
**Sourwood\***  
*Oxydendrum arboreum*  
**Sumac:**  
**Poison\***  
*Rhus vernix*  
**Smooth\***  
*Rhus glabra*  
**Winged\***  
*Rhus copallina*  
**Sweet gum**  
*Liquidambar styraciflua*  
**Swordfern\***  
*Polystichum munitum*  
**Tallowtree, Chinese**  
*Sapium sebiferum*  
**Thimbleberry**  
*Rubus parviflorus*  
**Tobacco, tree\***  
*Nicotiana glauca*  
**Trumpet creeper**  
*Campsis radicans*  
**Waxmyrtle, southern\***  
*Myrica cerifera*  
**Willow**  
*Salix* spp.

\*Partial control

\*\*See below for control or partial control instruction.

See the "DIRECTIONS FOR USE" and "MIXING AND APPLICATION INSTRUCTIONS" sections in this label for labeled use and specific application instructions.

Apply the product as follows to control or partially control the following woody brush and trees.

**Alder/Blackberry/Dewberry/Honeysuckle/Oak, Post/Raspberry** - For control, apply 4-1/2 to 6 pints per acre as a broadcast spray or as a 3/4 to 1-1/4 percent solution with hand-held equipment.

**Aspen, Quaking/Hawthorn/Trumpet creeper** - For control, apply 3 to 4-1/4 pints of this product per acre as a broadcast spray or as a 3/4 to 1-1/4 percent solution with hand-held equipment.

**Birch/Elderberry/Hazel/Salmonberry/Thimbleberry** - For control, apply 3 pints per acre of this product as a broadcast spray or as a 3/4 percent solution with hand-held equipment.

**Broom: French, Scotch** - For control, apply a 1-1/4 to 1-1/2 percent solution with hand-held equipment.

**Buckwheat, California/Hasardia/Monkey Flower/Tobacco, Tree** - For partial control of these species apply a 3/4 to 1-1/2 percent solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results.

**Catsclaw** - For partial control, apply a 1-1/4 to 1-1/2 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

**Cherry: Bitter, Black, Pin/Oak, Southern Red/Sweet Gum/Prunus** - For control, apply 3 to 7-1/2 pints of this product per acre as a broadcast spray or as a 1 to 1-1/2 percent solution with hand-held equipment.

**Coyote brush** - For control, apply a 1-1/4 to 1-1/2 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

**Dogwood/Hickory/Salt cedar** - For partial control, apply a 1 to 2 percent solution of this product with hand-held equipment or 6 to 7-1/2 pints per acre as a broadcast spray.

**Eucalyptus, bluegum** - For control of eucalyptus resprouts, apply a 1-1/2 percent solution of this product with hand-held equipment when resprouts are 6- to 12-feet tall. Ensure complete coverage. Apply when plants are actively growing. Avoid application to drought-stressed plants.

**Holly, Florida/Waxmyrtle, southern** - For partial control, apply this product as a 1-1/2 percent solution with hand-held equipment.

**Kudzu** - For control, apply 6 pints of this product per acre as a broadcast spray or as a 1-1/2 percent solution with hand-held equipment. Repeat applications will be required to maintain control.

**Maple, Red** - For control, apply as a 3/4 to 1-1/4 percent solution with hand-held equipment when leaves are fully developed. For partial control, apply 2 to 7-1/2 pints of this product per acre as a broadcast spray.

**Maple, Sugar/Oak: Northern Pine, Red** - For control, apply as a 3/4 to 1-1/4 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

**Poison Ivy/Poison Oak** - For control, apply 6 to 7-1/2 pints of this product per acre as a broadcast spray or as a 1-1/2 percent solution with hand-held equipment. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.

**Rose, multiflora** - For control, apply 3 pints of this product per acre as a broadcast spray or as a 3/4 to 1-1/2 percent solution with hand-held equipment. Treatments should be made prior to leaf deterioration by leaf-feeding insects.

**Sage, black/Sagebrush, California/Chamise/Tallowtree, Chinese** - For control of these species, apply a 3/4 percent solution with hand-held equipment. Thorough coverage of foliage is necessary for best results.

**Saltbush, Sea myrtle** - For control, apply this product as a 1 percent solution with hand-held equipment.

**Willow** - For control, apply 4-1/2 pints of this product per acre as a broadcast spray or as a 3/4 percent solution with hand-held equipment.

**Other woody brush and trees listed in this label** - For partial control, apply 3 to 7-1/2 pints of this product per acre as a broadcast spray or as a 3/4 to 1-1/2 percent solution with hand-held equipment.

### NON-CROP USES

See "PRODUCT INFORMATION" and "MIXING AND APPLICATION INSTRUCTIONS" sections of this label for essential product performance information and the following "NON-CROP" sections for specific uses.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OR SPRAY WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE TURFGRASSES, TREES, SHRUBS OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seeds. Where repeat applications are necessary, do not exceed 8 quarts of this product per acre per year.

This product does not provide residual weed control. For subsequent 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.

#### INDUSTRIAL, RECREATIONAL AND PUBLIC AREAS

When applied as directed for "NON-CROP USES", under conditions described, this product may be used to control the listed weeds.

**Non-Crop Sites** - This product may be used to control the listed weeds in terrestrial noncrop sites and/or in aquatic sites within these areas:

airfields; airports; alleys, lanes, trails & access roads; around commercial or industrial structures or outbuildings; around farm and ranch structures and outbuildings; around ornamental gardens; around ornamental trees & shrubs; bare ground; beaches; campgrounds; construction sites; ditch banks; drive-in theaters; driveways & ramps; dry ditches & canals; fences & fencerows; firebreaks; golf courses; gravel yards; habitat restoration & management areas; highways & roadsides (including aprons, medians, guardrails & right of ways); industrial plant sites; industrial areas; lumber yards; mulched areas; natural areas; paths and trails; parking areas; parks; paved areas; petroleum & other tank farms; pumping installations; pipeline, power, telephone & utility rights-of-way; power stations; preplant to turf & ornamental plants; railroad rights-of-way; recreation areas; refineries; resorts; schools; sidewalks; sports areas; storage areas; substations; tennis courts; uncropped farmstead areas; uncultivated non-agricultural areas; vacant lots; walkways; wastelands; & wildlife habitat areas

When applied as directed for "NON-CROP USES", under conditions described, this product may be used to control the listed weeds in terrestrial non-crop sites within these areas: Habitat Restoration & Management Area, Pipeline, Power, Telephone & Utility Rights-of-Way and Pumping Installations.

This product is a non-selective herbicide that is diluted and applied to the foliage of actively growing weeds as a spot or broadcast application. It is absorbed by the leaves and moves throughout the stem and roots to control the entire plant. Visible symptoms may require a week or more to appear, with burndown usually occurring in 2 to 4 weeks. Symptoms are a gradual wilting and yellowing of the sprayed plant followed by deterioration of both shoots and roots. This product has no herbicide activity in the soil and will not wash or leach to affect nearby vegetation. Any ornamental species may be planted in treated areas 7 days or more after application. For most effective results, delay mowing, clipping, planting or sodding of treated areas for at least 7 days after application. This allows time for this product to move within the plant.

For specific rates of application and instructions for control of particular annual weeds, perennial weeds, woody brush and trees, see the "WEEDS CONTROLLED" section of this label. These applications may be made to large affected areas or as spot treatments. For general use in small areas, see alternative instructions below under "Small Area Treatment With Hand-held Sprayers".

Unless the "Agriculture Use Requirements" on this label are observed, the following restrictions apply:

Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climactic modification and being grown in ornamental gardens or parks, or on golf courses or lawns and grounds.

AVOID SPRAY DRIFT CONTACT WITH DESIRABLE LAWN GRASSES, FLOWERS, VEGETABLES, SHRUBS OR TREES. DO NOT CONTACT GREEN BARK OF TREES OR SHRUBS. IF DESIRABLE VEGETATION IS CONTACTED, WASH IMMEDIATELY WITH WATER.

Depending on the type of non-crop application, this product may be applied with boom equipment, high-volume spray equipment and hand-held sprayers as described in the respective portions of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the label. Additionally, the product may be applied with recirculating sprayers, shielded applicators, or wiper applicators in any non-crop site specified on this label. See the "Selective Equipment" part of "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

#### **Small Area Treatment With Hand-held Sprayers**

Add 2.25 to 4.5 fluid ounces of this product plus 0.5 to 1 fluid ounce of nonionic surfactant to 1 gallon of clean water. Use the low rate for many grasses and annual weeds. Use the higher specified rate for control of perennials and brush. Use pump-up sprayer, backpack sprayer or other sprayer suitable for small areas. Adjust equipment to deliver a coarse spray pattern. USE OF HOSE-END SPRAYERS OR SPRINKLER-TYPE DEVICES MAY NOT BE USED.

#### **TANK MIXTURES FOR NON-CROP SITES**

When applied as a tank mixture, this product provides control of the emerged annual weeds and partial control of the emerged perennial weeds listed in this label. When applied as a tank mixture, the following residual herbicides will provide preemergence control of the weeds listed in the individual product labels.

**This product PLUS Diuron**  
**This product PLUS Krovar® I**  
**This product PLUS Princep®, Caliber®90, Simazine 4L, 80W or 90DF**  
**This product PLUS Surflan®75W, Surflan AS**  
**This product PLUS Ronstar®50WP**  
**This product PLUS Spyder or Spyder Extra**  
**This product PLUS ProClipse**  
**This product PLUS Polaris AC Complete**

When tank mixing with residual herbicides, add an nonionic surfactant at 0.5 to 1 percent by volume of spray solution. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label before preparing these tank mixtures.

Read and carefully observe the label claims, precautionary statements, specified use rate and all other information on the labels of all products used in these tank mixtures.

Use according to the most restrictive label directions for each product in the mixture.

#### **CONTROL OF EMERGED WEEDS**

Note: For backpack sprayer and handgun applications, see the "HAND-HELD AND HIGH VOLUME EQUIPMENT" section for specified rates.

##### **Annual Weeds**

Apply 1.5 pints per acre of this product in these tank mixtures when weeds are less than 6 inches tall and 2.25 pints per acre when weeds are more than 6 inches tall.

##### **Perennial Weeds**

For partial control of perennial weeds using these tank mixtures, apply 1.5 to 7.5 pints per acre of this product. Follow these recommendations in the "WEEDS CONTROLLED" section of this label for stage of growth and rate of application for specific perennial weeds.

#### **PREEMERGENCE WEED CONTROL**

For preemergence weed control, refer to the individual product labels for specific non-crop sites, rates, carrier volumes and precautionary statements.

Mix only the quantity of spray solution which can be used during the same day. Do not allow these tank mixtures to stand overnight as this may result in reduced weed control.

#### **BROADCAST APPLICATION FOR WEED CONTROL IN CHRISTMAS TREE PLANTATIONS**

NOTE: IF THIS PRODUCT IS IMPROPERLY APPLIED, IT HAS THE POTENTIAL TO CAUSE SEVERE INJURY TO CHRISTMAS TREES. FOLLOW ALL LABELED DIRECTIONS.

This product may be applied as a broadcast spray over established Christmas trees. To prevent drift onto nearby desirable crops or vegetation, ensure that adequate buffers are maintained.

The following Christmas tree species are approved for this application:

- Douglas Fir (*Pseudotsuga menziesii*)
- Fir species (*Abies* spp.)
- Spruce species (*Picea* spp.)

Do not apply this product until trees have completed at least a full growing season since planting or transplanting. Do not apply within 1 full year prior to tree harvest.

In the fall, applications may only be made after the formation of final conifer resting buds. Final resting buds must be in the dormant stage and fully hardened. If applications are made at any other time, unacceptable Christmas tree injury may occur.

Avoid spray pattern overlap, as injury may result.

Apply 24 fluid ounces of this product per acre in 5 to 30 gallons of water per acre.

**NOTE: ADDING SURFACTANTS, ADDITIVES CONTAINING SURFACTANTS, OR ANY OTHER ADDITIVES TO THIS PRODUCT MAY RESULT IN SEVERE CHRISTMAS TREE INJURY.**

In some areas, this product may be used at rates from 24 to 48 fluid ounces per acre. Consult your local Nufarm representative for specific instructions if you require rates that exceed 24 fluid ounces per acre.

Do not use drift control additives as they may increase Christmas tree injury. Do not use other herbicides in a tank mix with this product as Christmas trees could be severely injured.

### **SILVICULTURAL SITES AND RIGHTS-OF-WAY**

**NOTE: DO NOT USE AS AN OVER-THE-TOP BROADCAST SPRAY IN SILVICULTURAL NURSERIES.**

When applied as directed for "NON-CROP USES" under conditions described this product controls undesirable vegetation listed on this label. This product also suppresses or controls undesirable vegetation listed on this label when applied at specified rates for release of established coniferous species listed on this label.

For specific rates of application and instructions for control of various brush, annual and perennial weeds, see the "WEEDS CONTROLLED" section of this label. For specific rates of application for release of listed coniferous species, see the "CONIFER RELEASE" part of this section of the label.

Where repeat applications are necessary, do not exceed 8 quarts of this product per acre per year.

#### **Aerial Application**

This product may be applied using aerial spray equipment for silvicultural site preparation, conifer release and rights-of-way treatments.

See the "APPLICATION EQUIPMENT and TECHNIQUES" part of the "MIXING AND APPLICATION INSTRUCTIONS APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on how to apply this product by air.

**DO NOT APPLY THIS PRODUCT BY AIR TO RIGHTS-OF-WAY SITES IN THE STATE OF CALIFORNIA.**

#### **SITE PREPARATION**

Following preplant applications of this product, any silvicultural species may be planted.

#### **POST-DIRECTED SPRAY**

In established silvicultural sites, use as a spray on the foliage of undesirable vegetation. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of desirable species.

### **CONIFER RELEASE**

For release, apply at the end of the first growing season, except in California. Vegetation of target weeds or trees should not be disturbed prior to treatment or until visual symptoms appear after treatment. Symptoms of treatment are slow to appear, especially in woody species treated in late Fall. **Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied or when applications are made during periods of active conifer growth.**

Applications must be made after formation of final conifer resting buds in the fall or prior to initial bud swelling in spring. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Use the following rates for conifer release to control or partially control the weeds listed in the "WEEDS CONTROLLED" section of this label.

**For release of the following conifer species:**

<b>Douglas Fir</b> <i>Pseudotsuga menziesii</i>	<b>Fir</b> <i>Abies</i> spp.	<b>Hemlock</b> <i>Tsuga</i> spp.	<b>Pines*</b> <i>Pinus</i> spp.	<b>Spruce</b> <i>Picea</i> spp.
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\*Includes all species except eastern white pine, loblolly pine or slash pine.

Apply 2.25 to 3 pints of this product per acre except in Washington and Oregon, west of the crest of the Cascade Mountains. For Spring treatments west of the crest of the Cascade Mountains, apply 1 quart of this product per acre before conifer bud swell for control of annual weeds. For Fall treatments in Washington and Oregon, west of the crest of the Cascade Mountains, apply 1.5 to 2.25 pints of this product per acre before any major leaf drop of deciduous species. Add 10 fluid ounces nonionic surfactant per 2 pints of this product. In Maine, up to 4.5 pints per acre may be used for the control of difficult weeds.

Note for Douglas fir release: Ensure that surfactant has been adequately tested for Douglas fir safety and follow manufacturer's specifications for rate of application.

For release of Western hemlock, apply 1 quart of this product per acre.

**For release of the following conifer species:**

<b>Loiblolly Pine</b> <i>Pinus taeda</i>	<b>Eastern white pine</b> <i>Pinus strobus</i>	<b>Slash pine</b> <i>Pinus elliotii</i>
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**Late Season Application** - Apply 2-1/4 to 3 pints of this product in a minimum of 5 gallons of spray solution per acre during early autumn. Nufarm does not recommend the use of a crop oil concentrate or MSO (methylated seed oil) based surfactant for use in southern conifer species release with this product. The addition of a tested and approved southern conifer release surfactant is recommended. Applications made prior to September 1 or when conditions are conducive to rapid growth of conifers will create the potential for increased injury in the form of tip and/or needle burn. Injury may decrease with later applications. Some autumn colors are acceptable at time of application. Apply prior to frost or leaf drop of undesirable plants.

**Applications made according to label directions will release loblolly pine, eastern white pine and slash pine by reducing competition from the following species:**

<b>Ash</b> <i>Fraxinus</i> spp.	<b>Hawthorn</b> <i>Crataegus</i> spp.	<b>Oak, Post</b> <i>Quercus stellata</i>	<b>Poplar, yellow</b> <i>Liriodendron tulipifera</i>	<b>Sumac, Smooth</b> <i>Rhus glabra</i>
<b>Cherry, Black</b> <i>Prunus serotina</i>	<b>Locust, Black</b> <i>Robinia pseudoacacia</i>	<b>Oak, Southern Red</b> <i>Quercus falcata</i>	<b>Sassafras</b> <i>Sassafras albidum</i>	<b>Sumac, Winged</b> <i>Rhus copallina</i>
<b>Cherry, Pin</b> <i>Prunus pensylvanica</i>	<b>Maple, Red</b> <i>Acer rubra</i>	<b>Oak, White</b> <i>Quercus alba</i>	<b>Sourwood</b> <i>Oxydendrum arboreum</i>	<b>Sweetgum</b> <i>Liquidambar styraciflua</i>
<b>Elm</b> <i>Ulmus</i> spp.	<b>Oak, Black</b> <i>Quercus velutina</i>	<b>Persimmon</b> <i>Diospyros</i> spp.	<b>Sumac, Poison</b> <i>Rhus vernix</i>	

Apply only to those sites where woody brush and trees listed in this label constitute the majority of the undesirable species.

### **THIS PRODUCT PLUS SPYDER TANK MIXTURES FOR CONIFER RELEASE FROM HERBACEOUS WEEDS**

To release Loblolly pines, Slash, Red pine and Virginia pine from herbaceous weeds, tank mixtures of this product with Spyder will provide control of annual weeds listed in the "WEEDS CONTROLLED" section of this and the Spyder label, and partial control of the perennial weeds listed below.

Apply 12 to 18 fluid ounces of this product plus 2 to 4 fluid ounces of Spyder in 10 to 30 gallons of spray solution per acre. Nufarm does not recommend the use of a crop oil concentrate or MSO (methylated seed oil) based surfactant for use in southern conifer species release with this product. The addition of a tested and approved southern conifer release surfactant is recommended. Make application to actively growing weeds as a broadcast spray over the top of the young Loblolly pine, Red pine, Slash pine and Virginia pine.

This tank mixture may be applied using aerial equipment. When applying by air, use the specified rate in 5 to 15 gallons of spray solution per acre. This product plus Spyder tank mixtures may not be applied by air in California.

For control of annual weeds below 12 inches in height (or runner length on annual vines), use the lower rates of both products.

Use the higher rates of both products when annual weeds are in more advanced stages of growth and approaching flower or seed formation.

**Use the higher rates of both products for partial control of the following perennial weeds. Use the lower rates for suppression of growth.**

<b>Bahiagrass</b> <i>Paspalum notatum</i>	<b>Dock, curly</b> <i>Rumex crispus</i>	<b>Fescues, tall</b> <i>Festuca arundinacea</i>	<b>Poorjoe*</b> <i>Diodia teres</i>	<b>Vaseygrass</b> <i>Paspalum urvillei</i>
<b>Broomsedge</b> <i>Andropogon virginicus</i>	<b>Dogfennel</b> <i>Eupatorium capilliflorum</i>	<b>Johnsongrass*</b> <i>Sorghum halepense</i>	<b>Trumpetcreeper**</b> <i>Campsis radicans</i>	<b>Vervain, blue</b> <i>Verbena hastata</i>

\*Control at the higher rates

\*\*Suppression at the higher rates only.

Pine damage may occur or can be accentuated if treatment takes place when young trees are under stress from drought, flood water, insects or disease, or are in an active growth stage.

Read and observe the cautionary statements and all other information appearing on the labels of all herbicides used.

**Note To User:** This product must not be used in areas where adverse impact on federally designated endangered/threatened plant or aquatic species is likely. Prior to making applications, the user of this product must determine that no such species are located in or immediately adjacent to the area to be treated.

### **WIPER APPLICATIONS**

For wick or wiper applications, mix 1 gallon of this product with 2 gallons of clean water to make a 33 percent solution. Addition of a nonionic surfactant at a rate of 10 percent by volume of total herbicide solution is recommended.

Wiper applications can be used to control or suppress annual and perennial weeds listed on this label. In heavy weed stands, a double application in opposite directions may improve results. See the "WEEDS CONTROLLED" section in this label for specified timing, growth stage and other instructions for achieving optimum results.



## CUT STUMP APPLICATION

Woody vegetation may be controlled by treating freshly cut stumps of trees and resprouts with this product. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut vegetation close to the soil surface. **Apply a 50 to 100 percent solution of this product to the freshly-cut surface immediately after cutting.** Delay in application may result in reduced performance. For best results, applications should be made 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 many types of woody brush and tree species, some of which are listed below:**

<b>Alder</b> <i>Alnus</i> spp.	<b>Eucalyptus</b> <i>Eucalyptus</i> spp.	<b>Maple</b> <i>Acer</i> spp.	<b>Reed, Giant</b> <i>Arundo donax</i>	<b>Sycamore</b> <i>Platanus occidentalis</i>
<b>Coyote Brush</b> <i>Baccharis consanguinea</i>	<b>Hickory</b> <i>Carya</i> spp.	<b>Oak</b> <i>Quercus</i> spp.	<b>Salt cedar</b> <i>Tamarix</i> spp.	<b>Tan Oak</b> <i>Lithocarpus densiflorus</i>
<b>Dogwood</b> <i>Cornus</i> spp.	<b>Madrone</b> <i>Arbutus menziesii</i>	<b>Poplar</b> <i>Populus</i> spp.	<b>Sweet gum</b> <i>Liquidambar styraciflua</i>	<b>Willow</b> <i>Salix</i> spp.

## INJECTION AND FRILL APPLICATIONS

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment which must penetrate into the living tissue. Apply the equivalent of 1 ml of this product per each 2 to 3 inches of trunk diameter (DBH). This is best achieved by applying a 25 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 frill or cut areas in species that exude sap freely after frills or cutting. In species such as these, make frill or cut at an oblique angle so as to produce a cupping effect and use undiluted material. For best results, applications should be made during periods of active growth and after full leaf expansion.

Control		Suppression	
<b>Oak</b>	<i>Quercus</i> spp.	<b>Black Gum</b>	<i>Nyssa sylvatica</i>
<b>Poplar</b>	<i>Populus</i> spp.	<b>Dogwood</b>	<i>Cornus</i> spp.
<b>Sweetgum</b>	<i>Liquidambar styraciflua</i>	<b>Hickory</b>	<i>Carya</i> spp.
<b>Sycamore</b>	<i>Platanus occidentalis</i>	<b>Maple, Red</b>	<i>Acer rubrum</i>

## WETLAND SITES

This product may be used in and around water (aquatic areas) and wetlands found in forestry and in power, telephone and pipeline rights-of-way sites including where these sites are adjacent to or surrounding domestic water supply reservoirs, supply streams, lakes and ponds. Read and observe the following before making applications in and around water.

Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat in such areas.

There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.

**Note:** 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 application. 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. 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. The maximum application rate of 3.75 quarts per acre must not be exceeded in a single over-water broadcast application except as follows, where any specified rate may be applied:

- Stream crossings in utility right-of-way.
- Where applications will result in less than 20 percent of the total water area being treated.

## WILDLIFE HABITAT RESTORATION AND MANAGEMENT AREAS

This product is for the restoration and/or maintenance of native habitat and in wildlife management areas.

### Habitat Restoration and Maintenance

When applied as directed, exotic and other undesirable vegetation may be controlled in habitat management areas. Applications may be made to allow recovery of native plant species, to open up water to attract waterfowl, and for similar broad-spectrum vegetation control requirements in habitat management areas. Spot treatments may be made to selectively remove unwanted plants for habitat enhancement. For spot treatments, care should be exercised to keep spray off of desirable plants.

### Wildlife Food Plots

This product may be used as site preparation treatment prior to planting wildlife food plots. Apply as directed to control vegetation in the plot area. Any wildlife food species may be planted after applying this product, or native species may be allowed to re-infest the area. If tillage is needed to prepare a seedbed, wait 7 days after applying this product before tilling to allow for maximum effectiveness.



## WIPER APPLICATIONS

For wick or wiper applications, mix 1 gallon of this product with 2 gallons of clean water to make a 33 percent solution. Addition of a nonionic surfactant at a rate of 10 percent by volume of total herbicide solution is recommended.

Wiper applications can be used to control or suppress annual and perennial weeds listed on this label. In heavy weed stands, a double application in opposite directions may improve results. See the "WEEDS CONTROLLED" section in this label for specified timing, growth stage and other instructions for achieving optimum results.

## CUT STUMP APPLICATION

Woody vegetation may be controlled by treating freshly cut stumps of trees and resprouts with this product. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut vegetation close to the soil surface. **Apply a 50 to 100 percent solution of this product to the freshly-cut surface immediately after cutting.** Delay in application may result in reduced performance. For best results, applications should be made 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 many types of woody brush and tree species, some of which are listed below:**

<b>Alder</b> <i>Alnus</i> spp.	<b>Eucalyptus</b> <i>Eucalyptus</i> spp.	<b>Maple</b> <i>Acer</i> spp.	<i>Populus</i> spp.	<b>Sweet gum</b> <i>Liquidambar styraciflua</i>
<b>Coyote Brush</b> <i>Baccharis consanguinea</i>	<b>Hickory</b> <i>Carya</i> spp.	<b>Oak</b> <i>Quercus</i> spp.	<b>Reed, Giant</b> <i>Arundo donax</i>	<b>Sycamore</b> <i>Platanus occidentalis</i>
<b>Dogwood</b> <i>Cornus</i> spp.	<b>Madrone</b> <i>Arbutus menziesii</i>	<b>Poplar</b>	<b>Salt cedar</b> <i>Tamarix</i> spp.	<b>Tan Oak</b> <i>Lithocarpus densiflorus</i>

## INJECTION AND FRILL APPLICATIONS

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment which must penetrate into living tissue. Apply the equivalent of 1 ml of this product per 2 to 3 inches of trunk diameter. This is best achieved by applying 25 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 dilute material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff to occur from frill or cut areas in species that exude sap freely after frills or cutting. In species such as these, make frill or cut at an oblique angle so as to produce a cupping effect and use undiluted material. For best results, applications should be made during periods of active growth and full leaf expansion.

Control		Suppression	
<b>Oak</b>	<i>Quercus</i> spp.	<b>Black Gum*</b>	<i>Nyssa sylvatica</i>
<b>Poplar</b>	<i>Populus</i> spp.	<b>Dogwood</b>	<i>Cornus</i> spp.
<b>Sweetgum</b>	<i>Liquidambar styraciflua</i>	<b>Hickory</b>	<i>Carya</i> spp.
<b>Sycamore</b>	<i>Platanus occidentalis</i>	<b>Maple, Red</b>	<i>Acer rubrum</i>

\*This product is not approved for this use on this species in the state of California.

### INJECTION METHOD FOR CONTROL OF JAPANESE KNOTWEED (*Polygonum cuspidatum*) & GIANT KNOTWEED (*Polygonum polystachyum*)

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This label must be in the possession of the user at the time of application.

All applicable directions and precautions in the AquaNeat Herbicide label booklet must be followed.

See the "PRODUCT INFORMATION" and "MIXING AND APPLICATION INSTRUCTIONS" sections of this product's label booklet for essential product performance information.

This product may be used for control of Japanese knotweed and giant knotweed using individual stem treatment. Individual knotweed stems may be treated by injecting up to 5 ml of undiluted this product directly into the hollow stem just below a node. A hole suitable for injecting the herbicide should be made through both sides of the stem using an awl or other convenient pointed tool about 6 inches above the ground, just below a node. (Nodes are circular thickenings or scars surrounding the stem where leaves are or were previously attached.) The herbicide is then injected into this hole. Each stem of the knotweed plant must be treated.

This product can be injected using any injection device capable of delivering a 5 ml dose. For convenience and accuracy, a hand-operated injection device designed to deliver repeated pre-measured doses from a supply reservoir is recommended.

Commercially available dose measuring equipment may be adapted for this purpose. Calibrate the device to deliver a dose of 5 ml per injection cycle. A sharpened hollow probe for puncturing the stem and delivery of the herbicide can also be integrated into the delivery system.

**Restriction:** Do not apply more than 7.5 quarts of this product per acre. At 5 ml per stem, 7.5 quarts is sufficient to treat a maximum of 1,420 stems per acre.

**RELEASE OF BERMUDAGRASS OR BAHIAGRASS ON NONCROP SITES  
RELEASE OF DORMANT BERMUDAGRASS AND BAHIAGRASS**

When applied as directed, this product will provide control or suppression of many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. Make applications to dormant bermudagrass or bahiagrass.

For best results on winter annuals, treat when weeds 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 in or beyond the 4- to 6-leaf stage.

**WEEDS CONTROLLED**

Rate for control or suppression of winter annuals and tall fescue are listed below.

Apply the specified rates of this product in 10 to 25 gallons of water per acre, plus 2 quarts nonionic surfactant per 100 gallons of total spray volume.

**WEEDS CONTROLLED OR SUPPRESSED\***

**NOTE: C = Control  
S = Suppression**

WEED SPECIES	AQUANEAT AQUATIC HERBICIDE (FLUID OZ/ACRE)					
	6	9	12	18	24	48
<b>Barley, little</b> <i>Hordeum pusillum</i>	S	C	C	C	C	C
<b>Bedstraw, catchweed</b> <i>Galium aparine</i>	S	C	C	C	C	C
<b>Bluegrass, annual</b> <i>Poa annual</i>	S	C	C	C	C	C
<b>Chervil</b> <i>Chaerophyllum tainturieri</i>	S	C	C	C	C	C
<b>Chickweed, common</b> <i>Stellaria media</i>	S	C	C	C	C	C
<b>Clover, crimson</b> <i>Trifolium incarnatum</i>	.	S	S	C	C	C
<b>Clover, large hop</b> <i>Trifolium campestre</i>	.	S	S	C	C	C
<b>Speedwell, corn</b> <i>Veronica arvensis</i>	S	C	C	C	C	C
<b>Fescue, tall</b> <i>Festuca arundinacea</i>	.	.	.	.	S	S
<b>Geranium, Carolina</b> <i>Geranium carolinianum</i>	.	.	S	S	C	C
<b>Henbit</b> <i>Lamium amplexicaule</i>	.	S	C	C	C	C
<b>Ryegrass, Italian</b> <i>Lolium multiflorum</i>	.	.	S	C	C	C
<b>Vetch, common</b> <i>Vicia sativa</i>	.	.	S	C	C	C

\*These rates apply only to sites where an established competitive turf is present.

**RELEASE OF ACTIVELY GROWING BERMUDAGRASS**

**NOTE: USE ONLY ON SITES WHERE BAHIAGRASS OR BERMUDAGRASS ARE DESIRED FOR GROUND COVER AND SOME TEMPORARY INJURY OR YELLOWING OF THE GRASSES CAN BE TOLERATED.**

When applied as directed, this product will aid in the release of bermudagrass by providing control of annual species listed in the "WEEDS CONTROLLED" section in this label, and suppression or partial control of certain perennial weeds.

For control or suppression of those annual species listed in this label, use 3/4 to 2-1/4 pints of this product as a broadcast spray in 10 to 25 gallons of spray solution per acre, plus 2 quarts of a nonionic surfactant per 100 gallons of total spray volume. Use the lower rate when treating annual weeds below 6 inches in height (or length of runner in annual vines). Use the higher rate as size of plants increases or as they approach flower or seedhead formation.

Use the higher rate for partial control or longer-term suppression of the following perennial species. Use lower rates for shorter-term suppression of growth.

- Bahiagrass Johnsongrass\*\*
- Dallisgrass Trumpet creeper\*
- Fescue (tall) Vaseygrass

\*Suppression at the higher rate only.

\*\*Johnsongrass is controlled at the higher rate.

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment but regrowth will occur under moist conditions. Repeat applications in the same season are not recommended, since severe injury may result.

### **BAHIAGRASS SEEDHEAD AND VEGETATIVE SUPPRESSION**

When applied as directed in the "NONCROP SITES" section in this label, this product will provide significant inhibition of seedhead emergence and will suppress vegetative growth for a period of approximately 45 days with single applications and approximately 120 days with sequential applications.

Apply this product 1 to 2 weeks after full green-up of bahiagrass or after the bahiagrass has been mowed to a uniform height of 3 to 4 inches. Applications must be made prior to seedhead emergence. Apply 5 fluid ounces per acre of this product, plus 2 quarts of an approved nonionic surfactant per 100 gallons of total spray volume in 10 to 25 gallons of water per acre.

Sequential applications of this product plus nonionic surfactant may be made at approximately 45-day intervals to extend the period of seedhead and vegetative growth suppression. For continued vegetative growth suppression, sequential applications must be made prior to seedhead emergence.

Apply no more than 2 sequential applications per year. As a first sequential application, apply 3 fluid ounces of this product per acre plus nonionic surfactant. A second sequential application of 2 to 3 fluid ounces per acre plus nonionic surfactant may be made approximately 45 days after the last application.

### **ANNUAL GRASS GROWTH SUPPRESSION**

For growth suppression of some annual grasses, such as annual ryegrass, wild barley and wild oats growing in coarse turf on roadsides or other industrial areas, apply 3 to 4 ounces of this product in 10 to 40 gallons of spray solution per acre. Mix 2 quarts of a nonionic surfactant per 100 gallons of spray solution. Applications should be made when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments made after seedhead emergence may cause injury to the desired grasses.

### **AQUATIC SITES**

When applied as directed and under the conditions described in the "WEEDS CONTROLLED" section in this label, this product will control or partially control the labeled weeds growing in aquatic sites.

**Aquatic Sites** - This product may be applied to emerged weeds in all bodies of fresh and brackish water which may be flowing, non-flowing or transient. This includes 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 which 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 state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.

**NOTE:** Do not apply this product directly to water within 1/2 mile up-stream 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 lake, pond or reservoir. 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 applications. This restriction does not apply to intermittent inadvertent overspray of water in terrestrial use sites.

For treatments after drawdown of water or in dry ditches, allow 7 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after drawdown to ensure application to actively growing weeds. Floating Mats of vegetation may require retreatment. 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.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Do not store below 32°F or above 100°F. Store in original container in a well-ventilated area separately from fertilizer, feed, and food stuffs. Avoid cross-contamination with other pesticides.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Wastes resulting from 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 DISPOSAL [HANDLING]:

[**Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size. [**Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

**[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. 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 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. 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.

**[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. 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.

## **WARRANTY DISCLAIMER**

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

## **LIMITATION OF LIABILITY**

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR ARISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

**If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.**

(RV121211)

AquaNeat is a registered trademark of Nufarm, Inc.



**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Aquaneat Aquatic Herbicide  
**EPA Reg. No.:** 228-365  
**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 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**

Hazardous to aquatic environment, acute Category 2  
 Hazardous to aquatic environment, chronic Category 2

**SIGNAL WORD**

None

**HAZARD STATEMENTS:**

Toxic to aquatic life with long lasting effects.



**PRECAUTIONARY STATEMENTS**

Avoid release to the environment.

Collect spillage.

Dispose of contents in accordance with local, state, and federal regulations.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

COMPONENTS	CAS NO.	% BY WEIGHT
N-(phosphonomethyl)glycine, Isopropylamine salt	38641-94-0	52.2 – 55.4
Other Ingredients	Trade Secret	Trade Secret

**Synonyms:** Mixture containing Glyphosate IPA salt; N-(phosphonomethyl) glycine, in the form of its isopropylamine salt.

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

**4. FIRST AID MEASURES**

**If in Eyes:** Hold eye open and rinse slowly and gently with water. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

**If on Skin or Clothing:** Take off contaminated clothing. Wash with soap and water. Get medical attention if irritation develops and persists.

**If Inhaled:** Move person to fresh air. If symptoms develop, get medical advice.

**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. If symptoms develop, get medical advice.

**Most Important symptoms/effects, acute and delayed:** None expected. May cause mild eye irritation.

**Indication of Immediate medical attention and special treatment if needed:** None expected. For ingestion there is no specific antidote available. Treat symptomatically.

**5. FIRE FIGHTING MEASURES**

**Extinguishing Media:** Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.

**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:** If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later. This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode.

**Hazardous Decomposition Materials (Under Fire Conditions):** May produce gases such as oxides of carbon, nitrogen, and phosphorous.

**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. Collect washings 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:**

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. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR 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.

**Storage:**

STORE ABOVE 32° F (0° C) TO KEEP PRODUCT FROM CRYSTALLIZING. Crystals will settle to the bottom. If allowed to crystallize, warm to 68° F (20° C) and mix well or recirculate to redissolve before using. Do not contaminate water, foodstuffs, feed or seed 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 goggles or safety glasses with front, brow and temple protection. Washing facilities should be readily accessible to the work area.

**Skin Protection:** To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves. 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:**

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Glyphosate IPA	NE	NE	NE	NE	
Other Ingredients	NE	NE	NE	NE	

NE = Not Established

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear green or yellow tinted liquid
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available
<b>pH:</b>	4.82 (1% dilution w/w in DIW @ 24° C)
<b>Melting point/freezing point:</b>	No data available
<b>Initial boiling point and boiling range</b>	No data available
<b>Flash point:</b>	Not applicable due to aqueous formulation
<b>Evaporation rate:</b>	Not applicable
<b>Flammability (solid, gas):</b>	Not applicable
<b>Upper/lower flammability or explosive limits:</b>	Not applicable
<b>Vapor pressure:</b>	No data available (mixture)
<b>Vapor density:</b>	No data available
<b>Relative density:</b>	1.21 g/mL @ 20° C
<b>Solubility(ies):</b>	No data available
<b>Partition coefficient: n-octanol/water:</b>	No data available
<b>Autoignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity:</b>	67.9 cPs @ 20° C, 29.8 cPs @ 20° C
<b>VOC Emission Potential (%):</b>	0.00

**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:** Corrosive to mild steel, reaction with galvanized steel or unlined steel may produce hydrogen gas.

**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.

**Incompatible Materials:** This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode.

**Hazardous Decomposition Products:** Under fire conditions, may produce gases such as oxides of carbon, nitrogen and phosphorous.



## 11. TOXICOLOGICAL INFORMATION

**Likely Routes of Exposure:** Eye contact, Skin contact

**Symptoms of Exposure:** Minimally irritating to the eye based on toxicity studies. Slightly toxic and non-irritating to the skin based on toxicity studies. Low inhalation toxicity. Inhalation of mists may cause coughing and sneezing. Slightly toxic if ingested based on toxicity studies. No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallow

**Delayed, immediate and chronic effects of exposure:** None known

**Toxicological Data:**

Data from laboratory studies on this product are summarized below:

**Oral:** Rat LD<sub>50</sub>: >5,000 mg/kg

**Dermal:** Rat LD<sub>50</sub>: >5,000 mg/kg

**Inhalation:** Rat 4-hr LC<sub>50</sub>: >2.07 mg/l (no mortality at highest dose tested)

**Eye Irritation:** Rabbit: Minimally irritating

**Skin Irritation:** Rabbit: Non-irritating

**Skin Sensitization:** Not a contact sensitizer in guinea pigs following repeated skin exposure.

**Subchronic (Target Organ) Effects:** Repeated overexposure to glyphosate may decrease body weight gains and effects to liver.

**Carcinogenicity / Chronic Health Effects:** Prolonged overexposure to glyphosate may cause effects to the liver. EPA has given glyphosate a Group E classification (evidence of non-carcinogenicity in humans). Canada PMRA has classified glyphosate as non-carcinogenic. In 2015, IARC classified glyphosate as a probable human carcinogen Group 2A based on limited human evidence and some evidence in animals.

**Reproductive Toxicity:** In laboratory animal studies with glyphosate, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

**Developmental Toxicity:** In animal studies, glyphosate did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother.

**Genotoxicity:** Glyphosate has produced no genetic changes in a variety of standard tests using animals and animal or bacterial cells.

**ASSESSMENT CARCINOGENICITY:**

Component	Regulatory Agency Listing As Carcinogen			
	ACGIH	IARC	NTP	OSHA
Glyphosate IPA Salt	No	2A	No	No
Other Ingredients	No	No	No	No

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:**

Data on Glyphosate IPA

96-hour LC<sub>50</sub> Rainbow Trout: >1000 mg/l

48-hour EC<sub>50</sub> Daphnia: 930 mg/l

72-hour ErC<sub>50</sub> Algae: 166 mg/l

Data on Glyphosate Acid:

96-hour LC<sub>50</sub> Bluegill: 120 mg/l

96-hour LC<sub>50</sub> Rainbow Trout: 786 mg/l

48-hour EC<sub>50</sub> Daphnia: 780 mg/l

96-hour EC<sub>50</sub> Diatoms: 1.3 mg/l

14-day EC<sub>50</sub> Duckweed: 25.5 mg/l

72-hour EC<sub>50</sub> Algae: 450 mg/l

Bobwhite Quail Acute Oral LD<sub>50</sub>: >3,851 mg/kg

Bobwhite Quail 5-day Dietary LC<sub>50</sub>: >4,640 ppm

Mallard Duck 5-day Dietary LC<sub>50</sub>: >4,640 ppm

**Environmental Fate:**

In the environment glyphosate adsorbs strongly to soil and is expected to be immobile in soil. Glyphosate is readily degraded by soil microbes to AMPA (aminomethyl phosphonic acid) that is further degraded to carbon dioxide. Glyphosate and AMPA are unlikely to enter ground water due to their strong adsorptive characteristics. Terrestrially-applied glyphosate has the potential to move into surface waters through soil erosion because it may be adsorbed to soil particles suspended in the runoff. Aquatic applications registered for certain formulations may also result in glyphosate entering surface waters. Complete degradation is slow, but dissipation in water is rapid because glyphosate is bound in sediments and has low biological availability to aquatic organisms. These

## SAFETY DATA SHEET

## Aquaneat Aquatic Herbicide

characteristics suggest a low potential for bioconcentration in aquatic organisms and this has been verified by laboratory investigations of glyphosate bioconcentration in numerous marine and freshwater organisms with and without soil. The maximum whole body bioconcentration factors for fish were observed to be less than 1X. Bioconcentration factors for sediment dwelling mollusks and crayfish tended to be slightly higher, but were always less than 10X. In addition, any residues accumulated in organisms were rapidly eliminated.

### 13. DISPOSAL CONSIDERATIONS

#### Waste Disposal Method:

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. Emptied container retains vapors and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

#### 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. 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.

### 14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

#### DOT:

Non Regulated

#### IMDG:

Non Regulated

#### IATA:

Non 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.

# SAFETY DATA SHEET

# Aquaneat Aquatic Herbicide

Caution. Harmful if inhaled. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse. Wash thoroughly with soap and water after handling.

## 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.

<b>16. OTHER INFORMATION</b>
------------------------------

**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:** May 15, 2015

**Supersedes:** April 8, 2015



# Specimen Label

**PRINCIPAL FUNCTIONING AGENTS:**

Paraffin Oil, Surface Active Compounds and Coupling Agents. .... 100%  
 FOLLOW RECOMMENDATIONS AND LABEL RATES OF HERBICIDE MANUFACTURERS.



**KEEP OUT OF REACH OF CHILDREN**

**WARNING**

Causes serious eye irritation.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Keep only in original container. Do not breathe the dust, fume, gas, mist, vapors, spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, eye protection, face protection.

**FIRST AID**

**Call a poison control center or doctor immediately for treatment advice. 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**

**PREMIER RED** is a unique, highly emulsified low viscosity non-aromatic/noncarcinogenic diluent with select surface-active compounds and coupling agents. The low viscosity oils and other ingredients used in **PREMIER RED** are designed specifically for use in very cold temperatures and will perform and remain sprayable well. **PREMIER RED** is developed specifically for basal-bark and cut-surface brush control applications, where triclopyr (\*Element® 4, Garlon® 4 Ultra, Remedy® Ultra) and imazapyr (\*Stalker®) are used in a premix.

**DIRECTIONS FOR USE**

**PREMIER RED** can be used at dilution ratios of 1:4 (20%) or 1:3 (25%) when following the herbicide manufacturers' label recommendations. **PREMIER RED** is designed for use with 15 - 20% triclopyr (\*Element® 4, Garlon® 4 Ultra, Remedy® Ultra) and 1 - 5% imazapyr (\*Stalker®) v/v.

**NOTE:** Use rates may vary dependent on environmental conditions and applications. Increase rates as necessary for additional wetting and penetration. Some imazapyr product must be present in order for the emulsion to perform correctly. Do not exceed or go below levels specified on this label.

\*Element®, Garlon®, and Remedy® are registered trademarks of Dow Agro Sciences.

\*Stalker® is a registered trademark of BASF.

**HANDLING AND 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. Spray immediately after mixing. Liquid temperature must remain above 32°F during application. Air temperature must be above 25°F during application.

**CONTAINER 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](http://www.acrecycle.org).

**WARRANTY**

Red River warrants that this product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to the label instruction, or any abnormal conditions, or under conditions not reasonably foreseeable to Red River, and buyer assumes the risk of any such use.

**Tech Matrix**

Triclopyr Compatible	<input checked="" type="checkbox"/>
Imazapyr Compatible	<input checked="" type="checkbox"/>
Low Viscosity	<input checked="" type="checkbox"/>
Red Dye	<input checked="" type="checkbox"/>

Manufactured for:





# Safety Data Sheet

SDS DATE: 02/11/2015 - SUPERSEDES: NONE

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** ELITE SECURE ULTRA  
**DISTRIBUTOR:** Red River Specialties, Inc.  
**ADDRESS:** 1324 N. Hearne Ave., Ste 120, Shreveport, LA 71107  
**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 NOTES:** None

## SECTION 2: HAZARDOUS INGREDIENTS

### GHS RATINGS:

#### TOXICITY CATEGORIES

Skin corrosion/irritation Category 2



**SIGNAL WORD: WARNING**

#### GHS HAZARDS:

H315 Causes skin irritation.

#### HAZARDS NOT OTHERWISE CLASSIFIED

H303 May be harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H333 May be harmful if inhaled.

Slippery when wet/dry  
DO NOT FREEZE

#### 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.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
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 occurs: Get medical advice/attention.  
P362 Take off contaminated clothing and wash it before reuse.  
P363 Wash contaminated clothing before reuse.  
P501 Dispose of contents in container to an approved waste disposal facility in accordance with all local/regional/national/international regulations.

**SECTION 2 NOTES:** None

## SECTION 3: HAZARDS IDENTIFICATION

### INGREDIENT

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

## SECTION 4: FIRST AID MEASURES

**HAVE THE PRODUCT CONTAINER WITH YOU WHEN CALLING A POISON CONTROL CENTER OR DOCTOR, OR GOING FOR TREATMENT.**

**EYE CONTACT - 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.

**SKIN CONTACT - IF ON SKIN OR CLOTHING:** Take off contaminated clothing and wash it before reuse. Wash with plenty of soap and water for several minutes. 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. Call a poison center, doctor, chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice if you feel unwell.

**INHALATION - 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.

### NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

**SECTION 4 NOTES:** None





# Safety Data Sheet

SDS DATE: 02/11/2015 - SUPERSEDES: NONE

## SECTION 5: FIRE FIGHTING MEASURES

### NFPA HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0 OTHER: -

**IN CASE OF FIRE:** Use water spray, carbon dioxide or dry chemical.

**SPECIAL FIRE FIGHTING PROCEDURES:** Keep containers cool by spraying with water if exposed to fire.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing.

**HAZARDOUS DECOMPOSITION PRODUCTS:** During fire conditions, oxides of carbon and nitrogen, ammonia.

**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. Soak up spill with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. Wear suitable protective equipment.

**SECTION 6 NOTES:** None

## SECTION 7: HANDLING AND STORAGE

**HANDLING:** Keep out of reach of children. Read label before use. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing 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.

**SECTION 7 NOTES:** None

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES

**VENTILATION:** Normal room ventilation (mechanical) or outdoor use should be satisfactory.

**RESPIRATORY PROTECTION:** Not necessary unless ventilation is inadequate. Then use MSHA or NIOSH approved respirator, as appropriate.

**EYE PROTECTION:** Chemical goggles or face shield.

**SKIN PROTECTION:** Chemical 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:** White, milky

**ODOR:** Hydrocarbon

**ORDER THRESHOLD:** Not known

**PHYSICAL STATE:** Liquid

**PH AS SUPPLIED:** Not applicable

**PH (OTHER):**

**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):**

**SECTION 9 NOTES:** Values 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.

## SECTION 10: STABILITY AND REACTIVITY

**STABILITY:** Stable

**CONDITIONS TO AVOID (STABILITY):** None known

**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong oxidizing agents. This material reacts slowly with iron, copper, and aluminum, resulting in corrosion and product degradation.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Under fire conditions, oxides of carbon or nitrogen, ammonia.

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID (POLYMERIZATION):** None known

**SECTION 10 NOTES:** None

**FLAMMABLE LIMITS IN AIR, UPPER:** Unknown **LOWER:** Unknown  
(% BY VOLUME)

**VAPOR PRESSURE (mmHg): @** F: Unknown C: Unknown

**VAPOR DENSITY (AIR = 1): @** F: Unknown C: Unknown

**RELATIVE DENSITY:** 1.013 to 1.054

**EVAPORATION RATE:** Unknown

**BASIS (butyl acetate=1):**

**SOLUBILITY IN WATER:** Unknown

**PARTITION COEFFICIENT:** n-octanol/water): Unknown

**AUTO-IGNITION TEMPERATURE:** Unknown

**DECOMPOSITION TEMPERATURE:** Unknown

**VISCOSITY: @** Not determined F: Unknown C: Unknown



# Safety Data Sheet

SDS DATE: 02/11/2015 - SUPERSEDES: NONE

## SECTION 11: TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL INFORMATION:

**MIXTURE TOXICITY:** The acute oral (rat) and acute dermal (rabbit) LD50 values are both >10 ml/kg. This material caused moderate skin and mild eye irritation when tested in rabbits. LD50 Acute inhalation toxicity 23.00mg/L

**COMPONENT TOXICITY:** None

**SECTION 11 NOTES:** None

## SECTION 12: ECOLOGICAL INFORMATION

### ECOLOGICAL INFORMATION:

**ECOTOXICITY:** No adverse environmental effects are expected with proper use and disposal of this product. Acute toxicity tests conducted using environmentally representative water gave the following results:

#### ALGAE TEST RESULTS

Test: Growth Inhibition (OECD 201)

Duration: 72 hr

Species: Green Algae (*Selenastrum capricornutum*)

Information based on a structurally similar material.

>100 mg/l IC50

#### FISH TEST RESULTS

Test: Acute toxicity, freshwater (OECD 203)

Duration: 96 hr.

Species: Rainbow Trout (*Oncorhynchus 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

Test: Acute Immobilization (OECD 202)

Duration: 48 hr

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 bio-

concentration factor is therefore considered to be zero.

**SECTION 12 NOTES:** None

## SECTION 13: DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHOD:** 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 local, regional, national and international 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: TRANSPORTATION 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:** None

**INTERNATIONAL REGULATIONS:** None

**SECTION 15 NOTES:** None

## SECTION 16: OTHER INFORMATION

**OTHER INFORMATION:** None

**PREPARATION INFORMATION:** Prepared on 02/11/15

**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.

Red River Specialties, Inc.  
1324 N. Hearne Ave., Ste 120  
Shreveport, LA 71107



# Specimen Label

### PRINCIPAL FUNCTIONING AGENTS:

Polymers and other active ingredients.....	35%
Ingredients ineffective as spray adjuvants.....	65%
TOTAL.....	100%

All ingredients are exempt from tolerance requirements as specified in federal regulation 40 CFR 180.

**DO NOT FREEZE**



**KEEP OUT OF REACH OF CHILDREN  
WARNING**

Causes skin irritation.

### PRECAUTIONARY STATEMENTS

#### Hazards to humans and domestic animals.

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. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, protective clothing, eye protection and face protection.

#### SLIPPERY WHEN WET

#### FIRST AID

Call a poison control center or doctor immediately for treatment advice. 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 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.

**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

**SECURE ULTRA** is an effective, easy-to-use adjuvant, for deposition improvement, and drift retardation in spraying operations. **SECURE ULTRA** 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, **SECURE ULTRA** is compatible in tank mix applications 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.

**SECURE ULTRA** may be used with aquatic pesticides and in or near water.

### DOSEAGE CHART

Spray Pressure	Nozzle Orientation	SECURE ULTRA DOSAGE
Aerial applied below 45 psi	Straight Back	2 - 6 oz/ 100 gals
	45° Angle Back	4 - 8 oz/ 100 gals
GROUND APPLICATION Low (below 30 psi)	Flat Fan, Flooding	1 - 4 oz/ 100 gals
	Off-Center	3 - 5 oz/ 100 gals
Medium (30 - 50 psi)	Flat Fan, Flooding	3 - 4 oz/ 100 gals
	Off-Center	4 - 6 oz/ 100 gals
	Spray Guns	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 **SECURE ULTRA** in increments of 1 oz per 100 gal of spray solution.

### MIXING

**SECURE ULTRA** 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 **SECURE ULTRA** 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 **SECURE ULTRA** 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 **SECURE ULTRA** liquid to the agitating tank mix at the area of highest turbulence.

**Step 5:** Continue to agitate mix tank for at least 3 minutes before spraying.

**Step 6:** Follow all cleanup precautions on label of pesticide used. Follow governmental procedures for disposal of pesticide spray solution.

### STORAGE AND DISPOSAL

#### PROTECT FROM FREEZING.

**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 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](http://www.acrecycle.org).

### WARRANTY

Red River warrants that this product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to the label instruction, or any abnormal conditions, or under conditions not reasonably foreseeable to Red River, and buyer assumes the risk of any such use.

### Tech Matrix

Low Use Rate	<input checked="" type="checkbox"/>
K Salt Compatible	<input checked="" type="checkbox"/>
IPA Salt Compatible	<input checked="" type="checkbox"/>
Dual Salt Compatible	<input checked="" type="checkbox"/>
Drift Control	<input checked="" type="checkbox"/>

Manufactured for:



1324 N. Hearne Ave., Ste 120 Shreveport, LA 71107  
1-800-256-3344





**NU-FILM-IR<sup>®</sup>**  
**SOFT-FILM<sup>®</sup>**  
**NON-IONIC**  
**STICKER - SPREADER**

For use only with herbicides designed for application on Rights-Of-Way, Non-Crop Areas, Ditch Banks, Industrial Sites and in Forestry Programs.

**PRINCIPAL FUNCTIONING AGENT:**

Poly-1-p-Menthene ..... 96%

**INERT INGREDIENTS:** ..... 4%

EPA Reg. No.-Exempt

EPA Est. No. 72-PA-1

\*The amount of active ingredient in the formulation does not determine the activity. Activity is governed by the type of film which is formed and this is determined by refinement. The active ingredient in this product is Pinolene<sup>®</sup>, a terpenic polymer.

**KEEP OUT OF REACH OF CHILDREN**

**Manufactured by**  
**MILLER CHEMICAL & FERTILIZER, LLC**  
**P.O. BOX 333**  
**HANOVER, PENNSYLVANIA 17331, U.S.A.**  
**NET CONTENTS: 2½ GALLONS LIQUID**

## GENERAL INFORMATION

**NU-FILM-IR** is a superior STICKING agent designed for use with industrial herbicides usually eliminating the need for conventional surfactants. It is compatible in the spray tank with all commercially used products. **NU-FILM-IR** forms a sticky, elastic film which tenaciously holds the herbicide on the plant foliage and greatly reduces rainfall erosion of the spray residue, thus insuring that pesticide sprays are not lost shortly after application. **NU-FILM-IR** reduces the effect of ultra-violet (UV) degradation of herbicides. The film allows the herbicide to feed into the foliage slowly, reducing quick foliage burning which inhibits translocating herbicide activity. This is a major advantage of the **NU-FILM-IR** polymer over surfactant type herbicide activators, which increase burn down, but reduce long term weed and brush control. **NU-FILM-IR** will not foam, freeze or clog nozzles. It has been proven effective when applied by any aircraft or ground sprayer. It improves the initial pesticide deposit and allows excellent re-distribution of aircraft and concentrate sprayer deposits, to give complete coverage. **NU-FILM-IR** may be applied by ground controlled droplet or aerial spray equipment.

Apply sprays containing **NU-FILM-IR** during daylight. Sunlight, direct or indirect is needed to set the film. **NU-FILM-IR** can be applied when light dew is present or prior to rain events or to post-event wet vegetation. However, avoid applying to vegetation when excessive moisture is present (i.e. dripping).

## DIRECTIONS

**BRUSH CONTROL**—To increase the efficiency and provide wash-off protection of Brush Control Herbicides, add **NU-FILM-IR** to the spray mix as follows:

### Ground Application To Foliage

High Volume: 8 to 16 ounces **NU-FILM-IR** per 100 gallons of water (240 cc to 480 cc per 400 liters).

Low Volume Concentrate—Back Pack: 1 to 2 ounces **NU-FILM-IR** per 5 gallons of water (30 cc to 60 cc per 20 liters).

**Aerial and RadiArc® Application:** More than 25 gallons, but less than 100 gallons of spray mix per acre (960 liters per hectare): Use **NU-FILM-IR** at 8 to 16 ounces per 100 gallons of water. If using glyphosate products: Use **NU-FILM-IR** at 12 to 16 ounces per 100 gallons of water. When application rates are less than 25 gallons per acre use **NU-FILM-IR** at 4 to 6 ounces per acre. (300 to 450 cc per hectare).

**DORMANT STEM APPLICATIONS**—To improve the movement of herbicides into the tissue of dormant stems, apply 16 ounces **NU-FILM-IR** per 100 gallons of water. Such applications should be made according to the herbicide labels used and should be applied primarily to one and two year old new growth, or those stems less than two inches in diameter.

**RIGHTS-OF-WAY AND INDUSTRIAL VEGETATION CONTROL SITES**— To improve the efficiency of and provide wash-off protection for selective weed control along roadsides, pipelines, tank dikes, ditch banks, along fences and on other non-crop areas: Use **NU-FILM-IR** with approved herbicides at the rate of 8 to 16 ounces per 100 gallons of water.

To improve the efficiency of and provide wash-off protection for non-selective weed control programs, use **NU-FILM-IR** at 8 to 16 ounces per 100 gallons of water with post-emergence herbicides such as Vanquish® and RoundUp®. **NU-FILM-IR** can also be used when post-emergence herbicides are tank mixed with pre-emergence herbicides.

**FORESTRY USES**—To increase the efficiency of and provide wash-off protection for herbicides used in forestry site preparation, use **NU-FILM-IR** with herbicides such as, but not limited to Accord®, Arsenal®, Garlon®, Velpar®, at the rate of 4 to 6 ounces per acre (300 to 450 cc per hectare), when application rates are less than 25 gallons per acre. When higher volumes are applied, use at 8 to 16 ounces per 100 gallons of water.

**Plant Growth Regulator Treatments** for grass growth control and seed head suppression — To improve the efficiency of plant growth regulator products such as Arsenal®, Embark® and Telar®, add **NU-FILM-IR** to the spray mix at the rate of 6 to 8 ounces per acre (450 cc to 600 cc per hectare).

**Brush Control with Krenite®** — To increase the efficiency of Krenite® brush control applications, apply **NU-FILM-IR** at 16 ounces per 100 gallons (240 cc to 350 cc per 400 liters) in high volume ground applications. For aircraft applications of Krenite® use **NU-FILM-IR** at the rate of 4 to 6 ounces per acre (300 to 450 cc per hectare).

**Bare Ground Applications** — To stabilize, improve performance, provide wash-off protection and retard photo-degradation of Oust® and other herbicides used in control of vegetation on industrial sites and along railroad and highway rights-of-way. Apply 16 to 24 ounces of **NU-FILM-IR** per acre (1.2 liter per hectare).

Add **NU-FILM-IR** to the spray tank as it is filling, with the agitator running. To insure good emulsification of this product, it is advisable to pre-mix **NU-FILM-IR** with water before adding to the spray tank.

**NOTE:** In some glyphosate applications, it may be necessary to add some additional non-ionic surfactant, based on your past experience and especially in low volume applications.

Rinse tank, lines and nozzles immediately after spraying, with water. After rinsing, there may still be a small amount of sticky residue in the tank. This will help to prevent rusting and corrosion. It will not clog nozzles when sprayer is next used. If spray happens to land on undesired surfaces, such as windows, cars, application equipment or others, it can be removed with soap and water, before the spray deposit is dry or with premium grade or white kerosene after the film has dried or set. To remove dried deposits from painted car surfaces, use standard tar remover products designed for use on painted car finishes.

**ENVIRONMENTAL HAZARDS:** This product is not for aquatic use. 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.

**STORAGE and DISPOSAL:** Do not contaminate water, food, or feed by storage or disposal.

Use this product in accordance with good agronomic practices, which include utilizing proven spray equipment set for proper coverage. Do not make applications when temperatures are too hot. Applications should be made at temperature levels and when other environmental conditions in your area are such that your experience indicates the application will be compatible and will accomplish the desired result.

The use of this material being beyond our control and involving elements of risk to human beings, animals and vegetation, we do not make any warranty, express or implied, as to the effects of such use, when this product is not used in accordance with the directions as stated on this label.

Accord® - Reg. trademark of Dow-Agro Sciences  
Arsenal® - Reg. trademark of BASF Corp.  
Embark® - Reg. trademark of P.B.I. Gordon  
Garlon® - Reg. trademark of Dow-Agro Sciences  
Krenite® - Reg. trademark of E.I. DuPont de Nemours & Co.  
Oust® - Reg. trademark of E.I. DuPont de Nemours & Co.  
RadiArc® - Reg. trademark of Waldaum Specialties, Inc.  
Round Up® - Reg. trademark of Monsanto  
Telar® - Reg. trademark of E. I. DuPont de Nemours & Co.  
Vanquish® - Reg. trademark of Syngenta Crop Protection  
Velpar® - Reg. trademark of E.I. DuPont de Nemours & Co.

## METRIC CONVERSION

1 Pt. Per Acre = 1.2 Liters Per Hectare  
100 Gallons (U.S.) = 378.5 Liters  
1 Hectare = 2.5 Acres (U.S.)  
1 cc = 1 Milliliter (ml)

Batch No.



# MILLER CHEMICAL & FERTILIZER, LLC

## Safety Data Sheet

### Section 1 – Chemical Product and Company Identification

**Product Name:** Nu Film IR®  
**Chemical Name:** Adjuvant  
**Common Name, Synonym:** Mixture of Terpene polymers and emulsifiers  
**Material Uses:** Agricultural Adjuvant  
**Manufacturer/Manufactured For:** Miller Chemical and Fertilizer, LLC  
Phone: (717) 632-8921 FAX: (717) 646-1104 CHEMTREC: (800) 424-9300

### Section 2 – Hazard Identification

#### 2.1 Classification of the substance or mixture

##### GHS Classification (29 CFR 1910.1200)

Not a hazardous substance or mixture according to 29 CFR 1910.1200 (OSHA HCS)

#### 2.2 Label elements

##### GHS Labeling Elements

Pictogram: Not Applicable  
Signal Word: Not applicable

Hazard Statements: Not applicable

Precautionary Statements: Not Applicable

### Section 3 – Composition/Information of Ingredients

Ingredient Name	CAS Number	%
This product has been tested as a whole to determine its hazard – see section 11		100

### Section 4 – First Aid Measures

#### EYE CONTACT

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

#### SKIN CONTACT

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.



Product Name: Nu Film IR®

**INHALATION**

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

**INGESTION**

If swallowed, DO NOT induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Call a physician immediately!

**Section 5 – Fire-Fighting Measures**

<b>Flash Point (METHOD):</b>	> 100°C
<b>Auto-Ignition:</b>	Not Available
<b>Flammable Limits:</b>	Not Available
<b>Extinguishing Media:</b>	Dry chemical, carbon dioxide (CO <sub>2</sub> ), water spray or Sand/Earth
<b>Special Fire Fighting Procedures:</b>	None currently known.
<b>Unusual Fire and Explosion Hazards:</b>	Generates CO <sub>2</sub> , CO and smoke. Combustion products may be toxic

**Section 6 – Accidental Release Measures**

**Personal precautions**

Evacuate non-essential personnel, eliminate ignition sources, and wear protective equipment (See Section VIII). Shut off source of leak only if safe to do so. Wear respiratory equipment if exposure limits are exceeded.

**Contain spill**

Shut off leak if safe to do so. Dike area, recover and reclaim material if possible. This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Absorb the liquid on material such as sand, vermiculite, or other inert, noncombustible absorbent and place in a clean, dry container suitable for disposal. Containers should be closed and segregated for later disposal. Scrub the area with detergent and water.

**Section 6 – Accidental Release Measures *continued***

**Disposal Method**

Solids must be disposed of in a permitted waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted facility. Dispose of material in accordance with all Federal, State and Local regulations. Local regulations may be more stringent than Federal or State.



Product Name: Nu Film IR®

### Section 7 – Handling and Storage

- Handling:** Wear protective equipment when handling. Wash thoroughly after handling. Do not get in eyes. Do not breathe vapor, mist, or dust. Avoid prolonged or repeated contact with skin. Do not swallow.
- Storage:** For industrial use only. Keep container closed when not in use. Store at temperatures between 41°F and 104°F (5°C and 40°C) and in well-ventilated areas away from heat or flame. Keep out of reach of children.

### Section 8 – Exposure Controls/Personal Protection

**Engineering Controls:**

**Mechanical:** General ventilation is usually adequate.

**Respiratory Protection:** If exposure limits are exceeded, or if exposure may occur, use a NIOSHA/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSHA publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSHA/MSHA approved positive pressure-breathing apparatus should be readily available.

**Eye Protection:** Chemical goggles or face shield. Always wear eye protection when working with chemicals. Never wear contact lenses when working with chemicals.

**Skin Protection:** Rubber gloves. Clean protective body covering, rubber apron, and rubber boots.

**Work Hygienic Practices:** Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking or smoking. If contact occurs, remove contaminated clothing. If needed, take First Aid action shown in Section IV. Launder contaminated clothing before use.

**Other Protective Equipment:** Safety shower, eye wash fountain, and washing facilities should be readily available.

### Section 9 – Physical and Chemical Properties

- Appearance:** Red to Reddish Amber liquid
- Odor:** Moderate
- pH (aqueous approx. 5% in DW):** 6.0 – 7.0 @ 20°C
- Boiling point/Boiling range:** Not Determined
- Freeze Point:** Not Determined
- Flash Point:** > 100°C



Product Name: Nu Film IR®

Vapor Pressure (mmHg):	Not Determined
Vapor Density (Air=1):	Not Determined
Solubility in Water:	Emulsifies
Density:	7.71 – 7.75 lbs/gal @ 68°F (20°C)
Specific Gravity (H <sub>2</sub> O=1 @ 4°C):	0.92 - 0.93 g/mL @ 68°F (20°C)
Evaporation Rate (NA=1):	Not Determined
Percent Volatile by Volume:	Not Determined

#### Section 10 – Stability and Reactivity

Chemical Stability:	Stable
Materials/Conditions to Avoid:	Strong oxidizing agents, excessive heat and sources of ignition.
Hazardous Decomposition or Byproducts:	At high temperatures may release oxides of carbon
Hazardous Polymerization:	Will not occur

#### Section 11- Toxicological Information

##### Toxicity Data:

**Acute Eye Irritation:** May cause irritation

**Acute Dermal Effects:** LD<sub>50</sub> >5050 mg/kg (rabbit); May cause skin irritation.

**Acute Oral Effects:** LD<sub>50</sub> >5050 mg/kg (rat): Large doses may cause nausea, vomiting, and stomach pain or cramps.

**Acute Inhalation Effects:** LC<sub>50</sub> >5260 mg/m<sup>3</sup> (rat): May cause slight irritation if mist occurs

**Carcinogenicity:** None found

**Mutagenicity:** None found

**Teratogenicity:** None found

**Chronic Effects:** Not known

#### Section 12 – Ecological Information

**Ecotoxicity:** This product is a spray adjuvant. Large spills could possible damage vegetation. Contamination of waterways could possibly cause fish kills. Prevent spread of runoff into drains, storm sewers, and ditches that lead to waterways.

**Aquatic Toxicity:** Data not available

**Environmental Fate:** Data not available



Product Name: Nu Film IR®

**Section 13 – Disposal Considerations**

<b>Disposal:</b>	If uncontaminated, recover and reuse as product. If contaminated with other materials, the nature and extent of contamination may require use of specialized disposal methods. Consult local, county, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations
<b>Disposal Regulatory Requirements:</b>	Consult local, county, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations
<b>Container Cleaning and Disposal:</b>	Consult local, county, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations

**Section 14 – Transport Information**

**U.S. DEPARTMENT OF TRANSPORTATION**

**PROPER SHIPPING NAME:**  
**PACKING GROUP:**  
**HAZARD CLASS:**  
**LABEL/PLACARD REQUIRED:**  
**UN/NA No.:**

**WATER TRANSPORTATION**

**PROPER SHIPPING NAME:**  
**PACKING GROUP:**  
**HAZARD CLASS:**  
**LABEL/PLACARD REQUIRED:**  
**UN/NA No.:**

**AIR TRANSPORTATION**

**PROPER SHIPPING NAME:**  
**PACKING GROUP:**  
**HAZARD CLASS:**  
**LABEL/PLACARD REQUIRED:**  
**UN/NA No.:**

**OTHER AGENCIES:**

**SECTION 14 NOTES:** This product is not considered a hazard



Product Name: Nu Film IR®

### Section 15 – Regulatory Information

**EPA Regulations:**

**Reportable Quantity –CERCLA: Not applicable**

**SARA Title III (EPCRA): Not applicable**

**RCRA Waste Code: Not applicable**

**State Regulations:**

**PA Right to Know: This product contains proprietary ingredients**

**This product contains the following chemicals subject to the reporting requirements of Section 13 Title III of the Superfund Amendments and Reauthorization act of 1986 and 40 CFR part 372 (the corresponding CAS numbers and typical percent by weight are also provided): None**

**CA Proposition 65: Not applicable**

**EPA National Response Center (800) 424-8802**

### Section 16 – Other Information

**Preparation Date:** 09/26/2012

**Prepared By:** Miller Chemical Compliance Officer

**Revision Date:** 09/19/2016

**Revision Notes:** GHS Compliance

**NOTICE TO READER:** THE INFORMATION CONTAINED IN THIS SAFETY DATA SHEET (“SDS”) RELATES ONLY TO THE SPECIFIC PRODUCT(S) DESIGNATED HEREIN (THE “PRODUCT”). THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CURRENT AND CORRECT AS OF THE DATE OF THIS SDS, AND OBTAINED FROM SOURCES THAT ARE BELIEVED TO BE RELIABLE. HOWEVER, THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, REPRESENTATIONS OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO ACCURACY, CORRECTNESS, OR COMPLETENESS, AND NEITHER MILLER CHEMICAL AND FERTILIZER, LLC. NOR ITS MARKETING AFFILIATES (EACH, A “SELLER”) ASSUME ANY LEGAL RESPONSIBILITY FOR THE USE OR RELIANCE UPON SAME.



**QUALI-PRO**

# Prodiamine 65 WDG

## *Herbicide*

ACTIVE INGREDIENT:	% BY WT.
Prodiamine (CAS No. 29091-21-2) .....	65.0%
INERT INGREDIENTS: .....	35.0%
TOTAL: .....	100.0%

EPA REG. NO. 66222-89

### KEEP OUT OF REACH OF CHILDREN

## CAUTION

For additional precautionary, handling, and use statements, see inside of this booklet.

Manufactured for:  
**Makhteshim Agan of North America, Inc.**  
4515 Falls of Neuse Road, Suite 300  
Raleigh, NC 27609

13358

EPA 051104/EPA 072006/  
Notif 072308/Rev D

- For preemergence control of grass and broadleaf weeds in:**
- established turfgrasses (excluding golf course putting greens), lawns, and sod nurseries
  - container, field-grown, and landscape ornamentals
  - conifer and hardwood seedling nurseries
  - established perennials and wildflower plantings
  - noncrop areas including managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, and equipment yards)
  - facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows
  - Christmas tree farms
  - drainage ditches in California and Arizona only

<b>FIRST AID</b>	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor or going for treatment. <b>For medical emergencies involving this product, call Prosar at 1-877-250-9291.</b>	

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

##### WPS USES:

**Applicators and other handlers (other than mixers and loaders) who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR Part 170) - In general, agricultural plant uses are covered - must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as butyl rubber >14 mils, neoprene rubber > 14 mils, or nitrile rubber >14 mils (See instructions for Category A on the EPA chemical resistance category selection chart if you want other options.)
- Shoes plus socks

##### Mixers and loaders must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as butyl rubber >14 mils, neoprene rubber > 14 mils, or nitrile rubber >14 mils (See instructions for Category A on the EPA chemical resistance category selection chart if you want other options.)
- Shoes plus socks

##### NONWPS USES:

**Mixers and loaders who handle this product for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) - In general, only agricultural plant uses are covered by the WPS - must wear:**

- Chemical-resistant gloves such as butyl rubber >14 mils, neoprene rubber > 14 mils, or nitrile rubber >14 mils (See instructions for Category A on the EPA chemical resistance category selection chart if you want other options.)

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 STATEMENTS:** When handlers use closed systems or enclosed cabs 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.

#### **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.
- After handling this product, immediately wash the outside of gloves before removing them; then remove gloves and all other PPE. Immediately wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations substantially above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment washwater.

#### **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 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. Exception: If this product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

#### **GENERAL INFORMATION**

##### **WHERE TO USE**

Prodiamine 65 WDG is a preemergence herbicide that provides residual control of many grass and broadleaf weeds in:

- Established turfgrass (excluding golf course putting greens), lawns, and sod nurseries
- Container, field-grown, and landscape ornamentals
- Conifer and hardwood seedling nurseries
- Established perennial and wildflower plantings
- Noncrop areas including managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, and equipment yards)
- Facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows
- Christmas tree farms

Drainage ditches in California and Arizona only

##### **HOW QUALI-PRO PRODIAMINE 65 WDG WORKS**

Quali-Pro Prodiamine 65 WDG controls susceptible weeds by preventing growth and development

of newly germinated weed seeds. Weed control is most effective when Quali-Pro Prodiamine 65 WDG is activated by at least 0.5 inch of rainfall or irrigation or shallow incorporation (1-2 inches) before weed seeds germinate and within 14 days following application.

#### **USE PRECAUTIONS**

- Do not graze or feed livestock forage cut from areas treated with Quali-Pro Prodiamine 65 WDG.
- Do not apply Quali-Pro Prodiamine 65 WDG to plants that will be consumed for food use.
- Follow all applicable directions, restrictions, and precautions on the labels of EPA-registered tank mix partners.
- Do not blend Quali-Pro Prodiamine 65 WDG onto dry fertilizer or any other granular material.
- Chemigation Statement: do not apply this product through any type of irrigation system unless instructed otherwise in this label.
- Do not apply aerially.
- Do not apply to golf course putting greens.

#### **NEW PLANTINGS, REPLANTING, AND ROTATIONAL PLANTINGS**

Nursery, landscape, or noncropland areas treated with Quali-Pro Prodiamine 65 WDG should be rotated only to ornamental species listed on this label for 1 year following application unless the following test has shown species safety:

Before planting a species not listed on this label, it is recommended that several test strips of an indicator plant such as wheat, sorghum, or corn be sown into the treated area. If the indicator plants germinate and grow normally to a height of 12 inches with normal root development, it is safe to plant.

In areas disturbed by new plantings or replanting of labeled species, it may be necessary to retreat exposed soil to maintain satisfactory weed control.

When an adjuvant is to be used with this product, Makhteshim Agan of North America, Inc. suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

#### **MIXING AND APPLICATION PROCEDURES**

##### **MIXING**

Quali-Pro Prodiamine 65 WDG must be mixed thoroughly in the spray tank to ensure uniform application. Follow these steps:

1. Fill the spray tank 1/4 full with clean water or fluid fertilizer only.
2. Start agitation and check to ensure it is working properly.
3. Add Quali-Pro Prodiamine 65 WDG directly into the tank.
4. Add the rest of the carrier to obtain the final spray volume.
5. A spray colorant may be used with Quali-Pro Prodiamine 65 WDG to mark areas as they are treated. This will improve application accuracy by minimizing swath skips and overlaps.

6. Maintain vigorous agitation in the spray tank before and during the application. This will ensure a well mixed spray suspension.
7. Do not allow spray suspension to dry in the tank. Thoroughly clean the sprayer after use by flushing the system with water containing a detergent. Refer to the **PESTICIDE DISPOSAL** section of this label for waste disposal.

**TANK MIXING QUALI-PRO PRODIAMINE 65 WDG**

Quali-Pro Prodiamine 65 WDG may be tank mixed with certain other EPA-registered herbicides to provide a broader spectrum of weed control or to control emerged weeds. Refer to the specific directions for use for tank mix partners and consult the label(s) of the individual tank mix partner(s) for use rate, application timing, weeds controlled, and specific precautions and/or restrictions. Tank mixes are permitted only in states where the tank mix partner(s) are registered for the application site and the turf and ornamental species listed. When using Quali-Pro Prodiamine 65 WDG in a tank mixture with other pesticides, observe the most restrictive label limitations and precautions on the labels of the products used.

Before tank mixing with other pesticides not named on this label, compatibility must be tested. See the **COMPATIBILITY TEST** section below.

**COMPATIBILITY TEST**

Before mixing Quali-Pro Prodiamine 65 WDG with other pesticides in the spray tank, test the compatibility by mixing all components (carrier and pesticide products) in a small container in proportionate quantities. For example, a 1 qt. jar would be 1/100 the volume of a 25 gal./acre spray rate. At 1 lb./acre, the Quali-Pro Prodiamine 65 WDG rate would be proportional to 4.5 g per quart. Add approximately 1.5 teaspoons to a qt. of water. Calculate amounts for other products based on rate per acre. An approximate volume would be 1.5 teaspoons for each lb./acre of a dry formulation and 0.5 teaspoons for each pt./acre of a liquid formulation. (See following table).

**AMOUNT OF COMPONENT TO ADD TO ONE QUART JAR OF SPRAY CARRIER  
(Assuming Carrier Volume of 25 gals./Acre)**

COMPONENTS FORMULATIONS	RATE PER ACRE	RATE PER 1000 SQ. FT.	LEVEL TEASPOONS
Quali-Pro Prodiamine 65 WDG	1.0 lb.	0.4 oz.	1.5
Dry Tank Mix Partners	1.0 lb.	0.4 oz.	1.5
Liquid Tank Mix Partners	1.0 pt.	0.4 oz.	0.5

If components do not ball up or form flakes, sludge, gels, oily films, or layers, then the mixture is compatible. Incompatibility will usually occur within 5 minutes after mixing. If the components are not compatible, a compatibility agent must be added to the tank mixture. Rerun the test to determine if the

mixture is suitable after addition of the compatibility agent. If components are still not compatible, do not tank mix.

#### **MIXING ORDER FOR TANK MIXTURES**

Notes: 1. When mixing Quali-Pro Prodiamine 65 WDG with other components (carrier and partner pesticide products), allow products to completely dissolve between steps. This is key when tank mixing with ester formulations. 2. Maintain agitation throughout mixing and application of the mixture.

Add the products to the spray tank in the following order:

1. Add products packaged in water-soluble bags first. Agitate the tank mixture. Allow the water-soluble bags to completely dissolve and the product to disperse before adding any other tank mix partner.
2. Then add water-dispersible granules (WDG or WG formulations) and wettable powders (WP formulations). Add wettable powders to the tank as agitation continues. Allow the product to disperse completely before other products are added.
3. Add spray adjuvants and spray markers. Read the adjuvant's label first and use only those adjuvants approved for application to turf and ornamentals.
4. Add flowable liquids (FL) or suspension concentrates (SC).
5. Add emulsifiable concentrates (EC) last.

#### **APPLICATION**

Apply Quali-Pro Prodiamine 65 WDG in a minimum of 20 gals./acre (0.5 gal./1000 sq. ft.) of carrier (water and/or fluid fertilizer) using a calibrated, low-pressure sprayer with 50 mesh or coarser screens. A broadcast boom or handheld wand designed for herbicide or insecticide application will provide the best results. Select nozzle pressure and gallonage to provide complete coverage.

#### **SPECIAL USE DIRECTIONS**

##### **ESTABLISHED TURF**

Quali-Pro Prodiamine 65 WDG is a preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turfgrasses including:

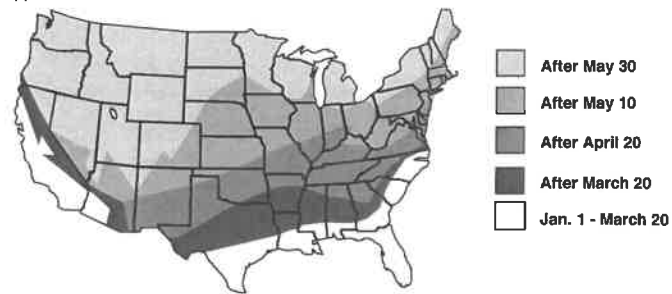
- golf courses excluding putting greens
- lawns
- sod nurseries

The maximum amount of Quali-Pro Prodiamine 65 WDG that may be applied per year is given for each turfgrass species in the **Annual Use Rates-Turfgrass** section of this label.

For optimum weed control, Quali-Pro Prodiamine 65 WDG should be activated by at least 0.5 inch of rainfall or irrigation before weed seeds germinate and within 14 days following application. See the map below for approximate crabgrass seed germination dates.



**CRABGRASS SEED GERMINATION DATES**  
Approximate Date



**Use Precautions - Turfgrass**

1. Do not apply Quali-Pro Prodiamine 65 WDG to areas where dichondra, colonial bentgrass, velvet bentgrass, or annual bluegrass (*Poa annua*) are desirable species.
2. Do not harvest treated sod within 90 days of application. To avoid turfgrass injury, do not apply to newly set sod until the sod has rooted and exposed edges have filled in.
3. To avoid turfgrass injury, do not apply Quali-Pro Prodiamine 65 WDG to turf stressed by conditions such as drought, low fertility, or pest damage.
4. Disturbing the herbicide barrier with cultural practices such as disking may result in reduced weed control.
5. Do not apply Quali-Pro Prodiamine 65 WDG to golf course putting greens.
6. If the depth of the creeping bentgrass root system becomes shallow and root tips contact prodiamine-treated soil, new root formation may be inhibited. Mowing height can affect the depth of a plant's root system. To avoid this, do not apply Quali-Pro Prodiamine 65 WDG to creeping bentgrass less than 0.5 inch in height.

**Application Timing and Rate - Turfgrass**

Quali-Pro Prodiamine 65 WDG may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications should be made before target weeds germinate. Quali-Pro Prodiamine 65 WDG will not control weeds that have already emerged.

The amount of Quali-Pro Prodiamine 65 WDG to apply is based upon:

1. the length of weed control desired (the higher the application rate, the longer the control) (see Figure 1);
2. the turf species; and
3. the maximum amount which can be applied to the turf species per calendar year (see Table 1).

**Figure 1: Length of Crabgrass Control**



\*Length of control varies by region. This table is an average for planning purposes.

**Annual Use Rates - Turfgrass**

Quali-Pro Prodiamine 65 WDG can be applied to the turfgrass species listed in the following table. Do not apply more than the highest rate listed for each species in a calendar year.

**TABLE 1: MAXIMUM APPLICATION RATE QUALI-PRO PRODIAMINE 65 WDG**  
Per Calendar Year by Turfgrass Species<sup>1</sup>

TURF SPECIES	LBS. OF PRODUCT/ACRE	OZ. OF PRODUCT/1000 SQ. FT.
Bermudagrass <sup>2</sup> Bahia grass Centipedegrass Kikuyugrass Seashore Paspalum St. Augustinegrass <sup>3</sup> Tall Fescue (including turf-type) Zoysiagrass	1.0 - 2.30 <sup>1</sup>	0.36 - 0.83
Buffalograss Kentucky Bluegrass Perennial Ryegrass	0.5 - 1.50 <sup>1</sup>	0.185 - 0.55
Fine Fescue	0.5 - 1.15 <sup>1</sup>	0.185 - 0.42
Creeping Bentgrass (0.5 inches or more in height) <sup>4</sup>	0.5 - 1.00 <sup>1</sup>	0.185 - 0.37

<sup>1</sup> Quali-Pro Prodiamine 65 WDG may be applied more than once a year as long as the total amount applied is not greater than the maximum application rate per calendar year for the turf species. All applications must be made before weed seeds germinate.

<sup>2</sup> May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 0.80 lb./A (0.30 oz./1000 sq. ft.). Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded.

<sup>3</sup> Use an initial rate of 0.75-1.5 lbs./acre (0.28-0.55 oz./1000 sq. ft.) per application.

<sup>4</sup> To avoid grass injury, do not apply Quali-Pro Prodiamine 65 WDG to creeping bentgrass mowed at less than 0.5 inch in height.

**Weeds Controlled (Turf, Ornamentals)**

When used as directed in this label, Quali-Pro Prodiamine 65 WDG will control the following weeds:

• Barnyardgrass	• Henbit <sup>2</sup>	• Purslane, Common
• Bluegrass, Annual ( <i>Poa annua</i> ) <sup>1</sup>	• Itchgrass	• Pusley, Florida
• Carpetweed	• Johnsongrass (from seed)	• Rescuegrass <sup>4</sup>
• Chickweed, Common <sup>2</sup>	• Junglerice	• Shepherdspurse <sup>2</sup>
• Chickweed, Mouseear (from seed)	• Knotweed <sup>2</sup>	• Signalgrass, Broadleaf
• Crabgrass (Large, Smooth) <sup>3</sup>	• Kochia	• Speedwell, Persian
• Crowfootgrass	• Lambsquarters, Common	• Sprangletop
• Cupgrass, Woolly	• Lovegrass	• Spurge, Prostrate
• Foxtails, Annual	• Panicum (Texas, Fall, Browntop)	• Witchgrass
• Goosegrass <sup>5</sup>	• Pigweed	• Woodsorrel, Yellow (from seed)

<sup>1</sup> In areas where *Poa annua* is a winter annual, apply Quali-Pro Prodiamine 65 WDG (see Table 1) in August or September to established, nonoverseeded turf before *Poa annua* seeds germinate. These timings are approximate. Consult State Extension Service for more specific timing for your area. Also see the section of this label "Poa Annua Control in Established Bermudagrass Overseeded with Perennial Ryegrass."

<sup>2</sup> To control this weed, apply Quali-Pro Prodiamine 65 WDG in late summer, fall, or winter before weed seeds germinate.

<sup>3</sup> Fall Applications for Spring Crabgrass Control in Cool-Season Grasses: In those areas where the ground freezes in the winter, Quali-Pro Prodiamine 65 WDG can be applied in the fall at rates of 1.0-1.15 lbs./acre after the soil temperature falls below 50°F but before the ground freezes. This application will control crabgrass the following spring.

<sup>4</sup> Suppression only.

<sup>5</sup> In many areas, a single application of 1.0-2.3 lbs./acre of Quali-Pro Prodiamine 65 WDG will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, the most effective control may be maintained by making a "split application" (i.e., two applications) that does not exceed the maximum application rate per calendar year for the turfgrass species.

**WHEN TO APPLY QUALI-PRO PRODIAMINE 65 WDG AFTER OVERSEEDING TURF**

Injury to desirable seedlings is likely if Quali-Pro Prodiamine 65 WDG is applied before the secondary roots of seedlings are in the second inch of soil (not thatch plus soil). To reduce the potential to injure overseeded turf, wait 60 days after seeding or until after the second mowing, whichever is longer, before applying Quali-Pro Prodiamine 65 WDG.

**When to Overseed After Application (All States)\*** Quali-Pro Prodiamine 65 WDG will inhibit the development of turfgrass species overseeded too soon after application. Follow rates and intervals in the table below for best overseeding/reseeding results.

\*Note: See exceptions for "*Poa Annua* Control in Established Bermudagrass Overseeded with Perennial Ryegrass" below.

AMOUNT OF QUALI-PRO PRODIAMINE 65 WDG Lbs. of Product/Acre	INTERVAL (MONTHS) BEFORE OVERSEEDING*		
	North	Transition	South
0.75	4	4	4
1.00	5	4	4
1.15	6	5	5
1.25	-	6	6
1.50	-	7	7
1.75	-	-	9
2.00	-	-	10
2.30	-	-	12

***Poa Annu*** Control in Established Bermudagrass Overseeded with Perennial Ryegrass  
 (Arizona, California, Nevada, and Texas only)

Use on golf courses (excluding golf course putting greens), lawns, and sod nurseries when overseeding with perennial ryegrass (minimum seeding rate of 350 lbs./A).

**HOW MUCH AND WHEN TO APPLY**

<b>AMOUNT TO APPLY</b>	<b>WHEN TO APPLY</b>	<b>EXPECTED CONTROL</b>	<b>USE PRECAUTIONS</b>
0.58-1.0 lb./acre	6 to 8 weeks <i>before</i> ryegrass overseeding  Second Application: 4 to 8 weeks <i>after</i> overseeding or when perennial ryegrass roots are in the second inch of soil	1 application for 70% or greater control of <i>Poa annua</i>  Second application may enhance control.	Some seedling mortality and temporary reduction in root growth of new seedlings may occur. To reduce the potential for seedling mortality, maintain a moist seedbed with light, frequent irrigation. Make no more than 2 applications per year for this use, and do not exceed a total of 1.3 lbs./acre per year.  Do not make a second application if any injury to the ryegrass is observed after the first application. Do not make a second application unless the product was first applied before overseeding.

**Poa Annua Control in Perennial Ryegrass Overseedings (Alabama, Louisiana, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee Only)**

Use this product on golf courses (excluding golf course putting greens) when overseeding with perennial ryegrass only (minimum seeding rate of 350 lbs./A).

**HOW MUCH AND WHEN TO APPLY**

AMOUNT TO APPLY	WHEN TO APPLY	EXPECTED CONTROL	USE PRECAUTIONS
0.58 - 1.0 lb./acre	8 to 10 weeks before ryegrass overseeding	70% or greater	Some seedling mortality and temporary reduction in root growth of new seedlings may occur. To reduce the potential for seedling mortality, maintain a moist seedbed with light, frequent irrigation. To maximize seedling establishment, use lower rate and/or the maximum time interval before overseeding. To maximize <i>Poa annua</i> control, use higher rate and shorter time interval before overseeding.

**CONTAINER, FIELD-GROWN, AND LANDSCAPE ORNAMENTALS (INCLUDING CHRISTMAS TREE FARMS)**

**Application Timing and Information**

Quali-Pro Proflaminate 65 WDG:

1. Will not control emerged weeds.
2. May be applied to newly transplanted and established ornamentals as broadcast or over-the-top spray.
3. Is most effective when applied to soil free of clods, weeds, and debris such as leaves and mulch.
4. Is most effective when the product is activated in the soil before weed seeds germinate and within 14 days after application.
5. Is activated when the treated area receives at least 0.5 inch of irrigation or rainfall or shallow (1 to 2 inches) mechanical incorporation.

**Use Precautions**

To reduce injury potential:

1. In the spring when buds are rapidly growing and expanding, over-the-top application of Quali-Pro Proflam 65 WDG may temporarily injure new growth of desirable plants. To reduce the possibility of injury at this time, wait to apply Quali-Pro Proflam 65 WDG over the top of newly emerged vegetation until it has hardened off unless experience indicates that the ornamental plant will not be injured by the over-the-top application.
2. After application (immediately for deciduous plants) apply overhead irrigation to wash Quali-Pro Proflam 65 WDG from plant surfaces onto soil (watering plants before application may improve the washing process).

**Application Sites and Instructions**

SITE	APPLICATION INSTRUCTIONS
Newly Transplanted Container or Field Nursery Stock	Delay application until soil has settled around transplants. Water transplants thoroughly before application. Apply after cuttings form roots and are established. To avoid inhibition of the tissue union, apply before budding/grafting or after buds/grafts have taken.
Established Container, Field Nursery Stock, or Landscape Plants	Apply at any time as a broadcast, over-the-top, or directed spray.
Landscape (or Ornamental) Plantings	Apply as a broadcast, over-the-top, or directed spray. Delay application to newly transplanted ornamentals until soil has settled around transplants.
Bare Ground Application for Container Placement	Apply to soil (including mulch, gravel, wood chips, or other permeable base) upon which containerized ornamentals are placed. After Quali-Pro Proflam 65 WDG is applied, perform shallow cultivation or hand weeding only to avoid disturbing the herbicide barrier.
In Shadehouses and Uncovered Polyhouses	After Quali-Pro Proflam 65 WDG is applied, uncovered polyhouses must remain open for at least 7 days and ornamentals must receive 2 irrigations totaling at least 1/2 inch of water.
Ornamental Bulbs and Perennial Wildflower Plantings	Quali-Pro Proflam 65 WDG may be applied to bulbs or perennial wildflower species listed in the section "Tolerant Ornamental Species." Apply before or after bulbs emerge but before bulbs bloom and weeds emerge. In wildflowers, a postemergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.



**HOW MUCH AND WHEN TO APPLY (Container, Field-Grown and Landscape Ornamentals)**

AMOUNT TO APPLY (BROADCAST)*	WHEN TO APPLY	COMMENTS/INSTRUCTIONS
1.0 - 2.3 lbs./acre or 0.37 - 0.83 oz./1000 sq. ft.	In the fall or spring before weeds germinate or after weeds are removed.	Use the higher rate for longer control. Quali-Pro Prodiamine 65 WDG may be applied more than once per year as long as the total amount of product applied does not exceed 2.3 lbs./acre per year.

\*Note: For band application, calculate amount per acre:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast rate} = \text{amount to apply per acre of field}$$

**EQUIVALENT MEASUREMENTS FOR QUALI-PRO PRODIAMINE 65 WDG**

lbs./acre	oz./1000 sq. ft.	Approximate Equivalent – Tablespoons/1000 sq. ft.
1.0	0.37	1
1.5	0.55	1.5
2.0	0.74	2
2.3	0.83	2.25

**Tank Mixtures For Use on Container, Field-Grown, and Landscape Ornamentals**

Quali-Pro Prodiamine 65 WDG may be tank mixed with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with Quali-Pro Prodiamine 65 WDG are for use only in states where the tank mix partner(s), application site, and intended use pattern are registered.

Follow the label(s) of the tank mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before mixing pesticides in the spray tank, test compatibility by mixing the products in a small container first. See the **COMPATIBILITY TEST** section of this label.

**Tank Mix Partners For Quali-Pro Prodiamine 65 WDG on Ornamentals**

PRODUCT	PRECAUTIONS/INSTRUCTIONS
Goal® or Galigan® (use on conifers only)	Mix with Quali-Pro Prodiamine 65 WDG for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Princep®, Pennant®	See product labels for weed spectrum and tolerant ornamentals.
Touchdown® Pro (or other glyphosate-based products), and Finale®	These nonselective tank mix herbicides control most emerged annual broadleaves and grasses. Take extreme care to prevent tank mixtures with these products from contacting the foliage and stems of turfgrass, trees, shrubs, or other desirable vegetation because desirable vegetation may be severely injured or killed. Apply these tank mixtures as a directed spray and use a shield to prevent spray from contacting foliage of desirable plants. Following instructions on the tank mix partner's label, delay irrigation of the treated area to allow time for the herbicide to be absorbed by weed foliage.

**Tolerant Ornamental Species – Container, Field-Grown, and Landscape Ornamentals**  
 Quali-Pro Prodiamine 65 WDG will not harm most trees, shrubs, vines, and flowers. The species listed below in Table 2 are tolerant to Quali-Pro Prodiamine 65 WDG. Quali-Pro Prodiamine 65 WDG is approved for application, except in CA, to the species in Table 3. Quali-Pro Prodiamine 65 WDG may be applied over the top of the listed species.

When plants are under stress (such as heat, drought, or frost damage), some cultivars of listed plants may be sensitive to Quali-Pro Prodiamine 65 WDG.

**TABLE 2 – Tolerant Ornamental Species – Container, Field-Grown, and Landscape (All States)**

Common Name	Scientific Name
Fir species** (Balsam, Fraser, Noble, etc.)	<i>Abies</i> spp.
Japanese Maple	<i>Acer palmatum</i>
Norway Maple***	<i>Acer platanoides</i>
Kiwi*	<i>Actinidia chinensis</i>
Lily-of-the-Nile (African Lily)	<i>Agapanthus africanus</i>
Vine Hill Manzanita	<i>Arctostaphylos densiflora</i>
Cape Weed	<i>Arctotheca calendula</i>
Japanese Aucuba	<i>Aucuba japonica</i>

Barberry	<i>Berberis gladwynensis</i>
Wintergreen Barberry	<i>Berberis julianae</i>
Mentor Barberry	<i>Berberis mentorensis</i>
Japanese Barberry	<i>Berberis thunbergii</i>
Warty Barberry	<i>Berberis verruculosa</i>
Japanese Boxwood	<i>Buxus microphylla</i>
Weeping Bottlebrush	<i>Callistemon viminalis</i>
Scotch Heather	<i>Calluna vulgaris</i>
Hottentot Fig (Ice Plant)	<i>Carpobrotus edulis</i>
Feathery Cassia	<i>Cassia artemisoides</i>
Wild Lilac	<i>Ceanothus rigidus</i>
False Cypress	<i>Chamaecyparis pisifera</i>
Cleyera	<i>Cleyera japonica</i>
Citrus species*	<i>Citrus spp.*</i>
Flowering Dogwood	<i>Cornus florida</i>
American Dogwood	<i>Cornus stolonifera</i>
Pampas Grass	<i>Cortaderia selloana</i>
Cranberry Cotoneaster	<i>Cotoneaster apiculatus</i>
Cotoneaster	<i>Cotoneaster buxifolius</i>
Bearberry Cotoneaster	<i>Cotoneaster dammeri</i>
Rockspray Cotoneaster	<i>Cotoneaster microphyllus</i>
Hawthorne	<i>Crataegus spp.</i>
Italian Cypress	<i>Cupressus sempervirens</i>
White Trailing Ice Plant	<i>Delosperma alba</i>
Hop Bush	<i>Dodonea viscosa</i>
Silverberry	<i>Elaeagnus pungens</i>
Wintercreeper	<i>Euonymus fortunei</i>
Japanese Spindle Tree (Evergreen Euonymus)	<i>Euonymus japonica</i>
Spreading Euonymus	<i>Euonymus kiautschovica</i>
Japanese Aralia	<i>Fatsia japonica</i>
Border Forsythia	<i>Forsythia intermedia</i>
Greenstem Forsythia	<i>Forsythia viridissima</i>
Gardenia, Cape-Jasmine	<i>Gardenia jasminoides</i>
Gladiolus species**	<i>Gladiolus spp.</i>
English Ivy	<i>Hedera helix</i>
Rose of Sharon**	<i>Hibiscus</i>
Chinese Hibiscus**	<i>Hibiscus Rosa-sinensis</i>
Chinese Holly**	<i>Ilex cornuta</i>

Japanese Holly	<i>Ilex crenata</i>
American Holly	<i>Ilex opaca</i>
Holly	<i>Ilex pernyi</i>
Yaupon Holly	<i>Ilex vomitoria</i>
Iris species**	<i>Iris</i> spp.
Winter Jasmine	<i>Jasminum nudiflorum</i>
Chinese Juniper	<i>Juniperus chinensis</i>
Shore Juniper	<i>Juniperus conferta</i>
Creeping Juniper	<i>Juniperus horizontalis</i>
Walnut*	<i>Juglans</i> spp.
Shrimp Plant	<i>Justicia brandegeana</i>
Crape Myrtle	<i>Lagerstromia indica</i>
Amur Privet	<i>Ligustrum amurense</i>
Japanese Privet	<i>Ligustrum japonicum</i>
Glossy Privet (wax-leaf)	<i>Ligustrum lucidum</i>
Big Blue Lillyturf	<i>Liriope muscari</i>
Japanese Honeysuckle	<i>Lonicera japonica</i>
Tatarian Honeysuckle	<i>Lonicera tatarica</i>
Magnolia species**	<i>Magnolia</i> spp.
Ice Plant	<i>Maleophora luteola</i>
Crabapple*	<i>Malus</i> spp.
Heavenly Bamboo	<i>Nandina domestica</i>
Narcissus species**	<i>Narcissus</i> spp.
Oleander	<i>Nerium</i> spp.
Olive*	<i>Olea europaea</i>
Mondo Grass**	<i>Ophiopogon japonicus</i>
Trailing African Daisy	<i>Osteospermum fruticosum</i>
Sourwood	<i>Oxydendrum arboreum</i>
Avocado*	<i>Persea americana</i>
Fraser's Photinia (Redtip)	<i>Photinia fraseri</i>
Spruce species** (Colorado Blue, Norway, etc.)	<i>Picea</i> spp.
Lily-of-the-Valley Shrub	<i>Pieris japonica</i>
Calabrian Pine	<i>Pinus brutia</i>
Canary Island Pine	<i>Pinus canariensis</i>
Slash Pine	<i>Pinus elliotii</i>
Aleppo Pine	<i>Pinus halepensis</i>
Austrian Black Pine	<i>Pinus nigra</i>
Longleaf Pine	<i>Pinus palustris</i>

Monterey Pine	<i>Pinus radiata</i>
Eastern White Pine	<i>Pinus strobus</i>
Scotch Pine	<i>Pinus sylvestris</i>
Loblolly Pine	<i>Pinus taeda</i>
Japanese Black Pine	<i>Pinus thunbergiana</i>
Virginia Pine	<i>Pinus virginiana</i>
Pistachio*	<i>Pistacia</i> spp.
Queensland Pittosporum	<i>Pittosporum rhombifolium</i>
Japanese Pittosporum	<i>Pittosporum tobira</i>
Japanese Yew	<i>Podocarpus macrophyllus</i>
English Laurel	<i>Prunus laurocerasus</i>
Almond, Apricot, Nectarine, Peach, Plum, and Prune*	<i>Prunus</i> spp.
Douglas Fir***	<i>Pseudotsuga menziesii</i>
Firethorn, Scarlet	<i>Pyracantha coccinea</i>
Firethorn, Chinese	<i>Pyracantha fortuneana</i>
Firethorn, Formosa	<i>Pyracantha koidzumii</i>
Bradford Pear spp.	<i>Pyrus</i> spp.
Oak species	<i>Quercus rubra</i>
Indian Hawthorne	<i>Raphiolepis indica</i>
'Coral Bells'	<i>Rhododendron (including Azalea)</i>
'Formosa'	
'Hino-crimson'	
'PJM'	
'Roseum Elegans'	
Lady Bank's Rose	<i>Rosa banksiae</i>
Rosemary*	<i>Rosmarinus officinalis</i>
Leatherleaf Fern	<i>Rumohra adiantiformis</i>
	<i>Santolina virens</i>
Stonecrop	<i>Sedum album</i>
Japanese Boxcherry	<i>Syzygium paniculatum</i>
Japanese Yew	<i>Taxus cuspidata</i>
Yew	<i>Taxus media</i>
American Arborvitae	<i>Thuja occidentalis</i>
Star Jasmine	<i>Trachelospermum asiaticum</i>
Canada Hemlock	<i>Tsuga canadensis</i>
Tulip species	<i>Tulipa</i> spp.
Japanese Viburnum	<i>Viburnum japonicum</i>
Sweet Viburnum	<i>Viburnum odoratissimum</i>

Japanese Snowball	<i>Viburnum plicatum</i>
Canary Island Viburnum	<i>Viburnum rigidum</i>
Laurustinus	<i>Viburnum tinus</i>
Cranberry Bush	<i>Viburnum trilobium</i>
Leatherleaf Viburnum	<i>Viburnum wrightii</i>
Vinca	<i>Vinca major</i>
Dwarf Periwinkle	<i>Vinca minor</i>
Grape*	<i>Vitis</i> spp.
Old Fashioned Weigela	<i>Weigela florida</i>
Spanish Bayonet	<i>Yucca aloifolia</i>
Yucca, Adam's Needle	<i>Yucca filamentosa</i>

\* Do not use on food-producing trees, vines, or plants.

\*\* Not for use on container-grown plants.

\*\*\*Landscape ornamentals only

**TABLE 3 – Tolerant Ornamental Species  
Container, Field-Grown, and Landscape (All States Except CA)**

Common Name	Scientific Name
Abelia: Sherwood	<i>Abelia grandiflora</i>
Yarrow: King Edward	<i>Achillea</i> spp.
	<i>Agapanthus orientalis</i>
Five-Leaf or Chocolate Vine	<i>Akebia quintata</i>
Lady's Leek, Nodding Onion	<i>Allium cernuum</i>
Japanese Anemone	<i>Anemone hybrida</i>
Aquilegia: Red and Gold	<i>Aquilegia</i> spp.
Wormwood; Silver Mound, Castle	<i>Artemisia</i> spp.
Aster: Bonny Blue	<i>Aster</i> spp.
Purple Dome	<i>Aster X frikartii</i>
Lady Fern; Fern Lady	<i>Athyrium filix-femina</i>
Fibrous Begonia: Hardy Grandis	<i>Begonia</i> spp.
	<i>Bergenia cordifolia</i>
Snowbank	<i>Boltonia asteroides</i>
Bougainvillea	<i>Bougainvillea</i> spp.
Butterfly-Bush (Dwarf Blue); Royal Red	<i>Buddleia davidii</i>
Crimson Bottlebrush	<i>Callistemon citrinus</i>
Tussock Bellflower; (White Clips)	<i>Campanula carpatica</i>
Trumpet Creeper, Trumpet Flower, Madame Galen	<i>Campis X tagliabuana</i>
	<i>Ceratostigma plumbaginoides</i>
	<i>Chrysanthemum nipponicum</i>

Coreopsis (Calliopsis); Early Sunrise, Moonbeam . . . . .	<i>Coreopsis</i> spp.
Lucifer . . . . .	<i>Crocosmia</i> spp.
Cooperi Pink . . . . .	<i>Delosperma</i> spp.
Larkspur; Blue Elf . . . . .	<i>Delphinium</i> spp.
Dianthus, Maiden Pinks 'Zing' . . . . .	<i>Dianthus deltooides</i>
Cheddar Pink . . . . .	<i>Dianthus gratianopolitanus</i>
Coneflower, Purple; Magnus . . . . .	<i>Echinacea purpurea</i>
Weeping Forsythia . . . . .	<i>Forsythia suspensa</i>
Gaillardia, Blanket Flower: 'Goblin' . . . . .	<i>Gaillardia</i> spp.
	<i>Gaura</i> spp.
Gentian . . . . .	<i>Gentiana dahurica</i>
Cranesbill . . . . .	<i>Geranium cinereum</i>
Baby's Breath . . . . .	<i>Gypsophila repens</i>
Sunrose . . . . .	<i>Helianthemum</i> spp.
Daylily: Aztec Gold, Stella De Oro, Tender Love . . . . .	<i>Hemerocallis</i> spp.
Coral Bell; Bridget Bloom . . . . .	<i>Heuchera</i> spp.
Mallow; Disco Belle White . . . . .	<i>Hibiscus</i> spp.
Hosta, Plantain Lily (Fragrant) . . . . .	<i>Hosta plantaginea</i>
Hosta, 'Searsucker' . . . . .	<i>Hosta sieboldiana</i>
	<i>Houttuynia cordata</i> var. <i>variegata</i>
Bigleaf Hydrangea . . . . .	<i>Hydrangea macrophylla</i>
	<i>Inula ensifolia</i>
Sword-Leaved Iris; Jodlesong . . . . .	<i>Iris ensata</i>
Siberian Iris; Cabernet . . . . .	<i>Iris siberica</i>
Parsoni . . . . .	<i>Juniperus davurica</i>
Crape Myrtle; Tuscarora . . . . .	<i>Lagerstromia indica</i> X <i>fauriei</i>
Weeping Lantana . . . . .	<i>Lantana montevidensis</i>
Lavender; Munstead . . . . .	<i>Lavender</i> spp.
Edelweiss . . . . .	<i>Leontopodium alpinum</i>
Chinese Privet; Variegata . . . . .	<i>Ligustrum sinense</i>
Lily; Jazz . . . . .	<i>Lilium</i> spp.
Liriope, Variegated . . . . .	<i>Liriope muscari</i> var. <i>variegata</i>
Liriope, Creeping . . . . .	<i>Liriope spicata</i>
Cardinal Flower, Indian Pink . . . . .	<i>Lobelia cardinalis</i>
Burgundy . . . . .	<i>Loropetalum chinense</i>
Loosestrife; Modern Pink . . . . .	<i>Lythrum</i> spp.
Yaku Jima**, Silberfeder** . . . . .	<i>Miscanthus sinensis</i>
Evening Primrose . . . . .	<i>Oenothera missouriensis</i>

Osmanthus (False Holly): Gulf Tide	<i>Osmanthus heterophyllus</i>
Tree Peony	<i>Paeonia suffruticosa</i>
Fountain Grass (Dwarf)**	<i>Pennisetum setaceum</i>
	<i>Perovskia atriplicifolia</i>
Dragonhead, False; Vivid	<i>Physostegia virginiana</i>
Oak, Shumard's Red	<i>Quercus shumardii</i>
Yedda Hawthorne	<i>Raphiolepis umbellata</i>
'Delaware Valley White'	<i>Rhododendron (including Azalea)</i>
'Flame Creeper'	
'Girard Crimson'	
'George L. Tabor'	
'Wakeiebisu'	
'White Gumpo'	
Black-Eyed Susan: Goldstrum	<i>Rudbeckia</i> spp.
Saxifrage; Purple Dome	<i>Saxifraga</i> spp.
Pincushion Flower	<i>Scabiosa</i> spp.
Stonecrop; Lidakense	<i>Sedum cauticola</i>
Stonecrop	<i>Sedum dasyphyllum</i>
Stonecrop; Dragon's Blood	<i>Sedum spurium</i>
Spirea: Anthony Waterer	<i>Spiraea bumalda</i>
Australian Brushcherry	<i>Syzygium paniculatum</i>
Germander	<i>Teucrium</i> spp.
Meadow Rue	<i>Thalictrum dipterocarpum</i>
Veronica, Speedwell; Sunny Border	<i>Veronica</i> spp.
Arrowwood Viburnum	<i>Viburnum suspensum</i>

\*\* Not for use on container-grown plants.

#### VEGETATION MANAGEMENT

Quali-Pro Proflam 65 WDG may be applied to soil surfaces for preemergence control of many grass and broadleaf weeds in:

- Noncrop areas including ornamentals (does not include container or field-grown ornamentals) and established perennial and wildflower plantings on or surrounding:
  - o Managed rights-of-way for transportation systems and utilities including roadways, roadsides, railways, and equipment yards;
  - o Facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows.



**Weeds Controlled–Vegetation Management**

When used as directed in this label, Quali-Pro Proflaminate 65 WDG will control the following weeds:

Barnyardgrass  
Bluegrass, Annual (*Poa annua*)<sup>1</sup>  
Carpetweed  
Chickweed, Common<sup>1</sup>  
Chickweed, Mouseear (from seed)  
Crabgrass (Large, Smooth)<sup>3</sup>  
Crowfootgrass  
Cupgrass, Woolly  
Foxtails, Annual  
Goosegrass<sup>3</sup>  
Henbit<sup>1</sup>  
Itchgrass  
Johnsongrass (from seed)  
Junglerice  
Knotweed<sup>1</sup>  
Kochia  
Lambsquarter, Common  
Lovegrass  
Panicum (Texas, Fall, Browntop)  
Pigweed  
Purslane, Common  
Pusley, Florida  
Rescuegrass<sup>2</sup>  
Shepherdspurse<sup>1</sup>  
Signalgrass, Broadleaf  
Speedwell, Persian  
Sprangletop  
Spurge, Prostrate  
Witchgrass  
Woodsorrel, Yellow (from seed)

<sup>1</sup> To control this weed, apply Quali-Pro Proflaminate 65 WDG in late summer, fall, or winter before weed seeds germinate.

<sup>2</sup> Suppression only.

<sup>3</sup> Sequential applications may be made as long as the total amount of product applied does not exceed 2.3 lbs./A per year. To control weeds, all applications must be made before weed seeds germinate.

**Application Timing and Information--Vegetation Management**

Quali-Pro Proflam 65 WDG:

1. Provides residual preemergence weed control.
2. Will not control emerged weeds.
3. May be applied to newly transplanted and established ornamentals as a broadcast or over-the-top spray.
4. Is most effective when the product is activated in the soil before weed seeds germinate and within 14 days after application.
5. Is activated when the treated area receives at least 0.5 inches of irrigation or rainfall or shallow (1-2 inches) mechanical incorporation.
6. Is most effective when applied to soil free of clods, weeds, and debris such as leaves and mulch.

**Use Precautions--Vegetation Management**

To reduce injury potential:

1. Direct application of Quali-Pro Proflam 65 WDG to rapidly growing tissue or buds may injure desirable plants. In the spring when buds are rapidly growing and expanding, over-the-top application of Quali-Pro Proflam 65 WDG may temporarily injure new growth of desirable plants. To reduce the possibility of injury at this time, wait to apply Quali-Pro Proflam 65 WDG over the top of newly emerged vegetation until it has hardened off unless your experience indicates that the ornamental plant will not be injured by the over-the-top application.
2. After application (immediately for deciduous plants), irrigate the treated area to wash Quali-Pro Proflam 65 WDG from plant surfaces onto soil. Watering plants before application may improve the washing process.

**How Much and When to Apply--Vegetation Management**

AMOUNT TO APPLY (BROADCAST)*	WHEN TO APPLY	COMMENTS/INSTRUCTIONS
1.0-2.3 lbs./A. or 0.37-0.83 oz/1000 sq.ft.	In fall and/or spring before weeds germinate or after weeds are removed.	Use the higher rate for longer control. Quali-Pro Proflam 65 WDG may be applied more than once per year as long as the total amount of product applied does not exceed 2.3 lbs./A. per year.

\*Note: For band application, calculate amount per acre:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast rate} = \text{amt. to apply/acre of field}$$

**Equivalent Measurements for Quali-Pro Proflaminate 65 WDG**

Lbs./A	Oz./1000 sq. ft.	Approximate Equivalent Tablespoons/1000 sq. ft.
1.0	0.37	1
1.5	0.55	1 1/2
2.0	0.74	2
2.3	0.83	2 1/4

**Application Sites and Use Precautions–Vegetation Management**

SITE	USE PRECAUTIONS
Ornamental Trees, Shrubs, Vines	Apply as a broadcast, over-the-top, or as a directed spray. Delay applications to newly transplanted ornamentals until soil has settled around transplants.
Ornamental Bulbs and Perennial Wildflower Plantings	May be applied to bulbs or perennial wildflower species listed in the section <b>Tolerant Ornamental Species</b> . Apply before or after bulbs emerge but before bloom and weeds emerge. In wildflowers, a postemergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.

**Tank Mixtures–Vegetation Management**

Quali-Pro Proflaminate 65 WDG may be tank mixed with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with Quali-Pro Proflaminate 65 WDG are for use only in states where the tank mix partner(s), application site, and intended use pattern are registered.

Follow the label(s) of the tank mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining tank mix partners in the spray tank, test compatibility by mixing the products in a small container. See the **COMPATIBILITY TEST** section.

**Tank Mixing and Application--Vegetation Management**

**Tank Mix Partners for Quali-Pro Proflaminate 65 WDG**

PRODUCT	PRECAUTIONS/INSTRUCTIONS
Goal <sup>®</sup> , Galigan <sup>®</sup> (use on conifers only)	Mix with Quali-Pro Proflaminate 65 WDG for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery <sup>®</sup> , Princep <sup>®</sup> , Pennant <sup>®</sup>	See product labels for weed spectrum and tolerant ornamentals.
Touchdown <sup>®</sup> Pro (or other glyphosate-based labeled products), Reward <sup>®</sup> and Finale <sup>®</sup>	These nonselective tank mix herbicides control most emerged annual broadleaves and grasses. Take extreme care to prevent tank mixtures with these partner products from contacting the foliage and stems of turf-grass, trees, shrubs, or other desirable vegetation because desirable vegetation may be severely injured or killed. Apply these tank mixtures as a directed spray and use a shield to prevent spray from contacting foliage of desirable plants. Follow instructions on the tank mix partner's label; delay irrigation of the treated area to allow time for the herbicide to be absorbed by weed foliage.

**Tolerant Ornamental Species\*--Vegetation Management**

**\*Not for use on container or field-grown ornamentals**

Quali-Pro Proflaminate 65 WDG will not harm most trees, shrubs, vines, and flowers. The species listed below in Table 4 are tolerant to Quali-Pro Proflaminate 65 WDG.

Quali-Pro Proflaminate 65 WDG is approved for application, except in California, to the species in Table 5. Quali-Pro Proflaminate 65 WDG may be applied over the top of the listed species.

When plants are under stress (such as heat, drought, or frost damage), some cultivars of listed plants may be sensitive to Quali-Pro Proflaminate 65 WDG.

**TABLE 4: TOLERANT ORNAMENTAL SPECIES\*--VEGETATION MANAGEMENT--ALL STATES**

Common Name	Scientific Name
Fir species (Balsam, Fraser, Noble, etc.)	..... <i>Abies</i> spp.
Japanese Maple	..... <i>Acer palmatum</i>

Norway Maple***	<i>Acer platanoides</i>
Kiwi**	<i>Actinidia chinensis</i>
Lily-of-the-Nile (African Lily)	<i>Agapanthus africanus</i>
Vine Hill Manzanita	<i>Arctostaphylos densiflora</i>
Cape Weed	<i>Arctotheca calendula</i>
Japanese Aucuba	<i>Aucuba japonica</i>
Barberry	<i>Berberis gladwynensis</i>
Wintergreen Barberry	<i>Berberis julianae</i>
Mentor Barberry	<i>Berberis mentorensis</i>
Japanese Barberry	<i>Berberis thunbergii</i>
Warty Barberry	<i>Berberis verruculosa</i>
Japanese Boxwood	<i>Buxus microphylla</i>
Weeping Bottlebrush	<i>Callistemon viminalis</i>
Scotch Heather	<i>Calluna vulgaris</i>
Hottentot Fig (Ice Plant)	<i>Carpobrotus edulis</i>
Feathery Cassia	<i>Cassia artemisoides</i>
Wild Lilac	<i>Ceanothus rigidus</i>
False Cypress	<i>Chamaecyparis pisifera</i>
Cleyera	<i>Cleyera japonica</i>
Citrus species**	<i>Citrus</i> spp.
Flowering Dogwood	<i>Cornus florida</i>
American Dogwood	<i>Cornus stolonifera</i>
Pampas Grass	<i>Cortaderia selloana</i>
Cranberry Cotoneaster	<i>Cotoneaster apiculatus</i>
Cotoneaster	<i>Cotoneaster buxifolius</i>
Bearberry Cotoneaster	<i>Cotoneaster dammeri</i>
Rockspray Cotoneaster	<i>Cotoneaster microphyllus</i>
Hawthorne	<i>Crataegus</i> spp.
Italian Cypress	<i>Cupressus sempervirens</i>
White Trailing Ice Plant	<i>Delosperma alba</i>
Hop Bush	<i>Dodonea viscosa</i>
Silverberry	<i>Elaeagnus pungens</i>
Wintercreeper	<i>Euonymus fortunei</i>
Japanese Spindle Tree (Evergreen Euonymus)	<i>Euonymus japonica</i>
Spreading Euonymus	<i>Euonymus kiautschovica</i>
Japanese Aralia	<i>Fatsia japonica</i>
Border Forsythia	<i>Forsythia intermedia</i>
Greenstem Forsythia	<i>Forsythia viridissima</i>

Gardenia, Cape-Jasmine . . . . .	<i>Gardenia jasminoides</i>
Gladiolus species . . . . .	<i>Gladiolus</i> spp.
English Ivy . . . . .	<i>Hedera helix</i>
Rose of Sharon . . . . .	<i>Hibiscus</i>
Chinese Hibiscus . . . . .	<i>Hibiscus Rosa-sinensis</i>
Chinese Holly . . . . .	<i>Ilex cornuta</i>
Japanese Holly . . . . .	<i>Ilex crenata</i>
American Holly . . . . .	<i>Ilex opaca</i>
Holly . . . . .	<i>Ilex pernyi</i>
Yaupon Holly . . . . .	<i>Ilex vomitoria</i>
Iris species . . . . .	<i>Iris</i> spp.
Winter Jasmine . . . . .	<i>Jasminium nudiflorum</i>
Chinese Juniper . . . . .	<i>Juniperus chinensis</i>
Shore Juniper . . . . .	<i>Juniperus conferta</i>
Creeping Juniper . . . . .	<i>Juniperus horizontalis</i>
Walnut** . . . . .	<i>Juglans</i> spp.
Shrimp Plant . . . . .	<i>Justicia brandegeana</i>
Crape Myrtle . . . . .	<i>Lagerstromia indica</i>
Amur Privet . . . . .	<i>Ligustrum amurense</i>
Japanese Privet . . . . .	<i>Ligustrum japonicum</i>
Glossy Privet (wax-leaf) . . . . .	<i>Ligustrum lucidum</i>
Big Blue Lillyturf . . . . .	<i>Liriope muscari</i>
Japanese Honeysuckle . . . . .	<i>Lonicera japonica</i>
Tatarian Honeysuckle . . . . .	<i>Lonicera tatarica</i>
Magnolia species . . . . .	<i>Magnolia</i> spp.
Ice Plant . . . . .	<i>Maleophora luteola</i>
Crabapple** . . . . .	<i>Malus</i> spp.
Heavenly Bamboo . . . . .	<i>Nandina domestica</i>
Narcissus species . . . . .	<i>Narcissus</i> spp.
Oleander . . . . .	<i>Nerium</i> spp.
Olive** . . . . .	<i>Olea europaea</i>
Mondo Grass . . . . .	<i>Ophiopogon japonicus</i>
Trailing African Daisy . . . . .	<i>Osteospermum fruticosum</i>
Sourwood . . . . .	<i>Oxydendrum arboreum</i>
Avocado** . . . . .	<i>Persea americana</i>
Fraser's Photinia (Redtip) . . . . .	<i>Photinia fraseri</i>
Spruce species*** (Colorado Blue, Norway, etc.) . . . . .	<i>Picea</i> spp.
Lily-of-the-Valley Shrub . . . . .	<i>Pieris japonica</i>

Calabrian Pine	<i>Pinus brutia</i>
Canary Island Pine	<i>Pinus canariensis</i>
Slash Pine	<i>Pinus elliotii</i>
Aleppo Pine	<i>Pinus halepensis</i>
Austrian Black Pine	<i>Pinus nigra</i>
Longleaf Pine	<i>Pinus palustris</i>
Monterey Pine	<i>Pinus radiata</i>
Eastern White Pine	<i>Pinus strobus</i>
Scotch Pine	<i>Pinus sylvestris</i>
Loblolly Pine	<i>Pinus taeda</i>
Japanese Black Pine	<i>Pinus thunbergiana</i>
Virginia Pine	<i>Pinus virginiana</i>
Pistachio**	<i>Pistacia</i> spp.
Queensland Pittosporum	<i>Pittosporum rhombifolium</i>
Japanese Pittosporum	<i>Pittosporum tobira</i>
Japanese Yew	<i>Podocarpus macrophyllus</i>
English Laurel	<i>Prunus laurocerasus</i>
Almond, Apricot, Nectarine, Peach, Plum, Prune**	<i>Prunus</i> spp.
Douglas Fir***	<i>Pseudotsuga menziesii</i>
Firethorn, Scarlet	<i>Pyracantha coccinea</i>
Firethorn, Chinese	<i>Pyracantha fortuneana</i>
Firethorn, Formosa	<i>Pyracantha koidzumii</i>
Bradford Pear spp.	<i>Pyrus</i> spp.
Oak species	<i>Quercus rubra</i>
Indian Hawthorne	<i>Raphiolepis indica</i>
'Coral Bells'	<i>Rhododendron (including Azalea)</i>
'Formosa'	
'Hino-crimson'	
'PJM'	
'Roseum Elegans'	
Lady Bank's Rose	<i>Rosa banksiae</i>
Rosemary**	<i>Rosmarinus officinalis</i>
Leatherleaf Fern	<i>Rumohra adiantiformis</i>
	<i>Santolina virens</i>
Stoncrop	<i>Sedum album</i>
Japanese Boxcherry	<i>Syzygium paniculatum</i>
Japanese Yew	<i>Taxus cuspidata</i>
Yew	<i>Taxus media</i>

American Arborvitae	<i>Thuja occidentalis</i>
Star Jasmine	<i>Trachelospermum asiaticum</i>
Canada Hemlock	<i>Tsuga canadensis</i>
Tulip species	<i>Tulipa</i> spp.
Japanese Viburnum	<i>Viburnum japonicum</i>
Sweet Viburnum	<i>Viburnum odoratissimum</i>
Japanese Snowball	<i>Viburnum plicatum</i>
Canary Island Viburnum	<i>Viburnum rigidum</i>
Laurustinus	<i>Viburnum tinus</i>
Cranberry Bush	<i>Viburnum trilobium</i>
Leatherleaf Viburnum	<i>Viburnum wrightii</i>
Vinca	<i>Vinca major</i>
Dwarf Periwinkle	<i>Vinca minor</i>
Grape**	<i>Vitis</i> spp.**
Old Fashioned Weigela	<i>Weigela florida</i>
Spanish Bayonet	<i>Yucca aloifolia</i>
Yucca, Adam's Needle	<i>Yucca filamentosa</i>

\*Not for use on container or field-grown ornamentals.  
 \*\*Do not use on food-producing trees, vines, or plants.  
 \*\*\*Landscape ornamentals only.

**TABLE 5: TOLERANT ORNAMENTAL SPECIES\*-VEGETATION MANAGEMENT-ALL STATES EXCEPT CA**

COMMON NAME	SCIENTIFIC NAME
Abelia: Sherwood	<i>Abelia grandiflora</i>
Yarrow: King Edward	<i>Achillea</i> spp. <i>Agapanthus orientalis</i>
Five-Leaf or Chocolate Vine	<i>Akebia quintata</i>
Lady's Leek, Nodding Onion	<i>Allium cernuum</i>
Japanese Anemone	<i>Anemone hybrida</i>
Aquilegia: Red and Gold	<i>Aquilegia</i> spp.
Wormwood; Silver Mound, Castle	<i>Artemisia</i> spp.
Aster: Bonny Blue, Purple Dome	<i>Aster</i> spp. <i>Aster X frikartii</i>
Lady Fern; Fern Lady	<i>Athyrium filix-femina</i>
Fibrous Begonia: Hardy Grandis	<i>Begonia</i> spp. <i>Bergenia cordifolia</i>



Snowbank	<i>Boltonia asteroides</i>
Bougainvillea	<i>Bougainvillea</i> spp.
Butterfly-Bush(Dwarf Blue); Royal Red	<i>Buddleia davidii</i>
Crimson Bottlebrush	<i>Callistemon citrinus</i>
Tussock Bellflower; (White Clips)	<i>Campanula carpatica</i>
Trumpet Creeper, Trumpet Flower, Madame Galen	<i>Campis X tagliabuana</i>
	<i>Ceratostigma plumbaginoides</i>
	<i>Chrysanthemum nipponicum</i>
Coreopsis (Calliopsis); Early Sunrise, Moonbeam	<i>Coreopsis</i> spp.
Lucifer	<i>Crocosmia</i> spp.
Cooperi Pink	<i>Delosperma</i> spp.
Larkspur; Blue Elf	<i>Delphinium</i> spp.
Dianthus, Maiden Pinks 'Zing'	<i>Dianthus deltoides</i>
Cheddar Pink	<i>Dianthus gratianopolitanus</i>
Coneflower, Purple; Magnus	<i>Echinacea purpurea</i>
Weeping Forsythia	<i>Forsythia suspensa</i>
Gaillardia, Blanket Flower: 'Goblin'	<i>Gaillardia</i> spp.
	<i>Gaura</i> spp.
Gentian	<i>Gentiana dahurica</i>
Cranesbill	<i>Geranium cinereum</i>
Baby's Breath	<i>Gypsophila repens</i>
Sunrose	<i>Helianthemum</i> spp.
Daylily; Aztec Gold, Stella De Oro, Tender Love	<i>Hemerocallis</i> spp.
Coral Bell; Bridget Bloom	<i>Heuchera</i> spp.
Mallow; Disco Belle White	<i>Hibiscus</i> spp.
Hosta, Plantain Lily (Fragrant)	<i>Hosta plantaginea</i>
Hosta, "Searsucker"	<i>Hosta sioboldiana</i>
	<i>Houttuynia cordata</i> var. <i>variegata</i>
Bigleaf Hydrangea	<i>Hydrangea macrophylla</i>
	<i>Inula ensifolia</i>
Sword-Leaved Iris; Jodlesong	<i>Iris ensata</i>
Siberian Iris; Cabernet	<i>Iris sibirica</i>
Parsoni	<i>Juniperus davurica</i>
Crape Myrtle; Tuscarora	<i>Lagerstromia indica X tauriei</i>
Weeping Lantana	<i>Lantana montevidensis</i>
Lavender; Munstead	<i>Lavender</i> spp.
Edelweiss	<i>Leontopodium alpinum</i>
Chinese Privet; Variegata	<i>Ligustrum sinense</i>

Lily; Jazz	.....	<i>Lilium</i> spp.
Liriope, Variegated	.....	<i>Liriope muscari</i> var. <i>variegata</i>
Liriope, Creeping	.....	<i>Liriope spicata</i>
Cardinal Flower, Indian Pink	.....	<i>Lobelia cardinalis</i>
Burgundy	.....	<i>Loropetalum chinense</i>
Loosestrife; Modern Pink	.....	<i>Lythrum</i> spp.
Yaku Jima, Silberfeder**	.....	<i>Miscanthus sinensis</i>
Evening Primrose	.....	<i>Oenothera missouriensis</i>
Osmanthus (False Holly); Gulf Tide	.....	<i>Osmanthus heterophyllus</i>
Tree Peony	.....	<i>Paeonia suffruticosa</i>
Fountain Grass (Dwarf)**	.....	<i>Pennisetum setaceum</i>
		<i>Perovskia atriplicifolia</i>
Dragonhead, False; Vivid	.....	<i>Physostegia virginiana</i>
Oak, Shumard's Red44	.....	<i>Quercus shumardii</i>
Yedda Hawthorne	.....	<i>Raphiolepis umbellata</i>
'Delaware Valley White'	.....	<i>Rhododendron (including Azalea)</i>
'Flame Creeper'		
'Girard Crimson'		
'George L. Tabor'		
'Wakeiebisu'		
'White Gumpo'		
Black-Eyed Susan; Goldstrum	.....	<i>Rudbeckia</i> spp.
Saxifrage; Purple Dome	.....	<i>Saxifraga</i> spp.
Pincushion Flower	.....	<i>Scabiosa</i> spp.
Stonecrop; Lidakense	.....	<i>Sedum cauticola</i>
Stonecrop	.....	<i>Sedum dasyphyllum</i>
Stonecrop; Dragon's Blood	.....	<i>Sedum spurium</i>
Spirea; Anthony Waterer	.....	<i>Spiraea bumalda</i>
Australian Brushcherry	.....	<i>Syzygium paniculatum</i>
Germander	.....	<i>Teucrium</i> spp.
Meadow Rue	.....	<i>Thalictrum dipterocarpum</i>
Veronica, Speedwell; Sunny Border	.....	<i>Veronica</i> spp.
Arrowood Viburnum	.....	<i>Viburnum suspensum</i>

\*Not for use on container or field-grown ornamentals.

\*\* Landscape ornamentals only.

**CONIFER AND HARDWOOD SEEDLING NURSERIES (NONORNAMENTAL, FORESTRY USE ONLY)-VEGETATION MANAGEMENT-QUALI-PRO PRODIAMINE 65 WDG**

1. Provides residual preemergence weed control in conifer and hardwood seedling nurseries.
2. Provides the most effective weed control when the product is activated in the soil by 0.5 inch of irrigation or rainfall before weed seeds germinate and within 14 days after application.
3. Should be applied to conifer and hardwood seedling nurseries any time after the soil has settled around newly transplanted seedlings and liners.

SITE	APPLICATION RATE		TIMING	COMMENTS/INSTRUCTIONS
	Lbs./A	Oz./1000 sq.ft		
Conifer and Hardwood Seedling Nurseries	1.0-2.3	0.37-0.84	Apply in fall or spring before weed seeds germinate or after weeds are removed.	Use higher rate range for longer control. More than one application per year is permitted, but do not apply more than 2.3 lbs./A per year.
Southern Pine Seedbeds	0.75	---	Just after seeding and/or a minimum of 3 weeks after most seedlings have shed their seedcoat.	To assist in the establishment of Southern pine seedbeds, apply this product preemergence just after seeding pines. Application after emergence of pine seedlings should not occur until 3 weeks after most seedlings have shed their seedcoat. Mix this product with clean water and broadcast spray at 20 to 40 psi in a minimum of 20 gals. of water per treated area. After application, sprinkler irrigate beds with approximately 1/2 inch of water.
Hardwood, Seedbeds: Oak ( <i>Quercus</i> spp.), Sweetgum, Green Ash	0.75-1.5	---	When seedlings are at least 6 weeks old (from time of 50% germination).	Use higher rate for longer control and when higher weed pressure is anticipated. The lower rate will provide 2 to 3 months of weed control. Broadcast to beds and apply approximately 1/2 inch of sprinkler irrigation afterwards.

**Tank Mixtures–Conifer Seedling Nurseries–Vegetation Management**

Quali-Pro Prodiamine 65 WDG may be tank mixed with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with Quali-Pro Prodiamine 65 WDG are for use only in states where the tank mix partner, application site, and intended use pattern are registered.

Follow the label of the tank mix partner for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining the tank mix partner in the spray tank, test compatibility by mixing the products in small container. See the COMPATIBILITY TEST section.

**Tank Mixing and Application–Vegetation Management**

**Tank Mix Partner for Quali-Pro Prodiamine 65 WDG-Conifer Seedling Nurseries**

PRODUCT	PRECAUTIONS/INSTRUCTIONS
Goal®, Galigan® (use on conifers only)	Mix with Quali-Pro Prodiamine 65 WDG for postemergence control of certain broadleaf weeds including malva and filaree.

**VEGETATION MANAGEMENT (NONCROP AREAS)**

- May be applied in soil surfaces for preemergence control of many grass and broadleaf weeds.
- Is most effective when activated by at least 0.5 inch rainfall or irrigation or shallow incorporation before weed seeds germinate and within 14 days after application.

SITE	APPLICATION RATE		TIMING	COMMENTS/ INSTRUCTIONS
	LBS./A	OZ./1000 SQ.FT		
Noncrop areas including ornamentals on or surrounding managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, and equipment yards), facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows	1.0-2.3	0.36-0.83	Before weed seeds germinate	Use higher rate for longer control. This product may be applied more than once per year, but do not apply more than 2.3 lbs./A per year.

Quali-Pro Prodiamine 65 WDG may be tank mixed with other registered herbicides to provide a broader spectrum of weed control or to control emerged weeds or brush. Tank mixes with Quali-Pro Prodiamine 65 WDG are for use only in states where the tank mix partner(s) are registered for the application site.

**Tank Mix Partners with Quali-Pro Prodiamine 65 WDG–Vegetation Management**

PRODUCTS	COMMENTS
Touchdown® Pro (and glyphosate-based products <sup>1</sup> ) Gramoxone®, Reward®, Predict®, Princep®, Vanquish®, diuron-based products <sup>1</sup> , Finale®, Gallery, Garlon®, Goal®, Krovar® I and II, Oust®, Arsenal®, Spike™, and Telar®	Follow the label(s) of the tank mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Do not mix Quali-Pro Prodiamine 65 WDG with any product whose label prohibits mixing with another pesticide.

<sup>1</sup> Products with this chemical as the active ingredient and which are labeled for the same use may be used.

**CHEMIGATION INSTRUCTIONS-OVERHEAD SPRINKLER IRRIGATION APPLICATION**

**Use Precautions**

1. Apply this product only through an overhead sprinkler irrigation system. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
3. To avoid injury to foliage, make sure foliage is sufficiently wet before application or adequate irrigation is applied after application.
4. If sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result.
5. If sprinkler distribution patterns overlap excessively, injury to leatherleaf ferns may result.
6. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to public water systems unless pesticide label-prescribed safety devices for public water systems are in place.
7. If necessary, a person knowledgeable of the chemigation system and responsible for its operation, or someone under the supervision of the responsible person, shall shut the system down and make necessary adjustments.

**Operation Instructions**

1. The system must contain a functional check valve, vacuum-relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 20 parts of water to 1 part Quali-Pro Prodiamine 65 WDG and inject this herbicide suspension mixture into the overhead system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Before injecting Quali-Pro Prodiamine 65 WDG into the system, run the irrigation system long enough to wet the foliage, then inject Quali-Pro Prodiamine 65 WDG suspension mixture in the pesticide supply tank (see number 8 above) in 1 inch of irrigation water. After the application is complete, continue the irrigation until all residues are washed off the foliage.

**Application Precautions**

To reduce injury potential:

1. Direct application of Quali-Pro Prodiamine 65 WDG to rapidly growing tissue or buds may injure desirable plants. Do not make over-the-top application of Quali-Pro Prodiamine 65 WDG until after newly formed tissue has hardened off.
2. Immediately wash Quali-Pro Prodiamine 65 WDG from plant surfaces onto soil.
3. Do not apply to newly transplanted ferns until after the plants are established and begin to grow.

**Weeds controlled**

<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>
Florida Betony .....	<i>Stachys floridana</i>
Buttercup Oxalis .....	<i>Oxalis pes-caprae</i>
Crabgrass .....	<i>Digitaria</i> spp.
Common Vetch .....	<i>Vicia sativa</i>

**Weeds suppressed**

<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>
Wandering Jew .....	<i>Zebrian pendul</i>

**FOR CONTROL OF CERTAIN WEEDS ON DRAINAGE DITCHES IN CALIFORNIA AND ARIZONA ONLY**

**Irrigation, Drainage Ditches, Spreading Grounds, Channels, Canals, and Similar Sites:**  
Apply 1.0 to 2.3 lbs. per acre for preemergent control of shallow germinating annual grasses and small seeded broadleaf weeds. Proflam 65WG inhibits growth and development of newly germinated weed seeds. It will not control established vegetation. Higher rates of application provide for a longer control period. Sequential applications are allowed so long as the total amount of product applied does not exceed the maximum annual application of 2.3 lbs. per acre. Apply only when water is not present. For irrigation ditches, apply when ditch is not in use. To minimize movement of Proflam 65WG with irrigation water and to activate product, it is essential that the herbicide be fixed in the soil by moisture. Apply before expected seasonal rainfall (if possible when soil in the ditch is still moist). Following treatment, if rainfall has not totaled at least one-half inch within 14 to 21 days, fill ditch with water and allow to stand for 48 hours; drain off any remaining water before using ditch.

**Wastewater Treatment Facilities (Levees)**

Apply 1.0 to 2.3 lbs. per acre for preemergent control of shallow germinating annual grasses and small seeded broadleaf weeds. Use the higher rate of application for longer control periods. Sequential applications are allowed so long as the total amount of product applied does not exceed the maximum annual application of 2.3 lbs. per acre. Applications may be made down to the water level. Do not apply to the water. Care must be taken not to allow overspray of the water or drift into the water.

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container away from fertilizer, feed, or foodstuffs.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

#### CONTAINER DISPOSAL:

**Nonrefillable Container (flexible-bag-all weights):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available.

**Nonrefillable Container (rigid-fifty lbs. or less):** 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 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.

**Nonrefillable Container (rigid-greater than fifty lbs.):** 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 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.

**Refillable Container:** Refillable container. Refill this container with profluminate 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.

#### LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES, and LIMITATIONS OF LIABILITY.**

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be



followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Makhteshim Agan of North America, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Makhteshim Agan of North America, Inc.'s election, the replacement of product.

Finale® - Bayer CropScience  
Galigan® - Agan Chemical Manufacturers, Ltd.  
Gallery®, Goal®, - Dow AgroSciences  
Pennant®, Princep®, Touchdown® - Syngenta Group Company

Quali-Pro® is a registered trademark of Makhteshim Agan of North America, Inc.



# Prodiamine 65 WDG

*Herbicide*

ACTIVE INGREDIENT:	% BY WT.
Prodiamine (CAS No. 29091-21-2) .....	65.0%
INERT INGREDIENTS: .....	35.0%
TOTAL: .....	100.0%

EPA REG. NO. 66222-89

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

For additional precautionary, handling, and use statements, see inside of this booklet.

Manufactured for:  
**Makhteshim Agan of North America, Inc.**  
4515 Falls of Neuse Road, Suite 300  
Raleigh, NC 27609

EPA 051104/EPA 072006/  
Notif 072308/Rev D

EPA EST. NO. 37429-GA-01<sup>BT</sup> EPA EST. NO. 37429-GA-02<sup>BO</sup>  
Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

13358

**Net Contents: 5 Pounds**

**1. IDENTIFICATION**

Product name: **Quali-Pro® Prodiamine 65 WDG**  
 Chemical name of active ingredient(s): Prodiamine: 2,4-dinitro-N3,N3-dipropyl-6-(trifluoromethyl)-1,3-benzenediamine  
 Registrant/Manufacturer: Makhteshim Agan of North America, Inc.  
 4515 Falls of Neuse Road, Suite 300  
 Raleigh, NC 27609  
 Phone: 919-256-9300  
 For fire, spill, and/or leak emergencies, contact Infotrac: Phone: 1-800-535-5053  
 For medical emergencies and health and safety inquiries, contact Prosar: Phone: 1-877-250-9291

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

COMMON NAME	CAS NO.	%	OSHA PEL	ACIGH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Prodiamine	29091-21-2	65	NE	NE	-	NA
NE=Not established NA=Not applicable						

**3. HAZARDS IDENTIFICATIONS**

**PHYSICAL PROPERTIES**

Appearance: Yellow granules  
 Odor: Odorless

**EMERGENCY OVERVIEW:** CAUTION. Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Can decompose at high temperatures forming toxic gases.

**UNUSUAL FIRE, EXPLOSION, AND REACTIVITY HAZARDS:** This product is considered electrically conductive. Static electricity, mechanical sparks, open flames and certain hot surfaces (greater than 680°F [360°C]) can serve as ignition sources for this material. This material can energetically decompose at approximately 383°F (195°C).

**SYMPTOMS OF ACUTE EXPOSURE:** Causes mild eye and skin irritation. Allergic skin reactions are possible.

**MEDICAL CONDITIONS LIKELY TO BE AGGRAVATED BY EXPOSURE:** None known.

**4. FIRST AID MEASURES**

FIRST AID	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> </ul>

• Do not induce vomiting unless told to do so by a poison control center or doctor.  
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For medical emergencies involving this product, call Prozar at 1-877-250-9291.

#### 5. FIRE FIGHTING MEASURES

**FLASH POINT:** Not applicable

**METHOD USED:** Not applicable

**FLAMMABLE LIMITS: LFL/UFL:** Not applicable

**AUTOIGNITION TEMPERATURE:** Not applicable

**FLAMMABILITY:** Not applicable

**EXTINGUISHING MEDIA:** Foam, CO<sub>2</sub>, dry chemical

**UNUSUAL FIRE, EXPLOSION, AND REACTIVITY HAZARDS:** This product is considered electrically conductive. Static electricity, mechanical sparks, open flames and certain hot surfaces (greater than 680°F [360°C] can serve as ignition sources for this material. This material can energetically decompose at approximately 383°F (195°C).

**HAZARDOUS DECOMPOSITION PRODUCTS:** Can decompose at high temperatures forming toxic gases.

**FIRE-FIGHTING PROCEDURES:** Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

#### 6. ACCIDENTAL RELEASE MEASURES

**ACTION TO TAKE FOR SPILLS/LEAKS:** Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage system or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Sweep up material and place in a compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is clean up and placed in a disposal container, seal container and arrange for disposition.

#### 7. HANDLING AND STORAGE

**PRECAUTIONS TO BE TAKEN IN HANDLING:** Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Bulk bags (FIBC) used to contain this material should be either Type B or Type C. If Type C bags are used, make sure they are electrically grounded before powder is discharged from the bag.

Handle this material only in electrically conductive equipment. Electrically ground and bond this equipment as well as any worker who could contact a dust cloud formed of this material. Eliminate the presence of mechanical sparks and other ignition sources where dust clouds of this material could form.

**PRECAUTIONS TO BE TAKEN IN STORAGE:** Store in original container away from fertilizer, feed, or foodstuffs. Do not store or process above 320° F (160° C). Store material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area.

**STORAGE TEMPERATURE (MIN/MAX):**

Minimum: Normal ambient temperatures.

Maximum: 320° F (160° C)

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS**

**PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

**INGESTION PROTECTION:** Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

**EYE PROTECTION:** Where contact is likely, use chemical splash goggles.

**RESPIRATORY PROTECTION:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

**SKIN PROTECTION:** Where contact is likely, wear chemical-resistant gloves (such as nitrile or butyl), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

**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.
- After handling this product, immediately wash the outside of gloves before removing them. Immediately wash thoroughly and change into clean clothing.

**EXPOSURE GUIDELINES:** Refer to Section 2.

**ENGINEERING CONTROLS:** Refer to product label.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Yellow granules

**ODOR:** Odorless

**FLASH POINT:** Not applicable

**pH:** 9.36

**DENSITY:** 0.45 g/mL

**SOLUBILITY IN H<sub>2</sub>O (Prodiamine):** 0.013 ppm @ 77°F (25°C)

**VAPOR PRESSURE (Prodiamine):** <5.6 X 10<sup>-6</sup> mmHg @ 68°F (20°C)

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable under normal use and storage conditions.

**CONDITIONS TO AVOID:** Thermal, mechanical and electrical ignition sources.

**MATERIALS TO AVOID:** Oxidizing agents.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Can decompose at high temperatures forming toxic gases.

**11. TOXICOLOGICAL INFORMATION**

**ACUTE TOXICITY/IRRITATION STUDIES:**

Acute Oral LD50 (Rat): >5,000 mg/kg

Acute Dermal LD50 (Rat): >2,000 mg/kg

Acute Inhalation LC50 (Rat): 1.81 mg/L air (4-hours)

Eye Irritation (Rabbit): Mildly Irritating

Dermal Irritation (Rabbit): Practically Non-Irritation (Rabbit)

Dermal Sensitization (Guinea Pig): Sensitizing (Guinea Pig)

**REPRODUCTIVE/DEVELOPMENT EFFECTS**

MATERIAL SAFETY DATA SHEET

Quali-Pro® Prodiamine 65 WDG

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Prodiamine: Fetal toxicity at high dose levels (rats); development and maternal toxicity observed at 1 g/kg/day.

**CHRONIC/SUBCHRONIC TOXICITY STUDIES**

Prodiamine: Liver (alteration and enlargement) and thyroid effects (hormone imbalances) at high doses levels (rats); decreased body weight gains.

**CARCINOGENICITY**

Prodiamine: Benign thyroid tumors (rat). None observed (mouse).

**OTHER TOXICITY INFORMATION**

None

**TOXICITY OF OTHER COMPONENTS**

Dispersing Agent: Exposure can result in eye, skin and respiratory tract irritation.

Kaolin Clay: Long-term exposure to high concentrations of this dust may produce x-ray evidence of dust in the lungs. Continued long-term exposure may affect respiratory function in some individuals.

**TARGET ORGANS**

Active Ingredients:

Prodiamine: Liver, thyroid

Inert Ingredients:

Dispersing Agent: Eye, skin, respiratory tract

Kaolin Clay: Lung

**12. ECOLOGICAL INFORMATION**

**ENVIRONMENTAL HAZARDS:** This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations substantially above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment washwater.

**SUMMARY OF EFFECTS (Prodiamine):** Highly toxic to fish and invertebrates. Practically non-toxic to birds and bees.

**ECO-ACUTE TOXICITY:**

Rainbow Trout 96-hour LC50: 0.83 mg/L  
Bluegill Sunfish 96-hour LC50: 0.55 mg/L  
*Daphnia magna* 48-hour LC50: 0.66 mg/L  
Bobwhite 8-day Dietary LC50: >10,000 mg/L  
Mallard 8-day Dietary LC50: >10,000 mg/L  
Bees LC50/EC50: >100 ug/bee

**ENVIRONMENTAL FATE:**

Does not bioaccumulate. Persistent in soil. Stable in water. Immobile in soil. Sinks in water (after 24 hours).

**13. DISPOSAL CONSIDERATIONS**

**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:** Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

**14. TRANSPORT INFORMATION**

**DOT CLASSIFICATION:**

Not regulated

**INTERNATIONAL TRANSPORTATION:**

MATERIAL SAFETY DATA SHEET

Quali-Pro® Prodiamine 65 WDG

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**IMO (vessel):** UN 3077, Environmentally Hazardous Substances, Solid, N.O.S (prodiamine), 9, PGIII,  
Marine pollutant

**IATA (air):** Not regulated

**15. REGULATORY INFORMATION**

**SARA TITLE III CLASSIFICATION:**

Section 302: Not applicable.  
Section 311/312: Acute health hazard (immediate)  
Chronic health hazard (delayed)  
Reactivity hazard  
Section 313: Not applicable.

**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.

**16. OTHER INFORMATION**

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

**MSDS DATE:** 8-24-09. Supersedes version dated 10-31-07. Changes made to all sections.

The information herein is given in good faith, but no warrant, express or implied, is made. Consult Makhteshim Agan of North America, Inc. for further information.

**GENERAL INFORMATION**

90 can be used with insecticides, fungicides, growth regulators and bio-stimulants at various rates as determined by label and field experience.

**DIRECTIONS FOR USE**

Type of Herbicide Application	Per 100 gallons
Utility rights of way and roadside foliar.....	1/2 pint - 2 quarts
Forest site preparation .....	1 pint - 2 quarts per acre
Aquatic - surface .....	1/2 pint - 2 quarts
Aquatic - submerged .....	1 - 2 gallons
Agriculture/Citrus/Turf.....	1/2 - 2 pints
Insecticides/Fungicides/Acaricides.....	4 - 8 ounces

**STORAGE AND DISPOSAL**

Do not store near heat or open flame. Store in original container. Triple rinse (or equivalent) then dispose of or recondition container through the regulations set by local or state authorities.

**WARRANTY**

Red River warrants that this product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Red River, and buyer assumes the risk of any such use.





# Material Safety Data Sheet

MSDS DATE: 06/12/11 - SUPERSEDES: 04/14/08

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** RRSI PACER  
**DISTRIBUTOR:** Red River Specialties, Inc.  
**ADDRESS:** 7545 Haygood Road, Shreveport, LA 71137-7241  
**CHEMTREC PHONE:** US: 1-800-424-9300 International: 1-202-483-7616  
**CHEMICAL NAME:** Proprietary mixture  
**CHEMICAL FAMILY:** Crop oil concentrate  
**CHEMICAL FORMULA:** Mixture  
**PRODUCT USE:** Agricultural adjuvant oil  
**SECTION 1 NOTES:** None

## SECTION 2: HAZARDOUS INGREDIENTS

INGREDIENT	CAS NO.	% WT	SARA 313 REPORTABLE	TWA	OSHA STEL	Ceiling	TWA	ACGIH STEL	Ceiling
Ethylene oxide	75-21-8	<1 ppm	@ 0.1%	1 ppm			1 ppm		

**SECTION 2 NOTES:** None

## SECTION 3: HAZARDS IDENTIFICATION

**ROUTES OF ENTRY:** Eyes, skin, ingestion, inhalation

### POTENTIAL HEALTH EFFECTS

**EYES:** Direct contact with material or exposure to vapors is not expected to cause irritation.

**SKIN:** Direct contact with material or exposure to vapors is not expected to cause irritation. Prolonged or repeated skin contact may cause drying, cracking or dermatitis.

**INGESTION:** High concentrations of vapors or mist may irritate the respiratory tract. Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation and fibrous tissue formation.

**INHALATION:** May cause throat irritation, nausea, vomiting and diarrhea. Aspiration during ingestion may cause lung injury or possible death.

**ACUTE HEALTH HAZARDS:** None beyond those listed above

**CHRONIC HEALTH HAZARDS:** None known

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** None known

### CARCINOGENICITY

OSHA: No      ACGIH: No      NTP: No      IARC: No      OTHER: No

**SECTION 3 NOTES:** None

## SECTION 4: FIRST AID MEASURES

**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 with you when calling a poison control center or doctor, or going for treatment.

**If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

**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 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.

**SECTION 4 NOTES:** None

## SECTION 5: FIRE-FIGHTING MEASURES

**FLAMMABLE LIMITS IN AIR, (% BY VOLUME)**  
**UPPER:** Unknown  
**LOWER:** Unknown

**FLASH POINT:**  
**F:** >200  
**C:** >93

**METHOD USED:** PMCC

**AUTOIGNITION TEMPERATURE:**  
**F:** Unknown  
**C:** Unknown

**NFPA HAZARD CLASSIFICATION**  
**HEALTH:** 1

**FLAMMABILITY:** 1

**REACTIVITY:** 0

**OTHER:** -

**EXTINGUISHING MEDIA:** Carbon dioxide, dry chemical powder, chemical foam or water fog.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus when fire fighting in confined space.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Burning decomposition or combustion products may be toxic. Empty containers may retain residue and may be dangerous. Heated containers may rupture.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Burning may produce carbon monoxide.

**SECTION 5 NOTES:** None

# Material Safety Data Sheet

MSDS DATE: 06/12/11 - SUPERSEDES: 04/14/08

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**ACCIDENTAL RELEASE MEASURES:** **Small Spills:** Flush the area thoroughly with water and scrub to remove residue.  
**Large Spills:** Contain spill, cover with inert absorbent and transfer to waste disposal container.

**SECTION 6 NOTES:** None

## SECTION 7: HANDLING AND STORAGE

**HANDLING AND STORAGE:** Maintain good housekeeping practices and clean up spills promptly. NFPA Class IIIB storage. Never siphon by mouth.

**SECTION 7 NOTES:** None

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:**

**VENTILATION:** Normal room ventilation (mechanical) should be satisfactory.

**RESPIRATORY PROTECTION:** None required under normal use. If necessary, use a respirator with a hydrocarbon insert.

**EYE PROTECTION:** Chemical goggles

**SKIN PROTECTION:** Hydrocarbon resistant gloves

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Where spills and splashes are likely, wear protective clothing. Eye wash and safety shower should be available.

**WORK HYGIENIC PRACTICES:** None

**EXPOSURE GUIDELINES:** None

**SECTION 8 NOTES:** None

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Clear, amber

**ODOR:** Slight

**PHYSICAL STATE:** Liquid

**pH AS SUPPLIED:** Not applicable

**pH (Other):** 5 – 6 @ 1% in water

**BOILING POINT:** F: Unknown  
C: Unknown

**MELTING POINT:** F: Unknown  
C: Unknown

**FREEZING POINT:** F: Unknown  
C: Unknown

**VAPOR PRESSURE (mmHg):**  
@ F: Unknown  
C: Unknown

**VAPOR DENSITY (AIR = 1):**  
@ F: Unknown  
C: Unknown

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** ~0.87  
@ F: 68  
C: 20

**EVAPORATION RATE:** Unknown

**BASIS (butyl acetate=1):**

**SOLUBILITY IN WATER:** Dispersible

**VISCOSITY:** Unknown  
@ F:  
C:

**SECTION 9 NOTES:** None

## SECTION 10: STABILITY AND REACTIVITY

**STABILITY:** Stable

**CONDITIONS TO AVOID (STABILITY):** Avoid intense heat, sparks or flame.

**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong oxidizing agents

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Combustion may produce carbon monoxide and asphyxiants.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID (POLYMERIZATION):** None known

**SECTION 10 NOTES:** None

# Material Safety Data Sheet

MSDS DATE: 06/12/11 - SUPERSEDES: 04/14/08

## SECTION 11: TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL INFORMATION:

Acute oral toxicity, mg/kg (RAT): >5050  
Acute dermal toxicity, mg/kg (RAT): >5050  
Acute eye irritation, Draize (RABBIT): score of 6 at 1 hr., 0 at 24 hours and beyond  
Acute dermal irritation, (RABBIT): score 0.6/8.0, none after 72 hours, slightly irritating

SECTION 11 NOTES: None

## SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Not available

SECTION 12 NOTES: None

## SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Liquid may be absorbed onto inert carrier and landfilled or may be burned, if allowed by law. Disposal must be made in accordance with applicable governmental regulations. Do not flush to drain/storm sewer.

RCRA HAZARD CLASS: Not regulated

SECTION 13 NOTES: None

## SECTION 14: TRANSPORT INFORMATION

### U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME:  
HAZARD CLASS:  
ID NUMBER:  
PACKING GROUP:  
LABEL STATEMENT:

OTHER AGENCIES:

SECTION 14 NOTES: None

## SECTION 15: REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): Not listed  
CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not listed  
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):  
311/312 HAZARD CATEGORIES: Not regulated  
313 REPORTABLE INGREDIENTS: None present at reportable levels

### STATE REGULATIONS:

WARNING! 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 known

SECTION 15 NOTES: None

## SECTION 16: OTHER INFORMATION

OTHER INFORMATION: None

PREPARATION INFORMATION: Prepared on 6/12/11

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.

Red River Specialties, Inc.  
7545 Haygood Road  
Shreveport, LA 71137-7241

# SAFETY DATA SHEET

RRSI DEFOAMER

SDS DATE: 11/20/2015

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** RRSI DEFOAMER

**DISTRIBUTOR:** Red River Specialties, Inc.  
**ADDRESS:** 1324 N. Hearne Ave. Ste 120 Shreveport, LA 71108  
**PHONE:** (800) 256-3344

**EMERGENCY CHEMTREC PHONE:** US: 1-800-424-9300 International: 1-202-483-7616

**CHEMICAL NAME:** Proprietary mixture  
**CHEMICAL FAMILY:** Silicone antifoam  
**CHEMICAL FORMULA:** Mixture

**PRODUCT USE:** Antifoam

**SECTION 1 NOTES:** None

## SECTION 2: HAZARDOUS INGREDIENTS

### GHS Ratings:

**Toxicity categories:** NONE

**Signal Word:** NONE

**Hazard symbol:** NONE

### GHS HAZARDS

None Classified

DO NOT FREEZE

### PRECAUTIONS

P102 Keep out of reach of children.  
P103 Read label before use.  
P233 Keep container tightly closed.  
P234 Keep only in original container.  
P261 Avoid breathing dust, fume, gas, mist, vapors or spray.  
P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P281 Use personal protective equipment as required.  
P301+312 IF SWALLOWED: Call a POISON CENTER, doctor or physician if you feel unwell.  
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.

## SECTION 3: HAZARDS IDENTIFICATION

### INGREDIENT

None

### CAS NO.

### % WT

**NOTE:** Product does NOT contain any pesticides or pest control agents.

**SECTION 3 NOTES:** These specific chemical identities and or exact percentage (concentration) of composition have been withheld as a trade secret.

### CARCINOGENICITY

**OSHA:** No      **ACGIH:** No      **NTP:** No      **IARC:** No      **OTHER:** No

# SAFETY DATA SHEET

RRSI DEFOAMER

SDS DATE: 11/20/2015

## SECTION 4: FIRST AID MEASURES

*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 for several minutes.

**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:** 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: 1      FLAMMABILITY: 0      REACTIVITY: 0      OTHER: -

**IN CASE OF FIRE:** Use carbon dioxide or dry chemical for small fires and water fog or foam (alcohol, polymer, or ordinary) for large fires. Water stream may spread flames.

**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:** None

**HAZARDOUS DECOMPOSITION PRODUCTS:** None

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. Soak up spill with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. Wear suitable protective equipment.

SECTION 6 NOTES: None

## SECTION 7: HANDLING AND STORAGE

**HANDLING** Keep out of reach of children. Read label before use. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wear protective gloves, protective clothing, eye protection and face protection.

**STORAGE:** **Do NOT Freeze.** 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. Keep away from heat, sparks, open flames or hot surfaces. No smoking.

SECTION 7 NOTES: None

# SAFETY DATA SHEET

SDS DATE: 11/20/2015

RRSI DEFOAMER

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>VENTILATION:</b>	Normal room ventilation (mechanical) or outdoor use should be satisfactory.
<b>RESPIRATORY PROTECTION:</b>	Wear a NIOSH/OSHA approved respirator, approved for use with propionic acid, if necessary.
<b>EYE PROTECTION:</b>	Chemical goggles and face shield.
<b>SKIN PROTECTION:</b>	Wear protective gloves, long-sleeved shirts and pants.
<b>OTHER PROTECTIVE CLOTHING OR EQUIPMENT:</b>	Eye wash and safety shower should be easily accessible.
<b>WORK HYGIENIC PRACTICES:</b>	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.
<b>EXPOSURE GUIDELINES:</b>	If exposed, see section 4 for acute exposure first aid.
<b>SECTION 8 NOTES:</b>	None

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE:</b>	Milky	<b>FLAMMABLE LIMITS IN AIR, UPPER:</b>	Unknown
<b>ODOR:</b>	Mild odor	<b>(% BY VOLUME) LOWER:</b>	Unknown
<b>ORDER THRESHOLD:</b>	Not known	<b>VAPOR PRESSURE (mmHg):</b>	@ Unknown F: Unknown C: Unknown
<b>PHYSICAL STATE:</b>	Liquid	<b>VAPOR DENSITY (AIR = 1):</b>	@ Unknown F: Unknown C: Unknown
<b>pH AS SUPPLIED:</b>	Not applicable	<b>RELATIVE DENSITY:</b>	0.991 to 1.021
<b>pH (Other):</b>		<b>EVAPORATION RATE:</b>	Unknown
<b>INITIAL BOILING POINT:</b>	F: Unknown C: Unknown	<b>BASIS (butyl acetate=1):</b>	
<b>BOILING POINT RANGE:</b>	F: Unknown C: Unknown	<b>SOLUBILITY IN WATER:</b>	Dispersible
<b>MELTING POINT:</b>	F: Unknown C: Unknown	<b>PARTITION COEFFICIENT: (n-octanol/water):</b>	Unknown
<b>FREEZING POINT:</b>	F: Unknown C: Unknown	<b>AUTO-IGNITION TEMPERATURE:</b>	Unknown
<b>FLASH POINT:</b>	F: >200 C: >93	<b>DECOMPOSITION TEMPERATURE:</b>	Unknown
<b>METHOD USED:</b>	PMCC	<b>VISCOSITY:</b>	@ Unknown F: Unknown C: Unknown
<b>FLAMMABILITY (solid, gas):</b>	Can burn		

### SECTION 9 NOTES: Values 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

RRSI DEFOAMER

SDS DATE: 11/20/2015

## SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable  Unstable

CONDITIONS TO AVOID (STABILITY): None known

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizers.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Under fire conditions, oxides of carbon and silicon.

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 >5050mg/kg (Rabbit)  
Acute eye Irritation (Rabbit) scored 1.3 out of 110 effects cleared in 7 days  
Acute Dermal irritation (Rabbit) 0.2 out of 8.0 based on a 72 hour observation

COMPONENT TOXICITY None

SECTION 11 NOTES: None

## SECTION 12: ECOLOGICAL INFORMATION

### ECOLOGICAL INFORMATION:

ECOTOXICITY: Not available

BIOACCUMULATIVE POTENTIAL: Not available

MOBILITY IN SOIL: Not available

OTHER ADVERSE EFFECTS: Not available

SECTION 12 NOTES: None

## SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: 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.

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

# SAFETY DATA SHEET

RRSI DEFOAMER

SDS DATE: 11/20/2015

## 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:** None

**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.



# RRSI DEFOAMER

ANTIFOAM/DEFOAMER

## Specimen Label

### PRINCIPAL FUNCTIONING AGENTS

A proprietary blend of antifoaming agents, emulsifier and constituents ineffective as a spray adjuvant..... 100%  
All ingredients are exempt from tolerance under 40 CFR 180.

### PROTECT FROM FREEZING

### KEEP OUT OF REACH OF CHILDREN

Keep out of reach of children. Read label before use. Keep container tightly closed. Keep only in original container. Avoid breathing mist, vapors, or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves /protective clothing/eye protection/ personal protective equipment as required.

### 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, after the first 5 minutes, then continue cautiously rinsing eye

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing and wash it before reuse. Wash skin immediately 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:** 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

**DEFOAMER** is both an excellent defoamer that quickly dissipates even stable foam structures and an efficient antifoaming agent that prevents the further formation of tank mix foam.

Use of **DEFOAMER** will prevent foaming that can cause the loss of accurate pesticide rates through spillover during mix agitation and eliminate the regeneration of foam during field applications.

### DIRECTIONS FOR USE

Follow the recommendations of the most restrictive active ingredient label.

Tank mixtures should only be applied within the label recommendations of every product in the tank mixture.

Use only if an antifoaming and a defoaming agent is allowed or not excluded on the label.

If the user does not have experience with the mixture being applied, perform a

jar test using the order and amounts in the mixture and perform a phytotoxicity test to ensure crop safety.

Vigorous agitation, temperature variations and the characteristics of some actives may require an adjustment of the use rate.

### USE RATES

Defoaming: Briefly stop agitation, and squirt or sprinkle **DEFOAMER** directly on surface foam that has already accumulated.

Add enough **DEFOAMER** to control foaming in the solution remaining in the tank.

Antifoaming: **DEFOAMER** should not be added to a dry tank. As the tank begins to fill, add the recommended amount of the active ingredient and then add **DEFOAMER** at a use rate of up to 2 ounces per 100 gallons of spray solution.

### STORAGE AND DISPOSAL

**Storage:** Do NOT Freeze. 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.acrcycle.org](http://www.acrcycle.org). Decontaminated containers and materials must be disposed of in a manner allowed by local, state and federal laws and regulations.

### Warranty Statement

Red River warrants that this product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to the label instruction, or any abnormal conditions, or under conditions not reasonably foreseeable to Red River, and buyer assumes the risk of any such use.

Manufactured for:



1324 N. Hearne Ave., Ste 120 Shreveport, LA 71107  
1-800-256-3344

# SAFETY DATA SHEET

RRSI IVM MARKING DYE

SDS DATE: 1-11-16

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** RRSI IVM MARKING DYE

**DISTRIBUTOR:** Red River Specialties Incorporated  
**ADDRESS:** 1324 N. Heame Ave., Ste Shreveport LA 71107  
**PHONE:** (318) 425-5944

**EMERGENCY CHEMTREC PHONE:** US: 1-800-424-9300 International: 1-202-483-7616

**CHEMICAL NAME:** Proprietary mixture  
**CHEMICAL FAMILY:** Colorant  
**CHEMICAL FORMULA:** Mixture

**PRODUCT USE:** Agricultural colorant

**SECTION 1 NOTES:** None

## SECTION 2: HAZARD IDENTIFICATION

### GHS Ratings:

**Toxicity Categories**

**Signal Word:** NONE

**Hazard Symbol:** NONE

### PRECAUTIONS

P102 Keep out of reach of children.  
P103 Read label before use.  
P233 Keep container tightly closed.  
P234 Keep only in original container.  
P261 Avoid breathing dust, fume, gas, mist, vapors, spray.  
P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves, protective clothing, eye protection and face protection.  
P301+312 IF SWALLOWED: Call a POISON CENTER, doctor or physician if you feel unwell.  
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.

## SECTION 3: INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>% WT</u>
Acid Blue 9	3844-45-9	10 – 20%

**NOTE:** Product does NOT contain any pesticides or pest control agents

**SECTION 3 NOTES:** These specific chemical identities and /or exact percentage (concentration) of composition have been withheld as a trade secret.

### CARCINOGENICITY

**OSHA:** No      **ACGIH:** No      **NTP:** No      **IARC:** No      **OTHER:** No

# SAFETY DATA SHEET

RRSI IVM MARKING DYE

SDS DATE: 1-11-16

## SECTION 4: FIRST AID MEASURES

*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 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.

### NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES: None

## SECTION 5: FIRE FIGHTING MEASURES

### NFPA HAZARD CLASSIFICATION

HEALTH: 1      FLAMMABILITY: 0      REACTIVITY: 0      OTHER: -

**IN CASE OF FIRE:** Use water spray, dry chemical, or Carbon dioxide.

**SPECIAL FIRE FIGHTING PROCEDURES:** None known

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known

**HAZARDOUS DECOMPOSITION PRODUCTS:** None known

SECTION 5 NOTES: Product is extremely soluble in water and will turn water blue but is safe for aquatic environments.

## 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. Soak up spill with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. Wear suitable protective equipment.

SECTION 6 NOTES: None

## SECTION 7: HANDLING AND STORAGE

**HANDLING** Keep out of reach of children. Read label before use. Do not eat, drink or smoke when using this product. Avoid breathing dust, fume, gas, mist, vapors or spray. Wash hands thoroughly after handling. Wear protective gloves, protective clothing, eye protection and 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.

SECTION 7 NOTES: None

# SAFETY DATA SHEET

RRSI IVM MARKING DYE

SDS DATE: 1-11-16

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values

<b>VENTILATION:</b>	Normal room ventilation (mechanical) or outdoor use should be satisfactory.
<b>RESPIRATORY PROTECTION:</b>	Not necessary unless ventilation is inadequate. Then use OSHA or NIOSH approved respirator, as appropriate.
<b>EYE PROTECTION:</b>	Chemical goggles and face shield.
<b>SKIN PROTECTION:</b>	Chemical gloves, long-sleeved shirts and pants.
<b>OTHER PROTECTIVE CLOTHING OR EQUIPMENT:</b>	Eye wash and safety shower should be easily accessible.
<b>WORK HYGIENIC PRACTICES:</b>	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.
<b>EXPOSURE GUIDELINES:</b>	If exposed, see section 4 for acute exposure first aid.
<b>SECTION 8 NOTES:</b>	None

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE:</b>	Deep blue	<b>FLAMMABLE LIMITS IN AIR, UPPER:</b>	Unknown
<b>ODOR:</b>	None	<b>(% BY VOLUME) LOWER:</b>	Unknown
<b>ORDER THRESHOLD:</b>	Not known	<b>VAPOR PRESSURE (mmHg):</b>	@ F: Unknown C: Unknown
<b>PHYSICAL STATE:</b>	Liquid	<b>VAPOR DENSITY (AIR = 1):</b>	@ F: Unknown C: Unknown
<b>pH AS SUPPLIED:</b>	Not applicable	<b>RELATIVE DENSITY:</b>	1.013 to 1.043
<b>pH (Other):</b>		<b>EVAPORATION RATE:</b>	Unknown
<b>INITIAL BOILING POINT:</b>	F: Unknown C: Unknown	<b>BASIS (butyl acetate=1):</b>	
<b>BOILING POINT RANGE:</b>	F: Unknown C: Unknown	<b>SOLUBILITY IN WATER:</b>	Soluble
<b>MELTING POINT:</b>	F: Unknown C: Unknown	<b>PARTITION COEFFICIENT: n-octanol/water:</b>	Unknown
<b>FREEZING POINT:</b>	F: Unknown C: Unknown	<b>AUTO-IGNITION TEMPERATURE:</b>	Unknown
<b>FLASH POINT:</b>	F: >200 C: >93	<b>DECOMPOSITION TEMPERATURE:</b>	Unknown
<b>METHOD USED:</b>	PMCC	<b>VISCOSITY:</b>	@ Not determined F: Unknown C: Unknown
<b>FLAMMABILITY (solid, gas):</b>	Can burn		

### SECTION 9 NOTES: Values 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

RRSI IVM MARKING DYE

SDS DATE: 1-11-16

## SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable  Unstable

CONDITIONS TO AVOID (STABILITY): None known.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizers.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID (POLYMERIZATION): None known

SECTION 10 NOTES: None

## SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: None

MIXTURE TOXICITY Not available

COMPONENT TOXICITY Not available

SECTION 11 NOTES: None

## SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: None

ECOTOXICITY: Not available

BIOACCUMULATIVE POTENTIAL: Not available

MOBILITY IN SOIL: Not available

OTHER ADVERSE EFFECTS: Not available

SECTION 12 NOTES: None

## SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: 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 local, regional, national and international 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

# SAFETY DATA SHEET

RRSI IVM MARKING DYE

SDS DATE: 1-11-16

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## SECTION 15: REGULATORY INFORMATION

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### 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:** None

**INTERNATIONAL REGULATIONS:** None

**SECTION 15 NOTES:** None

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## SECTION 16: OTHER INFORMATION

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**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.

# RRSI

# IVM MARKING DYE

## Specimen Label

### KEEP OUT OF REACH OF CHILDREN

Read label before use. 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.

### FIRST AID

**Call a poison control center or doctor immediately for treatment advice.**

**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 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

**IVM MARKING DYE** is a temporary spray colorant for use in monitoring spray applications. **IVM MARKING DYE** improves applications, and helps reduce waste from spraying unwanted areas. It may be used with foam markers, industrial and forestry applications with any type of spray equipment, either hand held, back pack, or broadcast.

### APPLICATION RATES

It is suggested that **IVM MARKING DYE** be mixed the rate of 2 to 4 ounces per 40 gallon of liquid (5-10 oz. per 100 gallons), however depending on treatment more or less dye might be needed. **Note:** The recommended concentration of **IVM MARKING DYE** may be adjusted for specific operations. Higher dosage rates will increase the darkness of the spray pattern.

### STORAGE AND DISPOSAL

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 contaminate water, food or feed by storage or disposal. Dispose of contents in container to an approved waste disposal facility in accordance with all local / regional / national / international 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.

### WARRANTY

Red River warrants that this product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to the label instruction, or any abnormal conditions, or under conditions not reasonably foreseeable to Red River, and buyer assumes the risk of any such use.

Manufactured for:



1324 N. Hearne Ave., Ste 120 Shreveport, LA 71107  
1-800-256-3344



## Specimen Label

### PRINCIPAL FUNCTIONING AGENTS:

Paraffin Base Petroleum Oil .....	83%
Nonionic Surfactants .....	17%
Total .....	100%

All ingredients are exempt from tolerance requirements under 40 CFR 180.

### KEEP OUT OF REACH OF CHILDREN



CONTACT MAY CAUSE MODERATE EYE IRRITATION. Avoid contact with eyes, skin or clothing. Do not take internally. Wear chemical-resistant eyewear and gloves, long-sleeve shirt and pants and shoes and socks. Do not eat, drink, smoke or chew gum while using this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. In addition, follow precautionary statements on all products used with this material. Clean affected clothing, shoes, and protective equipment before reuse.

**DO NOT USE, POUR, SPILL, OR STORE NEAR HEAT OR OPEN FLAME.**

### FIRST AID

**Call a poison control center or doctor immediately for treatment advice.**

**Have the product container with you when calling a poison control center or doctor, or going for treatment.**

**If Swallowed:** 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 on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

**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.

**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.

### GENERAL INFORMATION

PACER® is a nonionic blend of surfactants and highly refined phytobland paraffin oil. It is designed for use with a broad range of pesticides where an oil concentrate adjuvant is recommended. PACER increases contact activity and penetration of the spray while also providing uniform coverage on leaf surfaces. Always follow herbicide label recommendations.

### RECOMMENDED RATES

**Ground:** Use 4 - 8 pints per 100 gallons water or 0.5 - 1.00% v/v concentration. With atrazine and Aatrex®, use 1 quart to the acre with desirable amount of water.

**Aerial and Low Volume Sprays:** Use 1 - 4 pints per acre.

**Insecticides, Fungicides, Acaricides & Miticides:** Use 1/4 to 1/2 pints per 100 gallons water.

**Do not exceed 5% of the spray volume.**

### MIXING

Fill spray tank one-half full of water, add the desired amount of pesticide and continue filling. Add correct amount of PACER last and continue agitation.

### HANDLING AND STORAGE

PACER may be stored in stainless steel and most plastics. Do not store near oxidizing agents. Keep container closed in storage. Do not allow water to be introduced. If PACER is stored below 20°F for an extended period, it may become cloudy and thicken. By raising the temperature above 32°F the product will return to its normal clear and fluid state.

### WARRANTY

Red River warrants that this product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Red River, and buyer assumes the risk of any such use.

PACER® is a registered trademark of Red River Specialties, Inc.  
Aatrex® is a registered trademark of Syngenta.



1324 N. Hearne Ave., Ste 120 Shreveport, LA 71107



## Specimen Label

### PRINCIPAL FUNCTIONING AGENTS:

Methylated seed oil blend and emulsifiers ..... 100.0%  
Ingredients are exempt from tolerance under 40 CFR 180.

### KEEP OUT OF REACH OF CHILDREN



### WARNING

Avoid contact with eyes. Harmful if swallowed. Avoid skin contact. Causes eye and skin irritations. In case of contact, wash the affected areas with water immediately and continue washing for fifteen minutes. Call a doctor if irritation persists.

### FIRST AID

**Call a poison control center or doctor immediately for treatment advice. Have the product container with you when calling a poison control center or doctor, or going for treatment.**

**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.

**If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

**If Swallowed:** 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 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.

### GENERAL INFORMATION

**SUNSET** is a multi-component spray adjuvant developed to maximize the performance of most post-emergent herbicides. This product may be used as a replacement for non-ionic surfactants and crop oil (petroleum oils) in most post-emergence herbicide spray mixes.

Methylated seed oils have been tested by universities, and research indicates methylated seed oil improves the performance consistency of post-emergence herbicides such as imidazolinone, phenoxy, and sulfonylurea herbicides.

**SUNSET** may be used for aquatic or terrestrial applications such as agricultural crops, forestry, industrial, right-of-way, pasture, rangeland, turf and other sites recommending the use of an oil adjuvant.

### DIRECTIONS FOR USE

Use this product at 3/4 pint to 6 quarts per acre with the herbicide of choice. Always read and follow the label of the herbicide to be used with this product. Higher rates may be required if weed populations are extreme, if waxy leaf species are targeted, or if plants are stressed at the time of treatment. Always add this product last to the spray mix and continue agitation or follow specific tank filling information on the herbicide label. Do not allow water to be introduced. Always refer to the herbicide labels for additional recommendations or precautions.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal. Follow all governmental procedures for the disposal of pesticide spray solutions. Triple rinse container and empty rinsate into spray tank. Dispose of empty container according to approved local practices. Contact your County Agricultural Commissioner for disposal information.

### WARRANTY

Red River warrants that this product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Red River, and buyer assumes the risk of any such use.



1324 N. Hearne Ave., Ste 120 Shreveport, LA 71107

# SAFETY DATA SHEET

RRSI SUNSET

SDS DATE: 1/11/2016

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** RRSI SUNSET

**DISTRIBUTOR:** Red River Specialties Incorporated  
**ADDRESS:** 1324 n. Hearne Ave., Ste 120 Shreveport, LA 71107  
**PHONE:** (318) 425-5944

**EMERGENCY CHEMTREC PHONE:** US: 1-800-424-9300 International: 1-202-483-7616

**CHEMICAL NAME:** Proprietary mixture  
**CHEMICAL FAMILY:** Methyl Ester of Seed Oil  
**CHEMICAL FORMULA:** Mixture

**PRODUCT USE:** Agricultural adjuvant

**SECTION 1 NOTES:** None

## SECTION 2: HAZARD IDENTIFICATION

### GHS Ratings:

**Toxicity Categories**  
Skin corrosion/ irritation Category 2  
Eye damage/ irritation Category 2A



**Signal Word: WARNING**

### GHS HAZARDS

H315 Causes skin irritation.  
H319 Causes serious eye irritation.

### 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.  
P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves, protective clothing, eye protection and face protection.  
P301+312 IF SWALLOWED: Call a POISON CENTER, doctor or physician if you feel unwell.  
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 or attention.  
P332+313 If skin irritation occurs: Get medical advice or attention.  
P362 Take off contaminated clothing and wash it before reuse.

## SECTION 3: INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>% WT</u>
Distillates, petroleum, hydrotreated light	64742-58-1	10 – 20%
Soybean oil, Me ester	67784-80-9	70 – 80%

**NOTE:** Product does NOT contain any pesticides or pest control agents.

**SECTION 3 NOTES:** These specific chemical identities and or exact percentage (concentration) of composition have been withheld as a trade secret.

### CARCINOGENICITY

**OSHA:** No      **ACGIH:** No      **NTP:** No      **IARC:** No      **OTHER:** No

# SAFETY DATA SHEET

RRSI SUNSET

SDS DATE: 1/11/2016

## SECTION 4: FIRST AID MEASURES

*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. Call a poison center, doctor or physician to specify the appropriate source of emergency medical advice. 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. Call a poison center, doctor or physician to specify the appropriate source of emergency medical advice if you feel unwell.

**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.

### NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES: None

## SECTION 5: FIRE FIGHTING MEASURES

### NFPA HAZARD CLASSIFICATION

HEALTH: 1      FLAMMABILITY: 1      REACTIVITY: 0      OTHER: -

**IN CASE OF FIRE:** Use water spray, dry chemical, foam or Carbon dioxide.

**SPECIAL FIRE FIGHTING PROCEDURES:** Use a positive-pressure, self-contained air supply. Avoid getting water from fire-fighting into domestic or irrigation water supplies.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known

**HAZARDOUS DECOMPOSITION PRODUCTS:** Under fire conditions will form 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. Soak up spill with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. Wear suitable protective equipment.

SECTION 6 NOTES: None

## SECTION 7: HANDLING AND STORAGE

**HANDLING** Keep out of reach of children. Read label before use. Do not eat, drink or smoke when using this product. Avoid breathing dust, fume, gas, mist, vapors or spray. Wash hands thoroughly after handling. Wear protective gloves, protective clothing, eye protection and 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.

SECTION 7 NOTES: None

# SAFETY DATA SHEET

RRSI SUNSET

SDS DATE: 1/11/2016

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

<b>VENTILATION:</b>	Normal room ventilation (mechanical) or outdoor use should be satisfactory.
<b>RESPIRATORY PROTECTION:</b>	Not necessary unless ventilation is inadequate. Then use OSHA or NIOSH approved respirator, as appropriate.
<b>EYE PROTECTION:</b>	Chemical goggles and face shield.
<b>SKIN PROTECTION:</b>	Chemical gloves, long-sleeved shirts and pants.
<b>OTHER PROTECTIVE CLOTHING OR EQUIPMENT:</b>	Eye wash and safety shower should be easily accessible.
<b>WORK HYGIENIC PRACTICES:</b>	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.
<b>EXPOSURE GUIDELINES:</b>	If exposed, see section 4 for acute exposure first aid.
<b>SECTION 8 NOTES:</b>	None

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE:</b>	Clear yellow to brown	<b>FLAMMABLE LIMITS IN AIR, UPPER:</b>	Unknown
<b>ODOR:</b>	Fatty odor	<b>(% BY VOLUME) LOWER:</b>	Unknown
<b>ORDER THRESHOLD:</b>	Not known	<b>VAPOR PRESSURE (mmHg):</b>	@
<b>PHYSICAL STATE:</b>	Liquid		F: Unknown C: Unknown
<b>pH AS SUPPLIED:</b>	Not applicable	<b>VAPOR DENSITY (AIR = 1):</b>	@
<b>pH (Other):</b>			F: Unknown C: Unknown
<b>INITIAL BOILING POINT:</b>	F: Unknown C: Unknown	<b>RELATIVE DENSITY:</b>	0.871 to 0.907
<b>BOILING POINT RANGE:</b>	F: Unknown C: Unknown	<b>EVAPORATION RATE:</b>	Unknown
<b>MELTING POINT:</b>	F: Unknown C: Unknown	<b>BASIS (butyl acetate=1):</b>	
<b>FREEZING POINT:</b>	F: Unknown C: Unknown	<b>SOLUBILITY IN WATER:</b>	Dispersible
<b>FLASH POINT:</b>	F: >200 C: >93	<b>PARTITION COEFFICIENT: (n-octanol/water):</b>	Unknown
<b>METHOD USED:</b>	PMCC	<b>AUTO-IGNITION TEMPERATURE:</b>	Unknown
<b>FLAMMABILITY (solid, gas):</b>	Can burn	<b>DECOMPOSITION TEMPERATURE:</b>	Unknown
		<b>VISCOSITY:</b>	@ Not determined F: Unknown C: Unknown

### SECTION 9 NOTES: Values 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

RRSI SUNSET

SDS DATE: 1/11/2016

## SECTION 10: STABILITY AND REACTIVITY

STABILITY:  Stable  Unstable

CONDITIONS TO AVOID (STABILITY): This product is stable when handled under the stated conditions.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong acids, gases, and oxidizers.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: CO<sub>2</sub>, CO.

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID (POLYMERIZATION): None known

SECTION 10 NOTES: None

## SECTION 11: TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL INFORMATION:

MIXTURE TOXICITY Not available

COMPONENT TOXICITY Not available

SECTION 11 NOTES: None

## SECTION 12: ECOLOGICAL INFORMATION

### ECOLOGICAL INFORMATION:

ECOTOXICITY: Not available

BIOACCUMULATIVE POTENTIAL: Not available

MOBILITY IN SOIL: Not available

OTHER ADVERSE EFFECTS: Not available

SECTION 12 NOTES: None

## SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: 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 local, regional, national and international 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

# SAFETY DATA SHEET

RRSI SUNSET

SDS DATE: 1/11/2016

## 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: None

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.

CRFQ DOT190000074

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HERBICIDES		% Concentration/ Pounds per Gallon of Active Ingredients	Estimated Quantity	Unit of Measure	Cost Per Unit of Measure	Extended Cost
Item #	Description					
DOH-1H	Water Soluble Emulsifiable Concentrate Containing: Isopropylamine Salt of Glyphosate Phosphate Ester Surfactant	50.20%				
	Product Trade Name: Roundup Pro Concentrate or equal Roundup Pro					
	EPA Registration Number: 524-529					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		6000	gallon	17.72	106320.00
	B) Supplied in 15 gallon returnable/refillable containers in lots of 9 per pallet		6000	gallon	No Bid	No Bid
DOH-2H	Dispersible Granules Containing: Sulfometuron Methyl	75%				
	Product Trade Name: Oust XP or equal Oust XP					
	EPA Registration Number: 432-1552					
	A) Supplied in 3 pound containers in lots of 24 pounds (8 - 31 lbs ctn)		100	pound	28.19	2819.00
	B) Supplied in 3 pound containers		100	pound	28.19	2819.00
DOH-3H	Aqueous Solution Containing: Imazapyr	2 lbs/gallon				
	Product Trade Name: Arsenal Powerline or equal Arsenal Powerline					
	EPA Registration Number: 241-431					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		150	gallon	55.95	8392.50
	B) Supplied in 15 gallon returnable/refillable containers in lots of 9 per pallet		150	gallon	51.05	7657.50
DOH-4H	Aqueous Carrier Containing: Pendimethalin	3.8 lbs/gallon				
	Product Trade Name: Pendulum AquaCap or equal Pendulum AquaCap					
	EPA Registration Number: 241-416					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		600	gallon	60.14	36084.00
DOH-5H	Water Soluble Concentrate Containing: Tricopyr	3 lbs/gallon				
	Product Trade Name: Garlon 3A or equal Garlon 3/A					
	EPA Registration Number: 62719-37					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		500	gallon	45.12	22560.00
	B) Supplied in 15 gallon returnable/refillable containers in lots of 9 per pallet		500	gallon		
DOH-6H	Water Soluble Concentrate Containing: Tricopyr	4 lbs/gallon				
	Product Trade Name: Garlon 4 Ultra or equal Garlon 4					
	EPA Registration Number: 62719-527					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		250	gallon	63.95	15987.50
	B) Supplied in 15 gallon returnable/refillable containers in lots of 9 per pallet		270	gallon		
DOH-7H	Water Soluble Liquid Containing: Tricopyr	4 lbs/gallon				
	Product Trade Name: Vastlan™ or equal Vastlan					
	EPA Registration Number: 62719-687					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		250	gallon	72.20	18050.00
	B) Supplied in 15 gallon returnable/refillable containers in lots of 9 per pallet		270	gallon		
DOH-8H	Water Soluble Dispersible Granule Containing: Diuron	80.00%				
	Product Trade Name: Karmex DF or equal Karmex DF					
	EPA Registration Number: 66222-51					
	A) Supplied in 5 pound bags in lots of 10 bags		1000	pound	3.84	3840.00
	B) Supplied in 25 pound bags		2000	pound	3.76	7520.00
DOH-09H	Water Soluble Liquid Containing: Dimethylamine Salt of 2, 4-D acid	3.8 lbs/gallon/56.3%				
	Product Trade Name: Freelexx or equal Freelexx					
	EPA Registration Number: 62719-634					

HERBICIDES		% Concentration/ Pounds per Gallon of Active Ingredients	Estimated Quantity	Unit of Measure	Cost Per Unit of Measure	Extended Cost
Item #	Description					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		100	gallon	21.95	2195.00
	B) Supplied in 15 gallon returnable/refillable containers in lots of 9 per pallet		100	gallon		
	C) Supplied in 30 gallon containers		100	gallon	21.90	2190.00
DOH-10H	Water Soluble Liquid Containing Ammonium Salt of Imazapic	23.60%				
	Product Trade Name: Plateau or equal Plateau					
	EPA Registration Number: 241-365					
	A) Supplied in 1 gallon containers in lots of 2 gallons		50	gallon	109.19	5459.50
DOH-11H	Dispersible Liquid Containing: Hexazinone	2 lbs/gallon				
	Product Trade Name: Velpar L or equal Velpar L VU					
	EPA Registration Number: 432-1573					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		50	gallon	86.10	4305.00
DOH-12H	Dry Flowable Containing: Metsulfuron Methyl	60%				
	Product Trade Name: Escort XP or equal Escort XP					
	EPA Registration Number: 432-1549					
	A) Supplied in 16 ounce containers in lots of 8 pounds (8-16 oz ctn)		2400	ounce	2.95	7080.00
	B) Supplied in 16 ounce containers		2400	ounce	2.95	7080.00
	C) Supplied in 64 ounce returnable/refillable containers		2400	ounce	2.90	6960.00
DOH-13H	Dry Flowable Containing: Chlorsulfuron	75%				
	Product Trade Name: Telar XP or equal Telar XP					
	EPA Registration Number: 432-1561					
	A) Supplied in 16 ounce containers in lots of 8 pounds (8-16 oz ctn)		160	ounce	13.00	2080.00
DOH-14H	Liquid Solution Containing: 2, 4-D, 2-ethylhexyl ester 2, 4-DP-p, 2-ethylhexyl ester Dicamba	32.45% 15.90% 5.38%				
	Product Trade Name: BK-800 or equal No Bid					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		100	gallon		
	B) Supplied in 30 gallon containers		100	gallon		
DOH-15H	Dry Flowable Containing: Tebuthiuron	20%				
	Product Trade Name: Spike 20 P or equal Spike 20 P					
	EPA Registration Number: 62719-121					
	A) Supplied in 4 pound containers in lots of 48 pounds (12 4 lbs ctn)	5 lb. containers	48	pound	14.10	705.00
	B) Supplied in 25 pound bags		50	pound	10.15	507.50
DOH-16H	Water Soluble Emulsifiable Concentrate Containing: Clopyralid	3 lbs/gallon				
	Product Trade Name: Transline or equal Transline					
	EPA Registration Number: 62719-259					
	A) Supplied in .5 gallon containers in lots of 2 gallons		25	gallon	150.86	3771.50
	B) Supplied in 2.5 gallon containers in lots of 5 gallons		25	gallon	150.86	3771.50
DOH-17H	Aqueous Solution Containing: Isopropylamine Salt of Imazapyr	27.60%				
	Product Trade Name: Polaris SP or equal Polaris SP					
	EPA Registration Number: 228-536					
	B) Supplied in 2.5 gallon containers in lots of 5 gallons		50	gallon	54.19	2709.50
DOH-18H	Aqueous Solution Containing: Diglycolamine Salt of 3, 6-Dichloro-0-Anisic Acid	4 lbs/gallon				
	Product Trade Name: Vanquish or equal Vanquish					
	EPA Registration Number: 228-397					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		300	gallon	45.15	13545.00
	B) Supplied in 15 gallon returnable/refillable containers in lots of 9 per pallet		300	gallon	44.42	13326.00
DOH-19H	Aqueous Solution Containing: Tricopyr	.75 lbs/gallon				
	Product Trade Name: Pathfinder II or equal Pathfinder II					
	EPA Registration Number: 62719-176					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		100	gallon	40.89	4089.00
DOH-20H	Water Soluble Emulsifiable Concentrate Containing: Isopropylamine Salt of Glyphosate	53.80%				
	Product Trade Name: Rodeo or equal Aquaneat					
	EPA Registration Number: 228-365					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		100	gallon	16.79	1679.00
	B) Supplied in 30 gallon containers		100	gallon	16.25	1625.00
DOH-21H	Liquid Containing: Aminopyralid	40.60%				



HERBICIDES		% Concentration/ Pounds per Gallon of Active Ingredients	Estimated Quantity	Unit of Measure	Cost Per Unit of Measure	Extended Cost
Item #	Description					
	Product Trade Name: Milestone VM or equal <b>Milestone</b>					
	EPA Registration Number: 62719-519					
	A) Supplied in 1 quart containers in lots of 12 quarts		200	quarts	75.00	15000.00
	B) Supplied in 2.5 gallon containers in lots of 5 gallons		50	gallon	300.00	15000.00
DOH-22H	Water Dispersible Granular Material Containing: Prodiamine	65%				
	Product Trade Name: Endurance or equal <b>Prodiamine 65 WDG</b>					
	EPA Registration Number: 66222-89					
	A) Supplied in 5 pound bags in lots of 50 pounds		100	pound	11.91	1191.00
	B) Supplied in 10 pound bags in lots of 50 pounds		100	pound		
DOH-23H	Emulsifiable Concentrate Containing: Fluazifop-P-butyl	6.75%				
	Product Trade Name: Ornamec or equal <b>No Bid</b>					
	EPA Registration Number: _____					
	A) Supplied in 1 gallon containers in lots of 4 gallons		16	gallon		
DOH-24H	Dispersible Granule Containing: Imazapyr Diuron	7.78% 62.22%				
	Product Trade Name: Imazuron or equal <b>Imazuron</b>					
	EPA Registration Number: 228-654					
	A) Supplied in 10 pound bags in lots of 40 pounds		50	pound	9.00	450.00
DOH-25H	Water Soluble Dry Granule Containing: Sulfosulfuron	75%				
	Product Trade Name: Outrider or equal <b>Outrider</b>					
	EPA Registration Number: 59639-223					
	A) Supplied in 20 ounce bottles in lots of 200 ounces (10 - 20 oz ctn)		400	ounce	15.32	6128.00
DOH-26H	Liquid Containing: Diuron	40%				
	Product Trade Name: Diuron 4L or equal <b>No Bid</b>					
	EPA Registration Number: _____					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		50	gallon		
DOH-27H	Liquid Containing: Fluroxypyr	45.52%				
	Product Trade Name: Vista XRT or equal <b>Vista XRT</b>					
	EPA Registration Number: 62719-586					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		100	gallon	178.49	17849.00
DOH-28H	Wettable Granule Formulation Containing: Sodium Salt of Diflufenopy: 2-(1-[[3,5-Difluorophenylamino Carbonyl)-Hydrazono]ethyl)-3-Pyridinecarboxylic Acid, Sodium Salt Sodium Salt of Dicamba: 3,6-dichloro-o-anisic Acid	21.30% 55.00%				
	Product Trade Name: Overdrive or equal <b>Overdrive</b>					
	EPA Registration Number: 7969-150					
	A) Supplied in 7.5 pound containers in lots of 30 pounds (4 - 7.5 lbs ctn)		100	pound	37.17	3717.00
DOH-29H	Dispersible Granules Containing: Sulfometuron Methyl Chlorsulfuron	56.25% 18.75%				
	Product Trade Name: Landmark XP or equal <b>Landmark XP</b>					
	EPA Registration Number: 432-1560					
	A) Supplied in 4 pound containers in lots of 32 pounds (8 - 4 lbs ctn)		100	pound	115.10	11510.00
	B) Supplied in 64 ounce returnable/refillable containers		1600	ounce		
DOH-30H	Dispersible Granules Containing: Sulfometuron Methyl Metsulfuron Methyl	56.25% 15.00%				
	Product Trade Name: Oust Extra or equal <b>Oust Extra</b>					
	EPA Registration Number: 432-1557					
	A) Supplied in 4 pound containers in lots of 32 pounds (8 - 4 lbs ctn)		400	pound	28.19	11276.00
	B) Supplied in 64 ounce returnable/refillable containers		6400	ounce		
	C) Supplied in 12 pound containers		400	pound	28.19	11276.00
DOH-31H	Dry Flowable Granule Containing: Bromacil Diuron	40% 40%				
	Product Trade Name: Krovar I DF or equal <b>Krovar IDF</b>					
	EPA Registration Number: 432-1551					
	A) Supplied in 6 pound containers in lots of 48 pounds (8 - 6 lbs ctn)		50	pound	9.14	457.00
DOH-32H	Liquid Containing:					

HERBICIDES		% Concentration/ Pounds per Gallon of Active Ingredients	Estimated Quantity	Unit of Measure	Cost Per Unit of Measure	Extended Cost
Item #	Description					
	Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	24.58%				
	Dimethylamine Salt of Dicamba (3,6-Dichloro-o-Anisic Acid)	12.82%				
	<b>Product Trade Name: Veteran 720 or equal Veteran 720</b>					
	EPA Registration Number: 228-295					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		100	gallon	25.00	2500.00
	B) Supplied in 30 gallon drums		100	gallon		
DOH-33H	Water Soluble Dispersible Extruded Paste Granule Containing:					
	Imazapyr	31.60%				
	Aminocyclopyrachlor	22.80%				
	Metsulfuron methyl	7.30%				
	<b>Product Trade Name: Viewpoint™ or equal Viewpoint</b>					
	EPA Registration Number: 432-1580					
	A) Supplied in 5 pound containers in lots of 40 pounds (8 - 5 lbs ctn)		100	pounds	69.12	6912.00
	B) Supplied in 5 pound containers		100	pounds	69.12	6912.00
DOH-34H	Non-Selective Control of Emerged and Pre-Emerged Broadleaf and Grass Weeds Containing:					
	Indaziflam	0.089%				
	Diquat Dibromide	0.890%				
	Glyphosat Isopropylamine Salt	20.460%				
	<b>Product Trade Name: Esplanade EZ or equal Esplanade EZ</b>					
	EPA Registration Number: 432-1528					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		50	gallons	52.50	2625.00
DOH-35H	Liquid Containing:					
	Indaziflam (1.67 pounds per gallon)	19.05%				
	<b>Product Trade Name: Esplanade 200SC or equal Esplanade 200SC</b>					
	EPA Registration Number: 432-1528					
	A) Supplied in 1 quart containers in lots of 1 gallon			quart	325.25	
	B) Supplied in 2.5 gallon containers in lots of 5 gallons			gallons	1169.92	
DOH-36H	A pre-emergence and early post-emergence product to control broadleaf weeds and annual grasses Containing:					
	Penoxsulam: 2-(2,2-difluoroethoxy)-N-(5,8-dimethoxy[1,2,4]triazolo[1,5c]pyrimidin-2-yl)-6-(trifluoromethyl)benzenesulfonamide	0.850%				
	Oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl)benzene	40.310%				
	<b>Product Trade Name: Cleantraxx™ or equal Cleantraxx</b>					
	EPA Registration Number: 62719-702					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		50	gallons	130.00	6500.00
DOH-37H	Plant Growth Regulator Containing:					
	Mefluidide, diethanolamine salt	21.45%				
	Imazethapyr, ammonium salt	4.09%				
	Imazapyr, ammonium salt	0.15%				
	<b>Product Trade Name: Stronghold or equal No bid</b>					
	EPA Registration Number: _____					
	A) Supplied in 1 quart containers in lots of 1 gallon		50	gallons		
	B) Supplied in 2.5 gallon containers in lots of 5 gallons		50	gallons		
DOH-38H	Turf and Ornamental Growth Regulator Containing:					
	Flauzifop-P-Butyl	24.50%				
	<b>Product Trade Name: Fusilade II or equal No Bid</b>					
	EPA Registration Number: _____					
	A) Supplied in 1 quart containers in lots of 1 gallons		50	gallons		
	B) Supplied in 2.5 gallon containers in lots of 5 gallons		50	gallons		
DOH-39H	Soluble Liquid for Non-Crop Use Containing:					
	Potassium salt of aminocyclopyrachlor - Potassium salt of 6-amino-5-chloro-2-cyclopropyl-4-pyrimidinecarboxylic acid	25%				
	<b>Product Trade Name: Method® 240SL or equal Method 240SL</b>					
	EPA Registration Number: 432-1565					
	A) Supplied in 2.5 gallon containers in lots of 5 gallons		50	gallons	318.72	15936.00

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ADJUVANTS		Estimated Quantity	Unit of Measure	Cost Per Unit of Measure	Extended Cost
Item #	Description				
DOH-1A	Water Soluble Blue Liquid Spray Pattern Indicator	100	gallon	18.10	1810.00
	<b>Product Trade Name: Bullseye or equal RRSI IVM Marking Dye</b> A) Supplied in 2.5 gallon containers in lots of 5 gallons.				
DOH-2A	Diluent with Emulsifiers	100	gallon	13.10	1310.00
	<b>Product Trade Name: Hygrade EC or Arborchem Basal Oil or Bark Oil EC or Penevator or equal Elite Premier</b> A) Supplied in 2.5ga. containers in lots of 5ga.				
DOH-3A	Non-ionic Surfactant -90%	100	gallon	10.10	1010.00
	<b>Product Trade Name: Red River 90</b> A) Supplied in 2.5 gallon containers in lots of 5 gallons.				
DOH-4A	Non-ionic, Low Foam Penetrating Surfactant with Lecithin Drift Control Agent	100	gallon		
	<b>Product Trade Name: Liberate® or equal No Bid</b> A) Supplied in 2.5 gallon containers in lots of 5 gallons.				
DOH-5A	Concentrate Spray Adjuvant with Lecitech® Methylated Seed Oil	100	gallon	9.25	925.00
	<b>Product Trade Name: MSO® Concetrate or equal Sunset MSO</b> A) Supplied in 2.5 gallon containers in lots of 5 gallons.				
DOH-6A	Liquid Drift Control Agent	400	quart	9.10	3640.00
	<b>Product Trade Name: Elite Secure</b> A) Supplied in 1 quart containers in lots of 12 quarts.				
DOH-7A	Granular/Flake Drift Control Agent	48	container		
	<b>Product Trade Name: No Bid</b> A) Supplied in 32 ounce containers in lots of 12 containers.				
DOH-8A	Aquatic Surfactant	100	gallon	10.10	1010.00
	<b>Product Trade Name: Red River 90</b> A) Supplied in 2.5 gallon containers in lots of 5 gallons.				
DOH-9A	Water Soluble Liquid Spray Pattern Indicator	100	gallon	18.10	1810.00
	<b>Product Trade Name: Blueprint Plus or equal RRSI IVM Marking Dye</b> A) Supplied in 2.5 gallon containers in lots of 5 gallons.				
DOH-10A	Non-ionic Sticker Spreader	100	gallon	39.25	3925.00
	<b>Product Trade Name: Nu-Film-IR or equal Nu-Film IR</b> A) Supplied in 2.5 gallon containers in lots of 5 gallons.				
DOH-11A	Ready-to-Use Formula Containing Paraffinic Oil Emulsifiers	100	gallon	13.21	1321.00
	<b>Product Trade Name: Thinvert RTU or equal RRSI Pacer</b> A) Supplied in 2.5 gallon containers in lots of 5 gallons.				
	B) Supplied in 15 gallon drum.				
DOH-12A	Miscible-Dispersible Liquid Defoamer (10% Active Ingredient)	120	quarts	8.95	1074.00
	<b>Product Trade Name: RRSI Defoamer</b> A) Supplied in 1 quart containers in lots of 12 quarts per ctn				

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MISCELLANEOUS		Estimated Quantity	Unit of Measure	Cost Per Unit of Measure	Extended Cost
Item #	Description				
DOH-1M	Pressure Rinser				
	Product Trade Name: Easy Rinse or equal <b>No Bid</b>				
	A) Supplied per each.	25	each		
DOH-2M	Biostimulant Containing				
	Soluble Potash 1.00%				
	Iron 0.36%				
	Manure Extract 79.30%				
	Humic and Fulvic Acid Extract 9.00%				
	Kelp Extract 1.20%				
	Organo-Modified Silaxane Surfactant 0.36%				
	Product Trade Name: Launch or equal <b>No Bid</b>				
	A) Supplied in 2.5 gallon containers in lots of 5 gallons	10	gallon		
DOH-3M	5-gallon Backpack Sprayer				
	Product Trade Name: Birchmeier or equal <b>No Bid</b>				
	A) Supplied per sprayer	10	each		
	B) Supplied per each gasket set for Sprayer Pump	10	set		
	C) Supplied per each Valve and Wand Repair Kit	10	kit		
DOH-4M	2-Quart Handheld Pressure Sprayer				
	Product Trade Name: Tolco or equal <b>No Bid</b>				
	A) Supplied per each sprayer	10	each		
DOH-5M	Closed System Backpack Sprayer				
	Product Trade Name: Birchmeier BCS or equal <b>No Bid</b>				
	A) Supplied per each sprayer	10	each		
	B) Supplied per each gasket Set for Sprayer Pump	10	set		
	C) Supplied per each Valve and Wand Repair Kit	10	kit		
DOH-6M	32 ounce Eye Wash Bottle				
	Product Trade Name: <b>No Bid</b>				
	A) Supplied per each.	25	bottle		