



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

March 16, 2016

Luz G. Chan  
Registration Manager  
Drexel Chemical Company  
PO Box 13327  
Memphis, TN 38113

Subject: Notification per PRN 98-10 – New primary brand name  
Product Name: Drexel FomAsate Herbicide  
EPA Registration Number: 19713-679  
Application Date: 2/29/2016  
Decision Number: 514908

Dear Ms. Chan:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, you may contact Sarah Meadows at 703-347-0505 or via email at [meadows.sarah@epa.gov](mailto:meadows.sarah@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Sal Baris". The signature is fluid and cursive. To the right of the signature, the word "FOR" is written in a smaller, blocky font.

Reuben Baris, Product Manager 25  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

**NOTIFICATION**

19713-679

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

3/16/2016

<b>GROUP</b>	<b>9</b>	<b>14</b>	<b>HERBICIDES</b>
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**FomAsate™**  
Herbicide

For Control of Certain Weeds in Cotton and Soybeans

**ACTIVE INGREDIENT:**

Sodium salt of Fomesafen..... 5.88%  
 Glyphosate..... 22.40%

**OTHER INGREDIENTS:** ..... 71.72%

**TOTAL:** ..... 100.00%

This product contains 0.56 pound of Fomesafen and 2.26 pounds of Glyphosate expressed as acid equivalent per gallon.

**KEEP OUT OF REACH OF CHILDREN**  
**WARNING / AVISO**

Si usted no entiende la etiqueta, busque 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 FIRST AID Below**

EPA Reg. No. 19713-679

EPA Est. No. 19713-XX-X

Net Content: \_\_\_\_\_ Gals. ( \_\_\_\_\_ L)

<b>FIRST AID</b>
<p><b>IF IN EYES:</b></p> <ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 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>
<p><b>IF SWALLOWED:</b></p> <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 to an unconscious person.</li> </ul>
<p><b>IF ON SKIN OR CLOTHING:</b></p> <ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>IF INHALED:</b></p> <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 mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency.</p>

679SP-0216\*

## PRECAUTIONARY STATEMENTS

### Hazards To Humans And Domestic Animals

**WARNING:** Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eye wear (goggles, face shield or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, chemical-resistant gloves such as barrier laminate or viton and shoes plus socks

### USER SAFETY REQUIREMENTS

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

### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

## USER SAFETY RECOMMENDATIONS

**Users should:** 1) Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

For Terrestrial Uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate. Do not apply when weather conditions favor drift from target area.

### Groundwater Advisory

Fomesafen is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

## PHYSICAL AND CHEMICAL HAZARDS

Do not store, mix or apply this product or spray solutions of this product in unlined steel (except stainless steel), galvanized steel containers, or spray tanks. This product or spray solutions of this product will react with these containers and tanks and produce hydrogen gas which may form a highly combustible mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by spark, open flame, lighted cigarette, welder torch, or other ignition source.

Spray solutions of this product must be mixed, stored and applied using only stainless steel, fiberglass, plastic, or plastic-lined steel containers.

## 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 (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE). The requirements in this box only apply to uses of this product that are covered by the WPS.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.**

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves such as barrier laminate or viton and shoes plus socks.

## PRODUCT INFORMATION

Read all label directions before using this product.

This product may be used as a pre-plant or pre-emergence burndown herbicide in Cotton or as a post-emergence directed application in glyphosate tolerant (GT) Cotton\* and as a pre-plant or pre-emergence burndown herbicide in Soybeans or as a post-emergence over-the-top application in glyphosate tolerant (GT) Soybeans\*\* to control labeled broadleaf, grass and sedge weeds.

\*This product may be used on the following glyphosate tolerant Cotton only: Roundup Ready® Flex Cotton.

\*\*This product may be used on the following glyphosate tolerant Soybeans only: all Roundup Ready Soybeans including Roundup Ready 2 Yield Soybeans and all Genuity brand Soybeans which includes Roundup Ready 2.

## Environmental and Agronomic Conditions

Always apply this product under favorable environmental conditions that promote active weed growth. Avoid applying this product to weeds or labeled crops which are under stress from drought, extreme temperatures, excessive water, low humidity, low soil fertility, mechanical or chemical injury as reduced weed control and/or increased crop injury may result.

## Pre-plant Surface, Pre-emergence and Post-emergence Applications

This product will control or partially control certain germinating broadleaf weeds and sedges by soil residual activity from either pre-plant surface, pre-emergence or post-emergence applications that come in contact with the soil. Moisture is necessary to activate this product in soil for residual weed control. Dry weather following applications of this product may reduce effectiveness. When adequate moisture is not received 7 days after an application of this product, weed control may be improved by overhead irrigation with at least a 1/4 inch of water.

## Cultivation

Cultivation prior to post-emergence application is not recommended. Cultivation may put weeds under stress, thus reducing weed control. Timely cultivation 2 to 3 weeks after applying this product may assist weed control.

## RESISTANCE MANAGEMENT

GROUP	9	14	HERBICIDES
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This product is a Group 9 and 14 herbicides. It contains the active ingredients Glyphosate which inhibits 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS, Site of Action Group 9) and Fomesafen which inhibits the enzyme protoporphyrinogen oxidase (PPO or PROTOX, Site of Action Group 14). Some naturally occurring weed populations have been identified as resistant to Group 9 and Group 14 herbicides. Selection of resistant biotypes, through repeated use of these herbicides or lower than recommended rates in the same field, may result in weed control failures. A resistant biotype may be present where poor performance cannot be attributed to adverse environmental condition or improper application methods. If resistance is suspected, contact your local company representative and or agricultural advisor for assistance.

## Principles of Herbicide Resistant Weed Management

- Employ integrated weed management practices. Use multiple herbicide sites-of-action with overlapping weed spectrums in rotation, sequences or mixtures.
- Use the full labeled herbicide rate and proper application timing for the hardest to control weed species present in the field.
- Scout fields after herbicide application to ensure control has been achieved.
- Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.
- Monitor site and clean equipment between sites.
- Start with a clean field and control weeds early by using a burndown treatment or tillage in combination with a pre-emergence residual herbicide as appropriate.
- Use cultural practices, such as cultivation and crop rotation where appropriate.

Use good agronomic principles that enhance crop competitiveness.

## APPLICATION DIRECTIONS

### Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator and grower must consider the interaction of equipment and weather-related factors to ensure that the potential for drift to sensitive non-target plants is minimal.

This pesticide is to be applied only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, non-target plants) is minimal (i.e., when the wind is blowing away from the sensitive area).

Refer to the section "*AERIAL SPRAY DRIFT MANAGEMENT ADVISORY*" for additional information.

### Spray Adjuvants

Only spray additives cleared for use on growing crops under 40 CFR 180.910 may be used in the spray mixture.

Under certain conditions, burndown and post-emergence activity may be improved by adding one or more of the following spray adjuvants:

**Ammonium Sulfate (AMS)** at 8.5 to 17 pounds per 100 gallon of water should be added in areas where commonly used with glyphosate-containing products. Liquid formulations of AMS may be used at an equivalent rate.

**Urea Ammonium Nitrate (UAN)** (28-32% liquid nitrogen solution) may be added at 1 to 2.5% volume to volume (v/v) (1 to 2.5 gals. per 100 gals.) of finished spray volume. If AMS is being added, UAN is generally not required. UAN can improve weed control but may reduce crop tolerance.

**One of the following spray adjuvants can be added for difficult to control weeds or under adverse environmental conditions:**

**Crop Oil Concentrate (COC) or Methylated Seed Oil (MSO):** Use a non-phytotoxic COC or MSO containing 15 to 20% approved emulsifier at 0.5 to 1% v/v (2 to 4 qts. per 100 gals.) of finished spray volume. COC or MSO can improve weed control but may slightly reduce crop tolerance.

**Nonionic Surfactant (NIS):** Use NIS containing at least 80% active ingredient at 0.25 to 0.5% v/v (1 to 2 qts. per 100 gals.) of finished spray volume.

The use of deposition (drift control) agents that impact droplet size and coverage may reduce weed control.

**Note:** No adjuvants are needed for pre-plant or pre-emergence applications unless this product is being used in a burndown.

## Mixing Order

1. Fill spray tank with one-half to two-thirds the required amount of water and begin agitation.
2. Add AMS (if used).
3. Add dry pesticide formulations (WP, DF, etc.).
4. Add liquid pesticide formulation (EC, SC etc.).
5. Add This Product.
6. Add COC, MSO or NIS (if used).
7. Add remainder of water and then maintain constant agitation throughout the spray operation.

Be sure to allow each tank mix component to fully disperse before adding the next.

## Tank Mix Compatibility Test

A jar test is recommended prior to tank mixing to ensure compatibility of this product with mixture partners. Add proportion amounts of tank mixture components in a clear quart jar one at a time in the specified mixing order. Gently shake or invert capped jar and let stand for 15 to 30 minutes. If the mixture clumps, forms flakes, oily films or layers or other precipitates, it is not compatible and the tank mixture should not be used.

**It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.**

## GROUND APPLICATION

Use sufficient spray volume and pressure to ensure complete coverage of the target. A spray volume of 10 to 20 gallons per acre and 30 to 60 psi at the nozzle tip is recommended. When foliage is dense, use a minimum of 20 gallons per acre to ensure coverage of weed foliage.

The use of flat fan nozzles will result in the most effective post-emergence application of this product. Use nozzles that are set up to deliver medium quality spray (ASAE Standard S-572).

**Do not use air-induction, flood type or other spray nozzles which deliver coarse, large droplet sprays.**

## AERIAL APPLICATION

Use sufficient spray volume and pressure to ensure complete coverage of the target. A minimum of 5 gallons per acre of spray mixture should be applied with a maximum of 40 psi pressure. When broadleaf weed foliage is dense, use a minimum of 10 gallons per acre to ensure coverage of weed foliage.

**Do not apply this product through any type of irrigation system.**

## USE RESTRICTIONS

- A maximum of 5.3 pints of this product (or a maximum of 0.375 lb. a.i. per acre of Fomesafen from any product containing Fomesafen) may be applied per acre per year in Region 1 (see "*REGIONAL USE MAP*").
- A maximum of 5.3 pints of this product (or a maximum of 0.375 lb. a.i. per acre of Fomesafen from any product containing Fomesafen) may be applied per acre in ALTERNATE years in Region 2 (see "*REGIONAL USE MAP*").
- A maximum of 4.5 pints of this product (or a maximum of 0.315 lb. a.i. per acre of Fomesafen from any product containing Fomesafen) may be applied per acre in ALTERNATE years in Region 3 (see "*REGIONAL USE MAP*").
- A maximum of 3.5 pints of this product (or a maximum of 0.25 lb. a.i. per acre of Fomesafen from any product containing Fomesafen) may be applied per acre in ALTERNATE years in Region 4 (see "*REGIONAL USE MAP*").

- A maximum of 3.5 pints of this product (or a maximum of 0.25 lb. a.i. per acre of Fomesafen from any product containing Fomesafen) may be applied per acre in ALTERNATE years in Region 4a (see “*REGIONAL USE MAP*”). Apply only to Soybeans in Region 4a. Do not make an application of this product later than June 20<sup>th</sup>. Cumulative rainfall plus overhead irrigation must total 15 inches from the period of an application of this product to Soybean crop maturity to allow planting of rotation crops listed in this label (refer to “*ROTATIONAL CROP RESTRICTIONS*” section). If the Soybean crop is lost or the required cumulative rainfall plus irrigation is not received as outlined above, plant only Soybeans the following growing season.
- A maximum of 2.68 pints of this product (or a maximum of 0.1875 lb. a.i. per acre of Fomesafen from any product containing Fomesafen) may be applied per acre in ALTERNATE years in Region 5 (see “*REGIONAL USE MAP*”).

## USE PRECAUTIONS

- Thoroughly clean the spray system with water and a commercial tank cleaner before and after each use to avoid injury to desirable plants.
- Tank mixes of this product with other pesticides, fertilizers or any other additives except as specified on this label or other approved supplemental labels may result in tank mix incompatibility, unsatisfactory performance or unacceptable crop injury.

**It is the pesticide user’s responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.**

- Avoid overlapping spray swaths as injury may occur in crop or to rotational crops.
- Heavy rainfall or irrigation shortly after application may reduce performance.
- Optimum coverage will occur when the ground speed does not exceed 10 mph during application.
- Severe damage or destruction may be caused by contact of this product to any desirable crop or plant to which treatment is not intended.
- Spray solutions containing this product must be mixed stored and applied using only plastic, plastic-lined steel, stainless steel or fiberglass containers. Concentrate must not be stored in galvanized, carbon steel, aluminum or unlined steel containers.

## REPLANTING

If replanting is necessary in fields previously treated with this product, the field may be replanted to Cotton, Dry beans, Potatoes, Snap beans or Soybeans. Do not apply a second application of this product or other products containing Fomesafen as crop injury or illegal residues may occur in harvested crops. If tank mix combinations were used, refer to product labels for any additional replanting instructions.



## ROTATIONAL CROP RESTRICTIONS

Do not graze rotated small grain crops or harvest forage or straw for livestock.

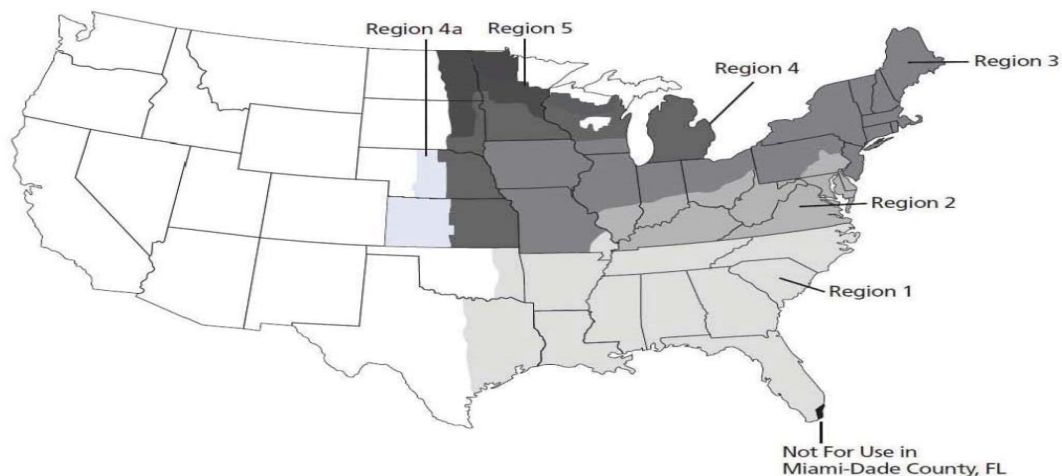
The following rotational crops may be planted after applying this product at specified rates:

Rotational Crops	Minimum Rotation Interval (Time From Last Application)
Bean, Dry Bean, Snap Cotton Potato Soybean Soybean, Succulent (Edamame)	0 days
Bean, Lima Pea, Succulent Small grains such as Barley, Rye, Wheat	4 months
Corn, Field Corn, Seed Corn, Sweet <sup>5</sup> Peanut Pepper (Transplanted) <sup>1</sup> Popcorn <sup>4</sup> Pumpkin <sup>2</sup> Rice Tomato (Transplanted) <sup>1</sup> Watermelon <sup>2</sup>	10 months
Bean, Succulent (other than Edamame, Lima bean and Snap bean) Cantaloupe <sup>2</sup> Cucumber <sup>2</sup> Edible-podded beans and peas not otherwise specified on this table Eggplant Pea, Dry Pepper (Direct-seeded) Squash <sup>2</sup> Sunflower Sweet Potato Tomato (Direct-seeded)	12 months
Sorghum <sup>3</sup>	18 months
All other crops not listed above	18 months
<sup>1</sup> 4 months in Region 1 <sup>2</sup> 8 months in Region 1 <sup>3</sup> 10 months in Region 1 <sup>4</sup> Use 12 months in the states of Illinois, Indiana, Iowa, Kentucky, Ohio and Region 4a when applied at a rate of 3.5 pints per acre or more. <sup>5</sup> 18 months in the states of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont and Region 5	

# USE RATES OF THIS PRODUCT AND WEEDS CONTROLLED

Refer to Map for Definition of Specified Geographic Regions.

## REGIONAL USE MAP



### REGION 1 (Maximum Rate: 5.3 Pints per Acre per Year)



**REGION 1** - Includes the following states or portion of states where this product may be applied: Alabama, Arkansas, Florida (except Miami-Dade County), Georgia, Louisiana, Mississippi, Missouri (Counties of Bollinger, Butler, Cape Girardeau, Dunklin, Madison, Mississippi, New Madrid, Pemiscot, Perry, Ripley, Scott, Stoddard and Wayne), North Carolina, Oklahoma (East of U.S. Highway 75 and East of Indian Nation Parkway), South Carolina, Tennessee and Texas (includes areas East of U.S. Highway 77 to State Road 239 including all of Calhoun County).

**REGION 2**  
**(Maximum Rate: 5.3 Pints per Acre, Alternate Years)**



**REGION 2** - Includes the following states or portion of states where this product may be applied: Delaware, Kentucky, Maryland, Virginia and West Virginia. South of Interstate 70 in the following states: Illinois, Indiana and Ohio and in Pennsylvania (all areas South of Interstate 80 to the intersection of U.S. Highway 15 and East of U.S. Highway 15 and U.S. Highway 522 in Pennsylvania).

**REGION 3**  
**(Maximum Rate: 4.5 Pints per Acre, Alternate Years)**



**REGION 3** - Includes the following states or portion of states where this product may be applied: Connecticut, Iowa, Maine, Massachusetts, Missouri (all counties except for those listed in Region 1), New Hampshire, New Jersey, New York, Pennsylvania (all areas except those listed in Region 2), Rhode Island, Vermont, Wisconsin (South of U.S. Highway 18 between Prairie Du Chien and Madison, and South of Interstate 94 between Madison and Milwaukee) and North of Interstate 70 in the following states: Illinois, Indiana and Ohio.

**REGION 4**  
**(Maximum Rate: 3.5 Pints per Acre, Alternate Years)**



**REGION 4** - Includes the following states or portion of states where this product may be applied: Kansas (all counties East of or intersected by U.S. Highway 281), Michigan (Southern Peninsula), Minnesota (all areas South of Interstate 94), Nebraska (all counties East of or intersected by U.S. Highway 281), North Dakota (all areas East of Interstate 29 from Fargo South to the South Dakota state line). South Dakota (all areas East of Interstate 29 from the North Dakota state line to Watertown, all areas East of Highway 81 from Watertown to Madison and all areas East and South of State Road 34 and U.S. Highway 281 to the Nebraska state line) and Wisconsin (all areas south of Interstate 94 all areas, except those in Region 3, from Minnesota state line to Eau Claire and South of U.S. Highway 29 from Eau Claire to Green Bay plus Barron, Burnett, Chippewa, Clark, Door, Dunn, Eau Claire, Kewaunee, Langlade, Lincoln, Marathon, Marinette, Menominee, Oconto, Polk, Price, Rusk, Sawyer, Shawano, St. Croix, Taylor and Washburn counties. The following counties are excluded: Adams, Marquette, Portage, Waupaca, Waushara and Wood).

**REGION 4a**  
**(Maximum Rate: 3.5 Pints per Acre, Alternate Years)**



**REGION 4a\*** - Includes the following states or portion of states where this product may be applied: Kansas (all areas west of U.S. Highway 281 to the Colorado state line), Nebraska (all areas that intersect west of U.S. Highway 281 and east of U.S. Highway 83).

**\*Note:** Refer to the **“USE PRECAUTIONS”** section for additional requirements that must be followed to use this product at the rate of 3.5 pints per acre in Region 4a.

**REGION 5**  
**(Maximum Rate 2.68 Pints per Acre, Alternate Years)**



**REGION 5** - Includes the following states or portion of states where this product may be applied: Minnesota (all areas South of U.S. Highway 2 except those areas in Region 4) plus Betrami, Clearwater, Lake of the Woods, Kittson, Marshall, Pennington, Polk, Red Lake and Roseau, North Dakota (all areas East of U.S. Highway 281 except those areas in Region 4) and South Dakota (all areas East of U.S. Highway 281 except those areas in Region 4).

## WEEDS CONTROLLED

**TABLE 1.** Weeds controlled or partially controlled by pre-plant surface or pre-emergence application of this product at 3.5 to 5.3 pints per acre\*.

<b>Broadleaf Weeds - Controlled</b>	<b>Soil Texture</b>	<b>Organic Matter</b>
Amaranth, Palmer	All soil types	Up to 5%
Croton, Tropic**		
Eclipta		
Galinsoga species		
Lambsquarters, Common		
Morningglory, Small flower		
Nightshade, Black		
Nightshade, Eastern black		
Pigweed, Redroot		
Pigweed, Smooth		
Poinsettia, Wild		
Purslane, Common		
Ragweed, Common**		
Sida, Prickly**		
Starbur, Bristly		
<b>Broadleaf Weeds - Partial Control***</b>		
Anoda, Spurred		
Cocklebur, Common		
Morningglory, Entireleaf		
Morningglory, Ivyleaf		
Morningglory, Pitted (Small white)		
Morningglory, Red (Scarlet)		
Morningglory, Tall (Common)		
Nightshade, Hairy		
Ragweed, Giant		
Waterhemp species		
<b>Sedge - Partial Control***</b>		
Nutsedge, Yellow		
<p>*Use the higher end of the rate range when heavy weed populations are anticipated.  **Rates less than 5.3 pints per acre will provide only partial control of this weed.  ***Partial control means significant activity but not always at a level considered acceptable for commercial weed control.</p>		

**TABLE 2.** Broadleaf weeds controlled by post-emergence application of this product.

Broadleaf Weeds Controlled <sup>1</sup>	Use Rate of This Product (Pts./Acre) Maximum Growth Stage Controlled At		
	3.5 Pts./Acre No. of True Leaves	4.5 Pts./Acre No. of True Leaves	5.3 Pts./Acre No. of True Leaves
Amaranth, Palmer (glyphosate susceptible)	4	4	6
Amaranth, Palmer (glyphosate resistant) <sup>1</sup>	1	2	3
Amaranth, Spiny	2	2	4
Anoda, Spurred	4	6	8
Buttercup species <sup>2</sup>	6	8	10
Carpetweed	6" Diameter size	Multi-leaf 6" Diameter	Unlimited size
Chickweed, Common	6	8	10
Chickweed, Mouseear	6	8	10
Citronmelon (Wild watermelon)	2	4	6
Cocklebur, Common	4	6	8
Copperleaf, Hophornbeam	2	2	4
Copperleaf, Virginia	2	2	4
Crotalaria, Showy	4	6	8
Croton, Tropic	2	4	6
Cucumber, Volunteer	2	4	6
Deadnettle, Purple	4	6	8
Eclipta	6	8	10
Eveningprimrose, Cutleaf	4	6	8
Groundcherry, Cutleaf	4	6	6
Henbit	4	6	8
Jimsonweed	4	6	8
Lambsquarters, Common	4	8	10
Morningglory:			
Cypressvine	4	4	6
Entireleaf var.	3	3	4
Ivyleaf	3	3	4
Purple moonflower	3	4	4
Red (Scarlet)	3	3	4
Small flower	3	3	4
Pitted (Small white)	4	4	4
Tall (Common)	3	3	4
Palmleaf (Willowleaf)	3	3	4
Mustard, Wild	6	8	10
Nightshade, Black	4	6	8
Pigweed:			
Redroot	4	6	6
Smooth	4	4	6

(Continued)

(Continuation)

	4	6	8
Poinsettia, Wild			
Purslane, Common	Multi-leaf 4" Diameter	Multi-leaf 6" diameter	Multi-leaf 8" diameter
Pusley, Florida	4	6	8
Ragweed, Common (glyphosate susceptible)	4	5	6
Ragweed, Common (glyphosate resistant) <sup>1</sup>	2	4	5
Ragweed, Giant (glyphosate susceptible)	4	6	8
Ragweed, Giant (glyphosate resistant) <sup>1,3</sup>	2	2	4
Redweed	4	6	8
Sesbania, Hemp	6	8	10
Shepherdspurse	6	8	10
Sicklepod	2	3	4
Sida, Prickly	2	3	4
Smartweed, Ladysthumb	4	6	8
Smartweed, Pennsylvania	4	6	8
Spurge, Prostrate	4	6	8
Spurge, Spotted	4	6	8
Starbur, Bristly	4	6	8
Sunflower, Common	4	6	8
Velvetleaf	4	6	8
Venice mallow	4	4	6
Waterhemp species (glyphosate susceptible)	2	4	6
Waterhemp species (glyphosate resistant) <sup>1</sup>	2	3	4
Yellow rocket	6	8	10

<sup>1</sup>Weed biotypes that have multiple resistance to both glyphosate and protoporphyrinogen oxidase inhibitor herbicides will not be controlled by this product. See your local company representative and or university recommendations for control programs.

<sup>2</sup>Control will be reduced at the button stage.

<sup>3</sup>Partial control of glyphosate resistant Giant ragweed. See your local company representative and or university extension recommendations for control programs. (Partial control means significant activity but not always at a level considered acceptable for commercial weed control.)



**TABLE 3.** Grasses controlled by post-emergence applications of this product.

Grass Weeds Controlled*	Use Rate of This Product (Pts./Acre) Maximum Growth Stage Controlled At		
	3.5 Pts./Acre Maximum Height (inches)	4.5 Pts./Acre Maximum Height (inches)	5.3 Pts./Acre Maximum Height (inches)
Barley, Volunteer	24	-	-
Barnyardgrass	6	10	12
Bluegrass, Annual	12	-	-
Corn, Volunteer (glyphosate susceptible)	24	-	-
Crabgrass species	12	-	-
Foxtail species	18	-	-
Goosegrass	6	8	12
Johnsongrass, Seedling*	12	18	-
Oats, Volunteer	18	-	-
Oats, Wild	18	-	-
Panicum, Browntop	10	18	-
Panicum, Fall	6	10	-
Panicum, Texas	10	18	-
Red rice	3	-	-
Rye, Volunteer	12	18	-
Ryegrass, Italian (Annual)*	8	10	-
Shattercane	12	16	-
Sprangletop species	18	-	-
Signalgrass, Broadleaf	8	10	-
Wheat, Volunteer	18	-	-
Wild proso millet	12	16	-
Witchgrass	12	-	-
Woolly cupgrass	12	-	-

\*This product will not control glyphosate resistant seedling Johnsongrass and Italian ryegrass biotypes or other glyphosate resistant grass species.

## COTTON

### Burndown and Residual Weed Control Applications

This product can provide burndown of emerged weeds and residual control of certain germinating broadleaf weeds and sedges in Cotton.

### Application to Coarse Textured Soils

Apply this product 3.5 to 5.3 pints per acre as a pre-plant surface or pre-emergence application to coarse textured soils (sandy loam, loamy sand, sandy clay loam) only. Refer to **Table 1** for use rates and weeds controlled by pre-plant surface or pre-emergence applications and **Tables 2** and **3** for use rates, weed growth stages and weeds controlled by post-emergence applications.

### Application to Medium or Fine Textured Soils

Apply this product at 3.5 pints per acre as a pre-plant surface application to medium or fine textured soils (i.e. soil types heavier than coarse textured soils) up to 21 days prior planting Cotton. Apply after the last tillage operation is completed.

Refer to **Table 1** for weeds controlled by pre-plant surface applications and **Tables 2 and 3** for weed growth stages and weeds controlled by post-emergence applications. To avoid severe crop injury, the following use directions must be followed when applications are made to medium or fine textured soils:

- After application of this product, a minimum of 0.5 inch of rainfall or overhead irrigation must occur before planting Cotton.
- Cotton must be planted at least 0.75 inch in depth.
- Avoid overlapping spray swaths.
- Do not disturb or re-work the seedbed following application.

The use of an in-furrow or seed applied fungicide will generally assist with seedling establishment and development.

**Use Restriction:** Do not exceed 3.5 pints per acre of this product on medium or fine textured soils.

### Use Directions for Burndown and Residual Weed Control Applications

Emerged weeds must receive thorough spray coverage for effective control. Refer to the “*SPRAY ADJUVANTS*” section for directions on spray adjuvants for post-emergence weed control.

Moisture is necessary to activate this product in soil for residual weed control. Dry weather following application of this product may reduce residual activity. When adequate moisture is not received within 7 days after an application of this product, residual weed control may be improved with at least a one-fourth inch of overhead irrigation.

Cotton plants are tolerant to this product when applied at specified rates and application use directions. Some crinkling or spotting of Cotton foliage or stunting may occur but Cotton plants normally outgrow these effects and develop normally.

### Tank Mixes for Burndown and Residual Weed Control Applications

This product may be applied in tank mix with the following products:

Diuron (Direx <sup>®</sup> , Karmex <sup>®</sup> ) Dicamba (Banvel <sup>®</sup> , Clarity <sup>®</sup> ) Fluometuron (Cotoran <sup>®</sup> )	Glyphosate Norflazuron (Solicam <sup>®</sup> ) Pendimethalin (Prowl <sup>®</sup> )	Prometryn (Caparol <sup>®</sup> ) Pyrithiobac (Staple <sup>®</sup> )
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**Note: It is the pesticide user’s responsibility to ensure that ALL PRODUCTS in the listed tank mixtures are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.**

### Post-Directed Application in Roundup Ready Flex Cotton

Apply this product in emerged Roundup Ready Flex Cotton as a post-directed treatment using precision post-directed, hooded or shielded application equipment to provide complete coverage of emerged weeds. Apply this product at 3.5 pints per acre in a minimum of 15 gallons spray solution per acre. Applications may be made broadcast or banded. Post-directed applications of this product will provide contact control of labeled weeds and residual pre-emergence control of labeled weeds (once activated by rainfall or irrigation). Refer to the **Table 1** for weeds controlled or partially controlled through residual activity and **Tables 2 to 3** for weeds controlled by post-emergence activity.

Cotton foliage is not tolerant to applications of this product. Avoid contact to Cotton foliage as unacceptable injury will occur. Calibrate application equipment (spray pressure, nozzle type and configuration, and orifice size) to avoid fine spray droplets contacting green Cotton stems and foliage.

**Use Restriction:** Do not exceed 3.5 pints per acre as a post-directed application in Roundup Ready Flex Cotton.

## Post-Directed Application Timing in Roundup Ready Flex Cotton

This product may be applied as a post-directed application to Roundup Ready Flex Cotton when Cotton is at least 6 inches in height through layby. Keep all post-directed applications from contacting any green non-barked parts of the Cotton plant or foliage as unacceptable injury will occur. Follow the application timing recommendations below for post-directed applications in Roundup Ready Flex Cotton.

### Shield and Hooded Applications

Make a precision post-directed application of this product to the base of the Cotton plant avoiding contact with the Cotton stem or foliage when Cotton is at least 6 inches in height to avoid Cotton injury. Use only hooded or shielded spray equipment to apply this product in Cotton that is 6 inches height. Adjust nozzles to provide full coverage of emerged target weeds.

### Layby Applications

Make a post-directed application of this product to the base of the Cotton plant avoiding contact with any non-barked portion of the Cotton plant or foliage. Use precision post-directed equipment or hooded or shielded sprayers on Cotton that has developed a minimum of 4 inches of brown bark through layby. Application equipment should be configured to provide full coverage of emerged target weeds.

## Tank Mixes for Post-Directed Applications

This product can be applied in tank mix combination with most Cotton herbicides which are labeled for post-directed, hooded or shielded applications. Refer to individual product labels for precautionary statements, restrictions, rates and a list of weeds controlled.

**It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.**

### Use Restrictions - Cotton

- Do not apply this product over the top of Cotton as plant death will occur.
- Do not exceed 5.3 pints of this product per acre in any one year and also adhere to the maximum rate that may be applied in each geographic region (refer to the "REGIONAL USE MAP").
- Do not apply more than 3.5 pints of this product as a pre-plant surface application to medium or fine textured soils.
- Do not apply more than 3.5 pints of this product per acre as a post-directed application.
- Do not apply this product later than 70 days before harvest.

## SOYBEANS

### Burndown and Residual Weed Control Applications – Glyphosate tolerant and Non-Glyphosate tolerant Soybeans

This product can provide burndown of emerged weeds and residual control of certain germinating broadleaf weeds and sedges from either a pre-plant surface or pre-emergence application in Soybeans.

Refer to **Table 1** for rates and weeds controlled by pre-plant surface or pre-emergence applications and **Tables 2 and 3** for rates, weed growth stages and weeds controlled by post-emergence applications.

Emerged weeds must have thorough spray coverage for effective control. Refer to the "SPRAY ADJUVANTS" section for directions on spray adjuvants for post-emergence weed control.

Moisture is necessary to activate this product in soil for residual weed control. Dry weather following application of this product may reduce effectiveness of residual activity. When adequate moisture is not received within 7 days after an application of this product, residual weed control may be improved with at least a ¼ inch of overhead irrigation.

### Pre-plant Surface and Pre-emergence Tank Mix Application

This product can be tank mixed with the following products for pre-plant surface or pre-emergence applications in glyphosate and non-glyphosate tolerant Soybeans:

2,4-D	Dicamba	Glyphosate
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**Note: It is the pesticide user’s responsibility to ensure that ALL PRODUCTS in the listed tank mixtures are registered for the intended use. It is the pesticide user’s responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.**

### Post-emergence Over-The-Top Applications in Glyphosate tolerant Soybeans

This product can provide post-emergence control of a broad spectrum of grass and broadleaf weeds as an over-the-top application in glyphosate tolerant Soybeans. Refer to **Tables 2 and 3** for specific directions on weed growth stages, rates and weeds controlled. Emerged weeds must have thorough spray coverage for effective control. Refer to the “*SPRAY ADJUVANTS*” section for directions on spray adjuvants for post-emergence weed control.

Post-emergence, in-crop applications of this product that come in contact with soil may control or partially control certain germinating broadleaf weeds and sedges.

Some bronzing, crinkling or spotting of Soybean leaves may occur following post-emergent applications, but Soybeans soon outgrow these effects and develop normally.

### Post-emergence Split Application Program for Glyphosate tolerant Soybeans in Region 1 and 2

A post-emergence split application of this product may be applied in Regions 1 and 2. Apply this product at 2.65 pints per acre with methylated seed oil (MSO) adjuvant at 1% v/v when weeds are 1 to 2 inches in height followed by a second application of this product at 2.65 pints per acre with MSO at 1% v/v when re-growth or newly emerged weeds are 1 to 2 inches in height (approximately 10 to 14 days after the first application). The total amount of this product in the split application program cannot exceed 5.3 pints per acre.

### Special Post-emergence Use Rate for Specific Weed Control Situations for Glyphosate tolerant Soybeans in Regions 1, 2, 3 and 4

This product may be applied at 2.8 pints per acre in Regions 1, 2, 3 and 4 as a post-emergence application to control non-glyphosate resistant weeds including difficult to control weeds such as Black nightshade, Morningglory, Velvetleaf and in glyphosate tolerant Soybeans. Apply when weeds are 1 to 4 inches in height.

### Special Post-emergence Use Rate for Specific Weed Control Situations for Glyphosate tolerant Soybeans in Region 5

This product may be applied at 2.68 pints per acre in Region 5 as a post-emergence application to control non-glyphosate resistant weeds including difficult to control weeds such as Black nightshade and Velvetleaf in glyphosate tolerant Soybeans. Apply when weeds are 1 to 3 inches in height.

### Post-emergence Over-The-Top Tank Mix Applications – Glyphosate tolerant Soybeans Only

This product can be tank mixed with the following products for post-emergence applications in glyphosate tolerant Soybeans:

Fenoxaprop (Fusion®) Fluazifop (Fusilade®)	Glyphosate Metolachlor (Dual Magnum®)
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**Note: It is the pesticide user's responsibility to ensure that ALL PRODUCTS in the listed tank mixtures are registered for the intended use. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.**

### **Use Restrictions - Soybeans**

- Do not apply this product as an over-the-top application to non-glyphosate tolerant Soybeans as plant death will occur.
- Refer to the "*REGIONAL USE MAP*" for maximum rate of this product (or other Fomesafen containing products) that may be applied in each geographic region. Do not apply to any field in Regions 2, 3, 4 or 5 more than once every two years.
- Do not exceed 5.3 pints of this product per acre in any one year and also adhere to the maximum rate that may be applied in each geographic region (refer to the "*REGIONAL USE MAP*").
- Do not graze treated areas or harvest for forage or hay.
- Do not apply within 45 days of harvest.

## **AERIAL SPRAY DRIFT MANAGEMENT ADVISORY**

### **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 determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed three-fourths the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and take into account the information covered in the "*AERIAL DRIFT REDUCTION ADVISORY INFORMATION*" section below.

### **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:** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation:** Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce 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 larger droplets than other nozzle types.

## BOOM LENGTH

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

## APPLICATION HEIGHT

Applications 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 should 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 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

## TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

## TEMPERATURE INVERSIONS

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers

and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly 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 (i.e., when wind is blowing away from the sensitive areas).

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers.

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

### CONTAINER HANDLING:

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. 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 one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

**Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple 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 one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

**Refillable Container ( $\geq$  250 gallons & Bulk):** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, by other procedures approved by State and local authorities.

## WARRANTY—CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically directed and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

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