

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

19713-739

EPA Reg. Number:

Date of Issuance:

4/15/24

Term of Issuance:

Unconditional

Name of Pesticide Product:

**Drexel Glufosinate 1SL** 

NOTICE OF PESTICIDE:

X Registration Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Drexel Chemical Company PO BOX 13327 Memphis, TN 38113-0327

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

- 1. Submit and/or cite all data required for registration/registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
- 2. The data requirements for Guidelines 830.617(ss) and 830.6320(cc)) are not satisfied. A one-year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data (see details in chem review report).

Signature of Approving Official: Date: 4/15/24 Acting Product Manager 24 Fungicide and Herbicide Branch, Registration Division (7505P)

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- 3. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 19713-739."
- 4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

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 these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

• Basic CSF dated: 11/30/2022

If you have any questions, please contact Sayed Islam by phone at 202-566-2796, or via email at islam.sayed@epa.gov

Enclosure

## ACCEPTED

4/15/2024

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under

EPA Reg. No. 19713-739



### Herbicide

#### **ACTIVE INGREDIENT:**

OTHER INGREDIENTS: 88.67%

Contains 1.0 pound of Glufosinate-ammonium per gallon.

# KEEP OUT OF REACH OF CHILDREN

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 FIRST AID Below] [See Side (Back) Panel for FIRST AID]; [See for FIRST AID] [See Container Labeling for (FIRST AID and) Complete **Directions for Use**] [See (Attached) Booklet (Container Labeling) for Complete Directions for Use]

**EPA Reg. No. 19713-XX Net Content:** EPA Est. No. 19713-XX-X Gals. (

#### **FIRST AID**

#### IF SWALLOWED:

- · Call a poison control center or doctor immediately for treatment
- · Have person sip a glass of water if able to swallow.
- DO NOT induce vomiting unless told to by a poison control center
- 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 to 20 minutes.
- · Call a poison control center or doctor for treatment advice.

#### IF IN EYES:

- · Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsina.
- · Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. national poison control hotline number 1 (800) 222-1222. You may also call CHEMTREC at 800-424-9300 for emergency medical treatment information. For general information on this product, contact the National Pesticides Information Center (NPIC) at 1-800-858-7378, Monday through Friday, 9 AM to 12 PM PST, or at http://npic.orst.edu.

NOTE TO PHYSICIAN: If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration.

For commercial users ONLY, not for sale to homeowners.

#### PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

All handlers must wear: Long-sleeved shirt, long pants, shoes and socks. Wear protective eyewear. Wear long-sleeved shirt and long pants, socks, and shoes, and chemical resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber, ≥ 14 mils polyvinyl chloride ≥ 14 mils or viton ≥ 14 mils).

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them.

#### **User Safety Requirements**

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.

#### **USER SAFETY RECOMMENDATIONS**

Users should: 1) Remove clothing/ PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 2) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. DO NOT clean equipment or dispose of equipment washwaters in a manner that will contaminate water resources or arable land. Glufosinate ammonium and its degradates have those properties normally associated with pesticides that have been detected in groundwater. Use of this product in areas with coarse soils and high water tables may result in groundwater contamination.

#### PRODUCT INFORMATION

GLUFOSINATE 1SL is a non-selective water-soluble herbicide for application as a foliar spray for the control of a broad spectrum of emerged annual and perennial grass and broadleaf weeds. This product will also control certain woody species. Plants that have not yet emerged at the time of application will not be controlled. THOROUGH SPRAY COVERAGE IS IMPORTANT. Visual effects and control from application of this product occur within 2 to 4 days after application under good growing conditions.



The DREXEL logo is a registered trademarks of Drexel Chemical Company.

**GLUFOSINATE 1SL SPDRAFT-0422** 

This product is non-selective and will injure or kill all green vegetation contacted by the spray. Avoid all contact with foliage or green tissue of desirable vegetation. Avoid direct spray contact with green, thin, or uncalloused bark of desirable vegetation or plant injury may result. If desirable vegetation is contacted, rinse the sprayed portion with water immediately.

This product works best when weeds are actively growing. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. Weeds under stress or in dense populations will require application at the highest rate specified. Refer to the "HOW TO APPLY" section of this label.

#### DIRECTIONS FOR USE

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

READ ALL DIRECTIONS COMPLETELY BEFORE USE.

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 intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT** enter or allow worker entry into treated areas during the Restricted Entry Intervals (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is: coveralls; chemical-resistant gloves including barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils; shoes plus socks; protective eyewear.

#### 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. The application for trimming and edging, industrial, recreational and public areas, and farmsteads are not within the scope of the WPS.

## WEED RESISTANCE MANAGEMENT GLUFOSINATE GROUP 10 HERBICIDE

For resistance management, this product is a Group 10 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 10 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies must be followed.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of this product or other Group 10 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank-mixtures with herbicides from a different group if such use
  is permitted; where information on resistance in target weed species
  is available, use the less resistance-prone partner at a rate that will
  control the target weed(s) equally as well as the more resistanceprone partner. Consult your local extension service or certified crop
  advisor if you are unsure as to which active ingredient is currently
  less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.

- Scout before and after herbicide applications to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method including hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and / or integrated weed-management recommendations for specific crops and weed biotypes.
- Report any incidence of non-performance of this product against a
  particular weed species to Drexel Chemical Company, your local
  retailer or your local extension specialist. If resistance is suspected,
  treat weed escapes with a herbicide having a different mechanism
  of action and/or use non-chemical means to remove escapes, as
  practical, with the goal of preventing further seed production.

#### **BEST MANAGEMENT PRACTICES**

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is advised. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/ or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistant weeds. Scouting after herbicide application is important because it can facilitate the early identification of weed shifts and/ or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant weed populations is to implement measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in reducing the spread of resistant weed seed.

#### MANDATORY SPRAY DRIFT MITIGATION

- DO NOT apply where wind speeds 10 miles per hour at the application site.
- DO NOT apply during temperature inversions.
- For ground applications, select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1
- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but DO NOT exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are advised with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.
- For non-crop vegetation management ground applications, apply
  with the nozzle height no more than 4 ft. above the ground or target
  vegetation, unless necessitated by the application equipment.
  Examples would include Roadside, Railroad, Utility rights of way,
  Forestry and other industrial vegetation management applications
  where safety or natural barriers obstruct application.

#### **SPRAY DRIFT ADVISORIES**

POLLINATOR ADVISORY: This product contains a herbicide. Follow all label directions and precautions to minimize potential off-target exposure in order to prevent effects to non-target plants adjacent to the treated site which may serve as habitat or forage for pollinators.

**Spray Drift Management:** The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors where making application decisions.

- 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. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. 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.
- Techniques for Controlling Droplet Size:
  - O Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rates flowers produce larger droplets.
  - O Pressure Use the lower spray pressures specified for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
  - 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 lowdrift nozzles.
- Boom Height: Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom must remain level with the crop and have minimal bounce.
- Drift Reduction Technology (DRT): The EPA Drift Reduction Technology (DRT) Program was developed to encourage the manufacture, marketing and use of spray technologies scientifically verified to significantly reduce pesticide drift. The use of DRTs should result in significantly less pesticide from spray applications drifting and being deposited in areas not targeted by those applications, compared to spray technologies that DO NOT meet the minimum DRT standard. EPA-verified drift reduction technologies (DRTs) and their ratings will be added to the following webpage as they become available: https://19january2017snapshot.epa.gov/reducing-pesticide-drift/ about-drift-reduction-technology-program\_.html
- Wind: Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS. Note: Local terrain can influence wind patterns. Every applicator needs to be familiar with local wind patterns and how they affect spray drift.
- Temperature and Humidity: When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.
- Temperature Inversions: Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature 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 and inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
- Shield Sprayers: Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

#### **USE RESTRICTIONS:**

- For commercial users ONLY, not for sale to homeowners.
- **DO NOT** apply this product by aerial application.
- DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

- DO NOT apply this product through any type of irrigation system.
- DO NOT apply directly to or allow drift to contact desirable green tissue or green, thin or uncalloused bark of desirable vegetation.
- DO NOT allow animals intended for slaughter to graze on vegetation treated with this product.
- DO NOT apply this product to residential areas as other than a spot spray.
- See "WHERE TO APPLY" section for dosing and additional restrictions.
- DO NOT apply more than 3 applications per year when using the maximum single application rate.
- Sequential applications must be a minimum of 5 days apart in noncrop areas.
- DO NOT allow spray or runoff to contact desirable plants.
- In the State of New York only: Not for use in Nassau and Suffolk Counties

WHEN TO APPLY: This product is a foliar-active material. Best results are obtained when weeds are actively growing. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. Weeds under stress or in dense populations will require application of the highest rate. Refer to the "HOW TO APPLY" section of this label.

This product need to be applied at the rate specified in the "HOW TO APPLY" section of this label. Repeat applications of this product or application of a separate residual herbicide will be needed to control weeds emerging from underground parts or seeds.

This product is rain fast in a minimum of one-half hour and an average of 4 hours after application depending upon weed species, environmental conditions, and herbicide application rate.

Plants may be safely planted into area treated with this product after spray has dried.

**HOW TO MIX:** This product must be mixed with water to make a finished spray solution as follows:

- 1. Fill the spray tank with the required amount of water.
- 2. Add the proper amount of this product, then mix thoroughly.

#### **HOW TO APPLY**

**Spot or Directed Applications:** This product may be used as a spot or directed spray application using 2 to 4 fluid ounces (0.02 to 0.03 lb. a.i.) per gallon of water. Mix 2 to 4 fluid ounces (0.02 to 0.03 lb. a.i.) per gallon of water depending upon the weed and stage of growth as shown in the following sections. Spray undesirable vegetation foliage on a spray-to-wet basis. **DO NOT** apply beyond runoff. Ensure uniform and complete coverage. Use a coarse spray. **DO NOT** spray during windy conditions. Backpack, pump-up, and hydraulic sprayers may be used. Thoroughly clean the sprayer following use.

#### **Broadcast or Boom Applications**

Apply 2 to 6 quarts per acre (0.5 to 1.5 lb. a.i.) depending upon the weed and stage of growth as shown in the following sections. Use a minimum of 40 gallons of water per acre with a minimum of 30-psi spray pressure.

#### Tank-Mixes for Non-crop Uses

This product is compatible in tank-mixes with many other herbicides including non-selective herbicides including Glyphosate. 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.

Tank-mix applications of this product plus products containing the following active ingredients can be used for broad-spectrum post-emergence and pre-emergence weed control.

Dicamba DGA Salt	Oxadiazon
Imazapyr	Pendimethalin
Isoxaben	Prodiamine
Oryzalin	

A compatibility test must be conducted with any potential tank-mix partner with this product, except with any one of those listed above. Using a clear glass quart jar, conduct the test as described below:

- 1. Fill the jar three-quarters full with water.
- Add the appropriate amount of herbicide in the following order:

   (a) dry flowable,
   (b) wettable powder,
   (c) aqueous suspensions,
   (d) flowables,
   (e) liquids and
   (f) solutions and emulsifiable or liquid concentrates. Shake or gently stir jar after each addition to thoroughly mix.
- After adding all ingredients, let the mixture stand for 15 minutes and then look for separation, large flakes, precipitates, gels, and heavy oily film on the jar or other signs of incompatibility.
- If the compatibility test shows signs of incompatibility, DO NOT tank-mix the product tested with this product.

#### WEEDS CONTROLLED BY THIS PROCUCT

#### For spot application:

Apply 2 fluid ounces (0.0156 lb. ai) per gallon of water when the weed height or diameter is less than 6 inches. Apply 3 fluid ounces (0.0234 lb. ai) per gallon of water when the weed height or diameter is 6 inches or greater.

#### For broadcast application:

Apply 3 quarts (0.75 lb. a.i.) per acre when the weed height or diameter is less than 6 inches. Apply 4 quarts (1.0 lb. ai) per acre when the weed height or diameter is 6 inches or greater.

Broadleaf Weeds	Grasses and Sedge
Chickweed	Barnyardgrass
Clover	Cupgrass
Common cocklebur	Fall panicum
Filaree	Giant foxtail
Jimsonweed	Goosegrass
Kochia	Green foxtail
London rocket	Johnsongrass (Rhizome)
Malva (Little mallow)	Lovegrass
Marestail	Shattercane
Purslane	Smallflower alexandergrass
Shepheardspurse	(Signal grass)
Smartweed	Stinkgrass
	Windgrass
	Yellow foxtail

#### For spot application:

Apply 3 fluid ounces (0.0234 lb. a.i.) per gallon of water when the weed height or diameter is less than 6 inches.

Apply 4 fluid ounces (0.03125 lb. a.i.) per gallon of water when the weed height or diameter is 6 inches or greater.

#### For broadcast application:

Apply 4 quarts (1.0 lb. a.i.) per acre when the weed height or diameter is less than 8 inches tall. Apply 6 quarts (1.5 lb. a.i.) per acre when the weed height or diameter is 8 inches or greater.

Broadleaf Weeds	Grasses and Sedges
Annual sowthistle	Annual bluegrass
Bindweed	Bahiagrass
Buffalobur	Barley
Burdock	Bermudagrass
Canada thistle	Carpetgrass
Curly dock	Crabgrass
Dandelion	Dallisgrass
Dogbane (Hemp)	Downy bromegrass
Field gromwell	Fescue
Fleabane	Guineagrass
Goldenrod	Kentucky bluegrass
Horsetail	Nutsedge
Lambsquarters	Paragrass
Leafy spurge	Quackgrass
Mugwort	Ryegrass
Musk thistle	Sandbur
Nettle	Smooth bromegrass
Nightshade	Torpedo grass
Pennycress	Vaseygrass
Pigweed, Red root Plantain	Wheat Wild oat
	vviid oat
Prickly lettuce	
Rag weed Russian thistle	
Tansy mustard Velvetleaf	
Vervaiun	
Virginia copperhead	
White heath aster	
Wild buckwheat	
Wild mustard	
Wild onion	
Wild rose	
Wild turnip	
Woodsorrel	
Yellow rocket	
. cc.i. rookot	

#### **USE NOTES:**

- Use higher rates within the specified rate range for plant sizes listed when vegetation cover is dense or when weeds are growing under stressed conditions including drought or when average temperatures are below 50°F.
- 2. The addition of 8.5 to 17 pounds of ammonium sulfate (spray grade) per 100 gallons of water (1 to 2% by weight) or 2 to 4 pounds of ammonium sulfate per acre may improve the level of weed control.

#### **Use on Woody Species**

When applied as specified, this product will provide control, partial control, or suppression of certain perennial woody weed species. Apply 2 to 6 quarts (0.5 to 1.5 lb. a.i.) per acre. Use the higher specified rates per acre of this product when conditions are not optimum for spray penetration, including when vegetation growth is heavy or dense. Lower specified rates may be used when the target species is a conifer and when vegetation growth conditions allow for uniform spray coverage.

umom spray coverage.		
Blackberry	Rubus spp.	
Deer brush	Ceanothus integerrimus	
Douglas Fir	Pseudotsuga menziesil	
Gallberry	llex spp.	
Hazel	Corylus spp.	
Honeysuckle	Lonicera spp.	
Huckleberry	Gaylussacia spp.	
Maple	Acer spp.	
Multiflora rose	Rosa muliflora	
Oak	Quercus spp.	
Pine	Pinus spp.	
Poison ivy	Toxicondedron radicans	
Poison oak	Toxicodendron toxicarium	
Roundleaf greenbriar	Smilax rotundifolia	
Salmonberry	Rubus spectabilis	
Sweet gum	Liquidambar styraciflua	
Sumac	Rhus spp.	
Thimbleberry	Rubus parviflorus	
Trumpetcreeper	Campsis radicans	
Vine maple	Acer circinatum	
Western red cedar	Thuja plicata	

#### WHERE TO APPLY

#### **Trimming and Edging**

This product may be used for trimming and edging landscape areas including: around individual Trees and Shrubs, Landscape beds, Foundations, Fences, Driveways, Paths and Parking areas; also on Golf courses along Cart paths, around Sign and Light posts, and around Sand traps. For control of weeds emerging from seed, the use of this product in a tank-mix with pre-emergence herbicides. If spraying in areas adjacent to desirable plants, use a shield made of cardboard, plywood, or sheet metal while spraying to help prevent spray from contacting foliage of desirable plants. Refer to the "HOW TO APPLY" section of this labeling for appropriate application rates to control specific weeds.

#### Use Restriction for Trimming and Edging:

- DO NOT apply this product to at a rate greater than 4 fluid ounces (0.03 lb. a.i.) per gallon per 1,000 square feet per application.
- DO NOT apply more than 12 fluid ounces of product (0.09 lb. a.i.) per 1,000 square feet per year when applied as a combination of any type of application.
- DO NOT apply this product at a rate greater than 192 fluid ounces (6 qt.) (1.5 lb. a.i.) per acre per application.
- DO NOT apply more than 576 fluid ounces (18 qt.) of product (4.5 lb. a.i.) per acre per year when applied as a combination of any type of application.
- **DO NOT** apply more than 3 applications per year when using the maximum single application rate.
- · Sequential applications must be a minimum of 5 days apart.

#### **Recreational and Public Areas**

When applied as a spot or directed spray application, this product controls annual and perennial weeds listed on this label in areas including: Airports, Commercial plants, Storage and Lumber yards, Educational facilities, Fence lines, Ditch banks, Dry ditches, Schools, Parking lots, Tank farms, Pumping stations and Parks. Refer to the "HOW TO APPLY" section of this labeling for appropriate application rates to control specific weeds.

#### Use Restriction for Recreational and Public Areas:

- DO NOT apply this product to at a rate greater than 4 fluid ounces (0.03 lb. a.i.) per gallon per 1,000 square feet per application.
- DO NOT apply more than 12 fluid ounces of product (0.09 lb. a.i.) per 1,000 square feet per year when applied as a combination of any type of application.
- **DO NOT** apply this product at a rate greater than 192 fluid ounces (6 gt.) (1.5 lb. a.i.) per acre per application.
- DO NOT apply more than 576 fluid ounces (18 qt.) of product (4.5 lb. a.i.) per acre per year when applied as a combination of any type of application.
- DO NOT apply more than 3 applications per year when using the maximum single application rate.
- · Sequential applications must be a minimum of 5 days apart.

#### **Recreational and Public Areas**

When applied as a spot or directed spray application, this product controls annual and perennial weeds listed on this label in areas including: airports, commercial plants, storage and lumber yards, educational facilities, fence lines, ditch banks, dry ditches, schools, parking lots, tank farms, pumping stations, and parks. Refer to the "HOW TO APPLY" section of this labeling for appropriate application rates to control specific weeds.

#### Use Restriction for Recreational and Public Areas:

- DO NOT apply this product to at a rate greater than 4 fluid ounces (0.03 lb. a.i.) per gallon per 1,000 square feet per application.
- DO NOT apply more than 12 fluid ounces of product (0.09 lb. a.i.) per 1,000 square feet per year when applied as a combination of any type of application.
- **DO NOT** apply this product at a rate greater than 192 fluid ounces (6 qt.) (1.5 lb. a.i.) per acre per application.
- DO NOT apply more than 576 fluid ounces (18 qt.) of product (4.5 lb. a.i.) per acre per year when applied as a combination of any type of application.
- DO NOT apply more than 3 applications per year when using the maximum single application rate.
- Sequential applications must be a minimum of 5 days apart.

#### **Residential Lawns**

- This product can ONLY be applied by spot treatment to residential lawns.
- DO NOT apply more than 4 fluid ounces (0.03 lb. a.i.) of this product per gallon, per 1,000 square feet per application.
- DO NOT apply more than 12 fluid ounces. (0.09 lb. a.i.) of this product per gallon, per 1,000 square feet per year.
- DO NOT apply more than 3 applications per year.
- · Sequential applications must be a minimum of 5 days apart.

#### **Dormant Bermudagrass**

- This product may be used to control Winter annual weeds in well-established ornamental dormant hybrid or common bermudagrass. Apply only when the turf is fully dormant and prior to Spring green-up or severe turfgrass injury or delayed green-up may occur. For best results, apply this product at a rate of 3 to 6 quarts (0.75 lb. a.i. to 1.5 lb. a.i.) per acre after most weeds have germinated and are in an early growth stage. Refer to the "WEEDS CONTROLLED BY THIS PRODUCT" section of this label for selecting specified rates.
- Applications of this product may also be used to suppress or control undesirable biennial or perennial weeds. Avoid high volume and spot applications where spray volume exceeds 80 gallons per acre or injury or delayed green-up may occur.

#### **Use Restrictions for Dormant Bermudagrass:**

- **DO NOT** apply this product to at a rate greater than 4 fluid ounces (0.03 lb. a.i.) per gallon per 1,000 square feet per application.
- DO NOT apply more than 12 fluid ounces of product (0.09 lb. a.i.) per 1,000 square feet per year when applied as a combination of any type of application.
- **DO NOT** apply this product at a rate greater than 192 fluid ounces (6 qt.) (1.5 lb. a.i.) per acre per application.
- DO NOT apply more than 576 fluid ounces (18 qt.) of product (4.5 lb. a.i.) per acre per year when applied as a combination of any type of application
- DO NOT apply more than 3 applications per year when using the maximum single application rate.
- DO NOT make more than 3 applications per year for broadcast or boom applications.
- · Sequential applications must be a minimum of 5 days apart.

#### **Ornamentals and Christmas Trees**

When applied as directed by this label, this product may be used for the control of undesirable vegetation in site preparation prior to planting, around and within shade and greenhouses, and as a directed spray around containers and field-grown established ornamentals and Christmas trees.

**Directed spray application:** This product may be applied as a directed spray to control in-row weeds in field-grown woody plants. Refer to the "HOW TO APPLY" section of this labeling for appropriate application rate to control specific weeds. This product may also be used between and around containers and in site preparation for new planting.

Site preparation application: This product may be used for pre-plant site preparation for the control of annual and perennial weeds listed in this label, in Ornamental and Christmas tree plantings. Ornamentals and Christmas trees may be planted into the treated area after the Restricted Entry Interval (REI) of 12 hours has elapsed. Refer to the "HOW TO APPLY" section of this labeling for appropriate application rates to control specific weeds.

#### Use Restrictions for Ornamental and Christmas Trees:

- **DO NOT** apply this product to at a rate greater than 4 fluid ounces (0.03 lb. a.i.) per gallon per 1,000 square feet per application.
- DO NOT apply more than 12 fluid ounces of product (0.09 lb. a.i.) per 1,000 square feet per year when applied as a combination of any type of application.
- **DO NOT** apply this product at a rate greater than 192 fluid ounces (6 gt.) (1.5 lb. a.i.) per acre per application.
- DO NOT apply more than 576 fluid ounces (18 qt.) of product (4.5 lb. a.i.) per acre per year when applied as a combination of any type of application
- DO NOT apply more than 3 applications per year when using the maximum single application rate.
- Sequential applications must be a minimum of 5 days apart.
- DO NOT apply directly to or allow drift to contact desirable green tissue or green, thin, or un calloused bark of desirable vegetation or injury may result.
- DO NOT apply this product as an over-the-top broadcast spray in Ornamentals and Shade or Christmas trees.

#### Greenhouse and shade house applications

This product may be used to control weeds in Greenhouses and Shadehouses. Air circulation fans must be turned off during application. Apply this product as a directed spray, using large droplet and low-pressure type nozzles.

#### Use Restrictions for Greenhouse and shade house applications:

- **DO NOT** apply this product to at a rate greater than 4 fluid ounces (0.03 lb. a.i.) per gallon per 1,000 square feet per application.
- DO NOT apply more than 12 fluid ounces of product (0.09 lb. a.i.) per 1,000 square feet per year when applied as a combination of any type of application.
- DO NOT apply this product at a rate greater than 192 fluid ounces (6 qt.) (1.5 lb. a.i.) per acre per application.

- DO NOT apply more than 576 fluid ounces (18 qt.) of product (4.5 lb. a.i.) per acre per year when applied as a combination of any type of application
- DO NOT apply more than 3 applications per year when using the maximum single application rate.
- Sequential applications must be a minimum of 5 days apart.
- · Avoid drift and direct contact with desirable vegetation.
- DO NOT use in greenhouses or shade houses containing edible crops.

#### **Farmsteads**

When applied as directed, this product controls undesirable plant vegetation in non-crop areas around Farmstead building foundations, Shelter belts, along Fences, and non-selective farmstead weed control. Refer to the "HOW TO APPLY" section of this labeling for appropriate application rates to control specific weeds.

#### **Use Restrictions for Farmsteads:**

- DO NOT apply this product to at a rate greater than 4 fluid ounces (0.03 lb. a.i.) per gallon per 1,000 square feet per application.
- DO NOT apply more than 12 fluid ounces of product (0.09 lb. a.i.) per 1,000 square feet per year when applied as a combination of any type of application.
- DO NOT apply this product at a rate greater than 192 fluid ounces (6 qt.) (1.5 lb. a.i.) per acre per application.
- DO NOT apply more than 576 fluid ounces (18 qt.) of product (4.5 lb. a.i.) per acre per year when applied as a combination of any type of application
- DO NOT apply more than 3 applications per year when using the maximum single application rate.
- Sequential applications must be a minimum of 5 days apart.
- DO NOT allow animals intended for slaughter to graze on treated vegetation.

#### 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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#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal. **PESTICIDE STORAGE: DO NOT** use or store near heat or open flame. Keep container tightly closed and dry in a cool, well ventilated place. Storage temperature must not exceed 125° F. If storage temperature of this product is below 32° F, the material must not be pumped until its temperature exceeds 32° F. Protect against direct sunlight.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

#### **CONTAINER HANDLING:**

Nonrefillable Container (rigid plastic; 5 gallons up to < 250 gallons): Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill 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. Dispose of empty container in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable Container (rigid plastic; ≥ 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.

#### **OPTIONAL MARKETING CLAIMS:**

- [Controls][Kills]: Annual and Perennial Weeds, Shrubs and Vines
- [Kills existing weeds only] [Does not have residual soil activity]
- [Kills many of the weeds you don't want] [Rid weeds] [Get rid of weeds] in flowerbeds, along fences, around trees, shrubs, driveways, walkways, in and around fences, patios, paths, sidewalks and curb cracks, walkways and trails
- · All purpose weed and grass killer
- · Fast Acting Formula
- Fast Acting Formula Kills Actively Growing Weeds In 1 to 4 Days
- · Has No Soil Activity
- Kills [weeds and grasses] [unwanted vegetation] [right down] to the roots
- · Kills 100+ Weeds
- · Kills broadleaf weeds, grasses
- · Kills undesirable weeds and grasses
- · Kills Weeds Roots and All
- · Kills Weeds in 1 to 4 Days
- · Multi-purpose weed and/& grass killer
- · No roots, no weeds, no problem!
- · Rain proof in as little as 4 hours for Most Species
- · Rainfastness in as Little as 4 Hours for Most Species
- · Single application controls [kills] most weeds
- · Starts working in minutes
- · Starts working on contact
- This Product quickly kills unwanted weeds, grass and brush roots and all. It can be used on and around walkways, driveways and patios, in flower beds and around fences, buildings, trees and shrubs.
- Use for site preparation for large plantings, including flower beds, fruit trees, ornamentals, and to renovate or replace lawns
- Use in or around [flower beds] [trees] [shrubs]
- · Water-based formulation

#### Guarantee

- [Guaranteed Satisfaction / Consumer Guarantee] If for any reason you are not satisfied after using this product, simply send us the original proof of purchase and we will [replace the product or] refund the purchase price.
- {100%} Satisfaction [Guaranteed] or your money back
- · 100% Satisfaction Guaranteed
- · Guaranteed (we guarantee it) qualify guarantee
- Guaranteed effective: Kills over 200 types of weeds and grasses, roots and all this product qualify guarantee
- Guaranteed Results [or your money back]
- · Guaranteed results [with one application] qualify guarantee
- Guaranteed Satisfaction qualify guarantee
- Guaranteed to kill to the root so weeds won't come back qualify quarantee
- Money Back Guarantee

#### **Performance**

- [Fast] [and powerful] root kill [action]
- [For] Use in Gardens too!
- [Formulated] for [outdoor] residential use [only]
- [Kills/ spray] listed weeds in flower beds and around fences, trees, shrubs, driveways, walkways and shrubs, in and around fences, driveways and walkways
- [Next day/ this weekend] results: Begins killing on contact, visible results in [1/3/6] hours
- [Provides/ See] Visible results in [[1/ 3/ 6] hour[s]/ sixty minutes]
- [RainFast/ RainProof/ Rainproof Protection:] [in 10 minutes/ less than 30 minutes] [for control that won't wash away]
- [See/ visible] results in [[insert value between 1 and 24] hours/ overnight/ days]
- [Use] For Landscaping: Use to prepare areas for planting of ornamentals, trees, shrubs, desert landscapes, rock gardens, flowerbeds.
- [Use] For Spot Spraying: Use in and around flowerbeds, ornamental, fruit and nut trees, grapevines, shrubs, fences, driveways and walkways.
- [Use] For Wildlife Areas: Use to prepare areas for planting wildlife food. Exotic or undesirable plants can be controlled to allow for planting or recovery of native plant species. Spot treatments can be made to selectively remove unwanted plants.
- 1 application = [dead roots] [dead weeds]
- Absorbed into both broadleaf and grassy weeds
- Absorbed through the leaves, it goes all the way to the root for total kill [on weeds you directly spray]
- · Absorbs on contact, starts working immediately

- Absorbs through the leaf and stem only so killing power won't spread to non-target plants through soil
- Also use for large jobs including vegetable and flower garden preparation
- Approved for garden uses
- Approved for use in vegetable gardens around fences, patios, paths, sidewalk cracks, walkways.
- Be smarter than your weeds
- Begins absorbing on contact
- Begins to Work in [Insert value of between 1 and 24] hours
- · Begins working in hours
- · Contains Glufosinate
- · Controls emerged weeds
- · Deactivates in soil
- Dead root, dead weed
- Dead weed, dead root
- · Dead Weeds Guaranteed [or Your Money Back] qualify guarantee
- Deep root killing [power] [action]
- DO NOT add water
- Does not have soil activity
- Effective even in cool and cloudy conditions [as low as 50°F]
- · Effective Killing Power
- Even if it rains –won't lose its effectiveness
- · EZ Kill Technology
- · Fast [effective] root killing [power] [action]
- Fast Uptake
- Fast-acting for visible results in [[1/3] hour[s]/ sixty minutes]
- Fast-acting formula
- Field Tested
- For general weed control kills weeds and grasses in 1 to 2 weeks - roots and all
- · Get to the Root of the Problem
- · Gets to the Root in hours
- Goodbye weeds
- Got Tough Weeds Get This Product
- Great for driveways, sidewalks, patios and mulched beds
- Hard on weeds
- · Ideal for killing unwanted weeds and grasses
- Keeps driveways, walkways, [landscaping/ landscaped] beds, and flower gardens weed-free
- · Kill listed weeds, even in your flowerbeds
- Kills [all] [annual and perennial] listed weeds, grasses and other unwanted plants
- Kills [Poison Ivy/ Poison Oak/ Poison Sumac/ Blackberry/ Kudzu/ Wild Berries]
- Kills [the toughest] [weeds and grasses] the root so [weeds/ they] don't come back
- Kills [unwanted/ undesirable] listed weeds [and grasses] [roots and all]
- Kills all types of tough weeds
- Kills emerged listed weeds only, no residual activity in soil
- Kills even [tough/ the toughest] weeds
- · Kills even the toughest listed weeds and grasses
- Kills listed weeds [and grasses] [clear down to the root] [1-2 weeks]
   [roots and all]
- Kills listed weeds [and unwanted grasses] [roots and all/ to the root]
- Kills listed weeds and grasses in Patios Driveways Sidewalks – Ornamental Gardens
- Kills listed weeds dead
- Kills listed weeds in flowerbeds, around trees, shrubs and fences, and on patios, paths, sidewalks, sidewalk cracks, walkways, and driveways
- · Kills listed weeds, roots and all
- Kills the root [dead]
- Kills the roots of [both] listed broadleaf and grassy weeds
- · Kills the weed you see and the root you don't
- Kills Tough Weeds [& Grasses] [to the Root]
- · Kills tough weeds in 1 to 2 weeks
- Kills Ugly, Annoying Weeds [& Brush]
- Kills weeds clear down to the root, 1st time, every time so weeds don't come back – guaranteed
- · Kills weeds dead [fast]
- · Kills weeds dead...Fast
- Kills what you directly spray, no residual [herbicidal] activity in soil
- · Make the [Smart] Switch
- · No more hand pulling
- No root. No weed. No problem

- No waiting, weeds wilt in hours
- Non-staining [formula]
- · Not All Weed Killers Are the Same
- · Once and done power
- One application kills weeds and grasses, [roots and all/ to the root]
- Outdoor use only
- · Outsmart your weeds
- · Overnight speed
- · Proven [Efficacy] [Results]
- · Proven Effective
- · Proven Efficacy
- · Proven Weed Killer
- Provides maximum control: Kills [existing] weeds to the root so they don't come back
- · Quick and Dead
- Quick Kill Formula
- · Quick Kill Technology
- · Rainproof in 10 Minutes!
- Rainproof Protection [in 10 minutes/ less than 30], after application.
- Ready-To-Use [grass & weed killer] [Tough Weed Killer] [Insert Applicator Name]
- · Results speak for themselves
- · Root Kill Technology
- · Root Killing Power
- Satisfaction guaranteed or [we will gladly refund purchase price/ your money back with proof of purchase]
- · See the difference
- · Seeina is believina
- · So long weeds
- Spray and Walk Away
- · Spray the [weed/ leaves] to kill the root
- Starts to kill [the same day/ hours/ overnight]
- Starts working [immediately/ in hours/ overnight]
- · Strong enough to kill even the toughest brush
- Suitable for use around flower beds, trees, shrubs, fences, and walks
- Systemic weed and grass killer [of undesirable vegetation]
- The easy way to kill tough weeds [and brush]
- This bottle [may] contain[s] an anti-theft device, [either inside or on the back of the bottle]. [It does not affect product performance].
- This product formula kills to the root so weeds don't come back
- This product formula won't be washed away by rain or watering [10/ 30] minutes after treatment
- This Product kills listed weeds and grasses in Patios Driveways – Sidewalks – Ornamental Gardens
- · Tough formula [kills to the roots]
- Unique formula starts working to kill listed problem weeds and grass [immediately/ within hours]
- Unlike hand pulling this product kills all the way to the roots
- Use along fences, paths, paver patios, sidewalks and driveways, around trees, shrubs, ornamental plantings, flowerbeds, and buildings, under decks and in brick and gravel walkways.
- · Use around flower beds, trees and shrubs
- Use as a first step for turning brushy fields into grassy areas or parks
- Use to prepare sites: for large plantings, for planting flowerbeds, fruit trees, ornamentals, vegetables and gardens
- · Use to trim and edge landscape areas.
- Visible effects are gradual wilting and yellowing advancing to complete browning and root destruction.
- Visible Results in [as little as] [[1/3/6] Hour[s]/ sixty minutes]!
- · Water-based formula
- Weeds start dying [in hours/ in 1 day/ in less than a day]
- · Will not build up in soil to hurt desirable plants growing nearby
- Works on [insert weed list]
- · Works on contact
- · Works only when absorbed by the [foliage/ leaves] of weeds
- · Works the first time, every time