



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

November 13, 2025

Joseph Wolfe, M.S.
Regulatory Manager, T&O
Nufarm Americas Inc.
4020 Aerial Center Parkway
Morrisville, NC 27560

Subject: Label Amendment - Registration Review Mitigation for Prodiamine
Product Name: PROCLIPSE 4F
EPA Registration Number: 228-433
Case Number: 475086
Application Dates: June 20, 2022

Dear Joseph Wolfe:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Prodiamine Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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 Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. You must submit one copy of the final printed labeling before you release the product for

shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Caleb Carr by phone at 202-566-0636, or via email at carr.caleb@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie R. Javier". The signature is fluid and cursive, with the first name "Julie" being the most prominent.

Julie Javier, Team Leader
Risk Mitigation and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

ENCLOSURE: Stamped label

PROCLIPSE 4F

HERBICIDE

A SELECTIVE PREEMERGENCE CONTROL OF GRASS AND BROADLEAF WEEDS IN: ESTABLISHED TURFGRASSES (EXCLUDING GOLF COURSE PUTTING GREENS), LAWNS, AND SOD NURSERIES; CONTAINER, FIELDGROWN, AND LANDSCAPE ORNAMENTALS; HARDWOOD SEEDLING NURSERIES; ESTABLISHED PERENNIAL AND WILDFLOWER PLANTINGS; AND CHRISTMAS TREE FARMS.

ACTIVE INGREDIENT:

Prodiamine (CAS No. 29091-21-2)	40.7%
OTHER INGREDIENTS:	<u>59.3%</u>
TOTAL:	100.00%

KEEP OUT OF REACH OF CHILDREN
CAUTION - PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
 (If you do not understand the label, find someone to explain it to you in detail.)

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300
 For Medical Emergencies Only, Call (877) 325-1840

NOTE: Spanish language is optional

EPA REG. NO. 228-434
 EPA EST. NO.

NET CONTENTS : Gallons

ACCEPTED
 Nov 13, 2025
 Under the Federal Insecticide, Fungicide
 and Rodenticide Act as amended, for the
 pesticide registered under
 EPA Reg. No. 228-433

Manufactured For
 NUFARM, INC.
 11901 S. Austin Ave.
 Alsip, IL 60803



000228-00433.20250318.MASTER

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION - PRECAUCION

Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact, while mixing or handling the concentrated material, may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

WPS Uses: Mixers, loaders, and applicators and other persons who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR part 170) (in general, agricultural-plant uses are covered) must wear: long-sleeved shirt, long pants, waterproof gloves, and shoes plus socks.

NON-WPS Uses: Mixers and loaders who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR part 170) - in general, only agricultural-plant uses are covered by the WPS - must wear: waterproof gloves.

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

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

IMPORTANT: When reduces PPE is worn because a closed system is being used, handlers must be provided with all of the PPE specified above for applicators and other handlers, and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users Should:

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

FIRST AID

IF SWALLOWED	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to <i>do</i> so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none">• 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 EYES	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
IF INHALED	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.• Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment wash water.

NON-TARGET ORGANISM ADVISORY STATEMENT: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. **READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, waterproof gloves, shoes plus socks.

NON-AGRICULTURAL USES 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.

Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

WEED RESISTANCE-MANAGEMENT

For resistance management, **PROCLIPSE 4F** is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to **PROCLIPSE 4F** and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

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

- Rotate the use of this product or other Group 3 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds.
- 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 resistance-prone partner. Consult your local extension service or pest control 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 that considers mechanical control methods, cultural (e.g., timing to favor the turf and not the weeds), biological (weed-competitive varieties) and other management practices.
- Scout after herbicide application 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. Prevent movement of resistant weed seeds to other areas by cleaning equipment.
- 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 pest control advisor for additional pesticide resistance-management and/or integrated weed management recommendations for specific types of turf and weed biotypes.
- For further information or to report suspected resistance, contact Nufarm at 1-800-345-3330.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

CONTROLLING DROPLET SIZE – GROUND BOOM

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

BOOMLESS GROUND APPLICATIONS

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

HANDHELD TECHNOLOGY APPLICATIONS

- Take precautions to minimize spray drift.

GENERAL INFORMATION

WHERE TO USE

This product is a preemergence herbicide that provides residual control of many grass and broadleaf weeds in:

- Established turfgrasses (excluding golf course putting greens), lawns, and sod nurseries, and in container, field grown, and landscape ornamentals
- Hardwood seedling nurseries
- Established perennial and wildflower plantings
- Christmas tree farms

HOW THIS PRODUCT WORKS

This product controls susceptible weeds by preventing growth and development of newly germinated weed seeds. Weed control is most effective when this product is activated by at least 0.5 inch of rainfall or irrigation or shallow incorporation (1 to 2 inches) before weed seeds germinate and within 14 days following application.

USE PRECAUTIONS

1. Do not graze or feed livestock forage cut from areas treated with this product.
2. Follow all applicable directions, restrictions, and precautions on the labels of EPA-registered tank mix partners.
3. Do not blend this product onto dry fertilizer or *any* other granular material.
4. Chemigation: Do not apply this product through any type of irrigation system unless instructed otherwise in this label.
5. Do *not* apply aerially.
6. Do not apply to golf course putting greens.

MIXING AND APPLICATION PROCEDURES

MIXING THIS PRODUCT ALONE

This product must be mixed thoroughly in the spray tank to ensure uniform application. Follow these steps:

1. Fill the spray tank 1/4 full with clean water only.
2. Start agitation and check to ensure it is working properly.
3. For tank mixing instructions, refer to the section "**Mixing Order for Tank Mixtures.**"
4. Maintain vigorous agitation in the spray tank before and during the application. This will ensure a well-mixed spray suspension. If this product was mixed with fertilizer in the spray tank, the fertilizer may aid resuspension of this product if agitation is disrupted. However, it is recommended that the entire tank be used before stopping agitation.
5. A spray colorant may be used with this product to mark areas as they are treated. This will improve application accuracy by minimizing swath skips and overlaps.
6. Thoroughly clean the sprayer after use by flushing the system with water containing a detergent.
7. Refer to the **Pesticide Disposal** section of this label for waste disposal. Do not allow spray suspension to dry in the tank.

TANK MIXING THIS PRODUCT

This product may be tank mixed with certain other EPA-registered herbicides to provide a broader spectrum of weed control or to control emerged weeds. Refer to the specific directions for use for tank mix partners, and refer to the label(s) of the individual tank mix partner(s) for use rate, application timing, weeds controlled, and specific precautions and/or restrictions. Tank mixes are permitted only in states where the tank mix partner(s) are registered for the application site and the turf and ornamental species listed. When using this product in a tank mixture with other pesticides, follow restrictions and precautions on the labels of the products used. Before tank mixing pesticides, test compatibility by mixing the products in a small container first. See the **Compatibility Test** section.

COMPATIBILITY TEST

Before mixing this product with other pesticides in the spray tank, test for compatibility by mixing all components (carrier and pesticide products) in an appropriate container in proportionate quantities. For example, a 1 quart jar would be 1/100 the volume of a 25 gallon/Acre spray rate. At 1 pound/Acre, the product rate would be proportional to 6 ml. per quart. Add approximately 1 teaspoons to a quart of water. Add approximately 1 teaspoon to a quart of water. (See following table.)

AMOUNT OF COMPONENT TO ADD TO ONE QUART OF SPRAY CARRIER
(Assuming Carrier Volume of 25 gallons/Acre)

COMPONENT FORMULATIONS	RATE PER		LEVEL TEASPOONS
	ACRE	1,000 SQ. FT.	
This Product	21.0 ozs.	0.5 oz.	1.0
Dry Tank Mix Partner	1.0 lb.	0.4 oz.	1.5
Liquid Tank Mix Partners	1.0 pt.	0.4 oz.	0.5

If components do not ball-up or form flakes, sludge, gels, oily films, or layers, then the mixture is compatible. Incompatibility will usually occur within 5 minutes after mixing. If components are not compatible, use a compatibility agent and rerun the test to determine if the mixture is suitable. If the components are still not compatible, do not tank mix.

MIXING ORDER FOR TANK MIXTURES

Notes: (1) When mixing this product with other components (carrier and partner pesticide products), allow products to completely dissolve between steps. (2) Maintain agitation throughout mixing and application of the mixture.

Add the products to the spray tank in the following order:

1. Add products packaged in water-soluble bags first. Agitate the tank mixture. Allow the water-soluble bags to completely dissolve and the products to disperse before adding any other tank mix partners.
2. Then add water-dispersible granules (WDG or WG formulations) and wettable powders (WP formulations). Add wettable powders to the tank as agitation continues. Allow the product to disperse completely before other products are added.
3. Add spray adjuvants and spray markers. Read the adjuvant's label first and use only those adjuvants approved for application to turf and ornamentals.
4. Add flowable liquids (FL) or suspension concentrates (SC).
5. Add emulsifiable concentrates (EC) last.

APPLICATION

Apply this product in a minimum of 20 gallons/acre (0.5 gallon/1,000 sq. ft.) of carrier (water and/or fluid fertilizer) using a calibrated, low-pressure sprayer with 50-mesh or coarser screens. A broadcast boom or handheld wand designed for herbicide or insecticide application will provide the best results. Select nozzle pressure and gallonage to provide complete coverage.

USE DIRECTIONS

CONTAINER, FIELD-GROWN, AND LANDSCAPE ORNAMENTAL PLANTINGS (INCLUDING CHRISTMAS TREE FARMS)

Application, timing, and Information

This product:

1. Will not control emerged weeds. Prior to application of this product, control existing vegetation by hand weeding, cultivation, or the use of an appropriate postemergence herbicide.
2. May be applied to newly-transplanted and established ornamentals as a broadcast or over-the-top spray.
3. Is most effective when applied to soil free of clods, weeds, and debris such as leaves and mulch.
4. Is most effective when the product is activated in the soil before weed seeds germinate and within 14 days after application.
5. Is activated when the treated area receives at least 0.5 inch of irrigation or rainfall, or shallow (1 to 2 inches) mechanical

incorporation.

Use Precautions

To reduce injury potential:

- a. In the spring when buds are rapidly growing and expanding, over-the-top application of this product may temporarily injure new growth of desirable plants. To reduce the possibility of injury at this time, wait to apply this product over the top of newly emerged vegetation until it has hardened off, unless your experience indicates that the ornamental plant will not be injured by the over-the-top application.
- b. Alter application immediately irrigate the treated area to wash this product from plant surfaces onto soil (watering the foliage of plants before application may improve the washing process).

ORNAMENTALS AND CHRISTMAS TREE FARMS: APPLICATION SITES AND INSTRUCTIONS

SITE	APPLICATION INSTRUCTIONS
Newly-Transplanted Container or Field Nursery Stock	1. Delay application until soil has settled around transplants. 2. Water transplants thoroughly before application. 3. Apply after cuttings form roots and are established. 4. To avoid inhibition of the tissue union, apply before budding/grafting or after buds/grafts have taken.
Established Container, Field Nursery Stock, or Landscape Plants	Apply at any time as a broadcast, over-the-top, or directed spray.
Landscape (or Ornamental) Plantings	1. Apply as a broadcast, over-the-top, or as a directed spray. 2. Delay applications to newly transplanted ornamentals until soil has settled around transplants.
Bare Ground Application for Container Placement	1. Apply to soil (including mulch, gravel, wood chips, or other permeable base), upon which containerized ornamentals are placed. 2. After this product is applied, perform shallow cultivation or hand weeding only, to avoid disturbing the herbicide barrier.
In Shade Houses and Uncovered Polyhouses	After this product is applied, uncovered polyhouses must remain open for at least 7 days and ornamentals must receive 2 irrigations totaling at least 1/2 inch of water.
Ornamental Bulbs and Perennial Wildflower Plantings	1. This product may be applied to bulbs or perennial wildflower species listed in the section. Tolerant Ornamentals Species. 2. Apply before or after bulbs emerge but before bulbs bloom and weeds emerge. In wildflowers, a postemergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.

HOW MUCH OF THIS PRODUCT AND WHEN TO APPLY - ORNAMENTALS

AMOUNT TO APPLY (BROADCAST)*	WHEN TO APPLY	COMMENTS/INSTRUCTIONS
21-48 ounces/Acre or 0.5-1.1 ounces/1,000 sq. ft.	In fall or spring before weeds germinate or after weeds are removed.	1. Use the higher rate for longer control. 2. This product may be applied more than once per year as long as the total amount of product applied does not exceed 48 ounces/Acre per year.

***NOTE:** For band application, calculate amount per acre:

$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast rate} = \text{amount to apply/acre of field}$

EQUIVALENT MEASUREMENTS FOR THIS PRODUCT

OUNCES/ACRE	OUNCES/1,000 SQ. FT.	APPROXIMATE EQUIVALENT - TABLESPOONS/1,000 SQ. FT.
21	0.5	1.0
31	0.7	1.5
42	1.0	2.0
48	1.1	2.25

TANK MIXTURES FOR USE ON ORNAMENTALS

This product may be tank mixed with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with this product are for use only in states where the tank mix partner(s), application site and intended use pattern are registered. Follow the label(s) directions of the tank mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before mixing pesticides in the spray tank, test compatibility by mixing the products in a small container first. See the **Compatibility Test** section of this label.

TANK MIX PARTNERS FOR THIS PRODUCT ON ORNAMENTALS

PRODUCT	PRECAUTIONS/INSTRUCTIONS
Goal® (use on conifers only)	Mix with this product for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Sim-Trol®, Pennant®	See product labels for weed spectrum and tolerant ornamentals.
Roundup®, Razor®, Credit® or other glyphosate-based products.	These tank mix herbicides control many emerged annual broadleaves and grasses. Take extreme care to prevent tank mixtures with these partner products from contacting the foliage and stems of turfgrass, trees, shrubs, or other desirable vegetation because desirable vegetation may be severely injured or killed. Apply these tank mixtures as a directed spray and use a shield to prevent spray from contacting foliage of desirable plants. Following instructions on the tank mix partner's label, delay irrigation of the treated area to allow time for the herbicide to be absorbed by weed foliage.

TOLERANT ORNAMENTAL SPECIES

The species listed below in Table 1 are tolerant to prodiamine. This product is approved for applications, except in CA, to the species in Table 2. This product may be applied over the top of the listed species.

When plants are under stress (such as heat, drought, or frost damage), some cultivars of listed plants may be sensitive to this product.

Table 1. Tolerant Ornamental Species - All States

<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>
Aleppo Pine	<i>Pinus halepensis</i>	English Laurel	<i>Prunus laurocerasus</i>
Almond, Apricot, Nectarine, Peach, Plum and Prune*	<i>Prunus</i> spp.	False Cypress	<i>Chamaecyparis pisifera</i>
American Arborvitae	<i>Thuja occidentalis</i>	Feathery Cassia	<i>Cassia artemisioides</i>
American Dogwood	<i>Cornus stolonifera</i>	Firethorn	<i>Pyracantha fortuneana</i>
American Holly	<i>Ilex opaca</i>	Firethorn	<i>Pyracantha koidzumii</i>
Amur Privet	<i>Ligustrum amurense</i>	Firethorn Scarlet	<i>Pyracantha coccinea</i>
Austrian Black Pine	<i>Pinus nigra</i>	Formosa	<i>Rhododendron</i> (including Azalea)
Avocado*	<i>Persea americana</i>	Flowering Dogwood	<i>Cornus florida</i>
Barberry	<i>Berberis gladyensis</i>	Fraiser's Photinia (Redtip)	<i>Photinia fraseri</i>
Bearberry Cotoneaster	<i>Cotoneaster dammeri</i>	Gardenia, Cape-Jasmine	<i>Gardenia jasminoides</i>
Big Blue Lillyturf	<i>Liriope muscari</i>	Gladiolus species**	<i>Gladiolus</i> spp.
Border Forsythia	<i>Forsythia intermedia</i>	Glossy Privet (Wax-Leaf)	<i>Ligustrum lucidum</i>
Bradford Pear	<i>Pyrus</i> spp.	Grape*	<i>Vitis</i> spp.
Calabrian Pine	<i>Pinus brutia</i>	Greenstem Forsythia	<i>Forsythia viridissima</i>
Canada Hemlock	<i>Tsuga canadensis</i>	Hawthorne	<i>Crataegus</i> spp.
Canary Island Pine	<i>Pinus canariensis</i>	Heavenly Bamboo	<i>Nandina domestica</i>
Canary Island Viburnum	<i>Viburnum rigidum</i>	Hino-crimson	<i>Rhododendron</i> (including Azalea)
Cape Weed	<i>Arctotheca calendula</i>	Holly	<i>Ilex pernyi</i>
Chinese Hibiscus**	<i>Hibiscus Rosa-sinensis</i>	Hop bush	<i>Dodonea viscosa</i>
Chinese Holly**	<i>Ilex cornuta</i>	Hottentot Fig (Ice Plant)	<i>Carpobrotus edulis</i>
Chinese Juniper	<i>Juniperus chinensis</i>	Ice Plant	<i>Malephora luteola</i>
Citrus species*	<i>Citrus</i> spp.	Indian Hawthorne	<i>Raphiolepis indica</i>
Cleyera	<i>Cleyera japonica</i>	Iris species**	<i>Iris</i> spp.
Corel Bells	<i>Raphiolepis indica</i>	Italian Cypress	<i>Cupressus sempervirens</i>
Cotoneaster	<i>Cotoneaster buxifolius</i>	Japanese Aralia	<i>Fatsia japonica</i>
Crabapple*	<i>Malus</i> spp.	Japanese Aucuba	<i>Aucuba japonica</i>
Cranberry Bush	<i>Viburnum trilobium</i>	Japanese Barberry	<i>Berberis thunbergii</i>
Cranberry Cotoneaster	<i>Cotoneaster apiculatus</i>	Japanese Black Pine	<i>Pinus thunbergiana</i>
Crape Myrtle	<i>Lagerstromia indica</i>	Japanese Boxcherry	<i>Syzygium paniculatum</i>
Creeping Juniper	<i>Juniperus horizontalis</i>	Japanese Boxwood	<i>Buxus microphylla</i>
Douglas Fir**	<i>Pseudotsuga menziesii</i>	Japanese Holly	<i>Ilex crenata</i>
Dwarf Periwinkle	<i>Vinca minor</i>		
Eastern White Pine	<i>Pinus strobus</i>		
English Ivy	<i>Hedera helix</i>		

(continued)

Table 1. Tolerant Ornamental Species - All States (continued)

<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>
Japanese Honeysuckle	<i>Lonicera japonica</i>	Rosemary*	<i>Rosmarinus officinalis</i>
Japanese Maple	<i>Acer palmatum</i>	Roseum Elegans	<i>Rhododendron</i> (including Azalea)
Japanese Pittosporum	<i>Pittosporum tobira</i>	Scotch Heather	<i>Calluna vulgaris</i>
Japanese Privet	<i>Ligustrum japonicum</i>	Scotch Pine	<i>Pinus sylvestris</i>
Japanese Snowball	<i>Viburnum plicatum</i>	Shrimp Plant	<i>Justicia brandegeana</i>
Japanese Spindle Tree (Evergreen Euonymus)	<i>Euonymus japonica</i>	Silverberry	<i>Elaeagnus pungens</i>
Japanese Viburnum	<i>Viburnum japonicum</i>	Slash Pine	<i>Pinus elliptii</i>
Japanese Yew	<i>Podocarpus macrophyllus</i>	Spanish Bayonet	<i>Yucca aloifolia</i>
Japanese Yew	<i>Taxus cuspidata</i>	Spreading Euonymus	<i>Euonymus kiautschovicka</i>
Kiwi*	<i>Actinidia chinensis</i>	Sourwood	<i>Oxydendrum arboreum</i>
Lady Bank's Rose	<i>Rosa banksiae</i>	Star Jasmine	<i>Trachelospermum asiaticum</i>
Laurustinus	<i>Viburnum tinus</i>	Stonecrop	<i>Sedum album</i>
Leatherleaf Fern	<i>Rumohra adiantiformis</i>	Shore Juniper	<i>Juniperus conferta</i>
Leatherleaf Viburnum	<i>Viburnum wrightii</i>	Spruce species** (Colorado Blue, Norway, etc.)	<i>Picea</i> spp.
Lily-of-the-Nile (African Lily)	<i>Agapanthus africanus</i>	Sweet Viburnum	<i>Viburnum odoratissimum</i>
Lily-of-the-Valley Shrub	<i>Pieris japonica</i>	Tatarian Honeysuckle	<i>Lonicera tatarica</i>
Loblolly Pine	<i>Pinus taeda</i>	Trailing African Daisy	<i>Osteospermum fruticosum</i>
Longleaf Pine	<i>Pinus palustris</i>	Tulip species	<i>Tulipa</i> spp.
Magnolia species**	<i>Magnolia</i> spp.	Vinca	<i>Vinca major</i>
Mentor Barberry	<i>Berberis mentorensis</i>	Vine Hill Manzanita	<i>Arctostaphylos densiflora</i>
Mondo Grass**	<i>Ophiopogon japonicus</i>	Virginia Pine	<i>Pinus virginiana</i>
Monterey Pine	<i>Pinus radiata</i>	Walnut*	<i>Juglans</i> spp.
Narcissus species**	<i>Narcissus</i> spp.	Warty Barberry	<i>Berberis verruculosa</i>
Norway Maple	<i>Acer platanoides</i>	Weeping Bottlebrush	<i>Callistemon viminalis</i>
Old Fashioned Weigela	<i>Weigela florida</i>	White Trailing Ice Plant	<i>Delosperma alba</i>
Oleander	<i>Nerium</i> spp.	Wild Lilac	<i>Ceanothus rigidus</i>
Olive*	<i>Olea europaea</i>	Winter Jasmine	<i>Jasminum nudiflorum</i>
Pampas Grass	<i>Cortaderia selloana</i>	Wintercreeper	<i>Euonymus fortunei</i>
Pistachio*	<i>Pistacia</i> spp.	Wintergreen Barberry	<i>Berberis julianae</i>
PJM	<i>Rhododendron</i> (including Azalea)	Yaupon Holly	<i>Ilex vomitoria</i>
Queensland Pittosporum	<i>Pittosporum rhombifolium</i>	Yew	<i>Taxus media</i>
Red Oak	<i>Quercus rubra</i>	Yucca, Adam's Needle	<i>Yucca filamentosa</i>
Rockspray Cotoneaster	<i>Cotoneaster microphyllus</i>		
Rose of Sharon**	<i>Hibiscus</i>		

*Do not use on food producing trees, vines, or plants.

**Not for use on container grown plants.

Table 2. Tolerant Ornamental Species/Varieties - All States Except CA

<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>
Abelia: Sherwood	<i>Abelia grandiflora</i>	Japanese Anemone	<i>Anemone hybrida</i>
Aquilegia: Red and Gold	<i>Aquilegia</i> spp.	Lady Fern; Fern Lady	<i>Athyrium filix-femina</i>
Arrowwood Viburnum	<i>Viburnum suspensum</i>	Lady's Leek, Nodding Onion	<i>Allium cernuum</i>
Aster: Bonny Blue, Purple	<i>Aster</i> spp.	Larkspur; Blue Elf	<i>Delphinium</i> spp.
Dome	<i>Aster X frikartii</i>	Lavender; Munstead	<i>Lavender</i> spp.
Australian Brushcherry,	<i>Syzygium paniculatum</i>	Lily: Jazz	<i>Lilium</i> spp.
Baby's Breath	<i>Gypsophila repens</i>	Lily of the Nile	<i>Agapanthus orientalis</i>
Bigleaf Hydrangea	<i>Hydrangea macrophylla</i>	Liriope, Creeping	<i>Liriope spicata</i>
	<i>Inula ensifolia</i>	Liriope, Variegated	<i>Liriope muscari</i> var.
Black-Eyed Susan:	<i>Rudbeckia</i> spp.		<i>variegata</i>
Goldstrum		Loosestrife; Modern Pink	<i>Lythrum</i> spp.
Bougainvillea	<i>Bougainvillea</i> spp.	Lucifer	<i>Crocsmia</i> spp.
Burgundy	<i>Loropetalum chinense</i>	Mallow; Disco Belle White	<i>Hibiscus</i> spp.
Butterfly-Bush (Dwarf Blue);	<i>Buddleia davidii</i>	Meadow Rue	<i>Thalictrum dipterocarpum</i>
Royal Red		Oak, Shumard's Red	<i>Quercus shumardii</i>
Cardinal Flower, Indian Pink	<i>Lobelia cardinalis</i>	Osmanthus (False Holly):	<i>Osmanthus heterophyllus</i>
Cheddar Pink	<i>Dianthus gratianopolitanus</i>	Gulf Tide	
Chinese Privet; Variegata	<i>Ligustrum sinense</i>	Parsoni	<i>Juniperus davurica</i>
Columbine; Red and Gold	<i>Aquilegia</i> spp.	Pincushion Flower	<i>Scabiosa</i> spp.
Coneflower, Purple; Magnus	<i>Echinacea purpurea</i>	Saxifrage; Purple Dome	<i>Saxifraga</i> spp.
Cooperi Pink	<i>Delosperma</i> spp.	Siberian Iris; Cabernet	<i>Iris sibirica</i>
Coral Belt; Bridget Bloom	<i>Heucherella</i> spp.	Snowbank	<i>Boltonia asteroides</i>
Coreopsis (Calliopsis): Early	<i>Coreopsis</i> spp.	Spirea: Anthony Waterer	<i>Spiraea bumalda</i>
Sunrise, Moonbeam		Stoncrop	<i>Sedum dasyphyllum</i>
Cransbill	<i>Geranium cinereum</i>	Stoncrop; Dragon's Blood	<i>Sedum spurium</i>
Grape Myrtle; Tuscarora	<i>Lagerstromia indica x fauriei</i>	Stoncrop; Lidakense	<i>Sedum cauticola</i>
Crimson Bottlebrush	<i>Callistemon citrinus</i>	Sunrose	<i>Helianthemum</i> spp.
Daylily: Aztec Gold, Stella	<i>Hemerocallis</i> spp.	Sword-Leaved Iris;	<i>Iris ensata</i>
De Oro, Tender Love		Jodlesong	
Delaware Valley White	<i>Rhododendron</i>	Trumpet Creeper, Trumpet	<i>Campis X tagliabuana</i>
	(including Azalea)	Flower Madame Galen	<i>Ceratostigma</i>
Dianthus, Maiden Pinks Zing	<i>Dianthus deltoides</i>		<i>plumbaginoides</i>
Dragonhead, False; Vivid	<i>Physostegia virginiana</i>		<i>Chrysanthemum nipponicum</i>
Edelweiss	<i>Leontopodium alpinum</i>		<i>Paeonia suffruticosa</i>
Evening Primrose	<i>Oenothera missouriensis</i>		<i>Campanula carpatica</i>
Flame Creeper	<i>Rhododendron</i>		
	(including Azalea)	Tree Peony	<i>Veronica</i> spp.
Fibrous Begonia: Hardy	<i>Begonia</i> spp.	Tussock Bellflower; (White	
Grandis	<i>Bergenia cordifolia</i>	Clips)	
Fountain Grass (Dwarf)**	<i>Pennisetum setaceum</i>	Veronica, Speedwell; Sunny	
	<i>perovskia atriplicifolia</i>	Border	
Five-Leaf or Chocolate Vine	<i>Akebia quintata</i>	Wakeiebisu	
Gaillardia, Blanket Flower:	<i>Gaillardia</i> spp.		<i>Rhododendron</i>
'Goblin'	<i>Gaura</i> spp.		(including Azalea)
Gentian	<i>Gentiana dahurica</i>	Weeping Forsythia	<i>Forsythia sypenssa</i>
George L. Tabor	<i>Rhododendron</i>	Weeping Lantana	<i>Lantana montevidensis</i>
	(including Azalea)	White Gumpo	<i>Rhododendron</i>
Germander	<i>Teucrium</i> spp.		(including Azalea)
Girard Crimson	<i>Rhododendron</i>		<i>Artemisia</i> spp.
	(including Azalea)	Wormwood; Silver Mound,	
Grape Myrtle; Tuscarora	<i>Lagerstromia indica x fauriei</i>	Castle	
Hosta, 'Searsucker'	<i>Hosta sieboldiana</i>	Yaku Jima**, Silberfeder**	<i>Miscanthus sinensis</i>
	<i>Houttuynia cordata</i>	Yarrow: King Edward	<i>Achillea</i> spp.
	var. <i>variegata</i>		<i>Agapanthus orientalis</i>
Hosta, Plantain Lily	<i>Hosta plantaginea</i>		<i>Raphiolepis umbellata</i>
(Fragrant)			

*Do not use on food producing trees, vines, or plants.

** Not for use on container grown plants.

NEW PLANTINGS, REPLANTING AND ROTATIONAL PLANTINGS

Nursery, landscape, or non-cropped land areas treated with this product should be rotated only to ornamental species listed on this label for 1 year following application unless the following test has shown species safety:

Before planting a species not listed on this label, it is recommended that several test strips of an indicator plant such as wheat, sorghum or corn be sown into the treated area. If the indicator plants germinate and grow normally to a height of 12 inches with normal root development, it is safe to plant.

In areas disturbed by new plantings or replanting of labeled species, it may be necessary to retreat exposed soil to maintain satisfactory weed control, but do not apply more than 48 ounces/Acre per year.

ESTABLISHED TURF

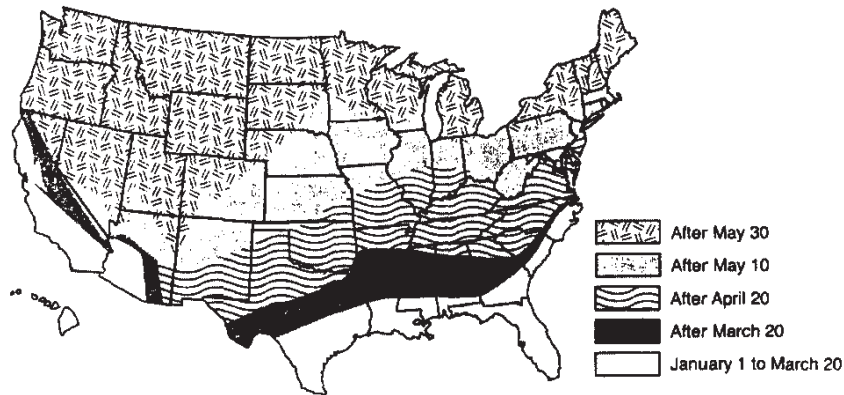
This product is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turfgrasses including:

- Golf courses **excluding** putting greens
- Lawns
- Sod nurseries

The maximum amount of this product that may be applied per year is given for each turfgrass species in the **Annual Use Rates** section of this label.

For optimum weed control, this product should be activated by at least 0.5 inch of rainfall or irrigation before weed seeds germinate. and within 14 days following application. See the map below for approximate crabgrass seed germination dates.

CRABGRASS SEED GERMINATION DATES



USE PRECAUTIONS - TURFGRASS

1. Do not apply this product to areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (*Poa annua*) are desirable species.
2. Do not cut (harvest) treated sod before 90 days after application. To avoid turfgrass injury, do not apply to newly set sod until the sod has rooted and exposed edges have filled in.
3. To avoid turfgrass injury do not apply this product to turf stressed by conditions such as drought, low fertility, or pest damage.
4. Disturbing the herbicide barrier with cultural practices such as disking may result in reduced weed control.
5. **Do not apply this product to golf course putting greens.**
6. If the depth of the creeping bentgrass root system becomes shallow and root tips contact this product - treated soil, new root formation may be inhibited. Mowing height can affect the depth of a plant's root system. To avoid this, do not apply this product to creeping bentgrass less than 0.5 inch in height.

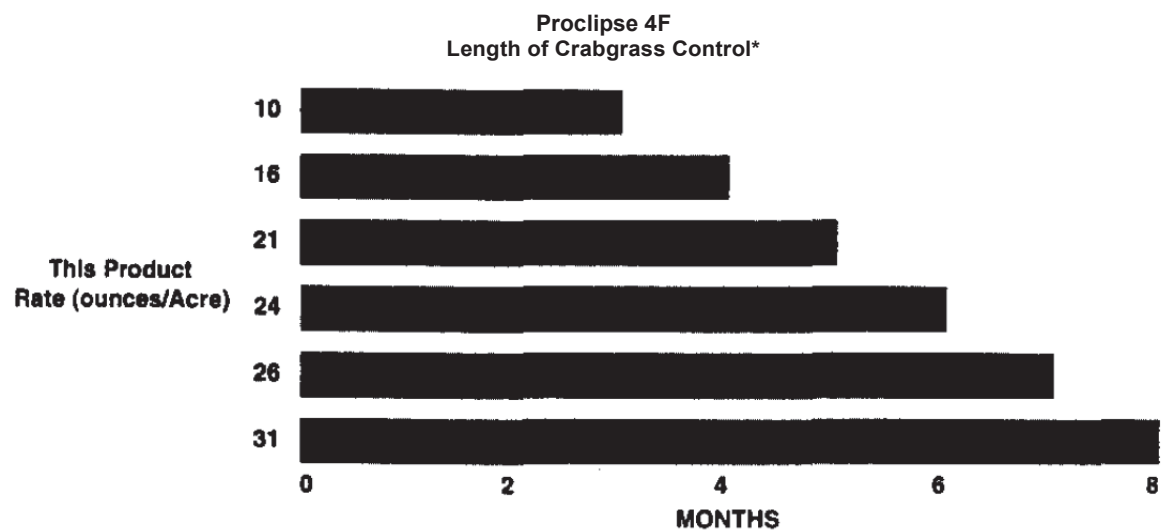
APPLICATION TIMING AND RATE -TURFGRASS

This product may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications should be made before target weeds germinate.

This product will not control weeds that have already emerged.

The amount of this product to apply depends upon:

1. The length of residual weed control desired (the higher the application rate, the longer the control),
2. The turf species, and
3. The maximum amount which can be applied to the turf species per calendar year.



*Length of control varies by region. This table is an average.

ANNUAL USE RATES - TURFGRASS

This product can be applied to the turfgrass species listed in the following table. Do not apply more than the highest rate listed for each species in a calendar year.

Table 1.

MAXIMUM APPLICATION RATE OF THIS PRODUCT PER CALENDAR YEAR BY TURF SPECIES¹

TURF SPECIES	OUNCES PRODUCT/ACRE	OUNCES PRODUCT/1,000 SQ. FT.
Bermudagrass ¹ Bahagrass Centipedegrass Kikuyugrass Seashore Paspalum St. Augustinegrass ¹ Tall Fescue (including turt-type) Zoysiagrass	21-48'	0.5-1.1
Buffalograss Kentucky Bluegrass Perennial Ryegrass	10-30'	0.23-0.70
Fine Fescue	10-24'	0.23-0.55
Creeping Bentgrass (0.5 inch or more in height) ¹	10-21'	0.23-0.48

¹ This product may be applied more than once a year as long as the total amount applied is not greater than the maximum application rate for each turf species. All applications must be made before weed seeds germinate.

² May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 17 ounces/Acre (0.39 ounce/1,000 sq. ft.). Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily inhibited.

³ Use an initial rate of 16-32 ounces/Acre per application.

⁴ To avoid grass injury, do not apply this product to creeping bentgrass mowed at less than 0.5 inch in height.

WEEDS CONTROLLED

When used as directed in this label, this product will control the following weeds:

Barnyardgrass	Henbit ¹	Purslane, Common
Bluegrass, Annual (<i>Poa annua</i>) ¹	Itchgrass	Pusley, Florida
Carpet weed	Johnsongrass (from seed)	Rescuegrass ¹
Chickweed, Common ²	Junglerice	Shepherds Purse ²
Chickweed, Mouseear (from seed)	Knotweed ²	Signalgrass, Broadleaf
Crabgrass (Large, Smooth) ¹	Kochia	Speedwell, Persian
Crowfootgrass	Lambsquarters, Common	Sprangletop
Cupgrass, Woolly	Lovegrass	Spurge, Prostrate
Foxtails, Annual	Panicum, (Texas, Fall, Browntop)	Witchgrass
Goosegrass ⁵	Pigweed	Woodsorrel, Yellow (from seed)

In those areas where *Poa annua* is a winter annual, apply this product (see rate table) in August or September to established, non-overseeded turf before *Poa annua* seeds germinate. These timings are approximate. Consult State Extension Service for more specific timing for your area. Also see the section of this label ***Poa annua* Control in Established Bermudagrass Overseeded with Perennial Ryegrass (AZ, CA, NV, and TX Only)**.

² To control this weed, apply this product in late summer, fall, or winter before weeds germinate.

³ **Fall Applications for Spring Crabgrass Control in Cool-Season Grasses:** In those areas where the ground freezes in the winter, this product can be applied in the fall at rates of 21-24 ounces/Acre after soil temperatures fall below 50°F, but before the ground freezes. This application will control crabgrass the following spring.

⁴ Suppression only.

⁵ In many areas a single application of 21-48 ounces/Acre of this product will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective control may be obtained by making an initial application of 21-26 ounces/Acre followed by a second application 60 to 90 days later. **Note: Do not exceed** the maximum rate for the turf species listed in the **Maximum Application Rates Table**.

WHEN TO APPLY THIS PRODUCT AFTER OVERSEEDING TURF

Injury to desirable seedlings is likely if this product is applied before the secondary roots of seedlings are in the second inch of soil, not thatch plus soil. To reduce the potential to injure overseeded turf, wait 60 days after seeding or until after the second mowing, whichever is longer, before applying this product.

WHEN TO OVERSEED AFTER APPLICATION - ALL STATES

This product will inhibit the development of turfgrass species overseeded too soon after application. Follow rates and intervals in the table below for best overseeding/reseeding results.

AMOUNT OF THIS PRODUCT	INTERVAL (MONTHS BEFORE OVERSEEDING)		
Ounces PRODUCT/ACRE	NORTH	TRANSITION	SOUTH
16	4	4	4
21	5	4	4
24	6	5	5
26	--	6	6
31	--	7	7
36	--	--	9
42	--	--	10
48	--	--	12

•**Note:** In AZ, CA, NV, and TX the overseeding interval can be shorter in established bermudagrass that has been overseeded with perennial ryegrass. See the next section, **Poa annua Control in Established Bermudagrass Overseed with Perennial Ryegrass** (AZ, CA, NV, and TX only).

POA ANNUA CONTROL IN ESTABLISHED BERMUDAGRASS OVERSEED WITH PERENNIAL RYEGRASS (AZ, CA, NV, AND TX ONLY)

Use on golf courses (excluding golf course putting greens), lawns, and sod nurseries when overseeding with perennial ryegrass (minimum seeding rate of 350 pounds/Acre).

HOW MUCH OF THIS PRODUCT AND WHEN TO APPLY

AMOUNT TO APPLY	WHEN TO APPLY	EXPECTED CONTROL	USE PRECAUTIONS
12-21 ozs./Acre*	First application: 6-8 weeks before ryegrass overseeding Second application: 4-8 weeks after overseeding or when perennial ryegrass roots are in the second inch of soil	1 application for 70% or greater control of <i>Poa annua</i> Second application may enhance control	1. Some seedling mortality and temporary reduction in root growth of new seedlings may occur. 2. To reduce the potential for seedling mortality maintain a moist seedbed with light, frequent irrigation. 3. Make no more than 2 applications per year for this use, and do not exceed a total of 27 ounces/Acre per year. 4. Do not make a second application if any injury to the ryegrass is observed after the first application. 5. Do not make a second application unless the product was first applied before overseeding.

*The amount of this product to apply depends upon: the length of residual control desired (the higher the application rate, the longer the control). **Note:** The higher the rate, the greater the potential for seedling mortality.

STORAGE AND DISPOSAL

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

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of container in a sanitary landfill, or incinerate, or burn if allowed by state and local authorities. Stay out of smoke from burning container.

WARRANTY

Seller warrants that this herbicide conforms to the chemical description on its label. When used in accordance with label directions under normal conditions, this herbicide is reasonably fit for its intended purposes. Since timing, method of application, weather, plant and soil conditions, mixtures with other chemicals, and factors affecting the use of this product are beyond our control, no warranty is given concerning the use of this product contrary to label direction or under conditions which are abnormal or not reasonably foreseeable. The user assumes all risks of any such use.

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