



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
228-433

Date of Issuance:
NOV 19 2004

Term of Issuance:
Conditional

Name of Pesticide Product:
Prodiamine 4FL
Herbicide

NOTICE OF PESTICIDE:

Registration
Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Nufarm Americas Inc.
1333 Burr Ridge Parkway, Suite 125A
Burr Ridge, IL 60527

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/reregistered 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 registered in accordance with FIFRA sec. 3(c) (7) (A) provided that you:

- 1. Add the phrase "EPA Registration No. 228-433" to the label before you release the product for shipment.

COMMENTS CONTINUED ON PAGE 2 OF THIS NOTICE OF REGISTRATION

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product under the enclosed stamped copy of the label constitutes acceptance of these conditions.

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Signature of Approving Official:

151

Date:

NOV 19 2004

2/14

2. Submit the following data required for the registration of this pesticide product within 1 year from the date of this Notice of Registration:

<u>EPA Guideline Data Number</u>	<u>Guideline Descriptor</u>
830.6317	Storage Stability Study
830.6320	Corrosion Characteristics Study

Note: These data have not been submitted for the product that is being repacked.

3. Delete the descriptor "Selective" on page 1, 3 and 9, or describe the meaning of it, as it is used in context with the following labeling.
4. Resubmit the "Application for Pesticide" registration on EPA Form 8570-1, which has a completed Section III.
5. On page 12, correct the typographic error in the listing of states for "Poa Annua Control in Established Bermudagrass overseeded with Perennial Ryegrass (AZ, CA, NV and TX Only). Note the error in listing NV, the label states NY.
6. Submit one (1) copy of the final printed labeling **and** a revised "Application for Pesticide", as required in comment 4 above, before you release this product for shipment.
7. Submit and/or cite all data required for the registration of this product when the Agency requires all registrants of similar products to submit data; and submit acceptable responses required for reregistration of this product under FIFRA, section 4. A Stamped copy of the label is enclosed for your records.

Enclosure

3 7 14

PRODIAMINE 4FL HERBICIDE

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

**ACCEPTED
with COMMENTS
In EPA Letter Dated:**

NOV 19 2004

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

228-433

ACTIVE INGREDIENT:		
Prodiamine*	40.7%
OTHER INGREDIENTS:	59.3%
	TOTAL:	100.00%

*CAS NO. 29091-21-2
Contains 4 pounds active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN
CAUTION - CAUCION**

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-
EPA EST. NO. 228-IL-1

MANUFACTURED BY
NUFARM AMERICAS INC.
BURR RIDGE, IL 60527-0866



NET CONTENTS 1 GALLON

000228-00000.102604.P4FLH

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION - CAUCION**

May be harmful if swallowed, absorbed through skin, or inhaled. Avoid breathing vapor. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact, while mixing or handling the concentrated material, may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

WPS Uses: Applicators, mixers, loaders, and other handlers 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, and shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering 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 reduced 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:	
<ul style="list-style-type: none"> • Wash hands, face and arms with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. • Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. • Remove 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 poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF IN 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.
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.
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

This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations substantially above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment wash water.

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, chemical-resistant gloves such as butyl rubber >14 mils or natural rubber >14 mils or neoprene rubber >14 mils or nitrile rubber >14mils, shoes plus socks.

GENERAL INFORMATION

WHERE TO USE

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

- established turfgrasses (excluding golf course putting greens), lawns, and sod nurseries
- containers, 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 weeds. Weed control is most effective when this product is activated by at least 0.5 inch of rainfall or irrigation or shallow incorporation (1-2 inches) before weed seeds germinate and within 14 days following application.

USE PRECAUTIONS

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.

Chemigation

Do not apply this product through any type of irrigation system unless instructed otherwise in this label.

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, 1 quart would be 1/100 the volume of a 25 gallon/Acre spray rate. At 1.0 pounds/Acre, the product rate would be proportional to 6 ml. per quart. 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		
	ACRE	1,000 SQ. FT.	LEVEL TEASPOONS
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. Let the mixture stand for 15 minutes. 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 this product, other 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.
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:

1. Direct application of this product to rapidly growing tissue of buds may injure desirable plants. In the spring when buds are rapidly growing and expanding, over-the-top application of this product may injure new growth of desirable plants, however, these effects are temporary. 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.

2. After application immediately apply overhead irrigation to the foliage to wash this product from plant surfaces onto soil (watering the foliage of plants before application may improve the washing process).

ORNAMENTAL 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	1. 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 Shadehouses and Uncovered Polyhouses	1. After this product is applied, uncovered polyhouses must remain open for at least 7 days and ornamentals must receive 2 irrigations totalling at least 1/2 inch of water before covering.
Ornamental Bulbs and Perennial Wildflower Plantings	1. This product may be applied to bulbs or perennial wildflower species listed in the section. Apply before or after bulbs emerge but before bulbs bloom and weeds emerge. 2. 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. Tanks mixes with this product are for use only in states where the tank mix partner(s), application site and intended use pattern ar registered.

Follow the label directions of the tank mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining a tank mix partner in the spray tank, test for compatibility as described on this label.

TANK MIX PARTNERS FOR THIS PRODUCT ON ORNAMENTALS

PRODUCT	PRECAUTIONS/INSTRUCTIONS
Goal® (use on conifers only)	1. Mix with this product for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Princep®, Pennant Magnum®	See product labels for weed spectrum and tolerant ornamentals.
Touchdown Pro®, Roundup®, Razor®, Credit® or other glyphosate-based products, Finale®	1. These nonselective tank mix herbicides control many emerged annual broadleaves and grasses. 2. 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. 3. 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 may be used for applications, except in CA, to the species in Table 2. This product may be applied over the top of the listed species. The species that are not tolerant to this product when grown in containers are indicated.

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

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

**Not for use on container grown plants

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

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

**Nor for use on container grown plants

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

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

*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

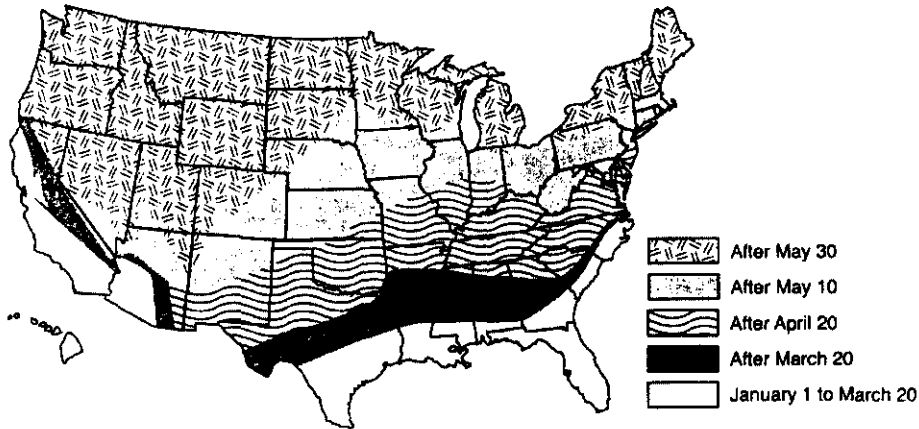
This product is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turfgrasses including:

- 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: GOLF COURSES, LAWNS, AND SOD NURSERIES

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 you consistently mow creeping bentgrass at a height of less than 0.5 inch do not apply this product.

APPLICATION TIMING AND RATE - TURFGRASS

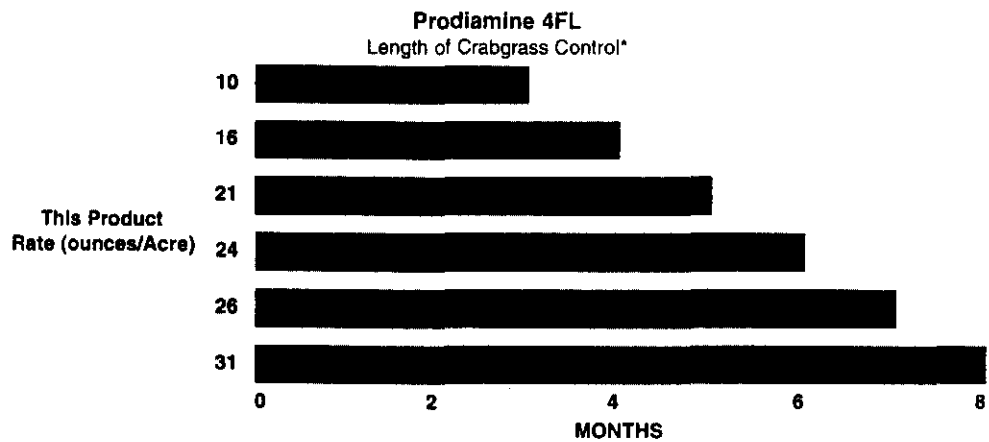
This product may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications must be made before target weeds germinate because **this product will not control weeds that have already emerged.**

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,
3. the maximum amount which can be applied to the turf species per calendar year.

(See the next 2 tables.)

12 8 14



*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. **Note:** Do not apply more than the highest rate listed for each species in a calendar year.

MAXIMUM APPLICATION RATE OF THIS PRODUCT PER CALENDAR YEAR BY TURF SPECIES		
TURF SPECIES	OUNCES PRODUCT/A	OUNCES PRODUCT/1,000 SQ. FT.
Bermudagrass ² Bahagrass Centipedegrass Kikuyugrass Seashore Paspalum St. Augustinegrass ³ Tall Fescue (including turf-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 ⁴)	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	Kochia
Bluegrass, Annual (<i>Poa annua</i>) ¹	Lambsquarters, Common
Carpetweed	Lovegrass
Chickweed, Common ²	Panicum, (Texas, Fall, Browntop)
Chickweed, Mouseear (from seed)	Pigweed
Crabgrass (Large, Smooth) ³	Purslane, Common
Crowfootgrass	Pusley, florida
Cupgrass, Woolly	Rescuegrass ⁴
Foxtails, Annual	Shepherdspurse ²
Goosegrass ⁴	Signalgrass, Broadleaf
Henbit ⁴	Speedwell, Persian
Itchgrass	Sprangletop
Johnsongrass (from seed)	Spurge, Prostrate
Junglerice	Whitchgrass
Knotweed ²	Woodsorrel, Yellow (from seed)

- 1 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, weed control will be most effective by making an initial application of 21-26 ounces/Acre followed by a second application 60-90 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 OUNCES PRODUCT/ACRE	INTERVAL (MONTHS BEFORE OVERSEEDING)*		
	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 OVERSEEDED WITH PERENNIAL RYEGRASS
(AZ, CA, NY, AND TX ONLY)**

Use on golf courses (excluding golf course putting greens), lawns, and sod nurseries when overseeding with perennial rye grass. (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*	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	<ol style="list-style-type: none"> 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 on site or 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 directions or under conditions which are abnormal or not reasonably foreseeable. The user assumes all risks of any such use.

(New 10/04)

Razor® and Credit® are Registered Trademarks of Nufarm Americas Inc.

Pennant Magnum®, Princep®, TouchdownPro® and the Syngenta logo are Registered Trademarks of Syngenta Group Company

Finale® is a Registered Trademark of Bayer

Gallery® and Goal® are Registered Trademarks of Dow AgroSciences LLC

Roundup® is a Registered Trademark of Monsanto Company