

Devrinol® 50-DF

Ornamental Selective Herbicide

A Preemergence Herbicide for Use on Container-Grown Ornamentals, Field-Grown Nursery Stock, Liner Stock, Ground Covers, and Turfgrass

ACTIVE INGREDIENT

N,N-diethyl-2-(1-naphthalenyloxy)-propionamide 50%
INERT INGREDIENTS 50%

TOTAL 100%

Contains 50 pounds of active ingredient per 100 pounds.

EPA Reg. No. 10182-352-70506

KEEP OUT OF REACH OF CHILDREN CAUTION

STATEMENT OF PRACTICAL TREATMENT

Immediately start the procedures given below and contact a Poison Control Center, a physician, or the nearest hospital. Report the type and extent of exposure, describe the victim's symptoms and follow the advice given.

IF SWALLOWED: Immediately give several glasses of water and induce vomiting by gagging the victim with a finger placed on the back of the victim's tongue. Give fluids until vomitus is clear. Do not induce vomiting or give anything by mouth to an unconscious or convulsing person.

IF ON SKIN: Flush all affected areas with plenty of water for several minutes. Remove and clean contaminated clothing and shoes. Seek medical attention if skin irritation occurs.

IF IN EYES: Immediately flush eyes with large amounts of running water for 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get medical attention immediately.

IF INHALED: Remove to fresh air. Seek medical attention if respiratory irritation occurs or if breathing becomes difficult.

**FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL
1-800-F-A-S-T-M-E-D (327-8633).**

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call
CHEMTREC, 1-800-424-9300.**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

MAY BE HARMFUL IF SWALLOWED. CAUSES MODERATE EYE INJURY AND SKIN IRRITATIONS. Do not breathe spray mist. Avoid contact with skin, eyes, and clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- 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.

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

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove 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 contaminate water when disposing of equipment wash waters. Apply this product as specified on this label.

Do not contaminate water used for domestic purposes.

Avoid contamination of food and feed.

GENERAL PRECAUTIONS

Read all instructions before using.

Use only for recommended purposes and at recommended rates. Do not overdose.

Except where specifically noted, DEVRINOL® 50-DF ORNAMENTAL herbicide is not recommended for use on soil containing more than 10% organic matter.

Spraying on ground heavily covered with leaves or trash may adversely affect weed control.

Do not apply to frozen ground.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus and Seller harmless for any claims relating to such factors.

United Phosphorus warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, and Buyer and User assume the risk of any such use. UNITED PHOSPHORUS MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall United Phosphorus or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of United Phosphorus.

DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval (REI). 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 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 into 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

DEVIRINOL 50-DF ORNAMENTAL does not control established weeds. It must be applied to freshly weeded soil before weeds germinate or during fall and winter months.

DEVIRINOL 50-DF ORNAMENTAL can be applied to newly planted container stock after soil has settled from first watering, field-grown nursery stock, dichondra, and to established plants.

DEVIRINOL 50-DF ORNAMENTAL needs mechanical incorporation (such as power tiller), adequate irrigation or natural moisture (rainfall or snow) (1 to 2 inches within 2 to 3 days) for optimum results.

DEVIRINOL 50-DF ORNAMENTAL is recommended on several different container potting soil mixtures. These mixtures include those containing 30 percent soil and/or sand and mixtures containing no soil. (Example: perlite, peat, bark, sawdust, and sand.)

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

WEEDS CONTROLLED BY 8 TO 12 POUNDS OF DEVIRINOL 50-DF ORNAMENTAL

WEEDS CONTROLLED	
ANNUAL GRASSES	
Common Name	Scientific Name
Barnyardgrass, Junglerice	<i>Echinochloa</i> spp.
Foxtail Barley	<i>Hordeum jubatum</i>
Wild Barley	<i>Hordeum leporinum</i>
Annual Bluegrass	<i>Poa annua</i>
Bromes	<i>Bromus</i>
Cheatgrass	<i>B. secalinus</i>
Downy Brome	<i>B. tectorum</i>
Ripgut Brome	<i>B. rigidus</i>
Soft Chess	<i>B. mollis</i>
Canarygrass	<i>Phalaris canariensis</i>
Large (Hairy) Crabgrass	<i>Digitaria sanguinalis</i>

WEEDS CONTROLLED

ANNUAL GRASSES (Cont'd.)

Common Name	Scientific Name
Smooth Crabgrass	<i>Digitaria ischaemum</i>
Southwestern Cupgrass	<i>Eriochloa gracilis</i>
Foxtails	<i>Setaria</i>
Bristly Foxtail	<i>S. verticilla</i>
Giant Foxtail	<i>S. faberi</i>
Green Foxtail	<i>S. viridis</i>
Yellow Foxtail	<i>S. lutescens</i>
Goosegrass	<i>Eleusine indica</i>
Seedling Johnsongrass	<i>Sorghum halpense</i>
Wild Oats	<i>Avena fatua</i>
Panicums	<i>Panicum</i>
Guineagrass	<i>P. paximum</i>
Fall Panicum	<i>P. dichotomiflorum</i>
Texas Panicum	<i>P. texanum</i>
Witchgrass	<i>P. capillare</i>
Italian Ryegrass	<i>Lolium multiflorum</i>
Sandbur	<i>Cenchrus</i> spp.
Mexican Sprangletop	<i>Leptochloa uninervia</i>
Red Sprangletop	<i>Leptochloa filiformis</i>
Stinkgrass	<i>Eragrostis cilianensis</i>
ANNUAL BROADLEAF WEEDS	
Carpetweed	<i>Mollugo verticillata</i>
Common Chickweed	<i>Stellaria media</i>
Coast Fiddleneck	<i>Amsinckia intermedia</i>
Cudweed, Purple	<i>Gnaphalium purpureum</i>
Redstem Filaree	<i>Erodium cicutarium</i>
Common Groundsel	<i>Senecio vulgaris</i>
Prostrate Knotweed	<i>Polygonum aviculare</i>
Lambsquarters	<i>Chenopodium album</i>
Prickly Lettuce	<i>Lactuca serriola</i>
Little Mallow*	<i>Malva parviflora</i>
Redroot Pigweed	<i>Amaranthus retroflexus</i>
Pineappleweed	<i>Matricaria matricarioides</i>
Common Purslane	<i>Portulaca oleracea</i>
Horse Purslane	<i>Trianthema portulacastrum</i>
Common Ragweed**	<i>Ambrosia artemisiifolia</i>
Annual Sowthistle	<i>Sonchus oleraceus</i>

* From seed

** Suppression

RECOMMENDATIONS

Nursery Stock (Field Grown):

Consult list of plant species on which DEVIRINOL 50-DF ORNAMENTAL can be used.

Apply DEVIRINOL 50-DF ORNAMENTAL as a broadcast treatment over young nursery stock or as a directed application to larger stock either as a band or broadcast application.

Application can be made any time of the year to weed-free soil; however, since DEVIRINOL 50-DF ORNAMENTAL requires 1 to 2 inches of rainfall or irrigation soon after application for adequate weed control, applications should be timed to take advantage of rainfall if irrigation is not available. Fall and winter applications will provide excellent weed control the following spring and

summer. A thorough incorporation of DEVRINOL 50-DF ORNAMENTAL into the soil to a depth of 1 to 2 inches will provide excellent weed control with less rainfall required.

One application of DEVRINOL 50-DF ORNAMENTAL should provide adequate weed control for a growing season in temperate areas.

Container-Grown Ornamentals

Consult list of plant species on which DEVRINOL 50-DF ORNAMENTAL can be used.

Apply DEVRINOL 50-DF ORNAMENTAL as a broadcast treatment over the containers.

Normal irrigation or rainfall (if a fall or winter application is made in cold areas) should provide sufficient water for satisfactory weed control.

Home Grounds, Highway, and Industrial Ornamental Plantings

Use an overall (broadcast) treatment over young ornamentals or as a directed application where larger plants are growing. Irrigate soon after application or apply just before expected rain. Fall through spring applications are preferred if irrigation is not available or if application is to be made in lower summer rainfall areas.

Ground Covers

Apply DEVRINOL 50-DF ORNAMENTAL as a broadcast treatment over the ground covers.

Irrigate immediately with a minimum of 1 inch of water or apply when rainfall is expected.

Dichondra

Apply DEVRINOL 50-DF ORNAMENTAL at the time of seeding, or to established dichondra including dichondra sod.

Irrigate immediately with a minimum of 1 inch of water.

RECOMMENDATIONS FOR USE ON THESE ORNAMENTALS AND NURSERY STOCK AND CONTAINER STOCK

FIELD-GROWN

Deciduous and Evergreen Trees

Acer	Eucalyptus
Ash	Ficus
Birch	Fir
Black Walnut	Gleditsia
Cedar	Hemlock
Citrus	Japanese Larch
Cragtaegus	Laburnum
Cypress	Malus
Dogwood	Olive (Olea)
Douglas Fir	Palm (Washingtonia robusta)

Deciduous and Evergreen Shrubs

Abelia	Forsythia
Asparagus (Sprengeri)	Gardenia
Aucuba	Hibiscus
Azalea	Honeysuckle (Lonicera)
Bottlebrush	Hypericum
Bougainvillea	Ilex
Buxus	Juniperus
Camellia	Leucothea
Cotoneaster	Ligustrum
Crepe Myrtle	Nandia
Dogwood	Natal Plum
Euonymus	Oleander

Fruit and Nuts

Almond	Lemon	Pistachio
Apple	Nectarine	Plum
Apricot	Orange	Prune
Cherry	Peach	Tangerine
Filbert	Pear	Walnut
Grape	Pecan	

Strawberry: Applications should be delayed until the desired number of daughter plants have become established. Do not apply from bloom through harvest.

Ground Covers

Ajuga	Hedera
Carpobrotus	Hypericum
Delosperma	Iceplant
Dichondra	Ivy
Erysimum	Lantana
Ganzania	Liriope

Container Stock

Abelia	Euonymus	Palm (Washingtonia robusta)
Agapanthus	Fir	Photinia
Ageratum	Forsythia	Pinus spp.
Asparagus	Gardenia	Pittosporum
Azalea	Geranium	Podocarpus
Bottlebrush	Heather	Pyracantha
Bougainvillea	Hedera	Raphiolepis
Buxus	Hibiscus	Rhododendron
Camellia	Ilex	Rosa
Cedar	Juniperus	Sedum
Cotoneaster	Leucothea	Star Jasmine
Crepe Myrtle	Ligustrum	Thuja
Cypress	Liriope	Vinca
Dogwood	Nandina	Xylosema
Douglas Fir	Pachysandra	
Eucalyptus		

Flowers

African Daisy	Dahlia	Narcissus
Aster	Daisy	Petunia
Bird of Paradise	Geranium	Plantain Lily (Hosta)

APPLICATION RATES

Annual Weeds: For annual grasses and broadleaf weeds, apply 8 to 12 pounds of DEVRINOL 50-DF ORNAMENTAL per broadcast acre (3 to 4.4 ounces per 2½ gallons of water per 1,000 square feet). Do not apply more than 8 pounds of DEVRINOL 50-DF ORNAMENTAL per acre in California. Use the higher rate when weed populations are heavy or when broadleaves are the primary weeds.

RECOMMENDATIONS: TURF GRASS

(For use on warm season grasses only)

DEVRINOL 50-DF ORNAMENTAL is recommended for annual bluegrass, crabgrass, and goosegrass control in the following established turf grasses: Bahia, Bermudagrass, Centipede, St. Augustine, and Fescue.

Timing of Application

For control of crabgrass and goosegrass, apply DEVRINOL 50-DF ORNAMENTAL at the recommended rate. Application should be made 2 to 3 weeks prior to weed emergence. DEVRINOL 50-DF ORNAMENTAL should be mixed with enough water to give adequate coverage of the area to be treated (but no less than 80 gallons per acre). Use a lawn type spray gun.

DEVRINOL 50-DF ORNAMENTAL requires a minimum of one-half (½) inch of rainfall or irrigation 2 to 3 days after application for adequate control. If irrigation methods are not available, the timing of the application of DEVRINOL 50-DF ORNAMENTAL should be moved back several weeks to allow for some rainfall between application and weed germination.

Rates of Application

For Crabgrass Control: Apply 4 to 6 pounds of DEVRINOL 50-DF ORNAMENTAL per acre in 80 to 120 gallons of water (1.5 to 2.25 ounces per 2½ gallons of water per 1,000 square feet). Goosegrass usually starts to germinate 6 to 7 weeks after the start of crabgrass germination.

Split Application for Crabgrass and Goosegrass Control: When both of these weeds are to be controlled, apply 4 pounds of DEVRINOL 50-DF ORNAMENTAL, spread uniformly per acre (1.5 ounces per 1,000 square feet), for crabgrass and another 4 pounds of DEVRINOL 50-DF ORNAMENTAL per acre for goosegrass. Apply 8 to 10 weeks apart. Timing should be adjusted to the germination of weeds in your area. Split applications give longer and better weed control than one (1) application.

For Annual Bluegrass (Poa Annua) Control: Annual bluegrass is a winter annual in most of the warm season turf regions; therefore, application of DEVRINOL 50-DF ORNAMENTAL should be made in the fall before the annual bluegrass germinates. Apply 4 to 6 pounds of DEVRINOL 50-DF ORNAMENTAL per acre in 80 to 120 gallons of water (1.5 to 2.25 ounces per 2½ gallons of water per 1,000 square feet).

TANK MIXTURES

Observe all cautions and limitations on labeling of all products used in combination. Make only one (1) application per season.

Do not contaminate water by cleaning of equipment or disposal of wastes. Apply these combinations only as specified on this label.

For tank mixture application, apply the recommended dosage (see "DIRECTIONS FOR USE") in 80 gallons of water per acre.

GENERAL TANKMIX DIRECTIONS

Proper care must be used in preparing combination tank mixtures to avoid incompatibility problems. Fill the spray tank at least $\frac{3}{4}$ full of water. Start agitation and continue moderate agitation throughout mixing and application. Add, mix, and disperse wettable powders first and flowable products next. Make sure each product is thoroughly wetted and dispersed prior to addition of the next product. Complete filling the tank with water, mix thoroughly, and maintain moderate agitation to provide a uniform mix during application. The tankmix combination should not be left in the spray tank for prolonged periods; batches should be mixed and applied the same day. All return lines to the tank must discharge below liquid level.

DEVIRINOL 50-DF ORNAMENTAL/BETASAN® 4E-LF COMBINATION

DEVIRINOL 50-DF ORNAMENTAL may be used as a tankmix combination with Betasan 4E-LF Herbicide for crabgrass control in the following established turf grass: Bahia, Bermudagrass, Centipede, St. Augustine, and Fescue.

DIRECTIONS FOR USE

Apply 4 pounds of DEVIRINOL 50-DF ORNAMENTAL and 5 quarts of Betasan 4E-LF per acre, using a minimum of 80 gallons of water. Application should be made at least 2 to 3 weeks before the earliest germination date for crabgrass in your area.

The DEVIRINOL 50-DF ORNAMENTAL/Betasan 4E-LF combination requires a minimum of one-half ($\frac{1}{2}$) inch of rainfall or irrigation 2 to 3 days after application for adequate control. If irrigation is not available, the application should be delayed several weeks to allow for some rainfall between application and weed germination.

TANK MIXING DIRECTIONS

Add the recommended amount of DEVIRINOL 50-DF ORNAMENTAL to the spray tank while filling with water. After the DEVIRINOL 50-DF ORNAMENTAL is thoroughly wetted out and dispersed in all of the water, then add the recommended amount of Betasan 4E-LF and mix to provide a uniform dispersion. Apply in at least 80 gallons of water per acre.

Reseeding: Do not seed or overseed within six months after application.

STORAGE AND DISPOSAL

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

STORAGE: Keep container closed when not in use. Store in a cool dry place. Do not store near seeds, fertilizer, or food stuffs.

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: Do not reuse. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

DEVIRINOL® is a registered trademark of a ZENECA Group Company and is licensed for use by United Phosphorus Inc.

Betasan® is a trademark of The Gowan Company.

© 1998. ZENECA Inc.

This specimen label is current as of the time of printing.

Made in U.S.A.



United Phosphorus Inc.

Regd Office 1209 Orange Street, Wilmington, DE 19801
For Information Call 1-800-395-8965