



Drexel®

# PIN-DEE™ 3.3 T & O

Herbicide

**GROUP 3 HERBICIDE**

For use in Turfgrasses, Ornamentals, Landscape or Grounds Maintenance, Non-bearing Fruit and Nut Crops and Vineyards, and Noncropland.

**ACTIVE INGREDIENT:**

Pendimethalin..... 37.4%

**OTHER INGREDIENTS\*:** ..... 62.6%

**TOTAL:** ..... 100.0%

This product contains 3.3 pounds of pendimethalin per gallon.

\*Contains aromatic naphtha.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

See FIRST AID Below

EPA REG. NO. 19713-590

Net Content:

EPA EST. NO. 19713-GA-003

2.5 Gallons (9.46 L)

**FIRST AID**

**IF SWALLOWED:**

- Call a poison control center or doctor immediately for treatment advice.
- Do not give any liquid to the person.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

**IF IN EYES:**

- 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 ON SKIN OR CLOTHING:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

**IF INHALED:**

- 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.

**Note To Physician:** Contains aromatic naphtha - vomiting may cause aspiration pneumonia. Because of increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent, vomiting should be induced only under professional supervision.

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**

**CAUTION:** Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):** Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical-resistance category selection chart.

**NON-WPS USES:**

**Applicators and other handlers (except Mixers/Loaders) who handle this pesticide for any use not covered by the Worker Protection Standard (WPS), 40 CFR Part 170 C in general, only agricultural plant uses are covered by the WPS - must wear:** Long-sleeved shirt and long pants, chemical-resistant gloves such as nitrile rubber ≥ 8 mils, shoes plus socks.

**Mixers and Loaders must wear:** Long-sleeved shirt and long pants, or coveralls, chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, or viton ≥ 14 mils, shoes plus socks.

**WPS USES:**

**Applicators and other handlers who handle this pesticide for any use covered by the WPS, 40 CFR part 170 - in general, agricultural-plant uses are covered - must wear:** Long-sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, or viton ≥ 14 mils, shoes plus socks.

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

**USER SAFETY RECOMMENDATIONS**

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

**ENVIRONMENTAL HAZARDS**

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

Manufactured By:

**Drexel Chemical Company**

P.O. BOX 13327, MEMPHIS, TN 38113-0327

**SINCE 1972**

590SP-0712\*

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## INFORMATION AND USE PRECAUTIONS

Apply PIN-DEE 3.3 T & O only as specified on this label.

This product is formulated as an emulsifiable concentrate containing 3.3 pounds of active Pendimethalin per gallon.

This product is a selective soil applied herbicide for preemergence control of most annual grasses and certain broadleaf weeds as they germinate, in any Turfgrass sites (lawns, sod, turf areas) such as grounds or lawns around residential and commercial establishments, airports, athletic fields, cemeteries, golf courses, houses of worship, military and other institutions, multifamily dwellings, parks, picnic grounds, prairiegrass areas, roadsides, schools, and sod farms.

This product can also be used in and around field, liner, and container grown ornamental nurseries; established landscape ornamentals and ornamental gardens; listed groundcovers; nonbearing fruit and nut trees; conifers and hardwood seedling nurseries; and for tree plantation site preparation and maintenance.

Also, this product can be applied for general grounds maintenance around areas such as alleyways, bike and jogging paths, buildings, driveways and roadsides, markers and fence lines, mulch beds, parking lots, stone gardens and gravel yards, vacant lots and other similar areas. It may be used under asphalt or concrete treatments as part of a site preparation program.

This product is also used for preemergence control of most annual grasses and certain broadleaf weeds as they germinate in any non-crop-land area such as bridge abutments and approaches, delineators, fence rows, highway guardrails, highway and pipeline rights-of-way, paved or gravel surfaces, petroleum tank farms, pumping installations, railroad, sign posts, storage areas, utility, utility substations, and windbreaks and shelterbelts; and other similar areas where weed control is desired.

This product will not control established weeds.

Established weeds should be controlled before applying this product or by using this product in conjunction with an appropriate postemergence herbicide. Unusually cold, excessively wet, or hot and dry conditions that delay germination or extend germination over a long period of time can reduce weed control.

One-half inch of rainfall or its equivalent in sprinkler irrigation following application of this product or tank mix combinations of this product improves weed control. Erratic weed control may result in the absence of rainfall or irrigation within 30 days of application of this product.

Follow label directions of this product or tank mix combinations of this product carefully to avoid crop injury. Over-application can result in crop stand loss, crop injury, or excessive soil residues. Uneven application, improper soil incorporation, or soil incorporation deeper than what is directed can decrease weed control and/or cause crop injury. Seedling diseases, cold weather, excessive moisture, shallow or deep planting, low or high soil pH, high soil salt concentration, or drought can weaken seedlings and plants and increase the possibility of crop damage and/or reduce crop yields from this product.

This product may cause temporary discoloration of sprayed surfaces. Rinse immediately to avoid staining. Spray colorants or dyes can be added to alter the color of the spray solution to match the treated surfaces.

**Uses with Other Products (Tank Mixes):** When tank mixing this product with other herbicides, all applicable directions, restrictions, and precautions for the additional herbicides must be followed. Use the most restrictive limitations stated on the product labels. Before initiating full tank mix application, the physical compatibility of the proposed mixture should be evaluated on a small scale of recommended spray mixture concentrations. Also, such mixtures should be evaluated for vegetation control before expanding commercial use.

## RESISTANCE MANAGEMENT

### GROUP 3 HERBICIDE

This product is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 3 herbicides. Weed species with acquired resistance to Group 3 may eventually dominate the weed population if Group 3 herbicides are used repeatedly in the same field or in successive years as primary method of control for targeted species. This may result in partial or total loss of control of those species by this product or other Group 3 herbicides.

To delay herbicide resistance, consider:

- Avoiding the consecutive use of this product or other target site of action Group 3 herbicides that have a similar target site of action on the same weed species.
- Using tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.

- Basing herbicide use on a comprehensive IPM program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

## 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. DO NOT apply this product through any type of irrigation system. DO NOT apply this product in greenhouses, shadehouses or other enclosed structures.

Drexel Chemical Company does not recommend or authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to Turf or Ornamentals.

Observe all use precautions and limitations in this label and the labels of products used in combinations with this product. The use of this product not consistent with this label can result in injury to crops, or may result in poor weed control.

## AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the REI of 24 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves such as barrier laminate, butyl rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, or viton  $\geq$  14 mils, and shoes plus socks.

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the WPS 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 enter or allow others to enter the treated area until sprays have dried.

## MIXING INSTRUCTIONS

### Ground Driven Sprayer:

1. Fill tank one-half to three-quarters full with clean water.
2. Add this product to the partially filled tank while agitating and then fill the remainder of the tank with water.
3. Maintain continuous agitation while adding this product and until spraying is completed. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential before spraying is resumed. Continue agitation while spraying.
4. If this product is to be used in tank mixtures with other registered herbicides, then follow directions on the labels of those products which recommend tank mixing.

### Backpack Sprayer:

1. Begin with a clean spray tank.
2. Fill the spray tank one-half full with clean water and add the required amount of this product to the sprayer.
3. Cap sprayer and agitate to ensure mixing.
4. Uncap sprayer and finish filling tank to desired level.
5. Cap sprayer and agitate once again.

During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential before spraying is resumed.

**Liquid Fertilizers:** Small quantities should always be tested using a simple jar test. Prior to mixing, add the required amount of this product to half filled spray tank while agitating then add the fertilizer product. Complete filling spray tank to desired level.

**Dry Bulk Fertilizers:** This product may be impregnated on dry bulk fertilizers. This product/Dry Bulk Fertilizer mixtures will provide weed control equal to that provided by the same rates of this product applied in water, when applied as directed.

**SPRAYING INSTRUCTIONS**

Apply with properly calibrated ground equipment in at least 40 gallons of water per acre to provide uniform spray distribution. Low pressure (i.e. 20 to 40 psi) sprayers are recommended. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Check sprayer routinely for proper calibration. Avoid overlaps that will increase rates above those recommended. Avoid application when winds may cause drift.

Avoid unintentional contact of spray solution with driveways, stone, wood or other porous surfaces. Rinse immediately to avoid staining.

**TURFGRASSES**

TYPES OF TURFGRASS	WEEDS CONTROLLED	RATES OF THIS PRODUCT	
		Pints/Acre	Ounces/1000 sq. ft.
<b>Cool Season Grasses:</b> Fescue (fine), Fescue (tall), Kentucky bluegrass, Perennial ryegrass	Barnyardgrass, Crabgrass, Evening primrose, Fall panicum, Foxtail, Hop clover, Knotweed, Oxalis, <i>Poa annua</i> , Prostrate spurge, Purslane	3.6 to 4.8	1.3 to 1.8
	USE INSTRUCTIONS: Use as initial application prior to weed germination in Spring. For extended weed control or where weed infestation is expected to be heavy, repeat application using 2.5 to 3.6 pints per acre (1 to 1.3 ozs. per 1000 sq. ft.) after 5 to 8 weeks.		
	<b>For Residential Turf* Uses Only:</b> Goosegrass	3.6 to 4.8	1.3 to 1.8
	USE INSTRUCTIONS: Use as initial application prior to weed germination in Spring. If the lower rate was used initially or for extended control, repeat application at 3.6 pts./acre (1.3 ozs./1000 sq. ft.). Do not exceed a maximum of 4.8 pts./Acre per application for use on residential Turfgrass. *Note: Residential turf is defined as turf in any residential situation as well as schools, parks and playgrounds.		
	<b>For Commercial or Other Non-Residential Turf:</b> Goosegrass	3.6 to 7.2	1.3 to 2.6
	USE INSTRUCTIONS: Use as initial application prior to weed germination in Spring. If the lower rate was used initially or for extended control, repeat application at 3.6 pts./acre (1.3 ozs./1000 sq. ft.). Do not exceed a maximum of 7.2 pts./Acre per application for use on commercial or other non-residential Turfgrass.		
	Chickweed, Corn speedwell, Cudweed, Henbit, Lawn burweed, <i>Poa annua</i>	3.6 to 4.8	1.3 to 1.8
USE INSTRUCTIONS: Apply in late Summer or early Fall prior to weed germination.			
<b>Warm Season Grasses:</b> Bahia grass, Bermudagrass, Buffalograss, Centipedegrass, Fescue (tall), St. Augustine-grass, Zoysiagrass	<b>For Residential Turf* Uses Only:</b> Barnyardgrass, Crabgrass, Evening primrose, Fall panicum, Foxtail, Hop clover, Knotweed, Oxalis, <i>Poa annua</i> , Prostrate spurge, Purslane	3.6 to 4.8	1.3 to 1.8

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TYPES OF TURFGRASS	WEEDS CONTROLLED	RATES OF THIS PRODUCT	
		Pints/Acre	Ounces/1000 sq. ft.
USE INSTRUCTIONS: Use as initial application prior to weed germination in Spring. Repeat application at 2.5 to 3.6 pints per acre (1 to 1.3 ozs. per 1000 sq. ft.) after 5 to 8 weeks if necessary. Do not exceed a maximum of 4.8 pts./Acre per application for use on residential Turfgrass. *Note: Residential turf is defined as turf in any residential situation as well as schools, parks and playgrounds.			
Goosegrass		3.6	1.3
USE INSTRUCTIONS: Apply prior to weed germination in Spring. Make a second application 6 to 8 weeks later. For extended control, an additional application of 3.6 pts./acre (1.3 ozs./1000 sq. ft.) may be made 8 weeks after the second application.			
Chickweed, Corn speedwell, Cudweed, Henbit, Lawn burweed, <i>Poa annua</i>		2.6 to 4.8	1.3 to 1.8
USE INSTRUCTIONS: Apply in late Summer or early Fall prior to weed germination.			

Efficacy of this product will be improved if application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if this product is not activated by rainfall or irrigation within 30 days.

To prevent establishment of weeds along the edges of lawns, it may be necessary to overlap the spray 3 to 6 inches onto sidewalks or driveways, etc. Rinse pavement immediately to avoid temporary discoloration.

**THIS PRODUCT IN TANK MIXTURE**

To control emerged weeds in Turfgrasses, this product can be mixed with postemergence herbicides. To control emerged annual grass, this product can be mixed with Acclaim® Extra or MSMA whereas broadleaved weeds can be controlled using Trimec®, Three-Way™, 2,4-D, and other similar products.

Before tank mixing, a simple jar test is recommended to insure compatibility of herbicides.

Always read the companion product label. Follow all use precautions and restrictions that apply to each product used. Always follow the most restrictive label.

**USE PRECAUTIONS FOR TURFGRASS**

1. Use on well established Turfgrass with a dense and uniform stand.
2. On newly planted areas, application should not be made until the Turfgrass has filled in and has been mowed at least four times.
3. On Turf that has been thinned or damaged due to Winter injury, excessive moisture, etc., allow Turf to recover prior to application.
4. Applications made to overseeded warm-season Turfgrasses may cause thinning or injury of the overseeded species.
5. Do not use on greens or injury may occur.
6. Delay reseeding or Winter overseeding of treated Turfgrass for at least 3 months following the last application of this product
7. Delay sprigging Turfgrass for 5 months after application of this product.

**INDUSTRIAL (UNIMPROVED) TURF**

**(Rights-Of-Way, Roadsides, Construction Sites, Parks, Substations, Lots, or Similar Areas)**

Industrial, or unimproved turf areas often have a different spectrum of weeds to be controlled than those found in fine Turf. This product will control annual grasses and broadleaf weeds mentioned in "TURFGRASSES" section of this label as well as the following weeds that might germinate in established grasses.

Annual spurge	Field sandbur
Browntop panicum	Filaree
Carpentweed	Florida pusley
Crowfootgrass	Itchgrass
Fiddleneck	

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<b>(Cont.)</b>	Pigweed
Johnsongrass (from seed)	Puncturevine
Junglerice	Red sprangletop
Kochia	Shepherdspurse
Lambsquarters	Signalgrass
London rocket	Texas panicum
Lovegrass	Velvetleaf
Mexican sprangletop	Witchgrass
Pennsylvania smartweed	Woolly cupgrass

Apply before weeds germinate. To control established weeds, 2,4-D, MSMA, or similar postemergence herbicides may be tankmixed with this product. Apply according to label instructions for the respective products and follow the most restrictive label.

### ORNAMENTALS

This product can be applied for preemergence weed control around and over the top of the established plants listed below. However, not all varieties or strains of the plants listed have been tested. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage prior to full scale application.

GROUND COVERS	
Common Name	Scientific Name
Ajuga	<i>Ajuga reptans</i>
Capeweed	<i>Arctotheca calendula</i>
Cinquefoil, Spring	<i>Potentilla verna</i>
Daisy, Trailing African	<i>Osteospermum fruticosum</i>
Gazania	<i>Gazania splendens</i>
Icelandic, Large Leaf	<i>Carpobrotus edulis</i>
Ivy, English	<i>Hedera helix</i>
Ivy, Geranium	<i>Pelargonium peltatum</i>
Jasmine, Asiatic	<i>Trachelospermum asiaticum</i>
Jasmine, Primrose	<i>Jasminum mesnyn</i>
Mondgrass	<i>Ophiopogon japonica</i>
Myoporum	<i>Myoporum parvifolium</i>
Pachysandra	<i>Pachysandra terminalis</i>
Potentilla	<i>Potentilla fruticosa</i>
Rose-of-Sharon	<i>Hypericum calycinum</i>
Wintercreeper	<i>Euonymus fortunei</i>

ORNAMENTAL GRASSES	
Common Name	Scientific Name
Beach grass	<i>Ammophila breviligulata</i>
Fescue, blue	<i>Festuca ovina</i>
Fescue, sheep	<i>Festuca ovina</i>
Fountain grass	<i>Pennisetum setaceum</i>
Pampas grass	<i>Cortaderia selloana</i>
Reed canary grass	<i>Phalaris arundinacea</i>
Reed, giant	<i>Arundo spp.</i>
Ribbon grass	<i>Phalaris arundinacea</i>
Tufted hair grass	<i>Deschampsia caespitosa</i>

ORNAMENTAL SHRUBS	
Common Name	Scientific Name
Abelia, glossy	<i>Abelia grandiflora</i>
Aucuba, gold	<i>Aucuba japonica</i>
Azalea	<i>Rhododendron spp.</i>
Bamboo, heavenly	<i>Nandina domestica</i>
Barberry	<i>Berberis gladwynensis</i>
Barberry, Japanese	<i>Berberis thunbergii</i>
Blue indigo bush	<i>Dalea gregii</i>
Bottlebrush, lemon	<i>Callistemon citrinus</i>
Boxwood, common	<i>Buxus sempervirens</i>
Boxwood, Japanese	<i>Buxus microphylla</i>
Camellia	<i>Camellia japonica</i>
Cape jasmine	<i>Gardenia jasminoides</i>
Cordyline	<i>Cordyline spp.</i>
Correa	<i>Correa spp.</i>
Cotoneaster	<i>Cotoneaster apiculatus</i>
Cotoneaster, bearberry	<i>Cotoneaster dammeri</i>
Cotoneaster, rock	<i>Cotoneaster horizontalis</i>

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(Cont.)	
ORNAMENTAL SHRUBS	
Common Name	Scientific Name
Cypress, Italian	<i>Cupressus sempervirens</i>
Cypress, leyland	<i>Cupressocyparis leylandii</i>
Deutzia, slender	<i>Deutzia gracilis</i>
Dogwood, red twig	<i>Cornus sericea</i>
Elaeagnus	<i>Elaeagnus ebbingei</i>
Escallonia	<i>Escallonia fradesii</i>
Euonymus	<i>Euonymus fortunei</i>
Euonymus, golden	<i>Euonymus japonica</i>
Euonymus, winged	<i>Euonymus alata</i>
Firethorn	<i>Pyracantha coccinea</i>
Forsythia, border	<i>Forsythia intermedia</i>
Fragrant olive	<i>Osmanthus fragrans</i>
Fuschia, California	<i>Zauschneria californica</i>
Gardenia	<i>Gardenia jasminoides</i>
Hawthorne, Indian	<i>Raphiolepis indica</i>
Hibiscus	<i>Hibiscus syriacus</i>
Holly, Chinese	<i>Ilex cornuta</i>
Holly, Japanese	<i>Ilex crenata</i>
Holly, Fosters	<i>Ilex attenuata 'Fosteri'</i>
Holly, savannah	<i>Ilex attenuata</i>
Holly, yaupon	<i>Ilex vomitoria</i>
Honeysuckle, bush	<i>Diervilla lonicera</i>
Juniper	<i>Juniperus spp.</i>
Juniper, Chinese	<i>Juniperus chinensis v. pfitzer</i>
Juniper, shore	<i>Juniperus conferta</i>
Juniper, trailing	<i>Juniperus horizontalis</i>
Laurel, cherry	<i>Prunus laurocerasus</i>
Laurel, Mountain	<i>Kalmia latifolia</i>
Laurel, otto luyken	<i>Prunus laurocerasus</i>
Laurel, schipka	<i>Prunus schipkanensis</i>
Laurustinus	<i>Viburnum tinus</i>
Lavender, English	<i>Lavandula angustifolia</i>
Leucothoe	<i>Leucothoe fontanesiana</i>
Leucothoe, coast	<i>Leucothoe axillaris</i>
Lilac, cut-leaf	<i>Syringa laciniata</i>
Lily-of-the-Nile	<i>Agapanthus africanus</i>
Mahonia	<i>Mahonia aquifolium</i>
Mock orange	<i>Pittosporum tobira</i>
Myrtle, compact	<i>Myrtus communis</i>
Myrtle, wax	<i>Myrica cerifera</i>
Nandina	<i>Nandina domestica</i>
Oleander	<i>Nerium oleander</i>
Oregon grape	<i>Mahonia aquifolium</i>
Osmanthus	<i>Osmanthus fragrans</i>
Palm, European fan	<i>Chamaerops humillilis</i>
Palm, Mediterranean fan	<i>Chamaerops spp.</i>
Phlox, prickly	<i>Leptodactylon californicum</i>
Photinia, fraser	<i>Photinia X Fraseri</i>
Pieris, Japanese	<i>Pieris japonica</i>
Pine, mugo	<i>Pinus mugo</i>
Plum, natal	<i>Carissa grandiflora</i>
Privet, California	<i>Ligustrum ovalifolium</i>
Privet, glossy	<i>Ligustrum lucidum</i>
Privet, variegated	<i>Ligustrum sinensis</i>
Privet, waxleaf	<i>Ligustrum japonicum</i>
Pyracantha	<i>Pyracantha coccinea</i>
Quince, flowering	<i>Chaenomeles japonica</i>
Ranger, Texas	<i>Leucophyllum frutescens</i>
Redroot	<i>Ceanothus spp.</i>
Rhododendron	<i>Rhododendron spp.</i>
Robira	<i>Pittosporum tobiri</i>
Spice plant	<i>Illicium parviflorum</i>
Spiraea	<i>Spiraea vanhouttei</i>
Spiraea, anthony waterer	<i>Spiraea X bumalda</i>
Spiraea, Japanese	<i>Spiraea japonica</i>
Sweet bay	<i>Laurus nobilis</i>
Trumpet bush	<i>Tecoma stans</i>
Verbena, lemon	<i>Aloysia triphylla</i>
Viburnum	<i>Viburnum suspensum</i>
Vitex	<i>Vitex spp.</i>
Weigela	<i>Weigela florida</i>
Wild lilac	<i>Ceanothus spp.</i>

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<b>(Cont.)</b>	
<b>ORNAMENTAL SHRUBS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Xylosma	<i>Xylosma congestum</i>
Yellowbells	<i>Tecoma stans</i>
Yew*	<i>Taxus media</i>
Yew, Japanese*	<i>Taxus cuspidata</i>
Yew, Southern	<i>Podocarpus macrophyllus</i>
Yucca, Adam's	<i>Yucca filamentosa</i>
Yucca, weeping	<i>Yucca pendula</i>
* Applications should not be made during Spring growth or injury to terminals may occur.	

<b>ORNAMENTAL TREES</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Alder, European black	<i>Alnus glutinosa</i>
Apple	<i>Malus</i> spp.
Arborvitae, American	<i>Thuja occidentalis</i>
Arbutus	<i>Arbutus</i> spp.
Ash, red	<i>Fraxinus pennsylvanica</i>
Ash, white	<i>Fraxinus americana</i>
Aspen, bigtooth	<i>Populus grandidentata</i>
Aspen, quaking	<i>Populus tremuloides</i>
Basswood	<i>Tilia</i> spp.
Birch, European weeping	<i>Betula pendula</i>
Birch, river	<i>Betula nigra</i>
Buckeye, red	<i>Aesculus pavia</i>
Cedar, white	<i>Thuja occidentalis</i>
Chamaecyparis, boulevard	<i>Chamaecyparis pisifera</i>
Cherry, black	<i>Prunus serotina</i>
Cherry, choke	<i>Prunus virginiana</i>
Cherry, kwanzan	<i>Prunus serrulata</i>
Cherry, nanking	<i>Prunus tomentosa</i>
Cottonwood	<i>Populus deltoides</i>
Crabapple	<i>Malus</i> spp.
Crepe myrtle	<i>Lagerstroemia indica</i>
Cryptomeria, Japanese cedar	<i>Cryptomeria japonica</i>
Cypress, bald	<i>Taxodium distichum</i>
Cypress, leyland	<i>Cupressocyparis leylandii</i>
Dogwood, flowering	<i>Cornus florida</i>
Dogwood, Korean	<i>Cornus kousa</i>
Dogwood, silky	<i>Cornus amomum</i>
Dogwood, shrub	<i>Cornus</i> spp.
Elm	<i>Ulmus japonica</i>
Fir, balsam	<i>Abies balsamae</i>
Fir, douglas	<i>Pseudotsuga menziesii</i>
Fir, fraser	<i>Abies fraseri</i>
Fir, white	<i>Abies concolor</i>
Franklinia	<i>Franklinia</i> spp.
Ginkgo	<i>Ginkgo biloba</i>
Gum, black	<i>Nyssa sylvatica</i>
Gum, sour	<i>Nyssa sylvatica</i>
Haw, black	<i>Viburnum prunifolium</i>
Hawthorn	<i>Crataegus</i> spp.
Hemlock, Canada	<i>Tsuga canadensis</i>
Hemlock, Eastern	<i>Tsuga canadensis</i>
Holly, American	<i>Ilex opaca</i>
Honeylocust	<i>Gleditsia triacanthos</i>
Lilac, common	<i>Syringa vulgaris</i>
Lilac, Japanese tree	<i>Syringa reticulata</i>
Linden	<i>Tilia</i> spp.
Magnolia, saucer	<i>Magnolia soulangiana</i>
Magnolia, Southern	<i>Magnolia grandiflora</i>
Magnolia, star	<i>Magnolia stellata</i>
Maidenhair tree	<i>Ginkgo biloba</i>
Maple, Norway	<i>Acer plantanoides</i>
Maple, Japanese	<i>Acer palmatum</i>
Maple, red	<i>Acer rubrum</i>
Maple, sugar	<i>Acer saccharum</i>
Nannyberry, rusty	<i>Viburnum rufidulum</i>
Oak, chinquapin	<i>Quercus muehlenbergii</i>
Oak, live	<i>Quercus virginiana</i>

(Continued)

<b>(Cont.)</b>	
<b>ORNAMENTAL TREES</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Oak, pin	<i>Quercus palustris</i>
Oak, red	<i>Quercus rubra</i>
Oak, swamp chestnut	<i>Quercus michauxii</i>
Oak, water	<i>Quercus nigra</i>
Oak, white	<i>Quercus alba</i>
Oak, willow	<i>Quercus phellos</i>
Olive	<i>Olea europaea</i>
Palm date	<i>Phoenix</i> spp.
Palm, fan	<i>Washingtonia</i> spp.
Palm, pindo	<i>Butia</i> spp.
Palm, Washington	<i>Washingtonia</i> spp.
Peach	<i>Prunus persica</i>
Pear, bradford	<i>Pyrus calleryana</i> 'bradford'
Pecan	<i>Carya illinoensis</i>
Pine, Austrian	<i>Pinus nigra</i>
Pine, Italian stone	<i>Pinus pinea</i>
Pine, loblolly	<i>Pinus taeda</i>
Pine, monterey	<i>Pinus radiata</i>
Pine, red	<i>Pinus resinosa</i>
Pine, scotch	<i>Pinus sylvestris</i>
Pine, slash	<i>Pinus elliotii</i>
Pine, Virginia	<i>Pinus virginiana</i>
Pine, white	<i>Pinus strobus</i>
Plum, purple leaf	<i>Prunus cerasifera</i>
Poplar, black	<i>Populus nigra</i>
Redcedar, Eastern	<i>Juniperus virginiana</i>
Redcedar, Western	<i>Thuja plicata</i>
Red ironbark	<i>Eucalyptus sideroxylon</i> 'rosea'
Redwood, dawn	<i>Metasequoia glytostroboides</i>
Sequoia, giant	<i>Sequoiadendron giganteum</i>
Serviceberry	<i>Amelanchier laevis</i>
Sourwood	<i>Oxydendrum arboreum</i>
Spruce, Colorado blue	<i>Picea pungens</i>
Spruce, dwarf Alberta	<i>Picea glauca</i> 'albertiana'
Spruce, Norway	<i>Picea abies</i>
Spruce, white	<i>Picea glauca</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Platanus occidentalis</i>
Trachycarpus	<i>Trachycarpus</i> spp.
Tulip tree	<i>Liriodendron tulipifera</i>
Walnut, black	<i>Juglans nigra</i>
Willow, weeping	<i>Salix babylonica</i>
Yellowwood	<i>Cladrastis lutea</i>

<b>PERENNIALS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Bleeding heart	<i>Dicentra spectabilis</i>
Calla lily	<i>Zantedeschia aethiopica</i>
Canna, common garden	<i>Canna generalis</i> 'Lucifer'
Chincherinchee	<i>Ornithogalum thyrsoides</i>
Crinum Lily	<i>Crinum</i> spp.
Fern, asparagus	<i>Asparagus officinalis</i>
Fern, leatherleaf	<i>Rumohra adiantiformis</i>
Freesia	<i>Freesia x hybrida</i>
Heather, dwarf	<i>Calluna vulgaris</i>
Hosta	<i>Hosta</i> spp.
Lily	<i>Lilium</i> spp.
Liriope, creeping	<i>Liriope spicata</i>
Liriope, variegated	<i>Liriope muscari</i>
Montbretia	<i>Crocsmia crocosmiiflora</i>
Orchid, peacock	<i>Acidanthera bicolor</i>
Peony, Chinese	<i>Paeonia lactiflora</i>
Wisteria	<i>Wisteria</i> spp.
Zephyr lily	<i>Zephyranthes</i> spp.

This product may be used on plant species not listed on this label. The suitability for such uses should be determined by treating a small number of such plants at the labeled rate. Treated plants should be evaluated 1 to 2 months following treatment for possible injury. The user assumes responsibility for any crop damage or other liability. Do not treat plants grown for food or feed. DO NOT use treated plants for food or feed.

## WEEDS CONTROLLED

This product is used for preemergence control of the weeds listed below. This product will not control established weeds.

If weeds should develop prior to activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow. This product may be used in conjunction with herbicides registered for postemergence use (i.e. glyphosate or Finale) for the control of established weeds. Do not apply sprays containing glyphosate or Finale over the top of desirable plants.

Application of this product may be followed by any registered herbicide to control weeds not listed on this label.

WEEDS CONTROLLED	
Common Name	Scientific Name
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, annual	<i>Poa annua</i>
Burweed, lawn	<i>Soliva pterosperma</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed, common	<i>Stellaria media</i>
Chickweed, mouseear	<i>Cerastium vulgatum</i>
Clover, hop	<i>Trifolium procumbens</i>
Crabgrass	<i>Digitaria</i> spp.
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Cudweed	<i>Gnaphalium</i> spp.
Eveningprimrose	<i>Oenothera biennis</i>
Fiddleneck	<i>Amsinckia intermedia</i>
Filaree	<i>Erodium</i> spp.
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria glauca</i>
Goosegrass	<i>Eleusine indica</i>
Henbit	<i>Lamium amplexicaule</i>
Itchgrass	<i>Rottboellia exaltata</i>
Johnsongrass (from seed)	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colona</i>
Knotweed, prostrate	<i>Polygonum aviculare</i>
Kochia	<i>Kochia scoparia</i>
Lambsquarters	<i>Chenopodium album</i>
Lovegrass (from seed)	<i>Eragrostis</i> spp.
Panicum, browntop	<i>Panicum fasciculatum</i>
Panicum, Fall	<i>Panicum dichotomiflorum</i>
Panicum, Texas	<i>Panicum texanum</i>
Pigweed	<i>Amaranthus</i> spp.
Puncturevine	<i>Tribulus terrestris</i>
Purslane	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scabra</i>
Rocket, London	<i>Sisymbrium irio</i>
Sandbur, field	<i>Cenchrus incertus</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Signalgrass	<i>Brachiaria platyphylla</i>
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>
Speedwell, corn	<i>Veronica arvensis</i>
Sprangletop, Mexican	<i>Leptochloa uninervia</i>
Sprangletop, red	<i>Leptochloa filiformis</i>
Spurge, annual	<i>Euphorbia</i> spp.
Spurge, prostrate	<i>Euphorbia humistrata</i>
Velvetleaf (buttonweed)	<i>Abutilon theophrasti</i>
Witchgrass	<i>Panicum capillare</i>
Woodsorrel, yellow	<i>Oxalis stricta</i>
Woolly cupgrass	<i>Eriochloa villosa</i>

## APPLICATION RATES

Apply this product for preemergence weed control using broadcast spray equipment using the following rates:

APPLICATION RATES		
Duration of Control	This Product (qts./A)	This Product (fl. ozs./1000 sq. ft.)
Short Term (2 to 4 months)	2.4	1.8
Long Term (6 to 8 months)	4.8	3.6

**For Hand-held Spray Equipment:** Refer to the "Application Rates" table to determine the amount of this product to be applied per 1000 square feet. The amount of water to be used for the application should be sufficient for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Refer to "MIXING INSTRUCTIONS" section of this label.

The efficacy of this product will improve if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control will result if this product is not activated by rainfall or irrigation within 30 days.

## THIS PRODUCT IN TANK MIXTURE FOR ORNAMENTALS

This product can be tank mixed with glyphosate, Finale™, Ornamec®, Gallery™, simazine and other similar herbicides to control emerged weeds in ornamentals. Do not apply tank mixtures containing glyphosate or Finale over the top of ornamental plants. Before tank mixing, a simple jar test is recommended to insure compatibility of herbicides.

Always read the companion product label. Follow all use precautions and restrictions that apply to each product used. Always follow the most restrictive label.

## USE RESTRICTIONS AND PRECAUTIONS FOR ORNAMENTALS

- Do not apply this product in greenhouses, shadehouses or other enclosed structures.
- Apply this product to established plantings.
- Do not make applications to grafted (or budded) liners at any time.
- Do not make over-the-top applications to liners or transplants.
- Do not apply this product to liners or transplants during bud break or at time of first flush of new growth.
- When making applications to established liners or transplants, direct sprays to the soil.
- Do not allow spray to cover or penetrate foliage and/or buds or injury is likely to occur.
- Delay application to seedbeds, transplant beds or liners until plants have become well rooted. Allow soil or planting mixes to settle firmly following transplanting before applying this product. Do not allow direct contact of this product with roots.
- On established rootstock, application of this product can be made before budding/grafting the plants.
- Plant only those plant species listed on this label into soil treated the previous season with this product to avoid plant injury.
- For container grown ornamentals, delay first application of this product to bareroot liners 2 to 4 weeks after transplanting.
- It is recommended that treated plants be evaluated for 1 to 2 months prior to making application to a large number of plants. The user assumes responsibility for any crop damage or other liability.

## LANDSCAPE AND GROUND MAINTENANCE

This product can be incorporated into landscape and ground maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds. Areas to be treated, such as fencelines and borders, mulch beds, parking areas and roadsides, around statuary or monuments, and similar areas, should be free of emerged weeds before application. To remove emerged weeds, either cultivate or tank mix this product with a postemergence herbicide labeled for such use.

Refer to the "APPLICATION RATES" table under the "ORNAMENTALS" section of this label for use rates. Avoid unintentional contact of spray solution of this product to stone, wood, or other porous surfaces as staining may occur. To avoid staining, rinse immediately.

## NON-BEARING FRUIT AND NUT CROPS AND VINEYARDS (Almond, Apple, Apricot, Cherry, Citrus, Fig, Grape, Nectarine, Olive, Peach, Pear, Pecan, Pistachio, Plum, Prune, Walnut English)

This product may be applied for preemergence control of most annual grasses and certain broadleaf weeds.

Apply the spray directly to the ground below the trees or vines. Refer to the "APPLICATION RATES" table under the "ORNAMENTALS" section of this label.

Allow soil or planting mixes to settle firmly following transplanting and that there are no cracks that would allow direct contact of this product and roots. Directed sprays where soil and media surfaces are uniformly covered will result in best weed control and plant tolerance. For newly transplanted and one year old Grapevines, apply only when they are dormant. Do not apply if buds have started to swell.

This product may be used where the roots of a fruit, vine, nut, or ornamental plant encroach into a treatable area.

## **NON-CROPLAND INCLUDING TREE PLANTATIONS**

This product can be used for maintenance of grounds in noncropland areas; preemergence control of the weed species listed in and around established tree plantations (including Christmas trees); pulpwood and fiber farms; in and around established ornamentals planted in noncropland areas such as highway rights-of-way, and utility substations. This product may be used for hardwood and Conifer regeneration on conservation reserve program land or similar areas.

Refer to the "APPLICATION RATES" table under the "ORNAMENTALS" section of this label for use rates.

This product may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to avoid direct contact of tree roots with this product or this product being washed into the root zone via the open slit or root stunting may occur.

For post-emergence use, tank-mix combination of this product with glyphosate, Finale, or other labeled herbicides are recommended. Refer to approved labeling for species recommendations.

Rates for the tank-mix compounds should be determined from the product labels of both this product and partner herbicides prior to use. Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury may result. This product plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict this product usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

## **TOTAL VEGETATION CONTROL**

This product tank-mixed with Arsenal®, Plateau®, glyphosate, diuron, Finale, Oust®, or other products can provide bare ground, or total vegetation control. This product can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Do not tank mix with Arsenal in California.

Applications may be made to existing weeds controlled by the partner herbicide. Recommended Rates should be determined from the product labels prior to use. Follow the most restrictive label instructions.

**For Kochia:** Combinations of this product with Arsenal or diuron are recommended if control has been a problem for other herbicides.

Refer to the "APPLICATION RATES" table under the "ORNAMENTALS" section of this label for use rates.

## **STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Do not store below 40°F. Extended storage at temperatures below 40°F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70°F) and rock occasionally until crystals redissolve.

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

### **CONTAINER DISPOSAL:**

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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## **STORAGE AND DISPOSAL (Cont.)**

**Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

### **Refillable Container (≥ 250 gallons & Bulk):**

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

### **For Residential/Household Use:**

**PESTICIDE DISPOSAL:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. If empty, place in trash or offer for recycling if available. If partially filled, call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

## **WARRANTY—CONDITIONS OF SALE**

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

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