

53883-84

7/8/2003

page 1817

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NOTICE OF PESTICIDE:   x   Registration  
EPA Reg. Number: 53883-~~84~~

JUL 8 2003

Term of Issuance: Conditional

Name of Pesticide Product: Pendimethalin 3.3

Control Solutions, Inc.  
5903 Genoa-Red Bluff  
Pasadena, TX 77507-1041

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. a. Add on the front panel, "EPA Reg. No. 53883-86" and "EPA Est. No. 53883-XX-XX." Please provide new formulation exemption statement and revised CSF to reflect the transfer of your source.  
b. Remove exclamation marks from the signal word "Caution."  
c. Under "If swallowed in First Aid";

Delete: "Have person sip a glass of water if able to swallow."

Add: "Do not give anything by mouth to an unconscious person."  
"Do not give any liquid to person."

Place the "If in eyes" statement above the "If on skin or clothing" statement.

- d. Under "Personal Protective Equipment";

Replace "Chemical-resistant gloves . . . or viton" with "chemical resistant gloves, made of waterproof materials, such as butyl rubber >14 mils, nitrile rubber >14 mils, or neoprene rubber >14 mils."

- e. Under "Directions for use";

Add the following statements to the non-agricultural use requirements box:

- Keep people and pets out of the area during application."
- Do not allow people or pets to enter the treated area until the sprays have settled.

f. Under "Directions for Use";

It is recommended that you add the following "Spray Drift" Statement in a new paragraph:

"Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use \_\_\_\_\_ (registrant to fill in blank with spray quality, e.g., fine or medium) or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3 -- 10 mph as measured by an anemometer. Use \_\_\_\_\_ (registrant to fill in blank with spray quality, e.g. fine or medium) or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or the crop canopy.

For overhead chemigation, apply only when wind speed is 10 mph or less.

The applicator also must use all other measures necessary to control drift."

g. "Under "Agricultural Use Requirements";

- Replace "Chemical-resistant gloves . . . or viton" with "chemical resistant gloves, made of waterproof materials, such as butyl rubber >14 mils, nitrile rubber >14 mils, or neoprene rubber >14 mils."
- Increase the restricted entry interval (REI) from 12 to 24 hours.

h. Under "Storage and Disposal";

- Add "Pesticide" to the heading of "Storage."
- It is recommended that you adopt the following bulk or mini-bulk container disposal instructions:

"When the container is empty, replace the cap and seal all openings that have been opened during use; and return the container to the point of purchase, or to a designated location named at the time of purchase of this product. This container must only be refilled with this pesticide product. **Do Not Reuse the Container for Any Other Purpose.** Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact Syngenta at 1-888-XXX-XXXX. If not returned to the point of purchase or to a designated location, triple rinse empty container and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

i. Under "General Information";

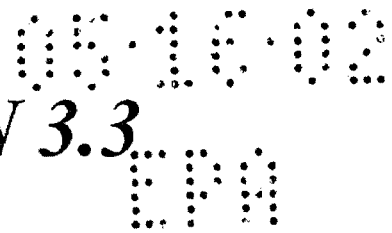
The EPA Reregistration Eligibility Decision (RED) document for Pendimethalin specifies a maximum allowable application rate of 2 lbs ai/acre. Adjust the application rates accordingly.

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 constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

*J. J. [Signature]*  
7/8/03

CONCURRENCES							
INITIAL ▶	7505C	7505C					
SURNAME ▶	Bien	Jenkins					
DATE ▶		7/8/03					

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# PENDIMETHALIN 3.3

Herbicide

For the control of most annual grasses and certain broadleaf weeds in landscape or grounds maintenance, noncropland areas, ornamentals, and turf.

ACTIVE INGREDIENT:  
Pendimethalin (N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzamine) ..... 37.4%  
INERT INGREDIENTS\* ..... 62.6%  
TOTAL ..... 100.0%  
1 gallon contains 3.3 pounds of pendimethalin.  
\*Contains aromatic naphtha

EPA Reg. No. 53883

EPA Est. No.

PRECAUCION AL USUARIO: 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.)

KEEP OUT OF REACH OF CHILDREN

## CAUTION / ¡PRECAUCION!

### FIRST AID

<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>·Call a poison control center or doctor immediately for treatment advice.</li> <li>·Have person sip a glass of water if able to swallow.</li> <li>·Do not induce vomiting unless told to do so by a poison control center or doctor.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>·Take off contaminated clothing</li> <li>·Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>·Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>·Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.</li> <li>·Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>·Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>·Move person to fresh air.</li> <li>·If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>·Call a poison control center or doctor for treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

### NOTE TO PHYSICIAN:

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.

FOR CHEMICAL EMERGENCY (SPILL, LEAK, FIRE, OR EXPOSURE) CALL CHEMTREC: 1-800-424-9300

NET CONTENTS: JUL 8 2003

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

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

53883-84

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

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

**PERSONAL PROTECTIVE EQUIPMENT (PPE)****Applicators and other handlers must wear:**

- long-sleeved shirt and long pants
- chemical-resistant gloves such as barrier laminate or viton
- 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.

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

**ENVIRONMENTAL HAZARDS**

This product is 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 aquatic sites. DO NOT contaminate water when disposing of equipment washwaters.

**AGRICULTURAL CHEMICAL  
DO NOT SHIP OR STORE WITH FOOD, FEEDS,  
DRUGS, OR CLOTHING**

**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. 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.

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 barrier laminate or viton
- 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 Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**STORAGE AND DISPOSAL**

**STORAGE:** Do not contaminate water, food, or feed, by storage or disposal. Open dumping is prohibited. **DO NOT** store this product near fertilizers, seeds, insecticides, or fungicides. Store at temperatures above 40°F. Extended storage at temperatures below 40°F can result in the formation of crystals on the bottom of the container. If crystallization does occur, store the container on its side at room temperature, (approximately 70°F) and rock or roll occasionally until crystals re-dissolve. Containers should not be stacked more than six (6) high. Reclose all partially used containers by thoroughly tightening screw cap. Damaged or leaking containers which cannot be used immediately should be transferred to suitable sound containers and properly marked. Absorb any spill with a suitable clay absorbent and dispose as indicated under "Pesticide Disposal".

For safety and prevention of unauthorized use, all pesticides should be stored in locked facilities.

To prevent accidental misuse, different pesticides should be stored in separate areas with enough distance between to provide clear identification.

Opened, partially used pesticides should be stored in original labeled containers when possible. When transfer to another container is necessary because of leakage or damage, carefully mark, and identify contents of the new container.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinseate 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:** For 5 gallon containers and under, triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. If burned, stay out of smoke.

For bulk and mini-bulk, return empty container to point of purchase for repackaging or recycling.

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#### WHERE TO USE

PENDIMETHALIN 3.3 is a selective soil applied herbicide for preemergence control of most annual grasses and certain broadleaf weeds as they germinate in:

- Landscape or grounds maintenance
- Noncropland areas
- Oramentals
- Turf

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#### GENERAL INFORMATION

##### Use Precautions

Apply this product only as specified on this label.

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

PENDIMETHALIN 3.3 is a selective soil applied herbicide for preemergence control of most annual grasses and certain broadleaf weeds as they germinate, but it will not control established weeds. Established weeds should be controlled before applying PENDIMETHALIN 3.3 or by use of an appropriate postemergence herbicide, tank mix combination treatment.

PENDIMETHALIN 3.3 may be tank mixed with any product having the same crop use and restrictions allowing co-application. PENDIMETHALIN 3.3 treatments may be followed by any registered herbicide for additional weed control.

Follow PENDIMETHALIN 3.3 label directions carefully. Over-application can result in crop stand loss, crop injury, or excessive soil residues. Uneven application, improper soil incorporation, or soil incorporation deeper than recommended 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 reduced crop yields from PENDIMETHALIN 3.3.

To assure uniform application, mix the prescribed amount of PENDIMETHALIN 3.3 with a sufficient volume of water to provide thorough coverage of target area. Follow the recommendations given in the "APPLICATION" section of this label.

PENDIMETHALIN 3.3 used according to label directions under normal growing conditions allows for crop rotation. However, various environmental and/or agronomic factors may cause some risk to rotational crops from prior use of PENDIMETHALIN 3.3. See "Plant Back Restrictions" for additional information.

Naturally occurring biotypes of some of the weeds listed on this label may not be effectively controlled by this and/or other mitotic inhibiting products. Other herbicides with the mitotic inhibiting mode of action include other dinitroaniline herbicides such as trifluralin, and Sonalan<sup>®</sup>. To control these biotypes, tank mix PENDIMETHALIN 3.3 with other herbicide products having another mode of activity and registered for use to control that weed pest in that crop.

##### MIXING

PENDIMETHALIN 3.3 readily mixes with water and most liquid fertilizers.

Always check compatibility of PENDIMETHALIN 3.3 with liquid fertilizers and other herbicides before full scale application mixing is attempted.

When applying PENDIMETHALIN 3.3 alone in water or liquid fertilizer, the spray mixture should be prepared by first placing ½ of the application water or liquid fertilizer into the mix tank. Start agitation and add the required amount of PENDIMETHALIN 3.3. Add remainder of application water or liquid fertilizer. Keep agitating the solution throughout application.

When tankmixing with other pesticide products, use the following guidelines:

1. Check compatibility of tankmix components.
2. Fill mix or spray tank ½ full with clean water (or liquid fertilizer).
3. Begin agitation.
4. Add wettable powder formulations to tank (first pre-slurry in water if applying in liquid fertilizer).
5. Add dry flowable formulations to tank (first pre-slurry in water if applying in liquid fertilizer).
6. Add liquid flowable formulations to tank.
7. Add emulsifiable concentrate formulations to tank.
8. Add PENDIMETHALIN 3.3 to tank.

- 9. Add remainder of water for application.
- 10. Maintain constant agitation until all of mixture is sprayed.

Check crop use directions in this label for additional tank mix information.

Always check other pesticide labels for additional mixing information and prohibitions.

**APPLICATION EQUIPMENT AND SPRAY VOLUME**

**Ground:** Apply PENDIMETHALIN 3.3 in 10 or more gallons of water (20 or more gallons of liquid fertilizer) per acre with conventional spray equipment. Increase spray volumes when treating dense weed foliage or fields containing excessive crop residues to increase penetration and coverage.

Band applications should be equivalent to the broadcast rate and application, volume per acre.

**Air:** Apply PENDIMETHALIN 3.3 in a minimum of 5 gallons of water per acre with aerial equipment. Increase spray volumes when treating dense weed foliage or applying during periods of low humidity.

**DO NOT** apply PENDIMETHALIN 3.3 if wind velocity is high enough to cause drift of the application spray off the target site or irregular spray patterns. **DO NOT** apply during periods of temperature inversions. The presence of a temperature inversion can be determined with smoke. If a smoke layer forms near the ground surface, application should be postponed until the air is stable.

Choose spray nozzles capable of producing spray droplets able to maintain good foliage coverage and weed control. Avoid using nozzles and excessive spray boom pressure that may increase the formation of fine droplets most likely to drift. Orienting spray nozzles away from the air stream prevents shear from also producing fine droplets.

Check for local aerial application restrictions.

**APPLICATION WITH DRY FERTILIZERS**

PENDIMETHALIN 3.3 may be applied via dry fertilizers impregnated with PENDIMETHALIN 3.3.

Absorb onto a minimum of 200 pounds of dry fertilizer to be applied per acre the recommended amount of PENDIMETHALIN 3.3 to be applied to that same acre.

Follow all label requirements regarding rates per acre, timing of application, incorporation, etc. and precautions in the same manner as if the PENDIMETHALIN 3.3 were applied by spray equipment.

Coated ammonium nitrate and limestone do not absorb PENDIMETHALIN 3.3 and therefore impregnation with these materials should not be attempted.

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**TURF**

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PENDIMETHALIN 3.3 provides preemergence control of most annual grasses and certain broadleaf weeds as they germinate in any turfgrass site (lawns, sod, turf areas). Examples of such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairiegrass areas, and sod farms.

USE RATES ON TURF

TURFGRASS	WEEDS	RECOMMENDED RATES		APPLICATION
		fl. oz. / 1000 sq. ft.	pints / acre	
<b>COOL SEASON GRASSES</b>				
Bluegrass, Kentucky Fescue, fine Fescue, tall Ryegrass, perennial	crabgrass foxtail <i>Poa annua</i> barnyardgrass fall panicum oxalis prostrate spurge purslane knotweed evening primrose hop clover	1.3 to 1.8 oz.	3.6 to 4.8 pt.	Apply a repeat application of 2.5 to 3.6 pts. / acre (1 to 1.3 oz. / 1000 sq. ft.) after 6-8 weeks for extended control or where heavy weed infestations are expected.
	goosegrass	1.3 to 1.8 oz.	3.6 to 4.8 pt.	
	cudweed <i>Poa annua</i> chickweed lawn burweed henbit corn speedwell	1.3 to 1.8 oz.	3.6 to 4.8 pt.	
<b>WARM SEASON GRASSES</b>				
Bahigrass Bermudagrass Buffalograss Centipedegrass Fescue, tall St. Augustinegrass Zoysiagrass	crabgrass foxtail <i>Poa annua</i> barnyardgrass fall panicum oxalis prostrate spurge purslane knotweed evening primrose hop clover	1.3 to 1.8 oz.	3.6 to 4.8 pt.	Apply a repeat application of 2.5 to 3.6 pts. / acre (1 to 1.3 oz. / 1000 sq. ft.) after 6-8 weeks if necessary.
	goosegrass	1.3 oz.	3.6 pt.	
	cudweed <i>Poa annua</i> chickweed lawn burweed henbit corn speedwell	1.3 to 1.8 oz.	3.6 to 4.8 pt.	



The efficacy of PENDIMETHALIN 3.3 will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If PENDIMETHALIN 3.3 is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

To prevent the establishment of weeds along the edges of lawns it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc. to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is to be avoided, rinse immediately to avoid staining.

**TURFGRASS TANK MIXES**

PENDIMETHALIN 3.3 herbicide can be mixed with postemergence herbicides to control emerged weeds in turfgrasses. For annual grass control, applications can be made with Acclaim Extra<sup>®</sup> or MSMA to control emerged weeds. Broadleaf weeds can be controlled using Trimec<sup>®</sup>, Three-Way<sup>®</sup>, 2,4-D, and other similar products.

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

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with PENDIMETHALIN 3.3 herbicide and follow those that are most restrictive.

**TURFGRASS PRECAUTIONS**

Use on well established turfgrass with a dense and uniform stand. On newly planted areas, application should not be made until the turfgrass has filled in and has been mowed at least four times. On turf that has been thinned or damaged due to winter injury, excessive moisture, etc., allow for turf recovery prior to making an application.

Applications made to overseeded warm-season turfgrasses may cause thinning or injury of the overseeded species.

Do not use on greens or injury may occur.

Delay reseeding or winter overseeding of treated turfgrass for at least three months following the last PENDIMETHALIN 3.3 application. Delay sprigging turfgrass for five months after application.

**INDUSTRIAL (UNIMPROVED) TURF**

Industrial, or unimproved turf areas often have a different spectrum of weeds to be controlled than those found in fine turf as described above. PENDIMETHALIN 3.3 herbicide will control annual grasses and broadleaf weeds mentioned in that section of this label as well as the following weeds that might germinate in established grasses in rights-of-way, roadsides, construction sites, parks, substations, lots, or similar areas:

Crowfootgrass, Itchgrass, Johnsongrass (from seed), Junglerice, Lovegrass, Browntop Panicum, Texas Panicum, Field Sandbur, Signalgrass, Mexican Sprangletop, Red Sprangletop, Witchgrass, Woolly Cupgrass, Carpetweed, Fiddleneck, Filaree, Kochia, Lambsquarters, Pigweed, Puncturevine, Florida Pusley, London Rocket, Shepherdspurse, Pennsylvania Smartweed, Annual Spurge, and Velvetleaf.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

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**ORNAMENTALS**

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**RECOMMENDED SPECIES**

PENDIMETHALIN 3.3 herbicide sprays are safe 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. Refer to APPLICATION RATE TABLE for rates.

TREES	
Common Name	Scientific Name
Alder, European black	<i>Alnus glutinosa</i>

Apple	<i>Malus spp.</i>
Arborvitae, American	<i>Thuja occidentalis</i>
Arbutus	<i>Arbutus spp.</i>

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>

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 platanoides</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>
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 glyptostroboides</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>SHRUBS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Abelia, Glossy	<i>Abelia grandiflora</i>
Aucuba, Gold	<i>Aucuba japonica</i>
Azalea	<i>Rhododendron</i> spp.

Bamboo, Heavenly	<i>Nandina domestica</i>
Barberry	<i>Berberis gladywensis</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</i> spp.
Correa	<i>Correa</i> spp.
Cotoneaster	<i>Cotoneaster apiculatus</i>
Cotoneaster, Bearberry	<i>Cotoneaster dammeri</i>
Cotoneaster, Rock	<i>Cotoneaster horizontalis</i>
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>
Elacagnus	<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</i> spp.
Juniper, Chinese	<i>Juniperus chinensis</i> v. <i>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 humilis</i>
Palm, Mediterranean Fan	<i>Chamaerops</i> spp.
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</i> spp.
Rhododendron	<i>Rhododendron</i> spp.
Robira	<i>Pittosporum tobira</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</i> spp.
Weigela	<i>Weigela florida</i>
Wild Lilac	<i>Ceanothus</i> spp.
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>
<b>GROUND COVERS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
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>

Iceplant, 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 mesnyi</i>
Mondograss	<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>

**PERENNIALS**

Common Name	Scientific Name
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>Lillium</i> spp
Liriope, Creeping	<i>Liriope spicata</i>
Liriope, Variegated	<i>Liriope miscari</i>
Montbretia	<i>Crocsmia crocosmiflora</i>
Orchid, Peacock	<i>Acidanthera bicolor</i>
Peony, Chinese	<i>Paeonia lactiflora</i>
Wisteria	<i>Wisteria</i> spp.
Zephyr Lily	<i>Zephyranthes</i> spp.

**ORNAMENTAL GRASSES**

Common Name	Scientific Name
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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</i> spp.
Ribbon Grass	<i>Phalaris arundinacea</i>
Tufted Hair Grass	<i>Deschampsia caespitosa</i>

PENDIMETHALIN 3.3 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 recommended rate. Treated plants should be evaluated 1-2 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.*

#### ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing Roundup<sup>®</sup>, Finale<sup>®</sup>, Ornamec<sup>®</sup>, Gallery<sup>®</sup>, Princep<sup>®</sup>, and other similar products. *Do not apply sprays containing Roundup or Finale over the top of ornamental plants.*

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

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with PENDIMETHALIN 3.3 herbicide and follow those that are most restrictive.

#### ORNAMENTAL PRECAUTIONS

Apply PENDIMETHALIN 3.3 herbicide to established plantings. DELAY applying PENDIMETHALIN 3.3 to seedbeds, transplant beds, or liners until plants have become well rooted. Care must be taken that soil or planting mixes have settled firmly following transplanting and that there are no cracks that would allow direct contact of PENDIMETHALIN 3.3 with roots. Directed sprays where soil and media surfaces are uniformly covered will result in best weed control and ornamental tolerance. Plant only those desirable plant species listed on this label into soil treated the previous season with PENDIMETHALIN 3.3 or injury may occur.

For container grown ornamentals, delay first application of this product to bare root liners 2-4 weeks.

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#### LANDSCAPE AND GROUNDS MAINTENANCE

PENDIMETHALIN 3.3 can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds. Areas to be treated, such as mulch beds, parking areas and roadsides, fencelines and borders, around statuary or monuments, and similar areas, should be free of emerged weeds before application. To remove emerged weeds either cultivate or tank mix PENDIMETHALIN 3.3 with a postemergence product labeled for such use. Refer to APPLICATION RATE TABLE for rates. Avoid unintentional contact of spray solution with stone, wood, or other porous surfaces as staining may occur. Rinse immediately to avoid staining.

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#### NONCROPLAND AREAS INCLUDING TREE PLANTATIONS

PENDIMETHALIN 3.3 is recommended for grounds maintenance 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. PENDIMETHALIN 3.3 may be used for hardwood and conifer regeneration on conservation reserve program land or similar areas.

Refer to APPLICATION RATE TABLE for rates.

PENDIMETHALIN 3.3 may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to prevent PENDIMETHALIN 3.3 from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur.

For postemergence control of weeds, tank mix combinations of PENDIMETHALIN 3.3 plus Roundup, Finale, or other labeled herbicides are recommended. Refer to approved labeling for species recommendations. Recommended rates for the tank mix compounds should be determined from the product labels of both PENDIMETHALIN 3.3 and partner herbicides prior to use. Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury may result. PENDIMETHALIN 3.3 plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict PENDIMETHALIN 3.3 usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

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#### TOTAL VEGETATIVE CONTROL

PENDIMETHALIN 3.3 may be tank mixed with Arsenal<sup>®</sup>, Plateau<sup>®</sup>, Roundup, Karmex<sup>®</sup>, Finale, Oust<sup>®</sup>, diuron, or other products to provide bare ground, or total vegetation control. PENDIMETHALIN 3.3 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 PENDIMETHALIN 3.3 with Arsenal or diuron are recommended if control has been a problem for other herbicides.

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**APPLICATION RATE TABLE**


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For preemergence control of the weed species listed using broadcast spray equipment, apply PENDIMETHALIN 3.3 at the following rates:

Length of Control	Quarts required to treat 1 acre	Ounces required to treat 1000 sq. ft.
Short Term (2-4 months)	2.4 quarts	1.8 oz.
Long Term (6-8 months)	4.8 quarts	3.6 oz.

**Hand-held Spray Equipment:** Use the table to determine the amount of PENDIMETHALIN 3.3 to be applied per 1000 square feet. The amount of water used for the application is not critical but 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. Follow mixing instructions discussed elsewhere on this label.

The efficacy of PENDIMETHALIN 3.3 will improve if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If PENDIMETHALIN 3.3 is not activated by rainfall or irrigation within 30 days, erratic weed control may result. PENDIMETHALIN 3.3 herbicide 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. PENDIMETHALIN 3.3 may be used in conjunction with herbicides registered for postemergence use (i.e. Roundup or Finale) for the control of established weeds. A PENDIMETHALIN 3.3 treatment may be followed by any registered herbicide to control weeds not listed on the PENDIMETHALIN 3.3 herbicide label.

**WEED SPECIES CONTROLLED**

PENDIMETHALIN 3.3 is recommended for preemergence control of the weed species listed. Applications can be made around and over the top of the ornamentals and to the sites listed on this label.

GRASSES CONTROLLED	
Common Name	Scientific Name
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, Annual	<i>Poa annua</i>
Crabgrass	<i>Digitaria</i> spp.
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Foxtail, Giant	<i>Setaria faberi</i>
Foxtail, Green	<i>Setaria viridis</i>
Foxtail, Yellow	<i>Setaria glauca</i>
Goosegrass	<i>Eleusine indica</i>
Itchgrass	<i>Rottboellia exaltata</i>
Johnsongrass (from seed)	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colona</i>
Lovegrass (from seed)	<i>Eragrostis</i> spp.
Panicum, Browntip	<i>Panicum fasciculatum</i>
Panicum, Fall	<i>Panicum dichotomiflorum</i>
Panicum, Texas	<i>Panicum texanum</i>
Sandbur, Field	<i>Cenchrus incertus</i>
Signalgrass	<i>Brachiaria platyphylla</i>
Sprangletop, Mexican	<i>Leptochloa uninervia</i>
Sprangletop, Red	<i>Leptochloa filiformis</i>
Witchgrass	<i>Panicum capillare</i>
Woolly Cupgrass	<i>Eriochloa villosa</i>
BROADLEAF WEEDS CONTROLLED	
Common Name	Scientific name
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>
Cudweed	<i>Gnaphalium</i> spp.
Eveningprimrose	<i>Oenothera biennis</i>
Fiddleneck	<i>Amsinckia intermedia</i>



Filaree	<i>Erodium</i> spp.
Henbit	<i>Lamium amplexicaule</i>
Knotweed, Prostrate	<i>Polygonum aviculare</i>
Kochia	<i>Kochia scoparia</i>
Lambsquarters	<i>Chenopodium album</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>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>
Speedwell, Corn	<i>Veronica arvensis</i>
Spurge, Annual	<i>Euphorbia</i> spp.
Spurge, Prostrate	<i>Euphorbia humistrata</i>
Woodsorrel, Yellow	<i>Oxalis stricta</i>
Velvetleaf (Buttonweed)	<i>Abutilon theophrasti</i>

**CONDITIONS OF  
SALE AND WARRANTY**

**CONTROL SOLUTIONS, INC AND SELLER OFFER THIS PRODUCT AND THE BUYER AND USER ACCEPTS THIS PRODUCT UNDER THE FOLLOWING AGREED CONDITIONS OF SALE AND WARRANTY.**

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