

241-360

9/8/1998

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**PRE-M® 3.3 EC TURF HERBICIDE**

An Emulsifiable Concentrate for Use as a Preemergent Weed Control in Noncropland Areas,  
Lawns and Other Turf Areas, Production and Established Landscape Ornamentals,  
Non-Bearing Fruit and Nut Trees,  
and Christmas Tree Plantations

**ACTIVE INGREDIENT:**

pendimethalin, N-(1-ethylpropyl)-3,4-dimethyl-2, 6-dinitrobenzenamine ..... 37.4%

**INERT INGREDIENTS\*** ..... 62.6%

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

(1 gallon contains 3.3 lbs. of pendimethalin)

\*Contains Petroleum Distillates

EPA Reg. No. 241-360

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION/!PRECAUCION!**

**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.

In case of an emergency endangering life or property involving this product,  
call collect, day or night, Area Code 973-683-3100.

**FIRST AID**

**If in eyes:** Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Call a physician if eye irritation persists.

**If swallowed:** DO NOT induce vomiting. Call a physician or Poison Control Center immediately.

**For skin contact:** Wash thoroughly with soap and water. Call a physician if skin irritation persists.

**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.

**ACCEPTED**  
SEP 8 1998  
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide 241-360

See next page for Additional Precautionary Statements.

AMERICAN CYANAMID COMPANY  
AMERICA AGRICULTURAL PRODUCTS DIVISION  
SPECIALTY PRODUCTS DEPARTMENT  
PARSIPPANY, NJ 07054 ©1998

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**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS**

**CAUTION!**

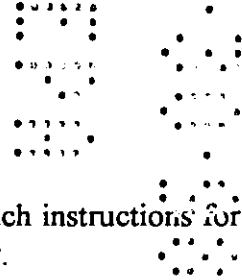
Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Use with adequate ventilation.

**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.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or viton (≥ 14 mils)
- Shoes plus socks



Follow manufacturer's instructions for cleaning and 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.
- \* 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**

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.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

DO NOT apply this product through any type of irrigation system.

DO NOT use in manufacturing products for application to turf or ornamentals.

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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 24 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 (≥ 14mils)
- 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.

Do not enter or allow others to enter the treated area until sprays have dried.

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.**

**STORAGE AND DISPOSAL**

**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.

DO NOT contaminate water, food, or feed by storage or disposal.

**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:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Observe all cautions and limitations in this label and the labels of products used in combination with PRE-M 3.3 EC turf herbicide. The use of PRE-M 3.3 EC turf herbicide not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

**DISCLAIMER**

The label instructions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the use or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user.

American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risk referred to above.

Any damages arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or values or any other special or indirect damages.

American Cyanamid Company makes no other express or implied warranty, including other express or implied warranty of FITNESS or of MERCHANTABILITY.

**GENERAL INFORMATION**

PRE-M 3.3 EC turf herbicide is recommended for use on plants intended for aesthetic purposes in landscaped grounds or being grown in fields, containers, or beds in production. PRE-M 3.3 EC turf herbicide can be used for preemergence weed control in interior plantscapes, or on ornamental gardens or parks, or on golf courses or lawns and landscape plantings.

PRE-M 3.3 EC turf herbicide is recommended for preemergence control of grasses and certain broadleaf weed species as they germinate on noncropland areas, in ornamentals, Christmas tree plantings, non-bearing fruit and nut trees, unimproved turf, and other vegetation control.

PRE-M 3.3 EC turf herbicide will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or PRE-M 3.3 EC turf herbicide may be used in conjunction with herbicides registered for postemergence use in noncropland areas. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in noncropland areas.

**MIXING INSTRUCTIONS**

1. Fill tank one-half to three-quarters full with clean water.
2. Add PRE-M 3.3 EC turf herbicide to the partially filled tank while agitating and then fill the remainder of the tank with water.

3. MAINTAIN CONTINUOUS AGITATION WHILE ADDING PRE-M 3.3 EC TURF HERBICIDE AND UNTIL SPRAYING IS COMPLETED. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.
4. If PRE-M 3.3 EC turf herbicide 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:** Begin with a clean spray tank. Fill the spray tank 1/2 full with clean water and add the required amount of PRE-M 3.3 EC turf herbicide to the sprayer. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. 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:** Prior to mixing, small quantities should always be tested using a simple jar test. Add the required amount of PRE-M 3.3 EC turf herbicide to half filled spray tank while agitating then add the fertilizer product. Complete filling spray tank to desired level.

**Dry Bulk Fertilizers:** PRE-M 3.3 EC turf herbicide may be impregnated on dry bulk fertilizers. When applied as directed, PRE-M 3.3 EC turf herbicide /Dry Bulk Fertilizer mixtures provide weed control equal to that provided by the same rates of PRE-M 3.3 EC turf herbicide applied in water.

### SPRAYING INSTRUCTIONS

Uniformly apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous agitation during spraying with good mechanical or bypass agitation. 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.

### NONCROPLAND WEED CONTROL

PRE-M 3.3 EC turf herbicide is recommended for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way; highway guardrails, delineators, and sign posts; utility substations; petroleum tank farms; pumping installations; fence rows; storage areas; windbreaks and shelterbelts, and other similar areas.

For postemergence control of weeds, tank-mix combinations of PRE-M 3.3 EC turf herbicide plus ARSENAL® herbicide are recommended. **DO NOT** tank mix with ARSENAL in California. Recommended rates for the tank-mix compounds should be determined from the product labels of both PRE-M 3.3 EC turf herbicide and ARSENAL prior to use. See Table on WEED SPECIES CONTROLLED for rates.

### PRODUCTION AND ESTABLISHED LANDSCAPE ORNAMENTALS

PRE-M 3.3 EC turf herbicide can be used in and around field, liner or container nurseries, established ornamentals or gardens, or in general grounds maintenance, or parks, around military or other institutions, or commercial establishments, or cemeteries, and other similar areas.

PRE-M 3.3 EC turf herbicide is recommended for use on the following established ornamentals and ground covers planted in noncropland areas such as highway rights-of-way, utility substations, mulch beds, parking areas, statuary or monuments, or similar areas.

**ORNAMENTAL PRECAUTIONS**

Apply PRE-M 3.3 EC turf herbicide to established plantings. DELAY applying PRE-M 3.3 EC turf herbicide to seedbeds, transplant beds, or bareroot liners placed in containers until plants have become well rooted (2-4 weeks). 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 PRE-M 3.3 EC turf herbicide 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 PRE-M 3.3 EC turf herbicide or injury may occur.

PRE-M 3.3 EC turf herbicide sprays can be safely applied over-the-top of those plants listed below.

DO NOT APPLY PRE-M 3.3 EC turf herbicide in greenhouses, shadehouses or other enclosed structures.

**ORNAMENTAL TANK MIXES**

Emerged weeds in ornamentals can be controlled using tank mixes containing Roundup, Finale, Ornamec<sup>2</sup>, Gallery<sup>5</sup>, Princep<sup>8</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 PRE-M 3.3 EC turf herbicide and follow those that are most restrictive.

**RECOMMENDED SPECIES**

PRE-M 3.3 EC turf 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 Table on WEED SPECIES CONTROLLED for rates.

**TREES**

| <u>Common Name</u>    | <u>Scientific Name</u>        |
|-----------------------|-------------------------------|
| 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  
 Birch, European Weeping  
 Birch, River  
 Buckeye, Red  
 Cedar, White  
 Chamaecyparis, Boulevard  
 Cherry, Black  
 Cherry, Choke  
 Cherry, Kwanzan  
 Cherry, Nanking  
 Cottonwood  
 Crabapple  
 Crepe myrtle  
 Cryptomeria, Japanese Cedar  
 Cypress, Bald  
 Cypress, Leyland  
 Dogwood, Flowering  
 Dogwood, Korean  
 Dogwood, Silky  
 Dogwood, Shrub  
 Elm  
 Fir, Balsam  
 Fir, Douglas  
 Fir, Fraser  
 Fir, White  
 Franklinia  
 Ginkgo  
 Gum, Black  
 Gum, Sour  
 Haw, Black  
 Hawthorn  
 Hemlock, Canada  
 Hemlock, Eastern  
 Holly, American  
 Honeylocust  
 Lilac, Common  
 Lilac, Japanese Tree  
 Linden  
 Magnolia, Saucer  
 Magnolia, Southern  
 Magnolia, Star  
 Maidenhair Tree  
 Maple, Norway  
 Maple, Japanese  
 Maple, Red  
 Maple, Sugar  
 Nannyberry, Rusty  
 Oak, Chinquapin  
 Oak, Live  
 Oak, Pin  
 Oak, Red  
 Oak, Swamp chestnut  
 Oak, Water

*Tilia* spp.  
*Betula pendula*  
*Betula nigra*  
*Aesculus pavia*  
*Thuja occidentalis*  
*Chamaecyparis pisifera*  
*Prunus serotina*  
*Prunus virginiana*  
*Prunus serrulata*  
*Prunus tomentosa*  
*Populus deltoides*  
*Malus* spp.  
*Lagerstroemia indica*  
*Cryptomeria japonica*  
*Taxodium distichum*  
*Cupressocyparis leylandii*  
*Cornus florida*  
*Cornus kousa*  
*Cornus amomum*  
*Cornus* spp.  
*Ulmus japonica*  
*Abies balsamae*  
*Pseudotsuga menziesii*  
*Abies fraseri*  
*Abies concolor*  
*Franklinia* spp.  
*Ginkgo biloba*  
*Nyssa sylvatica*  
*Nyssa sylvatica*  
*Viburnum prunifolium*  
*Crataegus* spp.  
*Tsuga canadensis*  
*Tsuga canadensis*  
*Ilex opaca*  
*Gleditsia triacanthos*  
*Syringa vulgaris*  
*Syringa reticulata*  
*Tilia* spp.  
*Magnolia soulangiana*  
*Magnolia grandiflora*  
*Magnolia stellata*  
*Ginkgo biloba*  
*Acer platanoides*  
*Acer palmatum*  
*Acer rubrum*  
*Acer saccharum*  
*Viburnum rufidulum*  
*Quercus muehlenbergii*  
*Quercus virginiana*  
*Quercus palustris*  
*Quercus rubra*  
*Quercus michauxii*  
*Quercus nigra*



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Oak, White  
 Oak, Willow  
 Olive  
 Palm, Date  
 Palm, Fan  
 Palm, Pindo  
 Palm, Washington  
 Peach  
 Pear, Bradford  
 Pecan  
 Pine, Austrian  
 Pine, Italian Stone  
 Pine, Loblolly  
 Pine, Monterey  
 Pine, Red  
 Pine, Scotch  
 Pine, Slash  
 Pine, Virginia  
 Pine, White  
 Plum, Purple Leaf  
 Poplar, Black  
 Redcedar, Eastern  
 Redcedar, Western  
 Red Ironbark  
 Redwood, Dawn  
 Sequoia, Giant  
 Serviceberry  
 Sourwood  
 Spruce, Colorado Blue  
 Spruce, Dwarf Alberta  
 Spruce, Norway  
 Spruce, White  
 Sweetgum  
 Sycamore  
 Trachycarpus  
 Tulip tree  
 Walnut, Black  
 Willow, Weeping  
 Yellowwood

*Quercus alba*  
*Quercus phellos*  
*Olea europaea*  
*Phoenix* spp.  
*Washingtonia* spp.  
*Butia* spp.  
*Washingtonia* spp.  
*Prunus persica*  
*Pyrus calleryana* 'Bradford'  
*Carya illinoensis*  
*Pinus nigra*  
*Pinus pinea*  
*Pinus taeda*  
*Pinus radiata*  
*Pinus resinosa*  
*Pinus sylvestris*  
*Pinus elliottii*  
*Pinus virginiana*  
*Pinus strobus*  
*Prunus cerasifera*  
*Populus nigra*  
*Juniperus virginiana*  
*Thuja plicata*  
*Eucalyptus sideroxylon* 'Rosea'  
*Metasequoia glyptostroboides*  
*Sequoiadendron giganteum*  
*Amelanchier laevis*  
*Oxydendrum arboreum*  
*Picea pungens*  
*Picea glauca* 'albertiana'  
*Picea abies*  
*Picea glauca*  
*Liquidambar styraciflua*  
*Platanus occidentalis*  
*Trachycarpus* spp. -  
*Liriodendron tulipifera*  
*Juglans nigra*  
*Salix babylonica*  
*Cladrastis lutea*

**SHRUBS**

Common Name

Scientific Name

Abelia, Glossy  
 Aucuba, Gold  
 Azalea  
 Bamboo, Heavenly  
 Barberry  
 Barberry, Japanese  
 Blue Indigo Bush  
 Bottlebrush, Lemon

*Abelia grandiflora*  
*Aucuba japonica*  
*Rhododendron* spp.  
*Nandina domestica*  
*Berberis gladwynensis*  
*Berberis thunbergii*  
*Dalea gregii*  
*Callistemon citrinus*

Cape jasmine  
 Cordyline  
 Correa  
 Cotoneaster  
 Cotoneaster, Bearberry  
 Cotoneaster, Rock  
 Cypress, Italian  
 Cypress, Leyland  
 Deutzia, Slender  
 Dogwood, Red Twig  
 Elaeagnus  
 Escallonia  
 Euonymus  
 Euonymus, Golden  
 Euonymus, Winged  
 Firethorn  
 Forsythia, Border  
 Fragrant Olive  
 Fuschia, California  
 Gardenia  
 Hawthorne, Indian  
 Hibiscus  
 Holly, Chinese  
 Holly, Japanese  
 Holly, Fosters  
 Holly, Savannah  
 Holly, Yaupon  
 Honeysuckle, Bush  
 Juniper  
 Juniper, Chinese  
 Juniper, Shore  
 Juniper, Trailing  
 Laurel, Cherry  
 Laurel, Mountain  
 Laurel, Otto Luyken  
 Laurel, Schipka  
 Laurustinus  
 Lavender, English  
 Leucothoe  
 Leucothoe, Coast  
 Lilac, Cut-leaf  
 Lily-of-the-Nile  
 Mahonia  
 Mock Orange  
 Myrtle, Compact  
 Myrtle, Wax  
 Nandina  
 Oleander  
 Oregon Grape  
 Osmanthus  
 Palm, European Fan  
 Palm, Mediterranean Fan  
 Phlox, Prickly

*Gardenia jasminoides*  
*Cordyline* spp.  
*Correa* spp.  
*Cotoneaster apiculatus*  
*Cotoneaster dammeri*  
*Cotoneaster horizontalis*  
*Cupressus sempervirens*  
*Cupressocyparis leylandii*  
*Deutzia gracilis*  
*Cornus sericea*  
*Elaeagnus ebbingei*  
*Escallonia fradesii*  
*Euonymus fortunei*  
*Euonymus japonica*  
*Euonymus alata*  
*Pyracantha coccinea*  
*Forsythia intermedia*  
*Osmanthus fragrans*  
*Zauschineria californica*  
*Gardenia jasminoides*  
*Raphiolepis indica*  
*Hibiscus syriacus*  
*Ilex cornuta*  
*Ilex crenata*  
*Ilex attenuata* 'Fosteri'  
*Ilex attenuata*  
*Ilex vomitoria*  
*Diervilla lonicera*  
*Juniperus* spp.  
*Juniperus chinensis* v. pfitzer  
*Juniperus conferta*  
*Juniperus horizontalis*  
*Prunus laurocerasus*  
*Kalmia latifolia*  
*Prunus laurocerasus*  
*Prunus schipkanensis*  
*Viburnum tinus*  
*Lavandula angustifolia*  
*Leucothoe fontanesiana*  
*Leucothoe axillaris*  
*Syringa laciniata*  
*Agapanthus africanus*  
*Mahonia aquifolium*  
*Pittosporum tobira*  
*Myrtus communis*  
*Myrica cerifera*  
*Nandina domestica*  
*Nerium oleander*  
*Mahonia aquifolium*  
*Osmanthus fragrans*  
*Chamaerops humilis*  
*Chamaerops* spp.  
*Leptodactylon californicum*

Palm, European Fan  
 Palm, Mediterranean Fan  
 Phlox, Prickly  
 Photinia, Fraser  
 Pieris, Japanese  
 Pine, Mugo  
 Plum, Natal  
 Privet, California  
 Privet, Glossy  
 Privet, Variegated  
 Privet, Waxleaf  
 Pyracantha  
 Quince, Flowering  
 Ranger, Texas  
 Redroot  
 Rhododendron  
 Robira  
 Spice Plant  
 Spiraea  
 Spiraea, Anthony Waterer  
 Spiraea, Japanese  
 Sweet Bay  
 Trumpet Bush  
 Verbena, Lemon  
 Viburnum  
 Vitex  
 Weigela  
 Wild Lilac  
 Xylosma  
 Yellowbells  
 Yew  
 Yew, Japanese  
 Yew, Southern  
 Yucca, Adam's  
 Yucca, Weeping

*Chamaerops humilis*  
*Chamaerops* spp.  
*Leptodactylon californicum*  
*Photinia X Fraseri*  
*Pieris japonica*  
*Pinus mugo*  
*Carissa grandiflora*  
*Ligustrum ovalifolium*  
*Ligustrum lucidum*  
*Ligustrum sinensis*  
*Ligustrum japonicum*  
*Pyracantha coccinea*  
*Chaenomeles japonica*  
*Leucophyllum frutescens*  
*Ceanothus* spp.  
*Rhododendron* spp.  
*Pittosporum tobiri*  
*Illicium parviflorum*  
*Spiraea vanhouttei*  
*Spiraea X bumalda*  
*Spirea japonica*  
*Laurus nobilis*  
*Tecoma stans*  
*Aloysia triphylla*  
*Viburnum suspensum*  
*Vitex* spp.  
*Weigela florida*  
*Ceanothus* spp.  
*Xylosma congestum*  
*Tecoma stans*  
*Taxus media*  
*Taxus cuspidata*  
*Podocarpus macrophyllus*  
*Yucca filamentosa*  
*Yucca pendula*

**GROUND COVERS**

Common Name

Scientific Name

Ajuga  
 Capeweed  
 Cinquefoil, Spring  
 Daisy, Trailing African  
 Gazania  
 Iceplant, Large Leaf  
 Ivy, English  
 Ivy, Geranium  
 Jasmine, Asiatic  
 Jasmine, Primrose  
 Mondograss  
 Myoporum

*Ajuga reptans*  
*Arctotheca calendula*  
*Potentilla verna*  
*Osteospermum fruticosum*  
*Gazania splendens*  
*Carpobrotus edulis*  
*Hedera helix*  
*Pelargonium peltatum*  
*Trachelospermum asiaticum*  
*Jasminum mesnyi*  
*Ophiopogon japonica*  
*Myoporum parvifolium*

Pachysandra  
Potentilla  
Rose-Of-Sharon  
Wintercreeper

*Pachysandra terminalis*  
*Potentilla fruticosa*  
*Hypericum calycinum*  
*Euonymus fortunei*

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## PERENNIALS

### Common Name

Bleeding Heart  
Calla lily  
Canna, common garden  
Chincherinchee  
Crinum Lily  
Fern, Asparagus  
Fern, Leatherleaf  
Freesia  
Heather, Dwarf  
Hosta  
Lily  
Liriope, Creeping  
Liriope, Variegated  
Montbretia  
Orchid, Peacock  
Peony, Chinese  
Wisteria  
Zephyr Lily

### Scientific Name

*Dicentra spectabilis*  
*Zantedeschia aethiopica*  
*Canna generalis* 'Lucifer'  
*Ornithogalum thyrsoides*  
*Crinum* spp.  
*Asparagus officinalis*  
*Rumohra adiantiformis*  
*Freesia x hybrida*  
*Calluna vulgaris*  
*Hosta* spp.  
*Lilium* spp.  
*Liriope spicata*  
*Liriope muscari*  
*Crocsmia crocosmiiflora*  
*Acidanthera bicolor*  
*Paeonia lactiflora*  
*Wisteria* spp.  
*Zephyranthes* spp.

## ORNAMENTAL GRASSES

### Common Name

Beach Grass  
Fescue, Blue  
Fescue, Sheep  
Fountain Grass  
Pampas Grass  
Reed Canary Grass  
Reed, Giant  
Ribbon Grass  
Tufted Hair Grass

### Scientific Name

*Ammophila breviligulata*  
*Festuca ovina*  
*Festuca ovina*  
*Pennisetum setaceum*  
*Cortaderia selloana*  
*Phalaris arundinacea*  
*Arundo* spp.  
*Phalaris arundinacea*  
*Deschampsia caespitosa*

PRE-M 3.3 EC turf herbicide 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.**

### WEED CONTROL IN CHRISTMAS TREE PLANTATIONS

PRE-M 3.3 EC turf herbicide is recommended for preemergence control of the weed species listed on this label as they germinate in areas planted with the following Christmas trees:

- |                      |                              |
|----------------------|------------------------------|
| * Austrian Pine      | <i>Pinus nigra</i>           |
| * Balsam Fir         | <i>Abies balsamae</i>        |
| Colorado Blue Spruce | <i>Picea pungens</i>         |
| Douglas Fir          | <i>Pseudotsuga menziesii</i> |
| * Scotch Pine        | <i>Pinus sylvestris</i>      |
| * Virginia Pine      | <i>Pinus virginiana</i>      |
| White Fir            | <i>Abies concolor</i>        |
| * White Spruce       | <i>Picea glauca</i>          |

**\*Do not use in California.**

PRE-M 3.3 EC turf herbicide can be applied directly over the top of established Christmas trees. DELAY applying PRE-M 3.3 EC turf herbicide to seedbeds, transplant beds, or bareroot liners until plants have become well rooted.

PRE-M 3.3 EC turf herbicide will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or PRE-M 3.3 EC turf herbicide may be used in conjunction with herbicides registered for postemergence use in Christmas trees. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in Christmas trees.

### WEED CONTROL IN NON-BEARING FRUIT AND NUT CROPS AND VINEYARDS

PRE-M 3.3 EC turf herbicide may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non-bearing crops:

- |           |                 |
|-----------|-----------------|
| Almond    | Olive           |
| Apple     | Peach           |
| Apricot   | Pear            |
| Cherry    | Pecan           |
| Citrus    | Pistachio       |
| Fig       | Plum            |
| Grape     | Prune           |
| Nectarine | Walnut, English |

Refer to Table on **WEED SPECIES CONTROLLED** for rates.

Apply the spray directly to the ground below the trees or vines. 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 PRE-M 3.3 EC turf herbicide 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. PRE-M 3.3 EC turf herbicide may be used where the roots of a fruit, vine, nut, or ornamental plant encroach into a treatable area.

## WEED SPECIES CONTROLLED

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For preemergence control of the weed species listed, apply PRE-M 3.3 EC turf herbicide at the following rates:

| Length of Control               | PRE-M 3.3 EC turf herbicide | Ounces required to<br>Treat 1000 sq. ft |
|---------------------------------|-----------------------------|---|
| Short Term Control (2-4 months) | 2.4 Quarts/Acre             | 1.8 oz.                                 |
| Long Term Control (6-8 months)  | 4.8 Quarts/Acre             | 3.6 oz.                                 |

PRE-M 3.3 EC turf herbicide will not control established weeds.

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

The following grass and broadleaf weeds are controlled by preemergence treatments of PRE-M 3.3 EC turf herbicide at the rates recommended:

### GRASSES CONTROLLED

| <u>Common Name</u>       | <u>Scientific Name</u>          |
|--------------------------|---------------------------------|
| Barnyardgrass            | <i>Echinochloa crus-galli</i>   |
| Bluegrass, Annual        | <i>Poa annua</i>                |
| Crabgrass                | <i>Digitaria spp.</i>           |
| Crowfootgrass            | <i>Dactyloctenium aegyptium</i> |
| Foxtail, Giant           | <i>Setaria faberi</i>           |
| Foxtail, Green           | <i>Setaria viridis</i>          |
| Foxtail, Yellow          | <i>Setaria lutescens</i>        |
| Goosegrass               | <i>Eleusine indica</i>          |
| Itchgrass                | <i>Rottboellia exaltata</i>     |
| Johnsongrass (from seed) | <i>Sorghum halepense</i>        |
| Junglerice               | <i>Echinochloa colonum</i>      |
| Lovegrass                | <i>Eragrostis spp.</i>          |
| Panicum, Browntop        | <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

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| Common Name             | Scientific Name                 |
|-------------------------|---------------------------------|
| Burweed, Lawn           | <i>Soliva persoperma</i>        |
| Carpentweed             | <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 spp.</i>          |
| Eveningprimrose         | <i>Oenothera biennis</i>        |
| Fiddleneck              | <i>Amsinckia intermedia</i>     |
| Filaree                 | <i>Erodium spp.</i>             |
| Henbit                  | <i>Lamium amplexicaule</i>      |
| Knotweed (prostrate)    | <i>Polygonum aviculare</i>      |
| Kochia                  | <i>Kochia scoparia</i>          |
| Lambsquarters           | <i>Chenopodium album</i>        |
| Pigweed                 | <i>Amaranthus spp.</i>          |
| Puncturevine            | <i>Tribulus terrestris</i>      |
| Purslane                | <i>Portulaca oleracea</i>       |
| Pusley, Florida         | <i>Richardia scabra</i>         |
| Rocket, London          | <i>Sisymbrium irio</i>          |
| Sheperdspurse           | <i>Capsella bursa-pastoris</i>  |
| Smartweed, Pennsylvania | <i>Polygonum pennsylvanicum</i> |
| Speedwell, Corn         | <i>Veronica arvensis</i>        |
| Spurge, Annual          | <i>Euphorbia spp.</i>           |
| Spurge, Prostrate       | <i>Euphorbia humistrata</i>     |
| Woodsorrel, Yellow      | <i>Oxalis stricta</i>           |
| Velvetleaf (Buttonweed) | <i>Abutilon theophrasti</i>     |

### WEED CONTROL IN LAWNS AND TURF

PRE-M 3.3 EC turf herbicide provides preemergence control of most annual grasses and certain boardleaf 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 or jogging paths, areas around houses of worship, cemeteries; golf courses; prairiegrass areas; and sod farms.

Turfgrass Types: PRE-M 3.3 EC turf herbicide should only be applied to well established lawns and turf. PRE-M 3.3 EC turf herbicide can be used on the following turfgrasses: Bahiagrass, Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, St. Augustinegrass, Tall Fescue, Zoysiagrass.

### GENERAL TURF INFORMATION

Use only on well-established turfgrass with a dense and uniform stand.

Do not use on greens or injury may occur.

PRE-M 3.3 EC turf herbicide treatments will not control established weeds. Applications must be made prior to germination of weeds.

Three applications per year may be made. Allow at least 2 months between applications except where indicated under **RATE AND APPLICATION CHART**.

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### MIXING AND APPLICATION INSTRUCTIONS

Add PRE-M 3.3 EC turf herbicide slowly to partially filled tank (1/2 to 3/4 full) of water while agitating and then fill the remainder of the tank with water. **MAINTAIN CONTINUOUS AGITATION WHILE ADDING PRE-M 3.3 EC turf herbicide AND-UNTIL SPRAYING IS COMPLETED.** If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying as needed.

Apply with properly calibrated equipment in sufficient water per acre to provide uniform spray distribution. Low pressure (25-50 psi) sprayers are recommended. Avoid application when winds may cause drift.

### COMPATIBILITY

PRE-M 3.3 EC turf herbicide is compatible with most commonly used herbicides. When PRE-M 3.3 EC turf herbicide is used in tank mixture with another herbicide, refer to each label for rates, methods of application, proper timing, weeds controlled, limitations, and precautions. Always use in accordance with the more restrictive label limitations and precautions. When tank mixing be sure to add PRE-M 3.3 EC turf herbicide to the partially filled tank first, mix thoroughly, and then add combination products to the mixture. **DO NOT** apply tank mix combinations unless previous experience indicates the mixture is effective and will not result in application problems or plant injury. **DO NOT** attempt to mix PRE-M 3.3 EC turf herbicide directly with liquid fertilizer. Premix one part of PRE-M 3.3 EC turf herbicide with two parts water and add this diluted mixture slowly into the tank while agitating.

### PRECAUTIONS ON TURF

Not for use on bentgrass or *Poa annua* (putting greens and tees) or on dichondra, where these are desired species.

This product may cause yellowing and thinning of cool season grasses in winter overseeded turf.

Delay seeding by 3 months and sprigging by 5 months after application. Prior to seeding or sprigging, the soil surface should be disturbed or worked to dilute any remaining chemical residue.

On newly planted areas, wait until the grass has been mowed at least 4 times and has filled in before applying product.

On turf that has been severely thinned due to winter damage, excessive soil moisture, low temperature (below 40°F), scalping, insects, disease, etc., wait until turf has filled in and rooting of stolons is complete before applying.

This product may stain, thus avoid contact with areas such as sidewalks, driveways, etc. If contact with the spray mixture occurs, promptly rinse with water.

PRE-M 3.3 EC turf herbicide treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after irrigation.

**Weeds Species Controlled:** When applied as directed, PRE-M 3.3 EC turf herbicide will control the following weed species:



**GRASSES CONTROLLED**

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**Common Name**

**Scientific Name**

Annual bluegrass  
 Barnyardgrass  
 Crabgrass  
 Fall panicum  
 Foxtail  
 Goosegrass

*Poa annua*  
*Echinochloa crus-galli*  
*Digitaria spp.*  
*Panicum dichotomiflorum*  
*Setaria spp.*  
*Eleusine indica*

**BROADLEAF WEEDS CONTROLLED**

**Common Name**

**Scientific Name**

Common chickweed  
 Cudweed  
 Hop clover  
 Henbit  
 Knotweed  
 Mouseear chickweed  
 Prostrate spurge  
 Purslane  
 Oxalis  
 Evening primrose

*Stellaria media*  
*Gnaphalium spp.*  
*Trifolium procumbens*  
*Lamium amplexicaule*  
*Polygonum aviculare*  
*Cerastium vulgatum*  
*Euphorbia supina*  
*Portulaca oleracea*  
*Oxalis spp.*  
*Oenothera biennis*

**RATE AND APPLICATION CHART**

| <u>Turf Species</u>  | <u>Weeds Controlled</u> | <u>Rates of PRE-M 3.3 EC turf herbicide</u>             | <u>Comments</u>                         |   |   |
|--|-------------------------|---|---|---|---|
| <u>Northern Grasses:</u><br>Fine fescue<br>Kentucky bluegrass<br>Perennial ryegrass<br>Tall fescue | Barnyardgrass           | 3.6 to 4.8 pt per acre or 1.3 to 1.8 oz per 1,000 sq ft | Apply in Spring before weeds germinate. |   |   |
|  | Crabgrass               |   |   |   |   |
|  | Fall panicum            |   |   |   |   |
|  | Foxtail                 |   |   |   |   |
|  | Hop clover              |   |   |   |   |
|  | Prostrate spurge        |   |   |   |   |
|  | Yellow woodsorrel       |   |   |   |   |
|  | Cudweed                 |   |   |   |   |
|  | Goosegrass              |   |   | 7.2 pt per acre or 2.6 oz per 1,000 sq ft | Apply in Spring before weeds germinate. Repeat application if |
|  | Evening primrose        |   |   |   |   |

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necessary in 8 weeks at 3.6 pt per acre or 1.3 oz per 1,000 sq ft.

|                    |                               |  |
|--------------------|-------------------------------|--|
| Annual bluegrass   | 3.6 pt to 4.8 pt              | Apply in late Summer to early Fall before weeds germinate. |
| Common chickweed   | per acre or                   |  |
| Mouseear chickweed | 1.3 to 1.8 oz per 1,000 sq ft |  |

**Southern Grasses:**

|                    |                   |                 |   |
|--------------------|-------------------|-----------------|---|
| Bahia              | Barnyardgrass     | 4.2 to 4.8 pt   | Apply in Spring before weeds germinate. Repeat application if necessary in 8 weeks using 3.6 pt per acre. |
| Bermudagrass       | Crabgrass         | per acre or     |   |
| Centipedegrass     | Fall panicum      | 1.6 to 1.8 oz   |   |
| St. Augustinegrass | Foxtail           | per 1,000 sq ft |   |
| Tall fescue        | Prostrate spurge  |                 |   |
| Zoysiagrass        | Yellow woodsorrel |                 |   |
| Cudweed            |                   |                 |   |

|                  |                           |
|------------------|---------------------------|
| Goosegrass       | 6.4 to 7.9 pt             |
| Hop clover       | per acre or 2.4           |
| Evening primrose | to 2.9 oz per 1,000 sq ft |

|                    |                 |  |
|--------------------|-----------------|--|
| Henbit             | 3.6 to 4.8 pt   | Apply in late Summer to early Fall before weeds germinate. |
| Annual bluegrass   | per acre or 1.3 |  |
| Common chickweed   | to 1.8 oz per   |  |
| Mouseear chickweed | 1,000 sq ft     |  |

**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 in this leaflet. PRE-M 3.3 EC turf 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, Shepherdspurge, 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.

## TOTAL VEGETATION CONTROL

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PRE-M 3.3 EC turf herbicide may be tank mixed with ARSENAL<sup>6</sup>, PLATEAU<sup>6</sup>, Roundup, Karmex<sup>7</sup>, Finale, Oust<sup>7</sup>, diuron, or other products to provide bare ground, or total vegetation control. PRE-M 3.3 EC turf herbicide 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 PRE-M 3.3 EC turf herbicide with ARSENAL or diuron are recommended if control has been a problem for other herbicides. For rates refer to RATE AND APPLICATION CHART.

1 Trademark of AgrEvo

2 Trademark of PBI Gordon Corp.

3 Trademark of American Cyanamid Company

4 Trademark of Monsanto Company

5 Trademark of Dow AgroSciences

6 Trademark of American Cyanamid Company

7 Trademark of E. I. DuPont de Nemours and Company

8 Trademark of Novartis Crop Protection, Inc.