# PLEASE NOTE

This image contains more than one label approved for this product on this date.

# 241-360 12/7/1998 PRE-M®3.3 EC TURE HERBICIDE

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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	7.4%
*	
INERT INGREDIENTS*:	2.6%
TOTAL100	0.0%
(1 gallon contains 3.3 lbs. of pendimethalin)	0.070

\*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 etiqeta, 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.

See next page for Additional Precautionary Statements.

AMERICAN CYANAMID COMPANY
NORTH AMERICA AGRICULTURAL PRODUCTS DIVISION
SPECIALTY PRODUCTS DEPARTMENT\_\_\_\_\_

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Net Contents:

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DEC 7 1998

Under the Federal Insecticide.
Fungicide, and Redenticide Act.

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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 ( $\geq 14$  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.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through crift. 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.

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# 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.

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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 rustic 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.

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#### **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 ½ 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<sup>3</sup> 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.

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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 PRO<sup>4</sup>, Finale<sup>1</sup>, Ornamec<sup>2</sup>, Gallery<sup>5</sup>, Princep<sup>8</sup>, and other similar products. Do not apply sprays containing Roundup PRO 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**

,	Coi	nm	on.	Nan	ne
$\overline{}$					_

Alder, European black

Apple

Arborvitae, American

Arbutus

Ash, Red Ash, White

Aspen, Bigtooth

Aspen, Quaking

Basswood

#### Scientific Name

Alnus glutinosa

Malus spp.

Thuja occidentalis

Arbutus spp.

Fraxinus pennsylvanica

Fraxinus americana

Populus grandidentata

Populus tremuloides

Tilia spp.

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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 Oak, White

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

Viburnum rufidulum
Quercus muehlenberg
Quercus virginiana
Quercus palustris
Quercus rubra
Quercus michauxii
Quercus nigra
Quercus alba

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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

**SHRUBS** 

Common Name

Abelia, Glossy

Aucuba, Gold

Azalea

Bamboo, Heavenly

Barberry

Barberry, Japanese

Blue Indigo Bush

Bottlebrush, Lemon

Boxwood, Common

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

I mus rucuu

Pinus radiata

Pinus resinosa

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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

#### Scientific Name

Abelia grandiflora

Aucuba japonica

Rhododendron spp.

Nandina domestica

Berberis gladwynensis

Berberis glaawynensis Berberis thunbergii

Dalea gregii

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Callistemon citrinus

Buxus sempervirens

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Boxwood, Japanese

Camellia

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

Buxus microphylla Camellia japonica 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

- yracanına 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

syringa lacimala

Agapanthus africanus

Mahonia aquifolium

Pittosporum tobira

Myrtus communis

Myrica cerifera

Nandina domestica

Nerium oleander

Mahonia aquifolium

Osmanthus fragrans

Chamaerops humilis

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Palm, Mediterranean Fan

Phlox, Prickly

Photinia, Fraser

Dieris, 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

**Kvlosma** 

Yellowbells

Yew

Yew, Japanese

Yew, Southern

Yucca, Adam's

Yucca, Weeping

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

Ajuga

Capeweed

Cinquefoil, Spring

Daisy, Trailing African

Gazania

Iceplant, Large Leaf

Ivy, English

Ivy, Geranium

Jasmine, Asiatic

asmine, Primrose

Mondograss

Myoporum

Pachysandra

#### Scientific Name

Ajuga reptans

Arctotheca calendula

Potentilla verna

Osteospermum fruticosum

Gazania splendens

Carpobrotus edulis

Hedera helix

Pelargonium peltatum

Trachelospermum asiaticum

Jasminum mesnyi

Ophiopogon japonica

Myoporum parviflolium

Pachysandra terminalis

Potentilla Rose-Of-Sharon Wintercreeper Potentilla fruticosa Hypericum calycinum Euonymous fortunei

#### **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. Lillium spp. Liriope spicata

Liriope muscari Crocosmia 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.

• On not use treated plants for food or feed.

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#### WEED CONTROL IN CHRISTMAS TREE PLANTATIONS

ORE-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

\* Balsam Fir

Colorado Blue Spruče

Douglas Fir

\* Scotch Pine

\* Virginia Pine

White Fir

\* White Spruce

Pinus nigra Abies balsamae Picea pungens

Pseudotsuga menziesii

Pinus sylvestris Pinus virginiana Abies concolor Picea glauca

#### \*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

Apple
Apricot
Cherry

Citrus Fig

Grape Nectarine Olive

Peach

Pear Pecan Pistachio

Plum Prune

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.

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# WEED SPECIES CONTROLLED

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
		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**

Common Name	Scientific Name	
Barnyardgrass	Echinochloa crus-galli	
Bluegrass, Annual	Poa annua	
Crabgrass	Digitaria spp.	
Crowfootgrass	Dactyloctenium aegyptium	
Foxtail, Giant	Setaria faberi	
Foxtail, Green	Setaria viridis	
Foxtail, Yellow	Setaria lutescens	
Goosegrass	Eleusine indica	
Itchgrass	Rottboellia exaltata	
Johnsongrass (from seed)	Sorghum halepense	
Junglerice	Echinochloa colonum	
Lovegrass	Eragrostis spp.	
Panicum, Browntop	Panicum fasciculatum	
Panicum, Fall	Panicum dichotomiflorum	
Panicum, Texas	Panicum texanum	
Sandbur, Field	Cenchrus incertus	
Signalgrass	Brachiaria platyphylla	
Sprangletop, Mexican	Leptochloa uninervia	
Sprangletop, Red	Leptochloa filiformis	
Witchgrass	Panicum capillare	
Woolly Cupgrass	Eriochloa villosa	

#### **BROADLEAF WEEDS CONTROLLED**

Common Name Scientific Name

Burweed, Lawn Soliva ptersoperma

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Carpetweed

Chickweed, Common Chickweed, Mouseear

Clover, Hop Cudweed

Eveningprimrose

Fiddleneck Filaree Henbit

Knotweed (prostrate)

Kochia

Lambsquarters

Pigweed Puncturevine Purslane

Pusley, Florida Rocket, London Sheperdspurse

Smartweed, Pennsylvania

Speedwell, Corn Spurge, Annual Spurge, Prostrate Woodsorrel, Yellow Velvetleaf (Buttonweed) Mollugo verticillata
Stellaria media
Cerastium vulgatum
Trifolium procumbens
Gnaphalium spp.
Oenothera biennis
Amsinckia intermedia

Erodium spp.
Lamium ample

Lamium amplexicaule Polygonum aviculare Kochia scoparia Chenopodium album Amaranthus spp. Tribulus terrestris Portulaca oleracea Richardia scabra Sisymbrium irio

Capsella bursa-pastoris Polygonum pensylvanicum

Veronica arvensis Euphorbia spp. Euphorbia humistrata

Oxalis stricta

Abutilon theophrasti

#### WEED CONTROL IN LAWNS AND TURF

PRE-M 3.3 EC turf herbicide 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 or jogging paths, areas around houses of worship, cemeteries; golf courses; prairiegrass areas; and sod farms.

<u>Turfgrass Types</u>: 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, Centipededgrass, 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.

Allow at least 2 months between applications except where indicated under RATE AND APPLICATION CHART.

#### MIXING AND APPLICATION INSTRUCTIONS

Add PRE-M 3.3 EC turf herbicide slowly to partially filled tank (1/2 to ¾ full) of water while agitating and then fill the remainder of the tank with water. MAINTAIN CONTINUOUS AGITATION WHILE ADDING PRE-M ...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**

# Common Name

Annual bluegrass
Barnyardgrass
Crabgrass
Fall panicum
Foxtail
Goosegrass

# Scientific Name

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

# **BROADLEAF WEEDS CONTROLLED**

Scientific Name **Common Name** Common chickweed Stellaria media Cudweed Gnaphalium spp. Hop clover Trifolium procumbens Henbit Lamium amplexicaule Knotweed Polygonum avicularc Mouseear chickweed Cerastium vulgatum Prostrate spurge Euphorbia supina Portulaca oleracea Purslane Oxalis spp. Oxalis Oenothera biennis Evening primrose

# RATE AND APPLICATION CHART

Turf Species	Weeds Controlled	Rates of PRE-M 3.3 EC turf herbicide	Comments
Northern Grasses: Fine fescue Kentucky bluegrass Perennial ryegrass Tall fescue	Barnyardgrass Crabgrass Fall panicum Foxtail Hop clover Prostrate spurge Yellow woodsorrel Cudweed	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. Repeat applications if necessary in 5-8 weeks at 2.5-3.6 pt per acre or 1 to 1.3 oz per 1.000 sq tt.
	Goosegrass Evening primrose	7.2 pt per acre or 2.6 oz per 1,000 sq ft	Apply in Sp.ing before weeds germinate. Repeat

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application if necessary in 5 - 8 weeks at 2.5 - 3.6 pt per acre or 1 to 1.3 oz per 1,000 sq ft.

Annual bluegrass
Common chickweed
Mouseear chickweed

Apply in late Summer to early Fall before weeds germinate.

# Southern Grasses:

Bahia
Bermudagrass
Centipedegrass
St. Augustinegrass
Tall fescue
Zoysiagrass

Barnyardgrass
Crabgrass
Fall panicum
Foxtail
Prostrate spurge
Yellow woodsorrel
Cudweed

4.2 to 4.8 pt per acre or 1.6 to 1.8 oz per 1,000 sq ft

before weeds germinate. Repeat application if necessary in 5 -8 weeks using 2.5 - 3.6 pt per acre or 1 to 1.3 oz 1,000 sq ft.

Apply in Spring

Goosegrass
Hop clover
Evening primrose

6.4 to 7.2 pt per acre or 2.4 to 2.6 oz per 1,000 sq ft.

Make a second application at 3.6 pt per acre or 1.3 oz per 1,000 sq ft at 5 - 8 weeks.

Apply in Spring before weeds germinate. An additional application of 3.6 pt per acre or 1.3 oz per 1,000 sq ft. may be made for extended goosegrass control 8 weeks after the second application.

Henbit Annual bluegrass Common chickweed Mouseear chickweed 3.6 to 4.8 pt per acre or 1.3 to 1.8 oz per 1,000 sq ft

Apply in late Summer to early Fall before weeds

germinate.

# 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

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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.

#### TOTAL VEGETATION CONTROL

PRE-M 3.3 EC turf herbicide may be tank mixed with ARSENAL<sup>6</sup>, PLATEAU<sup>6</sup>, Roundup PRO, 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.

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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.

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<sup>&</sup>lt;sup>1</sup>Trademark of AgrEvo

<sup>&</sup>lt;sup>2</sup>Trademark of PBI Gordon Corp.

<sup>&</sup>lt;sup>3</sup>Registered Trademark of American Cyanamid Company

<sup>&</sup>lt;sup>4</sup>Registered Trademark of Monsanto Company

<sup>&</sup>lt;sup>5</sup>Trademark of Dow AgroSciences

<sup>&</sup>lt;sup>6</sup>Registered Trademark of American Cyanamid Company

<sup>&</sup>lt;sup>7</sup>Trademark of E. I. DuPont de Nemours and Company

<sup>&</sup>lt;sup>8</sup>Trademark of Novartis Crop Protection, Inc.

# NEXT

# LABEL

241-360

PRE-M° 3.3 EC Turf Herblcide

Supplemental Labeling

EPA Reg. No. 241-360

ADDING WORKER PROTECTION STANDARD LANGUAGE, REVISED USE DIRECTIONS AND NEW USE SITES INCLUDING LAWNS AND OTHER TURF AREAS, PRODUCTION AND ESTABLISHED LANDSCAPE ORNAMENTALS, NON-BEARING FRUIT AND NUT TREES, AND CHRISTMAS TREE PLANTATIONS

OBSERVE ALL PRECAUTIONARY STATEMENTS, MIXING AND APPLICATION INSTRUCTIONS ON THE PRE-M 3.3 EC HERBICIDE LABEL

# 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.

DEC 7 1998

Under the Federal Insecticine. Fungicide, and Redenticide Act, as amended, for the posticide registered under EPA Reg. No. 241-360

# **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.

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.

#### **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 ½ 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.

#### 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 insitutions, 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 PRO<sup>3</sup>, Finale<sup>1</sup>, Ornamec<sup>2</sup>, Gallery<sup>4</sup>, Princep<sup>6</sup>, and other similar products. Do not apply sprays containing Roundup PRO 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

#### Common Name

Alder, European black

Apple

Arborvitae, American

Arbutus

Ash, Red

Ash, White

Aspen, Bigtooth

Aspen, Quaking

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

# Scientific Name

Alnus glutinosa

Malus spp.

Thuja occidentalis

Arbutus spp.

Fraxinus pennsylvanica

Fraxinus americana

Populus grandidentata

Populus tremuloides

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 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

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

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

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

D' l'

Pinus radiata

Pinus resinosa

Pinus sylvestris

Pinus elliottii

Pinus virginiana

Pinus strobus

T thus shoons

Prunus cerasifera

Populus nigra

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

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

Abelia, Glossy
Aucuba, Gold
Azalea
Bamboo, Heavenly
Barberry
Barberry, Japanese
Blue Indigo Bush
Bottlebrush, Lemon
Boxwood, Common
Boxwood, Japanese
Camellia
Cape jasmine
Cordyline
Correa
Cotoneaster

Cotoneaster, Bearberry Cotoneaster, Rock Cypress, Italian Cypress, Leyland Deutzia, Slender Dogwood, Red Twig

Elaeagnus Escallonia Euonymus

# Scientific Name

Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Callistemon citrinus Buxus sempervirens Buxus microphylla Camellia japonica 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 fortune:

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

Photinia, Fraser

Pieris, Japanese

Pine, Mugo

Plum, Natal

Privet, California

Privet, Glossy

Privet, Variegated

Privet, Waxleaf

Pyracantha

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

Photinia X Fraseri

Pieris japonica

Pinus mugo

Carissa grandiflora

Ligustrum ovalifclium

Ligustrum lucidum

Ligustrum sinensis

Ligustrum japonicum

Pyracantha coccinea

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 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

Tecoma stans Taxus media Taxus cuspidata

Podocarpus macrophyllus

Yucca filamentosa Yucca pendula

#### **GROUND COVERS**

#### **Common Name**

Ajuga

Capeweed

Cinquefoil, Spring Daisy, Trailing African

Gazania

Iceplant, Large Leaf

Iceplant, Large Lea Ivy, English Ivy, Geranium Jasmine, Asiatic Jasmine, Primrose Mondograss Myoporum Pachysandra

Rose-Of-Sharon Wintercreeper

Potentilla

# Scientific Name

Ajuga reptans

Arctotheca calendula

Potentilla verna

Osteospermum fruticosum

Gazania splendens Carpobrotus edulis

Hedera helix

Pelargonium peltatum

Trachelospermum asiaticum

Jasminum mesnyi
Ophiopogon japonica
Myoporum parviflolium
Pachysandra terminalis
Potentilla fruticosa
Hypericum calycinum

Euonymous fortunei

#### **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.
Lillium spp.
Liriope spicata

Liriope muscari
Crocosmia 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

\* Balsam Fir

Colorado Blue Spruce

Douglas Fir

\* Scotch Pine

\* Virginia Pine

White Fir

\* White Spruce

Pinus nigra

Abies balsamae

Picea pungens

Pseudotsuga menziesii

Pinus sylvestris

Pinus virginiana

Abies concolor

Picea glauca

#### \*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 Prune

Grape 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

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 Treat
	and the same of th	1000 sq. ft.
Short Term Control (2-4 month	s) 2.4 Quarts/Acre	1.8 oz.
Long Term Control (6-8 month	s) 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.

#### WEED CONTROL IN LAWNS AND TURF

PRE-M 3.3 EC turf herbicide 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 or jogging paths, areas around houses of worship, cemeteries; golf courses; prairiegrass areas; and sod farms.

<u>Turfgrass Types</u>: 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, Centipededgrass, 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.

Allow at least 2 months between applications except where indicated under RATE AND APPLICATION CHART.

#### 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**

# Common Name

Annual bluegrass
Barnyardgrass
Crabgrass

Fall panicum

Foxtail Goosegrass

# Scientific Name

Poa annua

Echinochloa crus-galli

Digitaria spp.

Panicum dichotomiflorum

Setaria spp. Eleusine indica

#### BROADLEAF WEEDS CONTROLLED

#### Common Name Scientific Name

Common chickweed Stellaria media
Cudweed Snaphalium spp.

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

Trifolium procumbens Lamium amplexicaule Polygonum avicularc Cerastium vulgatum Euphorbia supina Portulaca oleracea Oxalis spp. Oenothera biennis

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Turf Species	Weeds Controlled	Rates of PRE-M 3.3 EC turf herbicide	Comments
Northern Grasses: Fine fescue Kentucky bluegrass Perennial ryegrass Tall fescue	Barnyardgrass Crabgrass Fall panicum Foxtail Hop clover Prostrate spurge Yellow woodsorrel Cudweed	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. Repeat application if necessary in 5 - 8 weeks at 2.5 - 3.6 pt per acre or 1 to 1.3 oz per 1,000 sq ft.
	Goosegrass Evening primrose	7.2 pt per acre or 2.6 oz per 1,000 sq ft	Apply in Spring before weeds germinate. Repeat application if necessary in 5 - 8 weeks at 2.5 - 3.6 pt per acre or 1 to 1.3 oz per 1,000 sq ft.
	Annual bluegrass Common chickweed Mouseear chickweed	3.6 pt to 4.8 pt per acre or 1.3 to 1.8 oz per 1,000 sq ft	Apply in late Summer to early Fall before weeds germinate.
Southern Grasses: Bahia Bermudagrass	Barnyardgrass Crabgrass	4.2 to 4.8 pt per acre or	Apply in Spring before weeds

Centipedegrass
St. Augustinegrass
Tall fescue
Zoysiagrass

Fall panicum
Foxtail
Prostrate spurge
Yellow woodsorrel
Cudweed

1.6 to 1.8 oz per 1,000 sq ft germinate.
Repeat
application if
necessary in 5 - 8
weeks using 2.5 3.6 pt per acre,
or 1 to 1.3 oz per
1,000 sq ft.

Goosegrass Hop clover Evening primrose 6.4 to 7.2 pt per acre or 2.4 to 2.6 oz per 1,000 sq ft.

Make a second application of 3.6 pt per acre or 1.3 oz per 1,000 sq ft at 5-8 weeks.

Apply in Spring before weeds germinate. An additional application of 3.6 pt per acre or 1.3 oz per 1,000 sq ft may be made for extended goosegrass control 8 weeks after the second application.

Henbit Annual bluegrass Common chickweed Mouseear chickweed

3.6 to 4.8 pt per acre or 1.3 to 1.8 oz per 1,000 sq ft Apply in late Summer to early Fall before weeds germinate.

# 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, 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.

#### TOTAL VEGETATION CONTROL

PRE-M<sub>2</sub>3.3 EC turf herbicide may be tank mixed with ARSENAL<sup>5</sup>, PLATEAU<sup>5</sup>, Roundup PRO, Karmex<sup>7</sup>, Finale, Oust<sup>7</sup>, diuron, or other products to provide bare ground, or total vegetation control. PRE-M<sub>2</sub>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.



<sup>1</sup>Trademark of AgrEvo

<sup>2</sup>Trademark of PBI Gordon Corp.

Registered Trademark of Monsanto Company

Trademark of Dow AgroSciences

Registered Trademark of American Cyanamid Company

<sup>6</sup>Trademark of Novartis Crop Protection, Inc.

<sup>7</sup>Trademark of E. I. DuPont de Nemours and Company

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