

# Herbicide

For preemergence control of grass and broadleaf weeds in:

- Noncrop areas on or surrounding managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, and equipment yards)
- Facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows
- Landscape ornamentals
- Established perennial and wildflower plantings
- Conifer and hardwood seedling nurseries

Active Ingredient:

\*CAS No. 29091-21-2

SCP 834C-M1E 0504

10 pounds

**Net Contents** 

# KEEP OUT OF REACH OF CHILDREN. CAUTION

See additional precautionary statements on back of bag.

syngenta

	FIRST AID
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
Have the prod going for trea	uct container or label with you when calling a poison control center or doctor, or tment.
	HOT LINE NUMBER  For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident)  Call

1-800-888-8372

# PRECAUTIONARY STATEMENTS

#### **Hazards to Humans and Domestic Animals**

#### **CAUTION**

Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### Personal Protective Equipment (PPE)

Applicators and other handlers (other than mixers and loaders) who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR Part 170) - in general, agricultural-plant uses are covered, must wear:

- · Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as butyl rubber >14 mils, or neoprene rubber >14 mils, or nitrile rubber >14 mils
- Shoes plus socks

Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as butyl rubber >14 mils, or neoprene rubber >14 mils, or nitrile rubber >14 mils (see instructions for category A on the EPA chemical resistance category selection chart if you want other options)
- Shoes plus socks

#### **NON-WPS USES:**

Mixers and loaders who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) - in general, only agricultural-plant uses are covered by the WPS, must

Waterproof gloves

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

#### **Engineering Controls Statements**

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

#### **User Safety Recommendations:**

# Users should:

- · Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- After handling this product, immediately wash the outside of gloves before removing them, then remove gloves and all other PPE. Immediately wash thoroughly and change into clean clothing.

#### **Environmental Hazards**

This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations substantially above the level of water solubility, it may be 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 sites. Do not contaminate water when disposing of equipment wash water.

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

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

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

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

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitations of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

# **DIRECTIONS FOR USE**

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

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

### AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry 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 butyl rubber >14 mils, or neoprene rubber >14 mils, or nitrile rubber >14 mils (see instructions for Category A on the EPA chemical-resistance category selection chart if you want other options)
- · Shoes plus socks

#### **GENERAL INFORMATION**

#### WHERE TO USE

Endurance Herbicide is a preemergence herbicide that provides residual control of many grass and broadleaf weeds in vegetation management situations including:

- Noncrop areas on or surrounding managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, and equipment yards)
- Facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows
- Landscape ornamentals
- Established perennial and wildflower plantings
- Conifer and hardwood seedling nurseries

#### **HOW ENDURANCE WORKS**

Endurance controls susceptible weeds by growth and development of newly germinated weed seeds. Weed control is most effective when Endurance is activated by at least 0.5 inch of rainfall or irrigation, or with shallow incorporation (1-2 inches), before weed seeds germinate and within 14 days following application.

#### **USE PRECAUTIONS**

Do not graze or feed livestock forage cut from areas treated with Endurance.

Do not apply Endurance to plants that will be consumed for food use.

Follow all applicable directions, restrictions, and precautions on the labels of EPA registered tank mix partners.

Do not blend Endurance onto dry fertilizer or any other granular material.

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

Do not apply aerially.

#### **NEW PLANTINGS, REPLANTING AND ROTATIONAL PLANTINGS**

Nursery, landscape, or non-crop land areas treated with Endurance should be rotated only to ornamental species listed on this label for 1 year following application unless the following test has shown species safety:

Before planting a species not listed on this label, it is recommended that several test strips of an indicator plant such as wheat, sorghum or corn be sown into the treated area. If the indicator plants germinate and grow normally to a height of 12 inches with normal root development, it is safe to plant.

In areas disturbed by new plantings or replanting of labeled species, it may be necessary to retreat exposed soil to maintain satisfactory weed control.

#### MIXING AND APPLICATION PROCEDURES

#### **MIXING**

Endurance must be mixed thoroughly in the spray tank to ensure uniform application. Follow these steps:

- 1. Fill the spray tank 1/4 full with clean water or fluid fertilizer only.
- 2. Start agitation and check to ensure it is working properly.
- 3. Add Endurance directly into the tank.
- 4. Add the rest of the carrier to obtain the final spray volume.
- 5. A spray colorant may be used with Endurance to mark areas as they are treated. This will improve application accuracy by minimizing swath skips and overlaps.
- 6. Maintain vigorous agitation in the spray tank before and during the application. This will ensure a well-mixed spray suspension.
- 7. Do not allow spray suspension to dry in the tank. Thoroughly clean the sprayer after use by flushing the system with water containing a detergent. Refer to **Pesticide Disposal** section of this label for waste disposal.

#### TANK MIXING ENDURANCE

Endurance may be tank mixed with certain other EPA-registered herbicides to provide a broader spectrum of weed control or to control emerged weeds. Refer to the specific directions for use for tank mix partners, and consult the label(s) of the individual tank mix partner(s) for use rate, application timing, weeds controlled, and specific precautions and/or restrictions. Tank mixes are permitted only in states where the tank mix partner(s) are registered for the application site and the turf and ornamental species listed. When using Endurance in a tank mixture with other pesticides, observe the most restrictive label limitations and precautions on the labels of the products used.

Before tank mixing with other pesticides not named on this label, compatibility must be tested. See the **Compatibility Test** section below.

#### **COMPATIBILITY TEST**

Before mixing Endurance with other pesticides in the spray tank, test the compatibility by mixing all components (carrier and pesticide products) in a small container in proportionate quantities. For example, a 1-quart jar would be 1/100 the volume of a 25 gal./A spray rate. At 1 lb./A the Endurance rate would be proportional to 4.5 g per quart. Add approximately 1.5 teaspoons to a quart of water. Calculate amounts for other products based on rate per acre. An approximate volume would be 1.5 teaspoons for each pound per acre of a dry formulation and 0.5 teaspoons for each pint per acre of a liquid formulation (see following table).

Amount of Component to Add to One Quart Jar of Spray Carrier (Assuming Carrier Volume of 25 gals./A)

	Rate		
<b>Component Formulations</b>	Acre	1,000 Sq. Ft.	Level Teaspoons
Endurance	1.0 lb.	0.4 oz.	11/2
Dry Tank Mix Partners	1.0 lb.	0.4 oz.	11/2
Liquid Tank Mix Partners	1.0 pt.	0.4 oz.	1/2

If components do not ball up or form flakes, sludge, gels, oily films or layers then the mixture is compatible. Incompatibility will usually occur within 5 minutes after mixing. If the components are not compatible, a compatibility agent must be added to the tank mixture. Rerun the test to determine if the mixture is suitable after addition of the compatibility agent. If components are still not compatible, do not tank mix.

#### MIXING ORDER FOR TANK MIXTURES

**Notes:** 1) When mixing Endurance with other components (carrier and partner pesticide products), allow products to completely dissolve between steps. This is key when tank-mixing with ester formulations. 2) Maintain agitation throughout mixing and application of the mixture.

Add the products to the spray tank in the following order:

- 1. Add products packaged in water-soluble bags first. Agitate the tank mixture. Allow the water-soluble bags to completely dissolve and the product to disperse before adding any other tank-mix partner.
- 2. Then add water dispersible granules (WDG or WG formulations) and wettable powders (WP formulations). Add wettable powders to the tank as agitation continues. Allow the product to disperse completely before other products are added.
- 3. Add spray adjuvants and spray markers. Read the adjuvant's label first and use only those adjuvants approved for application to turf and ornamentals.
- 4. Add flowable liquids (FL) or suspension concentrates (SC).
- 5. Add emulsifiable concentrates (EC) last.

### **APPLICATION**

Apply Endurance in a minimum of 20 gals./A (0.5 gal./1,000 sq. ft.) of carrier (water and/or fluid fertilizer) using a calibrated, low pressure sprayer with 50 mesh or coarser screens. A broadcast boom or hand held wand designed for herbicide or insecticide application will provide the best results. Select nozzle pressure and gallonage to provide complete coverage.

#### **VEGETATION MANAGEMENT USE DIRECTIONS**

Endurance may be applied to soil surfaces for preemergence control of many grass and broadleaf weeds in:

- Non-crop areas, including ornamentals (does not include container or field grown ornamentals), and established perennial and wildflower plantings on or surrounding:
  - Managed rights-of-way for transportation systems and utilities including roadways, roadsides, railways, and equipment yards
  - Facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows

#### **WEEDS CONTROLLED**

When used as directed in this label Endurance will control the following weeds:

Kochia Barnyardgrass

Bluegrass, Annual (Poa annua)1 Lambsquarter, Common

Carpetweed Lovegrass

Chickweed, Common<sup>1</sup> Panicum (Texas, Fall, Browntop)

Chickweed, Mouseear (from seed) Pigweed

Crabgrass (Large, Smooth)3 Purslane, Common Crowfootgrass Pusley, Florida Cupgrass, Woolly Rescuegrass<sup>2</sup> Shepherd's Purse<sup>1</sup> Foxtails, Annual Signalgrass, Broadleaf Goosegrass<sup>3</sup> Henbit<sup>1</sup> Speedwell, Persian Itchgrass Sprangletop Johnsongrass (from seed) Spurge, Prostrate

Junglerice Witchgrass

Knotweed1 Woodsorrel, Yellow (from seed)

#### **Application Timing and Information**

#### **Endurance:**

- Provides residual preemergence weed control.
- · Will not control emerged weeds.
- May be applied to newly transplanted and established ornamentals as a broadcast or over-the-top
- Is most effective when the product is activated in the soil before weed seeds germinate and within 14 days after application.
- Is activated when the treated area receives at least 0.5 inch of irrigation or rainfall or shallow (1-2 inches) mechanical incorporation.
- Is most effective when applied to soil free of clods, weeds, and debris such as leaves and mulch.

#### **Use Precautions**

To reduce injury potential:

- Direct application of Endurance to rapidly growing tissue or buds may injure desirable plants. In the spring when buds are rapidly growing and expanding, over-the-top application of Endurance may temporarily injure new growth of desirable plants. To reduce the possibility of injury at this time, wait to apply Endurance over the top of newly emerged vegetation until it has hardened off unless your experience indicates that the ornamental plant will not be injured by the over-the-top application.
- · After application (immediately for deciduous plants), apply overhead irrigation to wash Endurance from plant surfaces onto soil. Watering plants before application may improve the washing process.

#### How Much and When to Apply

Amount to Apply (Broadcast)	When to Apply	Comments/Instructions
1.0-2.3 lbs./A or	In fall and/or spring before weeds germinate or after weeds are removed.	Use the higher rate for longer control.     Endurance may be applied more than once per year as long as the total
0.37-0.83 oz./ 1,000 sq. ft.	weeds are removed.	amount of product applied does not exceed 2.3 lbs./A per year.

<sup>\*</sup>Note: For band application calculate amount per acre:

Band width in inches Χ broadcast rate amt. to apply/acre of field Row width in inches

#### **Equivalent Measurements for Endurance**

lbs./A	oz./1,000 sq. ft.	Approximate Equivalent Tablespoons/1,000 sq. ft.
1.0	0.37	1
1.5	0.55	1 <sup>1</sup> / <sub>2</sub>
2.0	0.74	2
2.3	0.83	21/4

<sup>&</sup>lt;sup>1</sup> To control this weed, apply Endurance in late summer, fall, or winter before weed seeds germinate.

<sup>&</sup>lt;sup>2</sup> Suppression only.

<sup>&</sup>lt;sup>3</sup> Sequential applications may be made as long as the total amount of product applied does not exceed 2.3 lbs./A per year. To control weeds, all applications must be made before weed seeds germinate.

#### **Application Sites and Use Precautions**

Site	Use Precautions		
Ornamental Trees, Shrubs, Vines	<ul> <li>Apply as a broadcast, over-the-top, or as a directed spray.</li> <li>Delay applications to newly transplanted ornamentals until soil has settled around transplants.</li> </ul>		
Ornamental Bulbs and Perennial Wildflower Plantings	<ul> <li>May be applied to bulbs or perennial wildflower species listed in the section Tolerant Ornamental Species.</li> <li>Apply before or after bulbs emerge but before bulbs bloom and weeds emerge.</li> <li>In wildflowers a postemergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.</li> </ul>		

#### **Tank Mixtures**

Endurance may be tank mixed with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with Endurance are for use only in states where the tank mix partner(s), application site and intended use pattern are registered.

Follow the label(s) of the tank mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining tank mix partners in the spray tank test compatibility by mixing the products in a small container. See the **Compatibility Test** section.

#### **Tank Mix Partners for Endurance**

Product	Precautions/Instructions
Goal® (use on conifers only)	Mix with Endurance for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Princep®, Pennant®	See product labels for weed spectrum and tolerant ornamentals.
Touchdown® Pro (or other glyphosate-based products) Reward® and Finale®	<ul> <li>These non-selective tank mix herbicides control most emerged annual broadleaves and grasses.</li> <li>Take extreme care to prevent tank mixtures with these partner products from contacting the foliage and stems of turfgrass, trees, shrubs, or other desirable vegetation because desirable vegetation may be severely injured or killed. Apply these tank mixtures as a directed spray and use a shield to prevent spray from contacting foliage of desirable plants.</li> <li>Following instructions on the tank mix partner's label, delay irrigation of the treated area to allow time for the herbicide to be absorbed by weed foliage.</li> </ul>

#### Table 1 – Tolerant Ornamental Species\* – All States

Endurance will not harm most trees, shrubs, vines, and flowers. The species listed below in Table 1 are tolerant to Endurance. Endurance is approved for application, except in California, to the species in Table 2. Endurance may be applied over-the-top of the listed species.

When plants are under stress (such as heat, drought, or frost damage) some cultivars of listed plants may be sensitive to Endurance.

Scientific Name	Common Name
Abies spp.	Fir species (Balsam, Fraser, Noble, etc.)
Acer palmatum	Japanese Maple
Acer platanoides	Norway Maple***
Actinidia chinensis	Kiwi**
Agapanthus africanus	Lily-of-the-Nile (African Lily)
Arctostaphylos densiflora	Vine Hill Manzanita
Arctotheca calendula	Cape Weed
Aucuba japonica	Japanese Aucuba
Berberis gladwynensis	Barberry
Berberis julianae	Wintergreen Barberry
Berberis mentorensis	Mentor Barberry
Berberis thunbergii	Japanese Barberry
Berberis verruculosa	Warty Barberry
Buxus microphylla	Japanese Boxwood
Callistemon viminalis	Weeping Bottlebrush
Calluna vulgaris	Scotch Heather
Carpobrotus edulis	Hottentot Fig (Ice Plant)
Cassia artemisioides	Feathery Cassia
Ceanothus rigidus	Wild Lilac
Chamaecyparis pisifera	False Cypress
Cleyera japonica	Cleyera
Citrus spp.	Citrus species**

#### Table 1 - Tolerant Ornamental Species\* - All States (continued)

#### Scientific Name **Common Name**

Cornus florida Flowering Dogwood American Dogwood Cornus stolonifera Cortaderia selloana Pampas Grass Cotoneaster apiculatus Cranberry Cotoneaster Cotoneaster buxifolius Cotoneaster Cotoneaster dammeri **Bearberry Cotoneaster** 

Cotoneaster microphyllus Rockspray Cotoneaster Crataegus spp. Hawthorne

Italian Cypress Cupressus sempervirens Delosperma alba White Trailing Ice Plant

Dodonaea viscosa Hop Bush Silverberry Elaeagnus pungens Euonymus fortunei Wintercreeper

Euonymus japonica Japanese Spindle Tree (Evergreen Euonymus)

Euonymus kiautschovicks Spreading Euonymus Fatsia japonica Japanese Aralia Forsythia intermedia Border Forsythia Forsythia viridissima Greenstem Forsythia

Gardenia jasminoides Gardenia, Cape-Jasmine Gladiolus spp. Gladiolus species Hedera helix English Ivy Rose of Sharon Hibiscus

Hibiscus Rosa-sinensis Chinese Hibiscus Ilex cornuta Chinese Holly Ilex crenata Japanese Holly American Holly Ilex opaca Ilex pernyi Holly Ilex vomitoria Yaupon Holly Iris species Iris spp. Jasminium nudiflorum Winter Jasmine

Juniperus chinensis Chinese Juniper Juniperus conferta **Shore Juniper** Juniperus horizontalis Creeping Juniper Juglans spp. Walnut\*\* Justicia brandegeana Shrimp Plant Crape Myrtle Lagerstromia indica **Amur Privet** Ligustrum amurense Ligustrum japonicum Ligustrum lucidum Japanese Privet Glossy Privet (Wax-Leaf) Liriope muscari Big Blue Lillyturf Lonicera japonica Japanese Honeysuckle Lonicera tatarica Tatarian Honeysuckle Magnolia spp. Magnolia species

Malephora luteola Ice Plant Malus spp. Crabapple\*\* Nandina domestica Heavenly Bamboo Narcissus spp. Narcissus species Nerium spp. Oleander Olive\*\* Olea europaea

Mondo Grass Ophiopogon japonicus Osteospermum fruticosum Trailing African Daisy

Oxydendrum arboreum Sourwood Persea americana Avocado\*\*

Frasier's Photinia (Redtip) Photinia fraseri

Picea spp. Spruce species\*\*\* (Colorado Blue, Norway, etc.)

Lily-of-the-Valley Shrub Pieris japonica Pinus brutia Calabrian Pine Canary Island Pine Slash Pine Pinus canariensis Pinus elliottii Pinus halepensis Aleppo Pine Austrian Black Pine Pinus nigra Pinus palustris Longleaf Pine Pinus radiata Monterey Pine Eastern White Pine Pinus strobus Scotch Pine Pinus sylvestris Pinus taeda **Loblolly Pine** Pinus thunbergiana Japanese Black Pine Virginia Pine Pinus virginiana

Pistacia spp. Pistachio\*\*

Queensland Pittosporum Pittosporum rhombifolium Pittosporum tobira Japanese Pittosporum

Table 1 - Tolerant Ornamental Species\* - All States (continued)

#### **Scientific Name Common Name** Podocarpus macrophyllus Japanese Yew English Laurel Almond, Apricot, Prunus laurocerasus Prunus spp. Nectarine, Peach, Plum, and Prune\*\* Douglas Fir\*\* Pseudotsuga menziesii Pyracantha coccinea Firethorn, Scarlet Pyracantha fortuneana Firethorn Pyracantha koidzumii Firethorn Bradford Pear spp. Pyrus spp. Quercus rubra Oak species Rhaphiolepis indica Indian Hawthorne 'Coral Bells' Rhododendron (including Azalea) 'Formosa' 'Hino-crimson' 'PJM' 'Roseum Elegans' Lady Bank's Rose Rosa banksiae Rosmarinus officinalis Rosemary\*\* Rumohra adiantiformis Leatherléaf Fern Santolina virens Sedum album Stonecrop Syzygium paniculatum Japanese Boxcherry Taxus cuspidata Japanese Yew Taxus media Yew Thuja occidentalis American Arborvitae Trachelospermum asiaticum Star Jasmine Tsuga canadensis Canada Hemlock Tulipa spp. Tulip species Viburnum japonicum Japanese Viburnum Viburnum odoratissimum Sweet Viburnum Viburnum plicatum Japanese Snowball Viburnum rigidum Canary Island Viburnum Viburnum tinus Laurustinus Viburnum trilobum Cranberry Bush Viburnum wrightii Leatherleaf Viburnum Vinca major Vinca Vinca minor **Dwarf Periwinkle** Vitis spp. Grape\*\* Weigela florida Old Fashioned Weigela Yucca aloifolia Spanish Bayonet Yucca, Adam's Needle Yucca filamentosa

Delphinium spp.

Table 2 - Tolerant Ornamental Species\* - All States Except CA

Scientific Name	Common Name
Abelia grandiflora	Abelia: Sherwood
Achillea spp.	Yarrow: King Edward
Agapanthus orientalis	
Akebia quinata	Five-Leaf or Chocolate Vine
Allium cernuum	Lady's Leek, Nodding Onion
Anemone hybrida	Japanese Anemone
Aquilegia spp.	Aquilegia: Red and Gold
Artemisia spp.	Wormwood; Silver Mound, Castle
Aster spp.	Aster: Bonny Blue, Purple Dome
Aster X frikartii	,
Athyrium filix-femina	Lady Fern; Fern Lady
Begonia spp.	Fibrous Begonia: Hardy Grandis
Bergenia cordifolia	
Boltonia asteroides	Snowbank
Bougainvillea spp.	Bougainvillea
Buddleia davidii	Butterfly-Bush (Dwarf Blue); Royal Red
Callistemon citrinus	Crimson Bottlebrush
Campanula carpatica	Tussock Bellflower; (White Clips)
Campis X tagliabuana	Trumpet Creeper, Trumpet Flower; Madame Galen
Ceratostigma plumbaginoides	
Chrysanthemum nipponicum	
Coreopsis spp.	Coreopsis (Calliopsis): Early Sunrise, Moonbeam
Crocosmia spp.	Lucifer
Delosperma spp.	Cooperi Pink

Larkspur; Blue Elf

<sup>\*</sup>Not for use on container or field grown ornamentals.

<sup>\*\*</sup>Do not use on food producing trees, vines, or plants.

<sup>\*\*\*</sup>Landscape ornamentals only.

#### Table 2 - Tolerant Ornamental Species\* - All States Except CA (continued)

#### Scientific Name **Common Name** Dianthus deltoides Dianthus, Maiden Pinks 'Zing' Dianthus gratianopolitanus Cheddar Pink Echinacea pupurea Coneflower, Purple; Magnus Forsythia suspensa Weeping Forsythia Gaillardia, Blanket Flower: 'Goblin' Gaillardia spp.

Gaura spp. Gentiana dahurica Gentian Geranium cinereum Cranesbill Gypsophila repens Baby's Breath Helianthemum spp. Sunrose

Hemerocallis spp. Daylily: Aztec Gold, Stella De Oro, Tender Love

Coral Bell; Bridget Bloom Heucherella spp. Hibiscus spp. Mallow; Disco Belle White Hosta plantaginea Hosta, Plantain Lily (Fragrant) Hosta, 'Searsucker' Hosta sieboldiana

Houttuynia cordata var. variegata

Hydrangea macrophylla

Inula ensifolia Iris ensata Iris siberica Juniperus davurica

Lagerstromia indica x fauriei Lantana montevidensis

Lavender spp.

Leontopodium alpinum

Liqustrum sinense

Lilium spp.

Liriope muscari var. variegata Liriope spicata

Lobelia cardinalis

Loropetalum chinense

Lythrum spp. Miscanthus sinensis

Oenothera missourensis

Osmanthus heterophyllus

Paeonia suffruticosa

Pennisetum setaceum Perovskia atriplicifolia

Physostegia virginiana Quercus shumardii Rhaphiolepis umbellata Rhododendron (including Azalea)

Rudbeckia spp. Saxifraga spp.

Scabiosa spp. Sedum cauticola Sedum dasyphyllum

Sedum spurium Spiraea bumalda Syzyglum paniculatum

Teucrium spp. Thalictrum dipterocarpum Veronica spp.

Viburnum suspensum

Bigleaf Hydrangea

Sword-Leaved Iris; Jodlesong Siberian Iris; Cabernet Parsoni Crape Myrtle; Tuscarora Weeping Lantana Lavender; Munstead

**Edelweiss** 

Chinese Privet; Variegata

Lily: Jazz Liriope, Variegated Liriope, Creeping

Cardinal Flower, Indian Pink

Burgundy

Loosestrife; Modern Pink Yaku Jima, Silberfeder\*\*

**Evening Primrose** 

Osmanthus (False Holly): Gulf Tide

Tree Peony

Fountain Grass (Dwarf)\*\*

Dragonhead, False; Vivid Oak, Shumard's Red Yedda Hawthorne 'Delaware Valley White' 'Flame Creeper'

'Girard Crimson' 'George L. Tabor' Wakeiebisu White Gumbo

Black-Eyed Susan: Goldstrum Saxifrage; Purple Dome Pincushion Flower Stonecrop; Lidakense

Stonecrop

Stonecrop; Dragon's Blood Spirea: Anthony Waterer Australian Brushcherry

Germander Meadow Rue

Veronica, Speedwell; Sunny Border

Arrowood Viburnum

<sup>\*</sup>Not for use on container or field grown ornamentals.

<sup>\*\*</sup>Landscape ornamentals only.

# CONIFER AND HARDWOOD SEEDLING NURSERIES (NON-ORNAMENTAL, FORESTRY USE ONLY)

Endurance:

- Provides residual preemergence weed control in conifer and hardwood seedling nurseries.
- Provides the most effective weed control when the product is activated in the soil by 0.5 inch of irrigation or rainfall before weed seeds germinate and within 14 days after application.
- Should be applied to conifer and hardwood seedling nurseries any time after the soil has settled around newly-transplanted seedlings and liners.

	Application Rate			
Site	lbs./A	oz./1,000 sq. ft.	Timing	Comments/Instructions
Conifer and Hardwood Seedling Nurseries	1.0-2.3	0.37-0.84	Apply in fall or spring before weed seeds germinate or after weeds are removed.	<ul> <li>Use higher rate for longer control.</li> <li>More than one application per year is permitted, but do not apply more than 2.3 lbs./A per year.</li> </ul>
Southern Pine Seedbeds	0.75		Just after seeding and/or a minimum of 3 weeks after most seedlings have shed their seedcoat	<ul> <li>To assist in the establishment of Southern pine seedbeds, apply this product preemergence just after seeding pines.</li> <li>Application after emergence of pine seedlings should not occur until 3 weeks after most seedlings have shed their seedcoat.</li> <li>Mix this product with clean water and broadcast spray at 20 to 40 psi in a minimum of 20 gals. of water per treated area.</li> <li>After application, sprinkler irrigate beds with approximately 1/2 inch of water.</li> </ul>
Hardwood Seedbeds: Oak (Quercus spp.), Sweetgum, Green Ash	0.75-1.5		When seedlings are at least 6 weeks old (from time of 50% germination)	<ul> <li>Use higher rate for longer control and when higher weed pressure is anticipated.</li> <li>The lower rate will provide 2 to 3 months of weed control.</li> <li>Broadcast to beds and apply approximately 1/2 inch of sprinkler irrigation afterwards.</li> </ul>

### **Tank Mixtures – Conifer Seedling Nurseries**

Endurance may be tank mixed with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with Endurance are for use only in states where the tank mix partner, application site and intended use pattern are registered.

Follow the label of the tank mix partner for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining the tank mix partner in the spray tank, test compatibility by mixing the products in a small container. See the **Compatibility Test** section.

## **Tank Mixing and Application**

#### Tank Mix Partner for Endurance – Conifer Seedling Nurseries

Product	Precautions/Instructions
Goal (use on conifers only)	Mix with Endurance for postemergence control of certain broadleaf weeds including malva and filaree.

#### **VEGETATION MANAGEMENT (NON-CROP AREAS)**

- May be applied to soil surfaces for preemergence control of many grass and broadleaf weeds.
- Is most effective when activated by at least 0.5 inch rainfall or irrigation, or shallow incorporation before weed seeds germinate and within 14 days after application.

	Applica	tion Rate		
Site	lbs./A	oz./1,000 sq. ft.	Timing	Comments/Instructions
Non Crop Areas, including ornamentals, on or surrounding managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, and equipment yards)	1.0-2.3	0.36-0.83	Before weed seeds germinate	<ul> <li>Use higher rate for longer control.</li> <li>This product may be applied more than once per year but do not apply more than 2.3 lbs./A per year.</li> </ul>
Facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows				

Endurance may be tank mixed with other registered herbicides to provide a broader spectrum of weed control or to control emerged weeds or brush. Tank mixes with Endurance are for use only in states where the tank mix partner(s) are registered for the application site.

#### Tank-Mix Partners with Endurance

Products	Comments
Touchdown Pro (and glyphosate-based products <sup>1</sup> ), Gramoxone <sup>®</sup> , Reward, Predict <sup>®</sup> , Princep, Vanquish <sup>®</sup> , diuronbased products <sup>1</sup> , Finale, Gallery, Garlon <sup>®</sup> , Goal, Krovar <sup>®</sup> I and II, Oust <sup>®</sup> , Arsenal <sup>®</sup> , Spike <sup>™</sup> , and Telar <sup>®</sup>	<ul> <li>Follow the label(s) of the tank mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions.</li> <li>Do not mix Endurance with any product whose label prohibits mixing with another pesticide.</li> </ul>

<sup>&</sup>lt;sup>1</sup>Products with this chemical as the active ingredient and which are labeled for the same use may be

# STORAGE AND DISPOSAL

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

#### **Pesticide Storage**

Store in original container away from fertilizer, feed, or food stuffs.

# **Pesticide Disposal**

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

#### **Container Disposal**

Paper and Plastic Containers: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or at an incineration facility, or, if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

#### Chemigation

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

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Arsenal® trademark of BASF Specialty Products

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For non-emergency (e.g. current product information), call Syngenta Crop Protection at 1-800-334-9481.

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