



000100-00834-011499

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Systems Integration Group, Inc.



United States  
**Environmental Protection Agency**  
 Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number  
 Notification

**Application for Pesticide - Section I**

1. Company/Product Number 100-834	2. EPA Product Manager Ms. Joanne Miller	3. Proposed Classification  <input checked="" type="checkbox"/> None <input checked="" type="checkbox"/> Restricted
4. Company/Product (Name) Barricade® Herbicide (Alternate name Factor® Herbicide) ??	PM# 23	
5. Name and Address of Applicant (Include ZIP Code) Novartis Crop Protection, Inc. P. O. Box 18300 Greensboro, NC 27419  <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:  EPA Reg. No. _____ Product Name _____	

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

**NOTIFICATION**

**JAN 14 1999**

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.). In 1996 the EPA approved the addition of certain tolerant ornamental species to the master label for Barricade 65WG Herbicide. Factor Herbicide is a subset of that label. The new ornamental species are not approved in California. The label for Barricade 65WG and its subset labels have been revised to list the tolerant ornamental species in two lists - one is a list of those tolerant ornamental species approved in all states and the other is those approved in all states except California. The Barricade 65WG master label has already been submitted to the EPA (8/98). The enclosed Factor label is provided for the EPA's files.

This notification is consistent with the provisions of PR Notice 95-2 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 95-2 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Section - III**

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
*Certification must be submitted		If "Yes" Unit Packaging wgt. No. per Container	If "Yes" Unit Packaging wgt. No. per container		
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Carolyn F. Brinkley	Title Senior Regulatory Manager	Telephone No. (Include Area Code) 336-632-2838
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature <i>Carolyn F. Brinkley</i>	3. Title Senior Regulatory Manager	
4. Typed Name Carolyn F. Brinkley	5. Date 12/30/98	

# Factor<sup>®</sup>



PULL HERE TO OPEN ▲

## HERBICIDE

For selective preemergence control of grass and broadleaf weeds in:

- container, field grown, and landscape ornamentals
- established perennial and wildflower plantings
- Christmas tree farms
- conifer and hardwood seedling nurseries

**Active Ingredient:**

Prodiamine (CAS No. 29091-21-2) .....	65.0%
Other Ingredients:	35.0%
<b>Total:</b>	<b>100.0%</b>

EPA Reg. No. 100-834  
EPA Est. 62171-MS-001

**KEEP OUT OF REACH OF CHILDREN.**

## CAUTION

See additional precautionary statements and directions for use inside booklet.

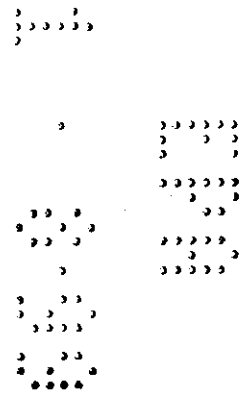
**NCP 834B-M1B 0798**

**3 POUNDS**  
NET CONTENTS

**NOTIFICATION**

JAN 14 1999

 **NOVARTIS**



# Factor®

## DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

**IMPORTANT:** Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product. If terms are not acceptable, return the unopened product container at once.

### CONDITIONS OF SALE AND WARRANTY

The Directions 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 manner of use or application all of which are beyond the control of Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Novartis warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above.

**Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of Novartis.

### 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
- Waterproof gloves
- Shoes plus socks

Factor is a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in:

- container, field grown, and landscape ornamentals
- established perennial and wildflower plantings
- Christmas tree farms
- conifer and hardwood seedling nurseries

Factor controls susceptible weeds by inhibiting weed seeds germination and root development. Most effective weed control will be obtained when Factor is activated by at least 0.5 inch of rainfall or irrigation, or with shallow (1-2 inches) incorporation, prior to weed seed germination and within 14 days following application.

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

All applicable directions, restrictions, and precautions on the labels of EPA registered tank mix partners are to be followed.

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

Do not apply this product through any type of irrigation system unless otherwise instructed by this label.

Do not apply aerially.

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# Factor®

## Mixing and Application

Apply Factor in a minimum of 20 gal./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.

A spray colorant may be used to modify the color of Factor to improve application accuracy by minimizing swath skips and overlaps.

Thorough mixing of Factor in the spray tank is essential for uniform application. Fill the spray tank half full with clean water or fluid fertilizer. Start agitation and check to ensure it is working properly, then add Factor directly into the tank.

Add the rest of the carrier to obtain the final spray volume. Maintain vigorous agitation in the spray tank before and during the application. This will ensure a well-mixed spray suspension.

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. Do not allow spray suspension to dry in the tank.

Factor may be tank mixed with certain other EPA registered herbicides to provide a broader spectrum of weeds controlled or to control emerged weeds. See Mixing Order in this section and the Container, Field Grown, and Landscape Ornamentals sections for specific recommendations.

## Mixing Order for Tank Mixtures

When mixing Factor with other components (carrier and partner pesticide products) add the products to the spray tank in the following order:

1. Water dispersible granules (WG formulations) and wettable powders (WP formulations). Wettable powders should be premixed with a small amount of carrier to form a slurry before addition; water dispersible granules can be added directly during filling. Allow the product to disperse completely before other products are added.
2. Flowable liquids (FL) or suspension concentrates (SC).
3. Emulsifiable concentrates (EC).
4. Surfactants approved for application to turf and ornamentals listed on this label. Check surfactant label before use.

## Compatibility Test

Before mixing Factor 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 (see following table).

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

COMPONENT FORMULATIONS	RATE PER		LEVEL TEASPOONS
	ACRE	1,000 Ft.	
Dry	1.0 lb.	0.4 oz.	1.5
Liquid	1.0 pt.	0.4 oz.	0.5

If components do not ball-up or form flakes, sludge, gels, oily films or layers; then the tested spray mix is compatible. Incompatibility in any of the above forms will usually occur within 5 minutes after mixing.

If components are incompatible, the use of a compatibility agent is recommended. Rerun the above test with commercially available compatibility agents until a suitable suspension is formed.

## CONTAINER, FIELD GROWN, AND LANDSCAPE ORNAMENTALS

Factor may be applied for residual preemergence weed control in the culture of ornamentals (including Christmas tree farms, and established perennial and wildflower plantings).

### Use Precautions

Application of solutions containing Factor directly to rapidly growing tissues or buds may cause deformation or injury. To reduce injury potential under these circumstances, avoid Factor application until after newly emerged vegetation has hardened off and immediately wash Factor from plant surfaces onto soil.

One-half inch overhead irrigation applied immediately following 'over the top' applications will help activate Factor in the soil and remove visible product residues from the exposed leaves.

### Use Rates

Apply Factor at 1-2.3 lbs./A in fall and/or spring. Equivalent applications for smaller areas are 0.36-0.83 oz./1,000 sq. ft. Use higher rates of application for longer control periods. Sequential applications may be made as long as the total amount of product applied does not exceed the maximum annual application rate of 2.3 lbs./A.

### Application Timing and Information

#### All Applications

Factor is a preemergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when Factor is activated by at least 0.5 inch of rainfall or irrigation, or with shallow (1-2 inches) mechanical incorporation, prior to weed seed germination and within 14 days following application.

Best weed control is obtained when Factor is applied to soil free of clods, weeds, and debris such as leaves and mulch. Prior to application of Factor, control existing vegetation by hand weeding, cultivation or the use of an appropriate postemergence herbicide.



Best weed control is obtained when Factor is applied to soil free of clods, weeds, and debris such as leaves and mulch. Prior to application of Factor, control existing vegetation by hand weeding, cultivation or the use of an appropriate postemergence herbicide.

### Established Landscape Ornamentals

Factor may be applied at any time to established ornamentals as a broadcast, over the top or directed spray. Irrigation or rainfall soon after application will wash residues off plant foliage and active Barricade 65WG in the soil.

### Newly-Transplanted Seedlings or Cuttings

Factor may be applied to newly-transplanted ornamentals. Delay application to allow soil to settle around new transplants and water thoroughly before applying Factor. Apply Factor after cuttings form roots and become established. Apply before budding/grafting or after buds/grafts have taken to avoid any inhibition of the tissue union.

### Tank Mixtures For Use On Ornamentals

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

Goal in tank mixes with Factor is effective for the postemergence control of certain broadleaf weeds including malva and filaree. Goal in tank mixes with Factor can only be applied to conifers listed on the Goal label.

Follow the label(s) of Goal (conifers only), Gallery, or other potential tank mix partner(s) for use, rate recommendations, application timing, weeds controlled, phytotoxicity, and specific use precautions and/or restrictions.

Paraquat, glyphosate and glufosinate-ammonium (Finale) are nonselective postemergence herbicides used for control of most emerged annual grass and broadleaf weeds. Drift of paraquat, glyphosate or glufosinate-ammonium (Finale) onto ornamental plants will cause injury. Tank mixes using paraquat, glyphosate, or glufosinate-ammonium (Finale) must be applied as a directed spray to avoid contact with desirable species. When Factor is applied in tank mixes with postemergent herbicides recommended on this label, delay irrigation according to the postemergent partner label to allow absorption of the postemergent herbicide.

Do not apply sprays containing either paraquat, glyphosate, or glufosinate-ammonium (Finale) over the top of ornamental plants. Extreme care must be exercised to prevent contact of spray mixtures of these herbicides with foliage or stems of turfgrasses, trees, shrubs, or other desirable vegetation because severe damage or death may result. If spraying areas adjacent to desirable plants use a shield to prevent spray from contacting foliage or stems of desirable plants.

Before combining tank mix partners in the spray tank it is advisable to test compatibility by mixing the products in a small container. See the Compatibility Test section under Mixing and Application.

### Weeds Controlled

When used in accordance with this label Factor is approved for control of the following weeds:

Barnyardgrass	Kochia
Bluegrass, Annual ( <i>Poa annua</i> )	Lambsquarter, Common
Carpetweed	Lovegrass
Chickweed, Common	Panicum, (Texas, Fall, Browntop)
Chickweed, Mouseear (from seed)	Pigweed
Crabgrass (Large, Smooth)	Purslane, Common
Crowfootgrass	Pusley, Florida
Cupgrass, Woolly	Rescuegrass <sup>3</sup>
Foxtails, Annual	Shepherd's Purse <sup>2</sup>
Goosegrass <sup>1</sup>	Signalgrass, Broadleaf
Henbit	Speedwell, Persian
Itchgrass	Sprangletop
Johnsongrass (from seed)	Spurge, Prostrate
Junglerice	Witchgrass
Knotweed	Woodsorrel, Yellow (from seed)

<sup>1</sup>In many areas a single application of 1 to 2.3 lbs./A Factor will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective weed control may be obtained by making an initial application of 1 to 1.5 lbs./A followed after 60 to 90 days by a second application at doses that would not exceed those given in the Maximum Application Rate Table. Do not exceed the maximum rate for turf grass species listed in the Maximum Application Rate Table above.

<sup>2</sup>Applications for this weed should be made in late summer, fall, or winter prior to germination.

<sup>3</sup>Suppression only.

Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rates recommended for each turf species. All applications must be made prior to germination of the weed seeds.

### TOLERANT ORNAMENTAL SPECIES

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

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

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Table 1 - Tolerant Ornamental Species - All States

Scientific name	Common name
<i>Abies</i> spp.**	Fir species** (Balsam, Fraser, Noble, etc.)
<i>Acer palmatum</i>	Japanese Maple
<i>Acer platanoides</i>	Norway Maple
<i>Actinidia chinensis</i> *	Kiwi*
<i>Agapanthus africanus</i>	Lily-of-the-Nile (African Lily)
<i>Arctostaphylos densiflora</i>	Vine Hill Manzanita
<i>Arctotheca calendula</i>	Cape Weed
<i>Aucuba japonica</i>	Japanese Aucuba
<i>Berberis gladwynensis</i>	Barberry
<i>Berberis julianae</i>	Wintergreen Barberry
<i>Berberis mentorensis</i>	Mentor Barberry
<i>Berberis thunbergii</i>	Japanese Barberry
<i>Berberis verruculosa</i>	Warty Barberry
<i>Buxus microphylla</i>	Japanese Boxwood
<i>Callistemon viminalis</i>	Weeping Bottlebrush
<i>Calluna vulgaris</i>	Scotch Heather
<i>Carpobrotus edulis</i>	Hottentot Fig (Ice Plant)
<i>Cassia artemisioides</i>	Feathery Cassia
<i>Ceanothus rigidus</i>	Wild Lilac
<i>Chamaecyparis pisifera</i>	False Cypress
<i>Cleyera japonica</i>	Cleyera
<i>Citrus</i> spp.*	Citrus species*
<i>Cornus florida</i>	Flowering Dogwood
<i>Cornus stolonifera</i>	American Dogwood
<i>Cortaderia selloana</i>	Pampas Grass
<i>Cotoneaster apiculatus</i>	Cranberry Cotoneaster
<i>Cotoneaster buxifolius</i>	Cotoneaster
<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster
<i>Cotoneaster microphyllus</i>	Rockspray Cotoneaster
<i>Crataegus</i> spp.	Hawthorne
<i>Cupressus sempervirens</i>	Italian Cypress
<i>Delosperma alba</i>	White Trailing Ice Plant
<i>Dodonea viscosa</i>	Hop Bush
<i>Elaeagnus pungens</i>	Silverberry
<i>Euonymus fortunei</i>	Wintercreeper
<i>Euonymus japonica</i>	Japanese Spindle Tree (Evergreen Euonymus)
<i>Euonymus kiautschovicks</i>	Spreading Euonymus
<i>Fatsia japonica</i>	Japanese Aralia
<i>Forsythia intermedia</i>	Border Forsythia
<i>Forsythia viridissima</i>	Greenstem Forsythia
<i>Gardenia jasminoides</i>	Gardenia, Cape-Jasmine
<i>Gladiolus</i> spp.**	Gladiolus species**
<i>Hedera helix</i>	English Ivy
<i>Hibiscus</i> **	Rose of Sharon**
<i>Hibiscus Rosa-sinensis</i>	Chinese Hibiscus
<i>Ilex cornuta</i>	Chinese Holly
<i>Ilex crenata</i>	Japanese Holly
<i>Ilex opaca</i>	American Holly
<i>Ilex pernyi</i>	Holly
<i>Ilex vomitoria</i>	Yaupon Holly
<i>Iris</i> spp.**	Iris species**
<i>Jasminium nudiflorum</i>	Winter Jasmine
<i>Juniperus chinensis</i>	Chinese Juniper
<i>Juniperus conferta</i>	Shore Juniper
<i>Juniperus horizontalis</i>	Creeping Juniper
<i>Juglans</i> spp.*	Walnut*
<i>Justicia brandegeana</i>	Shrimp Plant
<i>Lagerstromia indica</i>	Crape Myrtle
<i>Ligustrum amurense</i>	Amur Privet
<i>Ligustrum japonicum</i>	Japanese Privet
<i>Ligustrum lucidum</i>	Glossy Privet (Wax-Leaf)
<i>Liriope muscari</i>	Big Blue Lillyturf
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Lonicera tatarica</i>	Tatarian Honeysuckle
<i>Magnolia</i> spp.**	Magnolia species**
<i>Maleophora luteola</i>	Ice Plant
<i>Malus</i> spp.*	Crabapple*
<i>Nandina domestica</i>	Heavenly Bamboo
<i>Narcissus</i> spp.**	Narcissus species**
<i>Nerium</i> spp.	Oleander -
<i>Olea europaea</i> *	Olive*
<i>Ophiopogon japonicus</i>	Mondo Grass
<i>Osteospermum fruticosum</i>	Trailing African Daisy

\* Do not use on food producing trees, vines, or plants.

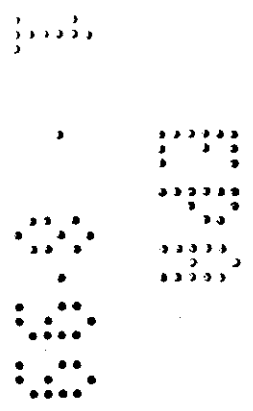
\*\* Not for use on container grown plants.



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

Scientific name	Common name
<i>Oxydendrum arboreum</i>	Sourwood
<i>Persea americana*</i>	Avocado*
<i>Photinia fraseri</i>	Fraser's Photinia (Redtip)
<i>Picea spp.**</i>	Spruce species** (Colorado Blue, Norway, etc.)
<i>Pieris japonica</i>	Lily-of-the-Valley Shrub
<i>Pinus brutia</i>	Calabrian Pine
<i>Pinus canariensis</i>	Canary Island Pine
<i>Pinus elliottii</i>	Slash Pine
<i>Pinus halepensis</i>	Aleppo Pine
<i>Pinus nigra</i>	Austrian Black Pine
<i>Pinus palustris</i>	Longleaf Pine
<i>Pinus radiata</i>	Monterey Pine
<i>Pinus strobus</i>	Eastern White Pine
<i>Pinus sylvestris</i>	Scotch Pine
<i>Pinus taeda</i>	Loblolly Pine
<i>Pinus thunbergiana</i>	Japanese Black Pine
<i>Pinus virginiana</i>	Virginia Pine
<i>Pistacia spp.*</i>	Pistachio*
<i>Pittosporum rhombifolium</i>	Queensland Pittosporum
<i>Pittosporum tobira</i>	Japanese Pittosporum
<i>Podocarpus macrophyllus</i>	Japanese Yew
<i>Prunus laurocerasus</i>	English Laurel
<i>Prunus spp.*</i>	Almond, Apricot, Nectarine, Peach, Plum, and Prune*
<i>Pseudotsuga menziesii**</i>	Douglas Fir**
<i>Pyracantha coccinea</i>	Firethorn Scarlet
<i>Pyracantha fortuneana</i>	Firethorn
<i>Pyracantha koidzumii</i>	Firethorn
<i>Pyrus spp.</i>	Bradford Pear spp.
<i>Quercus rubra</i>	Oak species
<i>Raphiolepis indica</i>	Indian Hawthorne
<i>Rhododendron</i> (including Azalea)	'Coral Bells' 'Formosa' 'Hino-crimson' 'PJM' 'Roseum Elegans'
<i>Rosa banksiae</i>	Lady Bank's Rose
<i>Rosmarinus officinalis*</i>	Rosemary*
<i>Rumohra adiantiformis</i>	Leatherleaf Fern
<i>Santolina virens</i>	
<i>Sedum album</i>	Stonecrop
<i>Syzygium paniculatum</i>	Japanese Boxcherry
<i>Taxus cuspidata</i>	Japanese Yew
<i>Taxus media</i>	Yew
<i>Thuja occidentalis</i>	American Arborvitae
<i>Trachelospermum asiaticum</i>	Star Jasmine
<i>Tsuga canadensis</i>	Canada Hemlock
<i>Tulipa spp.</i>	Tulip species
<i>Viburnum japonicum</i>	Japanese Viburnum
<i>Viburnum odoratissimum</i>	Sweet Viburnum
<i>Viburnum plicatum</i>	Japanese Snowball
<i>Viburnum rigidum</i>	Canary Island Viburnum
<i>Viburnum tinus</i>	Laurustinus
<i>Viburnum trilobum</i>	Cranberry Bush
<i>Viburnum wrightii</i>	Leatherleaf Viburnum
<i>Vinca major</i>	Vinca
<i>Vinca minor</i>	Dwarf Periwinkle
<i>Vitis spp.*</i>	Grape*
<i>Weigela florida</i>	Old Fashioned Weigela
<i>Yucca aloifolia</i>	Spanish Bayonet
<i>Yucca filamentosa</i>	Yucca, Adam's Needle

\* Do not use on food producing trees, vines, or plants.  
 \*\* Not for use on container grown plants.



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Table 2 - Tolerant Ornamental Species Varieties - All States Except CA

Scientific name	Common name
<i>Abelia grandiflora</i>	Abelia: Sherwood
<i>Achillea</i> spp.	Yarrow: King Edward
<i>Agapanthus orientalis</i>	
<i>Akebia quinata</i>	Five-Leaf or Chocolate Vine
<i>Allium cernuum</i>	Lady's Leek, Nodding Onion
<i>Anemone hybrida</i>	Japanese Anemone
<i>Aquilegia</i> spp.	Aquilegia: Red and Gold
<i>Artemisia</i> spp.	Wormwood; Silver Mound, Castle
<i>Aster</i> spp.	Aster: Bonny Blue, Purple Dome
<i>Aster X frikartii</i>	
<i>Athyrium filix-femina</i>	Lady Fern; Fern Lady
<i>Begonia</i> spp.	Fibrous Begonia: Hardy Grandis
<i>Bergenia cordifolia</i>	
<i>Boltonia asteroides</i>	Snowbank
<i>Bougainvillea</i> spp.	Bougainvillea
<i>Buddleia davidii</i>	Butterfly-Bush (Dwarf Blue); Royal Red
<i>Callistemon citrinus</i>	Crimson Bottlebrush
<i>Campanula carpatica</i>	Tussock Bellflower; (White Clips)
<i>Campis X tagliabuana</i>	Trumpet Creeper, Trumpet Flower; Madame Galen
<i>Ceratostigma plumbaginoides</i>	
<i>Chrysanthemum nipponicum</i>	
<i>Coreopsis</i> spp.	Coreopsis (Calliopsis): Early Sunrise, Moonbeam
<i>Crocosmia</i> spp.	Lucifer
<i>Delosperma</i> spp.	Cooperi Pink
<i>Delphinium</i> spp.	Larkspur; Blue Elf
<i>Dianthus deltoides</i>	Dianthus, Maiden Pinks 'Zing'
<i>Dianthus gratianopolitanus</i>	Cheddar Pink
<i>Echinacea pupurea</i>	Coneflower, Purple; Magnus
<i>Forsythia suspensa</i>	Weeping Forsythia
<i>Gaillardia</i> spp.	Gaillardia, Blanket Flower: 'Goblin'
<i>Gaura</i> spp.	
<i>Gentiana dahurica</i>	Gentian
<i>Geranium cinereum</i>	Cranesbill
<i>Gypsophila repens</i>	Baby's Breath
<i>Hellanthemum</i> spp.	Sunrose
<i>Hemerocallis</i> spp.	Daylily: Aztec Gold, Stella De Oro, Tender Love
<i>Heucherella</i> spp.	Coral Bell; Bridget Bloom
<i>Hibiscus</i> spp.	Mallow; Disco Belle White
<i>Hosta plantaginea</i>	Hosta, Plantain Lily (Fragrant)
<i>Hosta sieboldiana</i>	Hosta, 'Searsucker'
<i>Houttuynia cordata</i> var. <i>variegata</i>	
<i>Hydrangea macrophylla</i>	Bigleaf Hydrangea
<i>Inula ensifolia</i>	
<i>Iris ensata</i>	Sword-Leaved Iris; Jodlesong
<i>Iris siberica</i>	Siberian Iris; Cabernet
<i>Juniperus davurica</i>	Parsoni
<i>Lagerstromia indica x fauriei</i>	Crape Myrtle; Tuscarora
<i>Lantana montevidensis</i>	Weeping Lantana
<i>Lavender</i> spp.	Lavender; Munstead
<i>Leontopodium alpinum</i>	Edelweiss
<i>Ligustrum sinense</i>	Chinese Privet; Variegata
<i>Lilium</i> spp.	Lily: Jazz
<i>Liriope muscari</i> var. <i>variegata</i>	Liriope, Variegated
<i>Liriope spicata</i>	Liriope, Creeping
<i>Lobelia cardinalis</i>	Cardinal Flower, Indian Pink
<i>Loropetalum chinense</i>	Burgundy
<i>Lythrum</i> spp.	Loosestrife; Modern Pink
<i>Miscanthus sinensis</i>	Yaku Jima, Silberfeder
<i>Oenothera missourensis</i>	Evening Primrose
<i>Osmanthus heterophyllus</i>	Osmanthus (False Holly): Gulf Tide
<i>Paeonia suffruticosa</i>	Tree Peony
<i>Pennisetum setaceum</i>	Fountain Grass (Dwarf)
<i>Perovskia atriplicifolia</i>	
<i>Physostegia virginiana</i>	Dragonhead, False; Vivid
<i>Quercus shumardii</i>	Oak, Shumard's Red
<i>Rhaphiolepis umbellata</i>	Yedda Hawthorne
<i>Rhododendron</i>	'Delaware Valley White'
(including <i>Azalea</i> )	'Flame Creeper'
	'Girard Crimson'
	'George L. Tabor'
	Wakelebisu
	White Gumpo
<i>Rudbeckia</i> spp.	Black-Eyed Susan: Goldstrum
<i>Saxifraga</i> spp.	Saxifrage; Purple Dome

Table 2 - Tolerant Ornamental Species Varieties - All States Except CA (continued)

Scientific name	Common name
<i>Scabiosa</i> spp.	Pincushion Flower
<i>Sedum cauticola</i>	Stonecrop; Lidakense
<i>Sedum dasyphyllum</i>	Stonecrop
<i>Sedum spurium</i>	Stonecrop; Dragon's Blood
<i>Spiraea bumalda</i>	Spirea; Anthony Waterer
<i>Syzygium paniculatum</i>	Australian Brushcherry
<i>Teucrium</i> spp.	Germander
<i>Thalictrum dipterocarpum</i>	Meadow Rue
<i>Veronica</i> spp.	Veronica, Speedwell; Sunny Border
<i>Viburnum suspensum</i>	Arrowood Viburnum

## CONIFER AND HARDWOOD SEEDLING NURSERIES

Factor may be applied for residual preemergence weed control in conifer and hardwood seedling nurseries.

Factor may be applied to conifer and hardwood seedling nurseries any time after the soil has settled around newly transplanted seedlings, liners, or bare root plants.

Apply Factor at 1-2.3 lbs./A in fall and/or spring. Equivalent applications for smaller areas are 0.36-0.83 oz./1,000 sq. ft. Use higher rates of application for longer control periods. Sequential applications may be made as long as the total amount of product applied does not exceed the maximum annual application rate of 2.3 lbs./A.

**Southern Pine Seedbeds:** To assist in the establishment of Southern pine seedbeds, a preemergence application should be made just after seeding. Applications made after emergence of the pine seedlings should not be made until a minimum of three weeks after the time when most seedlings have shed their seedcoat. Pines are tolerant to preemergence and postemergence applications of Factor.

**Dosage:** Apply 0.75 lbs. (0.49 lb. active) of Factor per broadcast acre. Mix with clean water at recommended concentration and apply at 20-40 psi in a minimum of 20 gals. of water per treated acre. Broadcast to beds and irrigate with approximately 1/2 inch of sprinkler irrigation.

**Hardwood Seedbeds:** Apply Factor at a rate of 0.75-1.5 lbs. (0.49-0.98 lb. active) to the following seedlings that are at least 6 weeks old (from time of 50% germination):

- Oak (*Quercus* spp.)
- Sweetgum
- Green Ash

Use higher rate (1.5 lbs.) when a longer control period (3-4 months) is desired or under conditions of higher anticipated weed pressure. The lower rate (0.75 lb.) will provide 2-3 months of weed control. Broadcast to beds and irrigate with approximately 1/2 inch of sprinkler irrigation.

Most effective weed control will be obtained when Factor is activated by at least 0.5 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application.

Factor may be tank mixed with Goal in conifer seedling nurseries for broader spectrum preemergence weed control. Refer to the use directions of tank mix partner herbicides for additional weeds controlled, rates, and precautions.

## NEW PLANTINGS, REPLANTING, AND CROP ROTATION

If areas are to be seeded, do not apply Factor until seeded plants are up and well established.

Nursery, landscape, or non-cropland areas treated with Factor should be rotated only to ornamental species listed on this label for one 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.

## STORAGE AND DISPOSAL

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

### Storage

Store in original container away from fertilizer, feed, or food stuffs and separated from other pesticides.

### 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.

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**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, while mixing or handling the concentrated material, may cause allergic reactions in some individuals.

**Statement of Practical Treatment**

**If on skin:** Wash with soap and water. Rinse thoroughly.

**If inhaled:** Remove victim to clear air.

**If in eyes:** Flush thoroughly with water for several minutes. Contact a physician if irritation persists.

**Personal Protective Equipment**

**WPS USES:**

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
- Waterproof gloves
- Shoes plus socks

**Mixers and Loaders must wear:**

- Long-sleeved shirt and long pants
- Waterproof gloves
- 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 wear:

- 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 Control 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.

Factor® and Predict® trademarks of Novartis

Finale® trademark of AgrEvo USA Company

Gallery® trademark of Dow Agrosciences

Goal® trademark of Rohm and Haas Company

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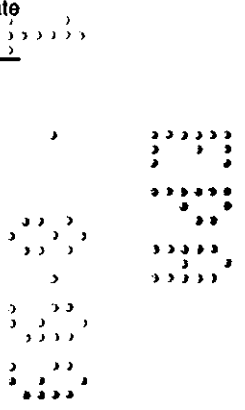
Turf and Ornamental Products

Greensboro, North Carolina 27419

NCP 834B-M1B 0798



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Please read instructions on reverse before completing form.

30422



United States  
**Environmental Protection Agency**  
 Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number  
**NOTIFICATION**

**Application for Pesticide - Section I**

1. Company/Product Number 100-834	2. EPA Product Manager Ms. Joanne Miller	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Barricade® 65WG Herbicide	PM# 23	
5. Name and Address of Applicant (Include ZIP Code) Novartis Crop Protection, Inc. P. O. Box 18300 Greensboro, NC 27419 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:  EPA Reg. No. _____  Product Name _____	

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

**NOTIFICATION**

**JAN 14 1999**

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.). Barricade 65WG Herbicide has a master label registration with subset marketing labels which include Endurance® and Factor® Herbicide and Barricade 65WG in water-soluble bags and loosely packed in paper bags. The registration of Barricade 65WG Herbicide was transferred from Sandoz Crop Protection to Novartis Crop Protection, Inc. in 1997. Novartis is in the process of revising the Barricade 65WG Herbicide subset labels to reflect the change in registrant. Submission of a final printed subset label of Barricade 65WG in water-soluble bags was submitted to the EPA in November 1997. The enclosed Barricade 65WG Herbicide subset label for loose-packed Barricade in paper bags is enclosed and includes the same revisions already submitted as a Notification in November 1997 with the Barricade 65WG Herbicide (water-soluble bag) label. This notification is consistent with the provisions of PR Notice 95-2 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 95-2 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Section - III**

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
				<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
*Certification must be submitted	If "Yes" Unit Packaging wgt. No. per Container	If "Yes" Unit Packaging wgt. No. per container		<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container	5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product		
6. Manner in Which Label is Affixed to Product		<input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled	<input type="checkbox"/> Other _____		

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Carolyn F. Brinkley	Title Senior Regulatory Manager	Telephone No. (Include Area Code) 336-632-2838
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature <i>Carolyn F. Brinkley</i>	3. Title Senior Regulatory Manager	..... ..... .....
4. Typed Name Carolyn F. Brinkley	5. Date January 4, 1999	

New Novartis  
"Loose-Pack" label with  
revisions  
marked 140122

Subset Label - "Loose Pack"

PULL HERE TO OPEN ►

# Barricade®

## 65WG HERBICIDE



*For selective preemergence control of grass and broad-leaf weeds in:*

- established turf grasses (excluding golf course putting greens), lawns and sod nurseries
- landscape ornamentals
- established perennial and wildflower plantings

Active Ingredient:  
 Prodiamine (N<sup>3</sup>, N<sup>3</sup>-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine) ..... 65.0%  
 Other ingredients: 35.0%  
 Total: 100.0%

**KEEP OUT OF REACH OF CHILDREN.  
CAUTION**  
 See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-834  
 EPA Est. 62171-MS-001  
 NCP 834A-M1 0698

**10 POUNDS  
NET CONTENTS**

 **NOVARTIS**

revised

revised

added

**NOTIFICATION**  
JAN 14 1999

**DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY**

**IMPORTANT:** Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product. If terms are not acceptable, return the unopened product container at once.

**CONDITIONS OF SALE AND WARRANTY**

The Directions 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 manner of use or application all of which are beyond the control of Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

*revised*

Novartis warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of Novartis.

**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
- Waterproof gloves
- Shoes plus socks

**Barricade 65WG Herbicide** (Barricade) is a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in:

- established turf grasses (excluding golf course putting greens), lawns and sod nurseries
- landscape ornamentals including established perennials and wildflower plantings

Barricade controls susceptible weeds by inhibiting weed seeds germination and root development. Most effective weed control will be obtained when Barricade is activated by at least 0.5 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application.

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

All applicable directions, restrictions, and precautions on the labels of EPA registered tank mix partners are to be followed.

Do not blend Barricade 65WG onto dry fertilizer or any other granular material.

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

Do not apply aerially.

Do not apply to golf course putting greens.

*added "s" throughout label*

**Mixing and Application**

Apply Barricade in a minimum of 20 gal/A (0.5 gal./1000 ft.<sup>2</sup>) 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.

A spray colorant may be used to modify the color of Barricade to improve application accuracy by minimizing swath skips and overlaps.



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# Barricade® 65WG

Thorough mixing of Barricade in the spray tank is essential for uniform application. Fill the spray tank half full with clean water or fluid fertilizer. Start agitation and check to ensure it is working properly, then add Barricade directly into the tank.

Add the rest of the carrier to obtain the final spray volume. Maintain vigorous agitation in the spray tank before and during the application. This will ensure a well mixed spray suspension.

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. Do not allow spray suspension to dry in the tank.

Barricade may be tank mixed with certain other EPA registered herbicides to provide a broader spectrum of weeds controlled or to control emerged weeds. See Mixing Order in this section and the Established Turf and Landscape Ornamentals sections for specific recommendations.

### Mixing Order for Tank Mixtures

When mixing Barricade with other components (carrier and partner pesticide products) add the products to the spray tank in the following order:

1. Water dispersible granules (WG formulations) and wettable powders (WP formulations). Wettable powders should be premixed with a small amount of carrier to form a slurry before addition; water dispersible granules can be added directly during filling. Allow the product to disperse completely before other products are added.
2. Flowable liquids (FL) or suspension concentrates (SC).
3. Emulsifiable concentrates (EC).
4. Surfactants approved for application to turf and ornamentals listed on this label. Check surfactant label before use.

### Compatibility Test

Before mixing Barricade 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 (see following table).

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

Component Formulations	Rate Per		
	Acre	1,000 Ft. <sup>2</sup>	Level Teaspoons
Dry	1.0 lb.	0.4 oz.	1.5
Liquid	1.0 pt.	0.4 oz.	0.5

If components do not ball-up or form flakes, sludge, gels, oily films or layers; then the tested spray mix is compatible. Incompatibility in any of the above forms will usually occur within 5 minutes after mixing.

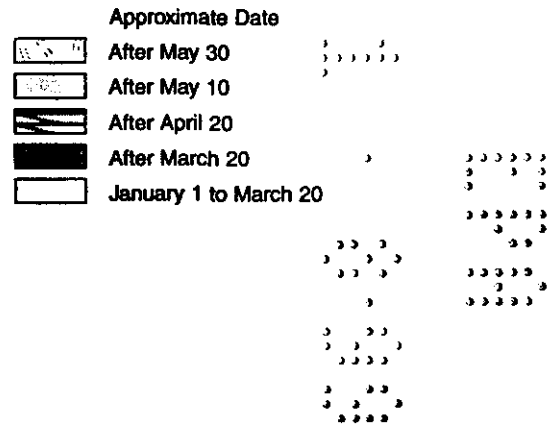
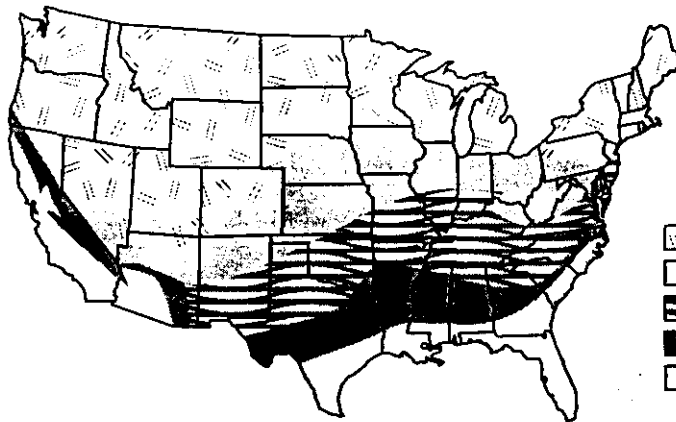
If components are incompatible, the use of a compatibility agent is recommended. Rerun the above test with commercially available compatibility agents until a suitable suspension is formed.

### ESTABLISHED TURF

Barricade is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turf grasses and lawns. The maximum amount of Barricade that may be applied per year is given for each turf grass species in the Maximum Annual Rates section of this label.

Most effective weed control in turf grasses will be obtained when Barricade is activated by at least 0.5 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application. See the map below for approximate crabgrass seed germination dates.

### CRABGRASS SEED GERMINATION DATES



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# Barricade® 65WG

## USE PRECAUTIONS

The following precautions apply to the use of Barricade in turf grasses and lawns:

1. Application of Barricade may thin emerged annual bluegrass and newly overseeded grasses.
2. Do not apply to overseeded turf within 60 days after seeding or until after the second mowing, whichever is longer. Injury to desirable seedlings is likely if Barricade is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.
3. Do not cut treated sod before 120 days after application. Do not apply to newly set sod until the following year.
4. Application of Barricade to turf stressed by drought, low fertility, or pest damage may result in turf injury.
5. Disturbing the herbicide barrier with cultural practices such as disking may result in reduced weed control.
6. Do not apply Barricade to putting greens or areas where dichondra, colonial bentgrass, velvet bentgrass, or annual bluegrass (*Poa annua*) are desirable species.

## Rates of Application

Barricade may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications must be made prior to germination of the target weeds. Barricade will not control established weeds.

Maximum use rate selection should be based on turf species. The length of time of residual weed control provided by Barricade is related to the rate applied.

## Maximum Annual Rates

Barricade is recommended for use on the turf grass species listed in the following table. Do not exceed the maximum yearly rate as given in the following table:

Maximum Application Rate Per Calendar Year of Barricade by Turf Grass Species<sup>1</sup>

Turf Species	lbs. product/A	oz. product/1,000 ft. <sup>2</sup>
Bermudagrass <sup>2</sup> Bahiagrass Centipedegrass Seashore Paspalum St. Augustinegrass <sup>3</sup> Tall Fescue (including turf-type) Zoysia	2.30	0.83
Buffalograss Kentucky Bluegrass Perennial Ryegrass	1.50	0.55
Creeping Red Fescue	1.15	0.40
Creeping Bentgrass	1.00	0.37

<sup>1</sup> These are the maximum rates per calendar year by species limitations.

<sup>2</sup> May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 0.80 lb./A (0.30 oz./1,000 ft.<sup>2</sup>). Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded.

<sup>3</sup> Use at an initial rate of 0.75-1.5 lb./A per application followed by sequential applications at doses that would not exceed the maximum annual application rate of 2.3 lbs./A per year.

## Weeds Controlled

When used in accordance with this label, Barricade will provide control of the following weeds:

- |  |  |
|--|--|
| Barnyardgrass                          | Kochia                                   |
| Bluegrass, Annual ( <i>Poa annua</i> ) | Lambsquarters <sup>added 5"</sup> Common |
| Carpetweed                             | Lovegrass                                |
| Chickweed, Common                      | Panicum (Texas, Fall, Browntop)          |
| Chickweed, Mouseear (from seed)        | Pigweed                                  |
| Crabgrass (Large, Smooth)              | Purslane, Common                         |
| Crowfootgrass                          | Pusley, Florida                          |
| Cupgrass, Woolly                       | Rescuegrass <sup>3</sup>                 |
| Foxtails, Annual                       | Shepherdspurse <sup>2</sup>              |
| Goosegrass <sup>1</sup>                | Signalgrass, Broadleaf                   |
| Henbit                                 | Speedwell, Persian                       |
| Itchgrass                              | Sprangletop                              |
| Johnsongrass (from seed)               | Spurge, Prostrate                        |
| Junglerice                             | Witchgrass                               |
| Knotweed                               | Woodsorrel, Yellow (from seed)           |

alphabetical list

<sup>1</sup> In many areas a single application of 1-2.3 lbs./A of Barricade will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective weed control may be obtained by making an initial application of 1-1.5 lbs./A followed after 60-90 days by a second application at doses that would not exceed those given in the Maximum Annual Rates Table. Do not exceed the maximum rate for turf grass species listed in the Maximum Annual Rates Table above.

<sup>2</sup> Applications for this weed should be made in late summer, fall, or winter prior to germination.

<sup>3</sup> Suppression only.

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## Barricade® 65WG

Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rates recommended for each turf species. All applications must be made prior to germination of the weed seeds.

### WHEN TO APPLY AFTER OVERSEEDING TURF

Do not apply to overseeded turf within 60 days after seeding or until after the second mowing, whichever is longer. Injury to desirable seedlings is likely if Barricade is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.

### WHEN TO OVERSEED AFTER APPLICATION

Barricade will inhibit the germination of turf species if overseeded too soon after application. Follow rates and intervals in the table below for best overseeding/reseeding results.

Barricade Rate (lbs./A)		Interval Before Overseeding		
Product	a.i.	North	Transition	South
0.75	0.50	4 mo.	4 mo.	4 mo.
1.00	0.65	5 mo.	4 mo.	4 mo.
1.15	0.75	6 mo.	5 mo.	5 mo.
1.25	0.81	—	6 mo.	6 mo.
1.50	0.98	—	7 mo.	7 mo.
1.75	1.15	—	—	9 mo.
2.00	1.30	—	—	10 mo.
2.30	1.50	—	—	12 mo.

### Turf Tank Mixes

Barricade may be tank mixed with other registered turf herbicides for broader spectrum weed control. Tank mixes may be used only in states where the tank mix partner(s) are registered for the application site and the turf species listed above.

Consult the label(s) of the individual tank mix partner(s) for uses, rate recommendations, application timing, weeds controlled, turf grass safety and specific precautions and/or restrictions.

Before mixing tank mix partner(s) in the spray tank it is advisable to test compatibility by mixing the products in a small container. See the **Compatibility Test** section under **Mixing and Application**.

### LANDSCAPE ORNAMENTALS (Including Established Perennials and Wildflower Plantings)

Barricade may be applied for residual preemergence weed control in ornamentals.

#### Use Rates

Apply Barricade at 1-2.3 lbs./A in fall and/or spring. Equivalent applications for smaller areas are 0.36-0.83 oz./1,000 ft.<sup>2</sup> Use higher rates of application for longer control period. Sequential or single applications are allowed so long as the total amount of product applied does not exceed the maximum annual application rate of 2.3 lbs./A per year.

#### Application Timing and Information

Barricade may be applied to newly transplanted and established ornamentals as a broadcast over the top or directed spray. Irrigation or rainfall soon after application will wash residues off plant foliage and activate Barricade in the soil.

Barricade may be applied at any time to established plants. Delay application to allow soil to settle around new transplants and water thoroughly before applying Barricade. Apply Barricade after cuttings form roots and become established. Apply before budding/grafting or after buds/grafts have taken to avoid any inhibition of the tissue union.

Barricade is a preemergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when Barricade is activated by at least 0.5 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application.

Best weed control is obtained when Barricade is applied to soil free of clods, weeds, and debris such as leaves. Prior to application of Barricade, control existing vegetation by hand weeding, cultivation or the use of an appropriate postemergence herbicide.

The following section gives directions for the use of Barricade in tank mixtures for use on ornamentals.

#### Tank Mixtures For Use On Ornamentals

Barricade may be tank mixed with other registered herbicides listed on this label for a broader spectrum of preemergence control or postemergent weed control. Tank mixes with Barricade 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 Goal®, Gallery®, or other potential tank mix partner(s) for use, rate recommendations, application timing, weeds controlled, phytotoxicity and specific use precautions and/or restrictions.

Do not apply sprays containing either paraquat, glyphosate or glufosinate-ammonium (Finale®) over the top of ornamental plants. Extreme care must be exercised to prevent contact of spray mixtures of these herbicides with foliage or stems of turfgrasses, trees, shrubs, or other desirable vegetation because severe damage or death may result. If spraying areas adjacent to desirable plants use a shield to prevent spray from contacting foliage or stems of desirable plants.

Barricade® 65WG

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Before combining tank mix partners in the spray tank it is advisable to test compatibility by mixing the products in a small container. See the **Compatibility Test** section under **Mixing and Application**.

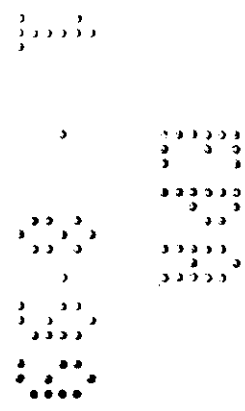
**Tolerant Ornamental Species**

Barricade will not harm most ornamental trees, shrubs, and flowers. The species listed below are tolerant to Barricade. Barricade may be applied over the top of these species.

Scientific name	Common name
<i>Abies</i> spp.**	Fir species** (Balsam, Fraser, Noble, etc.)
<i>Acer palmatum</i>	Japanese Maple
<i>A. platanoides</i>	Norway Maple
<i>Actinidia chinensis</i> *	Kiwi*
<i>Agapanthus africanus</i>	Lily-of-the-Nile
<i>Arctostaphylos densiflora</i>	Vine Hill Manzanita
<i>Arctotheca calendula</i>	Cape Weed
<i>Aucuba japonica</i>	Japanese Aucuba
<i>Barberis gladwynensis</i>	Barberry
<i>B. julianae</i>	Wintergreen Barberry
<i>B. mentorensis</i>	Mentor Barberry
<i>B. thunbergii</i>	Japanese Barberry
<i>B. verruculosa</i>	Warty Barberry
<i>Buxus microphylla</i>	Japanese Barberry
<i>Callistemon viminalis</i>	Weeping Bottlebrush
<i>Calluna vulgaris</i>	Scotch Heather
<i>Carpobrotus edulis</i>	Hottentot Fig (Ice Plant)
<i>Cassia artemisoides</i>	Feathery Cassia
<i>Ceanothus rigidus</i>	Wild Lilac
<i>Chamaecyparis pisifera</i>	False Cypress
<i>Cleyera japonica</i>	Cleyera
<i>Citrus</i> spp.*	Citrus species*
<i>Cornus florida</i>	Flowering Dogwood
<i>C. stolonifera</i>	American Dogwood
<i>Cortaderia selloana</i>	Pampas Grass
<i>Cotoneaster apiculatus</i>	Cranberry Cotoneaster
<i>C. buxifolius</i>	Cotoneaster
<i>C. dammeri</i>	Bearberry Cotoneaster
<i>C. microphyllus</i>	Rockspray Cotoneaster
<i>Cretaeagus</i> spp.	Hawthorne
<i>Cupressus sempervirens</i>	Italian Cypress
<i>Delasperma alba</i>	White Trailing Ice Plant
<i>Dodonea viscosa</i>	Hop Bush
<i>Elaeagnus pungens</i>	Silverberry
<i>Euonymus fortunei</i>	Wintercreeper
<i>E. japonica</i>	Japanese Spindle Tree (Evergreen Euonymus)
<i>E. kiautschovica</i>	Spreading Euonymus
<i>Fatsia japonica</i>	Japanese Aralia
<i>Forsythia intermedia</i>	Border Forsythia
<i>F. viridissima</i>	Greenstem Forsythia
<i>Gardenia jasminoides</i>	Gardenia, Cape-Jasmine
<i>Gladiolus</i> spp.**	Gladiolus species**
<i>Hedera helix</i>	English Ivy
<i>Hibiscus</i> **	Rose of Sharon**
<i>Hibiscus rosa-sinensis</i>	Chinese Hibiscus
<i>Ilex Bemyi</i>	Holly
<i>Ilex cornuta</i>	Chinese Holly
<i>I. crenata</i>	Japanese Holly
<i>I. opaca</i>	American Holly
<i>I. vomitoria</i>	Yaupon
<i>Iris</i> spp.**	Iris species**
<i>Jasminium nudiflorum</i>	Winter Jasmine
<i>Juniperus chinensis</i>	Chinese Juniper
<i>J. conferta</i>	Shore Juniper
<i>J. horizontalis</i>	Creeping Juniper
<i>Juglans</i> sp.*	Walnut*
<i>Justicia brandegeana</i>	Shrimp Plant
<i>Lagerstromia indica</i>	Crep Myrtle
<i>Ligustrum amurense</i>	Amur Privet
<i>L. japonicum</i>	Japanese Privet
<i>L. lucidum</i>	Glossy Privet (Waxleaf)
<i>Liriope muscari</i>	Big Blue Lily Turf
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>L. tatarica</i>	Tatarian Honeysuckle

\* On ornamental species only. Do not use on food producing trees or vines.

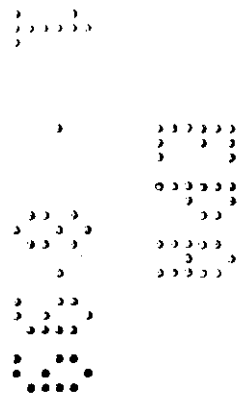
\*\* For use on field grown nursery stock and landscape ornamental sites.



Scientific name	Common name
<i>Magnolia</i> spp.**	Magnolia species**
<i>Maleophora luteola</i>	Ice Plant
<i>Malus</i> sp.*	Crabapple*
<i>Nandina domestica</i>	Heavenly Bamboo
<i>Narcissus</i> spp.**	Narcissus species**
<i>Nerium</i> spp.	Oleander
<i>Olea europaea</i> *	Olive*
<i>Ophiopogon japonicus</i>	Mondo Grass
<i>Osteospermum fruticosum</i>	Trailing African Daisy
<i>Oxydendrum arboreum</i>	Sourwood
<i>Persea americana</i> *	Avocado*
<i>Photinia fraseri</i>	Frasier's Photinia (Redtip)
<i>Picea</i> spp.**	Spruce species** (Colorado Blue, Norway, etc.)
<i>Pieris japonica</i>	Lilly-of-the-Valley Shrub
<i>Pinus brutia</i>	Calabrian Pine
<i>P. canariensis</i>	Canary Island Pine
<i>P. elliotii</i>	Slash Pine
<i>P. halepensis</i>	Aleppo Pine
<i>P. nigra</i>	Austrian Black Pine
<i>P. palustris</i>	Longleaf Pine
<i>P. radiata</i>	Monterey Pine
<i>P. thunbergiana</i>	Japanese Black Pine
<i>P. strobus</i>	Eastern White Pine
<i>P. sylvestris</i>	Scotch Pine
<i>P. taeda</i>	Loblolly Pine
<i>P. virginiana</i>	Virginia Pine
<i>Pistachio</i> sp.*	Pistachio*
<i>Pittosporum rhombifolium</i>	Queensland Pittosporum
<i>P. tobira</i>	Japanese Pittosporum
<i>Podocarpus macrophyllus</i>	Japanese Yew
<i>Prunus laurocerasus</i>	English Laurel
<i>Prunus</i> sp.*	Almond, Apricot, Nectarine, Peach, Plum, and Prune*
<i>Pseudotsuga menziesii</i> **	Douglas Fir**
<i>Pyracantha coccinea</i>	Firethorn, Scarlet
<i>P. fortuneana</i>	Firethorn
<i>P. koidzumii</i>	Firethorn
<i>Purus</i> sp.	Bradford Pear sp.
<i>Quercus rubra</i>	Oak Species
<i>Raphiolepis indica</i>	Indian Hawthorne
<i>Rhododendron</i> (including <i>Azalea</i> )	Coral Bells Formosa Hino-crimson PJM Roseum Elegans
<i>Rosa banksiae</i>	Lady Bank's Rose
<i>Rosmarinus officinalis</i>	Rosemary
<i>Rumohra adiantiformis</i>	Leatherleaf Fern
<i>Santolina virens</i>	
<i>Sedum album</i>	Stonecrop
<i>Syngium paniculatum</i>	Japanese Boxcherry
<i>Taxus cuspidata</i>	Japanese Yew
<i>T. media</i>	Yew
<i>Thuja occidentalis</i>	American Arborvitae
<i>Trachelospermum asiaticum</i>	Star Jasmine
<i>Tsuga canadensis</i>	Canada Hemlock
<i>Tulipa</i> spp.	Tulip species
<i>Viburnum japonicum</i>	Japanese Viburnum
<i>V. odoratissimum</i>	Sweet Viburnum
<i>V. plicatum</i>	Japanese Snowball
<i>V. rigidum</i>	Canary Island Viburnum
<i>V. tinus</i>	Laurustinus
<i>V. trilobium</i>	Cranberry Bush
<i>V. wrightii</i>	Leatherleaf Viburnum
<i>Vinca major</i>	Vinca
<i>Vinca minor</i>	Dwarf Periwinkle
<i>Vitis</i> sp.*	Grape*
<i>Weigela florida</i>	Old Fashioned Weigela
<i>Yucca aloifolia</i>	Spanish Bayonet
<i>Y. filamentosa</i>	Yucca, Adam's Needle

\* On ornamental species only. Do not use on food producing trees or vines.

\*\* For use on field grown nursery stock and landscape ornamental sites.





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# Barricade® 65WG

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Finale® trademark of AgrEvo USA Company

Gallery® trademark of Dow AgroSciences

Goal® trademark of Rohm and Haas Company

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Novartis Crop Protection, Inc. *revised*

Turf and Ornamental Products  
Greensboro, North Carolina 27419

NCP 834A-M1 0698 *added*



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## Barricade® 65WG

### HERBICIDE

For selective preemergence control of grass and broadleaf weeds in:

- established turf grasses (excluding golf course putting greens), lawns and sod nurseries
- landscape ornamentals
- established perennial and wildflower plantings

Active Ingredient:

Proflaminate [N <sup>2</sup> ,N <sup>2</sup> -Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine]. . . . .	65.0%
Other Ingredients:	35.0%
<b>Total:</b>	<b>100.0%</b>

EPA Reg. No. 100-834

EPA Est. 62171-MS-001

Barricade® trademark of Novartis

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Novartis Crop Protection, Inc.  
Turf and Ornamental Products  
Greensboro, North Carolina 27419

NCP 834A-M1 0698

*revised*

*added*

**10 POUNDS  
NET CONTENTS**

See directions for use in attached booklet.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

### KEEP OUT OF REACH OF CHILDREN.

## CAUTION

### Precautionary Statements

#### Hazards to Humans and Domestic Animals

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

#### Statement of Practical Treatment

If on skin: Wash with soap and water. Rinse thoroughly.

If inhaled: Remove victim to clear air.

If in eyes: Flush thoroughly with water for several minutes. Contact a physician if irritation persists.

#### 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 waters.

#### Storage and Disposal

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

#### Storage

Store in original container away from fertilizer, feed, or food stuffs and separated from other pesticides.

#### 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 bags and boxes: Completely empty container into application equipment. Then dispose of empty bag or box 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.

#### Chemigation

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

*added*

**NOVARTIS**

