

JAN 20 2000

Ms. Carolyn F. Brinkley
Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Dear Ms. Brinkley:

Subject: Barricade® 65WG Herbicide .
EPA Reg. No. 100-834

Application and Letter Dated November 8, 1999, Request To Amend Registration with Additional or Revised Use Patterns, Formatting Changes/Language Changes To Simplify and Clarify Label Text and Changes Consistent with EPA PR Notice 98-6: Changes Listed Under Additional or Revised Use-Patterns, Other Changes and Editorial Changes Subject Letter

The proposed labeling bearing the changes listed in your application and Letter have been reviewed and found to be acceptable under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended, provided that you:

1. Correct the ingredient statement to comply with PR Notice 97-5, which states "The CAS number need not figure prominently in the ingredient statement, but may appear as a substatement or Footnote to the ingredient statement."
2. On pages 15, 19, 33, and 55 revise the statement that reads: "Avoid over-the-top application or wait to apply Barricade 65WG" until newly emerged vegetation has hardened off." to read: "Do not make over-the-top application of Barricade 65WG until after newly formed tissue has hardened-off."
3. On page 49 delete the editorial note: "[Deleted statement re: thinning of emerged annual bluegrass and newly-overseeded grasses]", and in 3, delete the "etc" following the word "damage" If there are other conditions to avoid, name them.
4. On page 30 delete editorial note in table, and on page 31 delete editorial notes (2).
5. On page 34 and all other pages remove editorial notes, and revise the labeling to reflect only the name of this product as registered, not other trade names used for marketing parts of the subject labeling. The name

CONCURRENCES

SYMBOL	"Endurance" must be changed to "Barricade 65WG"					
SURNAME	wherever it occurs on the subject labeling.					
DATE						

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- 6. Delete reference to "B and E Labels" in the text of the labeling submitted. Submit final printed labeling for the two labels represented by this labeling, i.e. the "B and E" labels under their respective trade names, as they will be marketed.
- 7. Submit one (1) copy of your final printed label reflecting the above comments prior to your shipment of the subject pesticide product under the subject labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA, section 6(e). Your release for shipment of this product under the subject labeling constitutes acceptance of these conditions.

A stamped copy of the proposed label is enclosed for your records.

Sincerely yours,

Joanne I. Miller
 Product Manager (23)
 Herbicide Branch
 Registration Division (7505C)

Enclosure

E.Wilson:Diskette:Prodiamine:01:20:00

CONCURRENCES							
SYMBOL							
SURNAME							
DATE							

REVISÉD MASTER LABEL - ALL USES - NOT PRINTED

LOOSE PACK SECTION FIRST (Barricade 65WG and Endurance Marketing Labels)

WATER-SOLUBLE BAG SECTION FOLLOWS (For Barricade 65WG only at this time)

Revisions – Uses that previously appeared on the Factor® Herbicide label will now be incorporated into the Barricade 65WG marketing label, and the Factor marketing label will no longer be used. Conifers now on Endurance® label only, Revised mixing & compatability test directions; editorial changes i.e. combining statements and putting text into tables to improve readability, revision of sod cutting from 120 to 90 days and revised precautions re: newly set sod, added table for length of crabgrass control, added kikuyugrass, fine fescue in place of creeping red fescue; added dfus for fall application for season-long crabgrass control, added use precautions in section for crabgrass control, rate range with lower rates on turfgrass by species, added not for use on container-grown plants to certain tolerant ornamental spp., added precaution about waiting to apply Barricade 65WG until ornamentals have hardened off, added band dfu's to container, field-grown, and landscape ornamentals, added dfus for bulbs and wildflowers, added dfus for dissolving water-soluble bags, incorporated EPA-approved supplemental label for *Poa annua* control in established bermudagrass overseeded with perennial ryegrass (AZ, CA, NV, TX only). Added mowing height restriction to creeping bentgrass. Changes to ingredient statement, etc –PR Notices 97-6, 97-7, 98-10 1/6/00-
Additional change: 06/19/00 by Tom R. Wilson ad EP.

(First label is for loose packed product. Second label is for water-soluble packets).

Claims which appear on marketing labels are marked as follows:

B = Barricade® 65WG Herbicide

E = Endurance® Herbicide (alternate name for Barricade 65WG/vegetation management uses)

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40174

ACCEPTED
with COMMENTS
In EPA Letter Dated

JAN 20 2000

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
100-834

Barricade @ 65WG (Alternate Name—Endurance® Herbicide)

HERBICIDE

Active Ingredient:

Prodiamine (CAS No. 29091-21-2).....65.0%

Other Ingredients35.0%

Total: 100.0%

For selective preemergence control of grass and broadleaf weeds in:

- established turf grasses (excluding golf course putting greens), lawns and sod nurseries (B label only)
- container, field-grown and landscape ornamentals (B label only)
- conifer and hardwood seedling nurseries for non-ornamental uses (E label only)
- hardwood seedling nurseries (B label only)
- established perennial & wildflower plantings (B and E labels)
- plants grown for cut foliage production (B label only)
- non-cropped areas, including ornamentals, and established perennial wildflower plantings on or surrounding municipal grounds and government installations, managed rights-of-way for transportation systems and utilities (including, roadways, roadsides, railways & equipment yards) (E label only)
- facilities including substations, tank farms, pumping stations, parking & storage areas, and ungrazed fence rows (E label only)
- Christmas tree farms (B label only)

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See next page for additional Precautionary Statements and Statement of Practical Treatment.

EPA Reg. No. 100-834
EPA Est. No.

NET CONTENTS
NCP 834M-L0

Jan. 11, 2000

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

WHERE TO USE (B Label only)

Barricade 65WG 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 and in container, field grown and landscape ornamentals (B label only)
- conifer and hardwood seedling nurseries (Non-ornamental, Forestry Use Only) (E label only)
- hardwood seedling nurseries and established perennial & wildflower plantings (B label)
- plants grown for cut foliage production (B label only)
- non-cropped areas, including ornamentals and established perennial and wildflower plantings on or surrounding:
 1. municipal grounds, government installations, and
 2. managed rights-of-way for transportation systems and utilities, (including roadways, roadsides, railways, & equipment yards)
 3. facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows.
- Christmas tree farms

HOW BARRICADE 65WG WORKS (B and E labels)

Barricade 65WG (Endurance) controls susceptible weeds by preventing growth and development of newly germinated weed seeds. Weed control is most effective when Barricade 65WG (Endurance) is activated by at least 0.5 inch of rainfall or irrigation or shallow incorporation (1 to 2 inches) before weed seeds germinate and within 14 days following application.

Use Precautions (B and E labels)

- (1) Do not graze or feed livestock forage cut from areas treated with Barricade 65WG (Endurance).
- (2) Follow all applicable directions, restrictions, and precautions on the labels of EPA- registered tank mix partners.
- (3) Do not blend Barricade 65WG (Endurance) onto dry fertilizer or any other granular material.
- (4) **Chemigation:** Do not apply this product through any type of irrigation system unless instructed otherwise in this label

- (5) Do not apply aerially.
- (6) Do not apply to golf course putting greens. (golf courses on B label only)

Mixing and Application (B & E labels)

Mixing

Barricade 65WG (Endurance) must be mixed thoroughly in the spray tank to ensure uniform application. Follow these steps:

- (1) Fill the spray tank ¼ full with clean water or fluid fertilizer only.
- (2) Start agitation and check to ensure it is working properly,
- (3) Add Barricade 65WG (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 Barricade 65WG (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 Barricade 65WG (Endurance)

Barricade 65WG (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 (B label only) and ornamental (B & E labels) species listed. When using Barricade 65WG (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 pesticides it is advisable to test compatibility by mixing the products in a small container first. See the **Compatibility Test** section.

Compatibility Test (B and E labels)

Before mixing Barricade 65WG (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 Barricade 65WG (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 gal./A)**

Component Formulations	Rate Per		Level Teaspoons
	Acre	1000 Sq. Ft.	
Barricade 65WG	1.0 lb.	0.4 oz	1 ½
Dry Tank Mix Partners	1.0 lb.	0.4 oz.	1 ½
Liquid Tank Mix Partners	1.0 pt.	0.4 oz.	½

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, use a compatibility agent and rerun the test to determine if the mixture is suitable. If components are still not compatible, do not tank mix.

Mixing Order for Tank Mixtures (B & E labels)

Notes: (1) When mixing Barricade 65WG (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 (B & E labels)

Apply Barricade 65WG (Endurance) in a minimum of 20 gal./A (0.5 gal./1000 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.

ESTABLISHED TURF (B Label only)

Barricade 65WG is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turfgrasses:

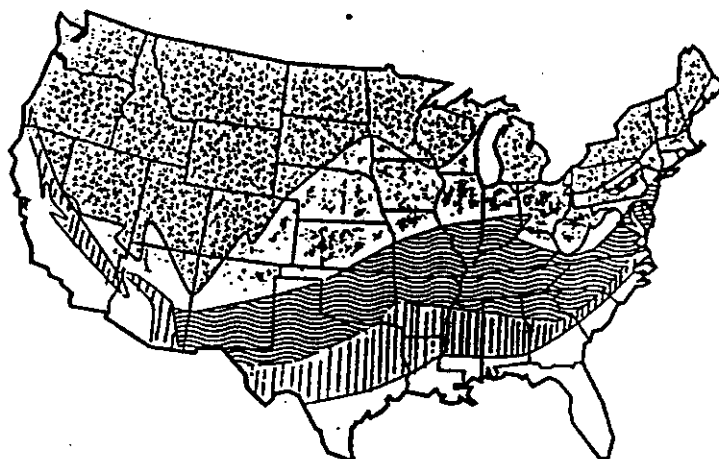
- Golf courses **excluding** putting greens
- lawns
- sod nurseries.






The maximum amount of Barricade 65WG that may be applied per year is given for each turfgrass species in the **Annual Use Rates** section of this label.

For optimum weed control, Barricade 65WG should be activated by at least 0.5 inch of rainfall or irrigation before weed seeds germinate and within 14 days following application. See the map below for approximate crabgrass seed germination dates.

CRABGRASS SEED GERMINATION DATES

Approximate Date



-  After May 30
-  After May 10
-  After April 20
-  After March 20
-  January 1 to March 20

Use Precautions- Turfgrass: Golf Courses, Lawns, Sod Nurseries,

1. Do not apply Barricade 65WG to areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (*Poa annua*) are desirable species.
2. Do not cut (harvest) treated sod before 90 days after application. To avoid turfgrass injury, do not apply to newly set sod until the sod has rooted and exposed edges have filled in.
3. To avoid turfgrass injury do not apply Barricade 65WG to turf stressed by drought, low fertility, or pest damage etc.
4. Disturbing the herbicide barrier with cultural practices such as disking may result in reduced weed control.
5. ***Do not apply Barricade 65WG to golf course putting greens.***
6. If the depth of the creeping bentgrass root system becomes shallow and root tips contact Barricade-treated soil, new root formation may be inhibited. Mowing height can affect the depth of a plant's root system. To avoid this, do not apply Barricade to creeping bentgrass less than 0.5 inch in height.

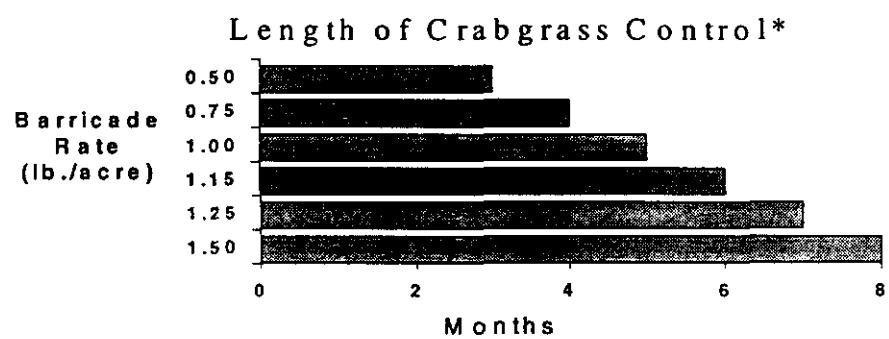
Application Timing and Rate - Turfgrass (B label only)

Barricade 65WG may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications should be made before target weeds germinate. **Barricade 65WG will not control weeds that have already emerged.**

The amount of Barricade 65WG to apply depends upon:

- 1) the length of residual weed control desired. (The higher the application rate, the longer the control)
- 2) the turf species
- 3) and the maximum amount which can be applied to the turf species per calendar year.

(See the next 2 tables)



*Length of control varies by region. This table is an average for planning purposes.

Annual Use Rates –(Turfgrass – B label only)

Barricade 65WG can be applied to the turfgrass species listed in the following table. Do not apply more than the highest rate listed for each species in a calendar year.

Maximum Application Rate of Barricade 65WG Per Calendar Year by Turfgrass Species ¹		
Turf Species	Lbs. product/A	oz. product/1000 sq. ft.
Bermudagrass ² Bahagrass Centipedegrass Kikuyugrass Seashore Paspalum St. Augustinegrass ³ Tall Fescue (including turf-type) Zoysiagrass	1 - 2.3 ¹	0.36 - 0.83
Buffalograss Kentucky Bluegrass Perennial Ryegrass	0.5 - 1.50 ¹	0.185 - 0.55
Fine Fescue	0.5 - 1.15 ¹	0.185 - 0.42
Creeping Bentgrass (0.5 inches or more in height) ⁴	0.5 - 1.00 ¹	0.185 - 0.37

¹ Barricade 65WG may be applied more than once a year as long as the total amount applied is not greater than the maximum application rate for each turf species. All applications must be made before weed seeds germinate

² May be used on newly -sprigged or plugged Bermudagrass at rates not to exceed 0.80 lb./A (0.30 oz./1000 sq. ft.). Newly -sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded.

³ Use an initial rate of 0.75 to 1.5 lb/A per application.

⁴ To avoid grass injury, do not apply Barricade to creeping bentgrass mowed at less than 0.5 inch in height.

WEEDS CONTROLLED (This table is for B label only since some of the footnotes relate to turf which is not listed on the E label)

When used as directed in this label Barricade 65WG will control the following weeds:

Barnyardgrass	Kochia
Bluegrass, Annual (<i>Poa annua</i>) ¹	Lambsquarter, Common
Carpetweed	Lovegrass
Chickweed, Common ²	Panicum, (Texas, Fall, Browntop)
Chickweed, Mouseear (from seed)	Pigweed
Crabgrass (Large, Smooth) ³	Purslane, Common
Crowfootgrass	Pusley, Florida
Cupgrass, Woolly	Rescuegrass ⁴
Foxtails, Annual	Shepherd's Purse ²
Goosegrass ⁵	Signalgrass, Broadleaf
Henbit ²	Speedwell, Persian
Itchgrass	Sprangletop
Johnsongrass (from seed)	Spurge, Prostrate
Junglerice	Witchgrass
Knotweed ²	Woodsorrel, Yellow (from seed)

¹ In areas where *Poa annua* is a winter annual, apply Barricade 65WG (see rate table) in August or September to established, non-overseeded turf before *Poa annua* seeds germinate. These timings are approximate. Consult State Extension Service for more specific timing for your area. Also see the section of this label ***Poa Annua* Control in Established Bermudagrass Overseeded with Perennial Ryegrass (Arizona, California, Nevada & Texas Only)** .

² To control this weed, apply Barricade 65WG in late summer, fall, or winter before weed seeds germinate.

³ **Fall Applications for Spring Crabgrass Control in Cool-Season Grasses:**

⁴In those areas where the ground freezes in the winter, Barricade 65WG can be applied in the fall at rates of 1.0 to 1.15 lbs/A after the soil temperature falls below 50°F but before the ground freezes. This application will control crabgrass the following spring

⁴Suppression only.

⁵In many areas a single application of 1 to 2.3 lbs./A Barricade 65WG will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective 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 that does not exceed the maximum rate for that turfgrass species listed in the **Maximum Application Rates Table**.

WEEDS CONTROLLED (E label only)

When used as directed in this label Barricade 65WG (Endurance) will control the following weeds:

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

¹ To control this weed, apply Barricade 65WG (Endurance) in late summer, fall, or winter before weed seeds germinate.

² Suppression only

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

When to Apply Barricade 65WG After Overseeding Turf (B label only)

Injury to desirable seedlings is likely if Barricade 65WG is applied before the secondary roots of seedlings are in the second inch of soil (not thatch plus soil). To reduce the potential to injure overseeded turf, wait 60 days after seeding or until after the second mowing, whichever is longer, before applying Barricade 65WG.

When to Overseed After Application – All States* (B label only) Barricade 65WG will inhibit the development of turfgrass species overseeded too soon after application. Follow rates and intervals in the table below for best overseeding/reseeding results.

***Note: In Arizona, California, Nevada, and Texas, the overseeding interval can be shorter in established bermudagrass that has been overseeded with perennial ryegrass. See the next section "Poa Annu Control in Established Bermudagrass Overseeded with Perennial Ryegrass (Arizona, California, Nevada, and Texas only)"**

Amount of Barricade 65WG Lbs. Product/A	Interval (Months) Before Overseeding*		
	North	Transition	South
0.75	4	4	4
1.00	5	4	4
1.15	6	5	5
1.25	---	6	6
1.50	---	7	7
1.75	---	---	9
2.00	---	---	10
2.30	---	---	12

Poa annua control in Established Bermudagrass Overseeded with Perennial Ryegrass (Arizona, California, Nevada and Texas only.) (B label only)

Use on golf courses (excluding golf course putting greens), lawns, and sod nurseries when overseeding with perennial ryegrass (minimum seeding rate of 350 pounds per acre).

How Much and When to Apply Amount to Apply	When to Apply	Expected Control	Use Precautions
0.58 to 1.0 lb/A	<p>6 to 8 weeks before ryegrass overseeding</p> <p><i>second application: 4 to 8 weeks after</i> overseeding or when perennial ryegrass roots are in the second inch of soil</p>	<p>1 application for 70% or greater control of <i>Poa annua</i></p> <p><i>second application may enhance control</i></p>	<p>(1) Some seedling mortality and temporary reduction in root growth of new seedlings may occur.</p> <p>(2) To reduce the potential for seedling mortality maintain a moist seedbed with light, frequent irrigation.</p> <p>(3) Make no more than 2 applications per year for this use, and do not exceed a total of 1.3 lbs/ per year.</p> <p>(4) Do not make a second application if any injury to the ryegrass is observed after the first application.</p> <p>Do not make a second application unless the product was first applied before overseeding.</p>

CONTAINER, FIELD GROWN, & LANDSCAPE ORNAMENTALS (B LABEL ONLY)

Application Timing and Information (B label only) (format change)

Barricade 65WG:

- (1) Will not control emerged weeds.
- (2) May be applied to newly-transplanted and established ornamentals as broadcast or over-the-top spray.
- (3) Is most effective when applied to soil free of clods, weeds, and debris such as leaves and mulch.

- (4) Is most effective when the product is activated in the soil before weed seeds germinate and within 14 days after application.
- (5) Is activated when the treated area receives at least 0.5 inch of Irrigation or rainfall, or shallow (1-2 inches) mechanical incorporation.

Use Precautions: (B label only)

To reduce injury potential:

- a. Direct application of Barricade 65WG to rapidly-growing tissue or buds may injure desirable plants. Avoid over-the-top application or wait to apply Barricade 65WG until newly -emerged vegetation has hardened off.
- b. After application, immediately irrigate the treated area to wash Barricade 65WG from plant surfaces onto soil (Watering plants before application may improve the washing process).

Ornamentals and Christmas Tree Farms - Application Sites and Instructions

Site	Application Instructions
Newly-Transplanted Container or Field Nursery Stock (B label only)	(1) Delay application until soil has settled around transplants (2) Water transplants thoroughly before application. (3) Apply after cuttings form roots and are established. (3) To avoid inhibition of the tissue union, apply before budding/grafting or after buds/grafts have taken
Established Container, Field Nursery Stock, or Landscape Plants (B label only)	Apply at any time as a broadcast, over-the-top, or directed spray.
Landscape (or Ornamental) Plantings (B label only)	(1) Apply as a broadcast, over-the-top, or as a directed spray. (2) Delay application to newly-transplanted ornamentals until soil has settled around transplants.
Bare Ground Application for Container Placement (B label only)	(1) Apply to soil (including mulch, gravel, wood chips, or other permeable base) upon which containerized ornamentals are placed. (2) After Barricade 65WG is applied, perform shallow cultivation or hand weeding only, to avoid disturbing the herbicide barrier.
In Shadehouses and Uncovered Polyhouses (B label only)	After Barricade 65WG is applied, uncovered polyhouses must remain open for at least 7 days and ornamentals must receive 2 irrigations totaling at least ½ inch of water.
Ornamental Bulbs and Perennial Wildflower Plantings (B label)	(1) Barricade 65WG may be applied to bulbs or perennial wildflower species listed in the section, Tolerant Ornamental Species . (2) Apply before or after bulbs emerge but before bulbs bloom and weeds emerge. In wildflowers, a post-emergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.

How Much and When to Apply /Ornamentals (B label)

Amount to Apply (Broadcast)*	When to Apply	Comments/Instructions
1 - 2.3 lbs/A or 0.37 to 0.83 oz./1,000 sq. ft.	In fall or spring before weeds germinate or after weeds are removed	(1) Use the higher rate for longer control. (2) Barricade 65WG (Endurance) may be applied more than once per year as long as the total amount of product applied does not exceed 2.3 lbs/A/year.

*NOTE: For band application calculate amount per acre:

$\frac{\text{Band width in inches} \times \text{broadcast rate}}{\text{Row width in inches}} = \text{amount to apply/acre of field}$

Equivalent Measurements for Barricade 65WG

Lbs.A	oz./1000 sq. ft	Approximate Equivalent - Tablespoons/1000 sq. ft.
1.0	0.37	1
1.5	0.55	1 ½
2.0	0.74	2
2.3	0.83	2 ¼

Tank Mixtures For Use On Ornamentals (B Label)

Barricade 65WG 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 Barricade 65WG 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 mixing pesticides in the spray tank, test compatibility by mixing the products in a small container first. See the **Compatibility Test** section of this label.

Tank Mix Partners for Barricade 65WG on Ornamentals (B label)

Product	Precautions/Instructions
Goal® (use on conifers only)	Mix with Barricade 65WG for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Princep®, Pennant®	See product labels for weed spectrum and tolerant ornamentals.
Roundup® or other glyphosate based products ¹ , Finale®	(1) These non-selective tank-mix herbicides control most emerged annual broadleaves and grasses. (2) Take extreme care to prevent tank mixtures with these 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. (3) 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.

¹Roundup® is one brand of a non-selective herbicide containing glyphosate. Other glyphosate products may also be used.

VEGETATION MANAGEMENT (On loose pack Endurance marketing label only)

Barricade 65WG (Endurance) may be applied to soil surfaces for preemergence control of many grass and broadleaf weeds in:

- **non-cropped areas, including ornamentals, and established perennial and wildflower plantings on or surrounding:**
 1. **municipal grounds and government installations,**
 2. **managed rights-of-way for transportation systems and utilities, including roadways, roadsides, railways, & equipment yards)**
 3. **facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows.**

Application Timing and Information

Barricade 65WG (Endurance):

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

Use Precautions-(Vegetation Management) (E label)

To reduce injury potential

- a. Direct application of Barricade 65WG to rapidly-growing tissue or buds may injure desirable plants. Avoid over-the-top application or wait to apply Barricade 65WG until newly -emerged vegetation has hardened off.
- b. After application immediately irrigate the treated area to wash Barricade 65WG (Endurance) from plant surfaces onto soil. Watering plants before application may improve the washing process.

How Much and When to Apply (-Vegetation Management – E label)

Amount to Apply (Broadcast)	When to Apply	Comments/Instructions
1 - 2.3 lbs/A <i>or</i> 0.37-0.83 oz/1,000 sq. ft.	In fall and/or spring before weeds germinate or after weeds are removed.	Use the higher rate for longer control. Barricade 65WG (Endurance) may be applied more than once per year as long as the total amount of product applied does not exceed 2.3 lbs/A/year.

*NOTE: For band application calculate amount per acre:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast rate} = \text{amt. to apply/acre of field}$$

Equivalent Measurements for Barricade 65WG (Endurance)

Lbs/A	oz./1000 sq. ft	Approximate Equivalent - Tablespoons/1000 sq. ft.
1.0	0.37	1
1.5	0.55	1 ½
2.0	0.74	2
2.3	0.83	2 ¼

Application Sites and Use Precautions – Vegetation Management (E label only)

Site*	Use Precautions
Ornamental Trees, Shrubs, Vines	(1) Apply as a broadcast, over-the-top, or as a directed spray. (2) Delay applications to newly transplanted ornamentals until soil has settled around transplants.
Ornamental Bulbs and Perennial Wildflower Plantings	(1) May be applied to bulbs or perennial wildflower species listed in the section Tolerant Ornamental Species . (2) Apply before or after bulbs emerge but before bulbs bloom and weeds emerge. (3) In wildflowers a post-emergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.

Tank Mixtures- (Vegetation Management—E label)

Barricade 65WG (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 Barricade 65WG (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 Mixing and Application.

Tank Mix Partners for Barricade 65WG (Endurance) – Vegetation Management

Product	Precautions/Instructions
Goal® (use on conifers only)	(1) Mix with Barricade 65WG (Endurance) for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Princep®, Pennant®	See product labels for weed spectrum and tolerant ornamentals.
Roundup® ¹ or other glyphosate-based products Finale®	(1) These non-selective tank-mix herbicides control most emerged annual broadleaves and grasses. (2) 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. (3) 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.

¹ Roundup® is one brand of a non-selective herbicide containing glyphosate. Other glyphosate products may also be used.

Tolerant Ornamental Species (Barricade & Endurance labels)

Barricade 65WG (Endurance) will not harm most trees, shrubs, vines, and flowers. The species listed below in Table 1 are tolerant to Barricade 65WG (Endurance). Barricade 65WG (Endurance) is approved for application, except in California, to the species in Table 2. Barricade 65WG (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 Barricade 65WG (Endurance)

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>Dodonaea viscosa</i>	Hop Bush
<i>Elaeagnus pungens</i>	Silverberry
<i>Euonymus fortunei</i>	Wintercreeper
<i>Euonymus japonica</i>	Japanese Spindle Tree (Evergreen)
<i>Euonymus</i>	

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

**Not for use on container grown plants.

<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>Malephora 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>Ophicpogon 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. etc.)	Spruce species** (Colorado Blue, Norway, etc.)
<i>Pieris japonica</i>	Lily-of-the-Valley Shrub

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

<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</i> spp.	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</i> spp.	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</i> spp.	Bradford Pear spp.
<i>Quercus rubra</i>	Oak species
<i>Rhaphiolepis indica</i>	Indian Hawthorne
<i>Rhododendron</i>	'Coral Bells'
(including Azalea)	'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

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

**Not for use on container grown plants.

<i>Tulipa</i> spp.	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</i> spp.	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.

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>Helianthemum</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</i> x <i>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>Lirope muscari</i> var. <i>variegata</i>	Lirope, Variegated
<i>Lirope spicata</i>	Lirope, 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>Raphiolepis umbellata</i>	Yedda Hawthorne
<i>Rhododendron</i> (including azalea)	'Delaware Valley White' 'Flame Creeper' 'Girard Crimson' 'George L. Tabor' Wakeiebisu White Gumpo
<i>Rudbeckia</i> spp.	Black-Eyed Susan: Goldstrum
<i>Saxifraga</i> spp.	Saxifrage; Purple Dome
<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>Syzyglum paniculatum</i>	Australian Brushcherry

** Not for use on container grown plants

<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 (NON-ORNAMENTAL, FORESTRY USE ONLY) (E Label only)

HARDWOOD SEEDLING NURSERIES (B label only)

[Use on conifers and hardwood seedlings appears on the marketing label/Endurance® Herbicide) Use in conifer nurseries (except Christmas tree farms) does not appear on the Barricade 65WG marketing label]

Barricade 65WG (Endurance):

- 1) provides residual preemergence weed control in conifer (E label only) and hardwood seedling (B and E label) nurseries,
- 2) 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,
- 3) should be applied to conifer (E label only) and hardwood seedling (B and E label) nurseries any time after the soil has settled around newly-transplanted seedlings, liners, or bare root plants.

Site*	Application Rate		Timing	Comments/ Instructions
	lbs/A	oz/1,000 sq. ft.		
Conifer and Hardwood Seedling Nurseries (E both, B label hardwood only)	1- 2.3	0.37 - 0.84	Apply in fall or spring before weed seeds germinate or after weeds are removed.	(1) Use higher rate for longer control (2) More than one application per year is permitted, but do not apply more than 2.3 lbs/A per year
Southern Pine Seedbeds (E label only)	0.75		Just after seeding and/or a minimum of 3 weeks after most seedlings have shed their seedcoat	(1) To assist in the establishment of Southern pine seedbeds, apply this product preemergence just after seeding pines (2) Application after emergence of pine seedlings should not occur until 3 weeks after most seedlings have shed their seedcoat (3) 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. (4) After application, sprinkler irrigate beds with approximately ½ inch of water.
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)	(1) Use higher rate for longer control and when higher weed pressure is anticipated. (2) The lower rate will provide 2 to 3 months of weed control. (3) Broadcast to beds and apply approximately ½ inch of sprinkler irrigation afterwards.

* Conifers and hardwood seedlings directions are on the marketing label -
Endurance®. Herbicide. Conifer directions do not appear on the marketing label
- Barricade 65WG Herbicide.

Tank Mixtures-Conifer Seedling Nurseries (E label)

Barricade 65WG (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 Barricade 65WG (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 plant species, 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 Barricade 65WG – Conifer Seedling Nurseries

Product	Precautions/Instructions
Goal® (use on conifers only)	Mix with Barricade 65WG (Endurance) for postemergence control of certain broadleaf weeds including malva and filaree. [deleted "Apply this tank mix only to conifers that are listed on the Goal label"]

CUT FOLIAGE PRODUCTION (FL ONLY on Barricade 65WG supplemental marketing label)

Broadcast or Directed Spray Application

Barricade 65WG provides residual preemergence control of weeds and should be applied as a broadcast or directed spray to established foliage production beds.

Plant Species	Application Rate/Timing	Use Instructions
Leatherleaf Fern, (<i>Rumohra adiantiformis</i>), Asparagus Fern (aka treefern, <i>Asparagus virgatus</i>), <i>Pittosporum</i> species, <i>Euonymus</i> species, <i>Aspidistra</i> (<i>Aspidistra elatior</i>), and <i>Ruscus hypopyllum</i> .	3 - 4 lbs/A in the fall followed by 2-3 lbs./A in the spring	(1) The rate to use depends on anticipated weed pressure and spectrum. (2) Immediately, following application, apply ½ inch of irrigation to activate Barricade 65WG in the soil and to wash visible product residue from foliage. (3) Barricade 65WG may be applied more than once per year but do not apply more than 6 lbs/A/yr.

Overhead Sprinkler Irrigation Application

Use Precautions [Format change]

- (1) Apply this product only through an overhead sprinkler irrigation system. Do not apply this product through any other type of irrigation system.
- (2) Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
- (3) To avoid injury to foliage, make sure foliage is sufficiently wet before application or adequate irrigation is applied after application,

- (4) If sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result;
- (5) If sprinkler distribution patterns overlap excessively, injury to leatherleaf ferns may result.
- (6) Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless pesticide label-prescribed safety devices for public water systems are in place.
- (7) If necessary, a person knowledgeable of the chemigation system and responsible for its operation, or someone under the supervision of the responsible person, shall shut the system down and make necessary adjustments.

Operation Instructions

1. The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 20 parts of water to 1 part Barricade 65WG and inject this herbicide suspension mixture into the overhead system.

Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.

- 9. Before injecting Barricade 65WG into the system, run the irrigation system long enough to wet the foliage, then inject Barricade 65WG suspension mixture in the pesticide supply tank (see number 8 above) in 1 inch of irrigation water. After the application is complete, continue the irrigation until all the residues are washed off the foliage.

Application Precautions

To reduce injury potential

- (1) Direct application of Barricade 65WG to rapidly-growing tissue or buds may injure desirable plants. Avoid over-the-top application or wait to apply Barricade 65WG until newly -emerged vegetation has hardened off.
- (2) Immediately wash Barricade 65WG from plant surfaces onto soil.
- (3) Do not apply to newly-transplanted ferns until after the plants are established and begin to grow.

Weeds Controlled

- | | |
|-------------------|--------------------------|
| Florida Betony | <i>Stachys flordana</i> |
| Buttercup Oxalis | <i>Oxalis pes-caprae</i> |
| Crabgrass species | <i>Digitaria</i> spp. |
| Common Vetch | <i>Vicia sativa</i> |

Weeds Suppressed

- | | |
|---------------|------------------------|
| Wandering-Jew | <i>Zebrina pendual</i> |
|---------------|------------------------|

VEGETATION MANAGEMENT (NON-CROPPED AREAS)(E LABEL ONLY)

Endurance:

- 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.

Site	Application Rate		Timing	Comments/ Instructions
	Lbs/A	oz/1,000 sq. ft.		
Non Cropped Areas, including ornamentals, on or surrounding Managed rights- of- way for transportation systems & utilities (including roadways, roadsides, railways, & equipment yards) Facilities including substations, tank farms, pumping stations, parking & storage areas, & ungrazed fence rows	1 - 2.3	0.36 - 0.83	Before weed seeds germinate	(1) Use higher rate for longer control. (2) This product may be applied more than once per year but do not apply more than 2.3 lbs/A/year.

Barricade 65WG (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 Barricade 65WG (Endurance) are for use only in states where the tank mix partner(s) are registered for the application site.

Tank-Mix Partners with Barricade 65WG (Endurance) - Vegetation Management

Products	Comments
Vanquish®, diuron-based products ¹ , Finale®, Gallery, Garlon®, Goal, glyphosate-based products ¹ Krovar® I and II, Oust®, paraquat-based products ¹ , Predict Princep, Arsenal®, Spike™, and Telar®	(1) 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. (2) Do not mix Barricade 65WG (Endurance) with any product whose label prohibits mixing with another pesticide.

¹Products with this chemical as the active ingredient and which are labeled for the same use may be used.

NEW PLANTINGS, REPLANTING AND ROTATIONAL PLANTINGS (B and E labels)

Nursery, landscape, or non-cropped land areas treated with Barricade 65WG (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.

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 incinerate; or, if allowed by state and local authorities, burn locally. Stay out of smoke from burning container.

For minor spills, leaks, or other accidental contamination, 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.

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.

First Aid

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 (PPE)**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 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.

<p>User Safety Recommendations:</p> <p>Users should:</p> <ul style="list-style-type: none"> • 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.

Arsenal® trademark of American Cyanamid Company

Barricade 65WG®, Pennant®, Predict®, Princep®, and Vanquish® trademarks of Novartis

Finale® trademark of AgrEvo USA Company

Gallery®, Garlon®, and Spike® trademarks of Dow AgroSciences

Goal® trademark of Rohm and Haas Company

Krovar® I, Krovar® II, Oust®, and Telar® trademarks of E. I. duPont de Nemours & Company, Inc.

Roundup® trademark of Monsanto Company

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

NCP 834M-L0
(Previous Master label code was 834M-L0B 0199)

Jan. 5, 1999 - Created two weed lists and two tolerant ornamentals lists - one does not include species not yet approved in CA (corresponds with CA-approved label dated 4/10/98)

Revised Ingredient Statement expression per PR-Notice 97-1; changed Statement of Practical Treatment to First Aid per PR Notice 98-10.

April 23, 1999 - Editorial changes in text and in table format,

July 20, 1999 – revisions including comments from Brinkley/Mosdell, conifers on Endurance® label only, conifers will not appear on Factor® label, revised mixing & compatability test directions, editorial changes i.e. combining statements and putting text into tables to improve readability, revision of sod cutting from 120 to 90 days and revised precautions re: newly set sod, added table for length of crabgrass control, added kikuyugrass, fine fescue; added dfus for fall application for season-long crabgrass control , added use precautions in section for crabgrass control, rate range with lower rates on turfgrass by species, added not for use on container-grown plants to certain tolerant ornamental spp., added precaution about waiting to apply Barricade 65WG until ornamentals have hardened off, added band dfu's to container, field-grown, and landscape ornamentals, added dfus for bulbs and wildflowers, added dfus for dissolving

water-soluble bags , incorporated EPA-approved supplemental label for *Poa annua* control in established bermudagrass overseeded with perennial ryegrass (AZ, CA, NV, TX only), minor revisions to disposal statements, substituted CAS no for chemical name and "First Aid" for Statements of Practical Treatment per PR Notices 97-6, 97-7, and 98-10; added mowing height restriction for bentgrass, substituted fine fescue for creeping red bentgrass, numerous editorial changes: tables for text, consolidated language, rephrased statements
Jan 11, 2000 – additional changes per 12/7/99 fax from E. Wilson

**REVISED MASTER LABEL - ALL USES - NOT PRINTED
WATER-SOLUBLE PACKETS SECTION for Barricade 65WG Marketing
Label Only**

Revisions – Uses that previously appeared on the Factor® Herbicide label will now be incorporated into the Barricade 65WG marketing label, and the Factor label will no longer be used. Conifers now on Endurance® label only, Revised mixing & compatability test directions, editorial changes i.e. combining statements and putting text into tables to improve readability, revision of sod cutting from 120 to 90 days and revised precautions re: newly set sod, added table for length of crabgrass control, added kikuyugrass, fine fescue substituted for creeping red fescue; added dfus for fall application for season-long crabgrass control, added use precautions in section for crabgrass control, rate range with lower rates on turfgrass by species, added not for use on container-grown plants to certain tolerant ornamental spp., added precaution about applying Barricade 65WG directly to rapidly-growing tissues of ornamentals, added band dfu's to container, field-grown, and landscape ornamentals, added dfus for bulbs and wildflowers, added dfus for dissolving water-soluble bags , incorporated EPA-approved supplemental label for *Poa annua* control in established bermudagrass overseeded with perennial ryegrass (AZ, CA, NV, TX only). Added mowing height restriction to creeping bentgrass. Changed ingredient statement, etc. per PR Notices 97-6, 97-7, & 98-10

Only Barricade 65WG (marketing label) is packaged in water-soluble packets. Endurance ® Herbicide is packaged loose in conventional bags.

Claims which appear on marketing labels are marked as follows:
B = Barricade 65WG Herbicide
E = Endurance Herbicide (alternate name for Barricade 65WG/vegetation management uses

Barricade® 65WG
HERBICIDE

Packaged in water-soluble packets

Active Ingredient:	
Prodiamine (CAS No. 29091-21-2).....	65.0%
Other Ingredients:	35.0%
Total:	100.0%

For selective preemergence control of grass and broadleaf weeds in:

- Established turfgrasses (excluding golf course putting greens), lawns and sod nurseries
- Container, field-grown and landscape ornamentals
- Hardwood seedling nurseries
- Established perennial and wildflower plantings
- Christmas tree farms

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-834

EPA Est.

NCP 834M-L0

10 x ½ POUND
Water-Soluble Packets

5 POUNDS
Total Net Contents Per Container

Jan 11, 2000

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

Water Soluble Packets

This box contains Barricade 65WG in 0.5 lb. water-soluble packets. These packets are designed to be dropped, unopened, into the spray tank.

Do not remove water-soluble packets from container except for immediate use. Reseal the outer container after use.

WHERE TO USE

Barricade 65WG 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
- container, field-grown, and landscape ornamentals
- hardwood seedling nurseries
- established perennial and wildflower plantings
- Christmas tree farms

HOW BARRICADE 65WG WORKS

Barricade 65WG controls susceptible weeds by preventing growth and development of newly-germinated weed seeds. Weed control is most effective when Barricade 65WG is activated by at least 0.5 inch of rainfall or irrigation or shallow incorporation (1 to 2 inches) before weed seeds germinate and within 14 days following application.

USE PRECAUTIONS

- (1) Do not graze or feed livestock forage cut from areas treated with Barricade 65WG.
- (2) Follow all applicable directions, restrictions, and precautions on the labels of EPA-registered tank-mix partners..
- (3) Do not blend Barricade 65WG onto dry fertilizer or any other granular material.
- (4) **Chemigation:** Do not apply this product through any type of irrigation system unless instructed otherwise in this label.
- (5) Do not apply aerially.
- (6) Do not apply to golf course putting greens. (golf courses on B label only)

MIXING AND APPLICATION

Mixing

Barricade 65WG must be mixed thoroughly in the spray tank to ensure uniform application. Follow these steps:

- (1) Settling of product can occur during shipment. Wearing chemical-resistant gloves, 'fluff' product like a pillow to improve distribution of product and help speed dissolving process.
- (2) Fill the spray tank ¼ full with clean water only.
- (3) Start agitation and check to ensure it is working properly.
- (4) Add water-soluble packets of Barricade 65WG and any other tank-mix partners that are packaged in water-soluble bags directly into the tank.
- (5) Allow packets to dissolve completely before adding any fertilizer additives and the rest of the water to obtain the final spray volume.
- (6) If liquid fertilizer is the primary carrier, dissolve Barricade 65WG packets in a separate mixing vat at a minimum of one quart clean water to each pound of Barricade 65WG. Dissolve packets completely in vat before adding to spray tank.
- (7) Maintain vigorous agitation in the spray tank before and during the application. This will ensure a well-mixed spray suspension.
- (8) A spray colorant may be used with Barricade 65WG to mark areas as they are treated. This will improve application accuracy by minimizing swath skips and overlaps.
- (9) Thoroughly clean the sprayer after use by flushing the system with water containing a detergent.
- (10) Refer to **Pesticide Disposal** section of this label for waste disposal. Do not allow spray suspension to dry in the tank.

Tank Mixing Barricade 65WG

Barricade 65WG 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 for the 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 Barricade 65WG 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 pesticides, test compatibility by mixing the products in a small container first. See the **Compatibility Test** section.

Compatibility Test

Before mixing Barricade 65WG 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 Barricade 65WG rate would be proportional to 4.5 g per quart. Add approximately 1.5 teaspoons to a quart of water. (See following table)

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

Component Formulations	Rate Per		Level Teaspoons
	Acre	1000 Sq. Ft.	
Barricade 65WG	1.0 lb.	0.4 oz	1 ½
Dry Tank Mix Partners	1.0 lb.	0.4 oz.	1 ½.
Liquid Tank-Mix Partners	1.0 pt.	0.4 oz.	½

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 components are not compatible, use a compatibility agent and rerun the test to determine if the mixture is suitable. If the components are still not compatible, do not tank mix.

Mixing Order for Tank Mixtures

Notes: (1) When mixing Barricade 65WG 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 in packages in water-soluble bags first. Agitate the tank mixture. Allow the water-soluble bags to completely dissolve and the products to disperse before adding any other tank-mix partners.
- (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 Barricade 65WG in a minimum of 20 gal/A (0.5 gal/1000 ft²) 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.

ESTABLISHED TURF

Barricade 65WG is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turfgrasses:

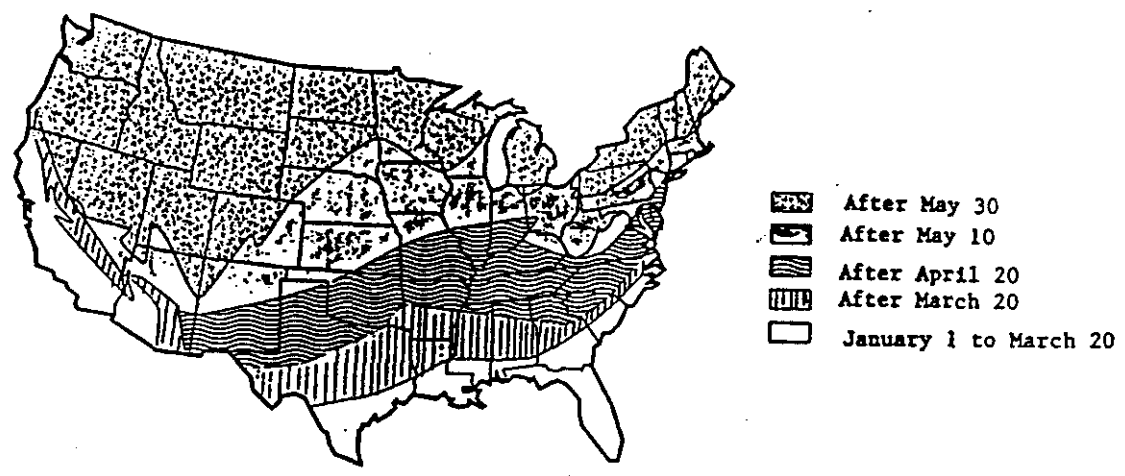
- Golf courses **excluding** putting greens
- Lawns
- Sod nurseries

The maximum amount of Barricade 65WG that may be applied per year is given for each turf grass species in the **Annual Use Rates** section of this label.

For optimum weed control, Barricade 65WG should be activated by at least 0.5 inch of rainfall or irrigation before weed seeds germinate and within 14 days following application. See the map below for approximate crabgrass seed germination dates.

CRABGRASS SEED GERMINATION DATES

Approximate Date



Use Precautions- Turfgrass: Golf Courses, Lawns, Sod Nurseries,

Do not apply Barricade 65WG to creeping bentgrass, annual bluegrass, or desirable species.

2. Do not cut (harvest) treated sod before 90 days after application. To avoid turfgrass injury, do not apply to newly set sod until the sod has rooted and exposed edges have filled in.
3. To avoid turfgrass injury do not apply Barricade 65WG to turf stressed by drought, low fertility, or pest damage etc.
4. Disturbing the herbicide barrier with cultural practices such as disking may result in reduced weed control.
5. **Do not apply Barricade 65WG to golf course putting greens.**
6. If the depth of the creeping bentgrass root system becomes shallow and root tips contact Barricade-treated soil, new root formation may be inhibited. Mowing height can affect the depth of a plant's root system. To avoid this, do not apply Barricade to creeping bentgrass less than 0.5 inch in height.

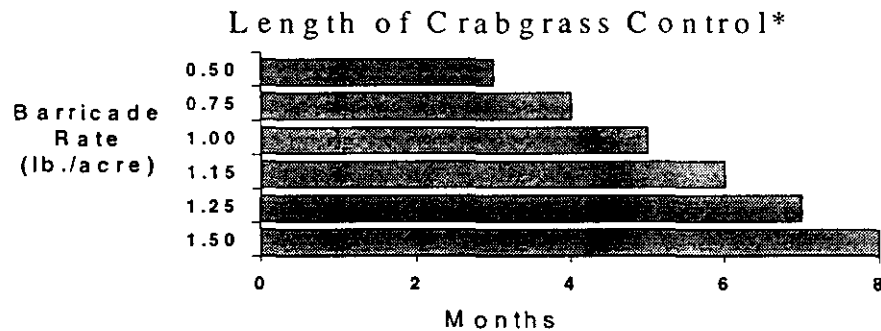
Application Timing and Rate - Turfgrass

Barricade 65WG may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications should be made before target weeds germinate. **Barricade 65WG will not control weeds that have already emerged.**

The amount of Barricade 65WG to apply depends upon:

- 4) the length of residual weed control desired. (The higher the application rate, the longer the control)
- 5) the turf species
- 6) and the maximum amount which can be applied to the turf species per calendar year.

(See the next 2 tables)



*Length of control varies by region. This table is an average for planning purposes.

Annual Use Rates –(Turfgrass – B label only)

Barricade 65WG can be applied to the turfgrass species listed in the following table. Do not apply more than the highest rate listed for each species in a calendar year.

Maximum Application Rate of Barricade 65WG Per Calendar Year by Turfgrass Species			
Turf Species	Lbs. product/A	Oz. product/1000 ft²	Area treated per water -soluble packet (sq.ft.)
Bermudagrass ² Bahagrass Centipedegrass Kikuyugrass Seashore Paspalum St. Augustinegrass ³ Tall Fescue (including turf-type) Zoysiagrass	1 to 2.3 ¹	0.36 to 0.83	22,000 to 9,600
Buffalograss Kentucky Bluegrass Perennial Ryegrass	0.5 to 1.50 ¹	0.185 to 0.55	44,000 to 14,700
Fine Fescue	0.5 to 1.15 ¹	0.185 to 0.42	44,000 to 19,100
Creeping Bentgrass (0.5 inch or more in height ⁴)	0.5 to 1.00 ¹	0.185 to 0.37	44,000 to 22,000

¹ Barricade 65WG may be applied more than once a year as long as the total amount applied is not greater than the maximum application rate for each turf species. All applications must be made before weed seeds germinate.

² May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 0.80 lb/A (0.30 oz./1000 sq. ft.). Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded.

³ Use an initial rate of 0.75 to 1.5 lb/A per application.

⁴ To avoid grass injury, do not apply Barricade to creeping bentgrass mowed at less than 0.5 inch in height.

WEEDS CONTROLLED (B label only)

When used as directed in this label Barricade 65WG will control the following weeds:

- | | |
|---|----------------------------------|
| Barnyardgrass | Kochia |
| Bluegrass, Annual (<i>Poa annua</i>) ¹ | Lambsquarter, Common |
| Carpetweed | Lovegrass |
| Chickweed, Common ² | Panicum, (Texas, Fall, Browntop) |
| Chickweed, Mouseear (from seed) | Pigweed |
| Crabgrass (Large, Smooth) ³ | Purslane, Common |
| Crowfootgrass | Pusley, Florida |
| Cupgrass, Woolly | Rescuegrass ⁴ |
| Foxtails, Annual | Shepherd's Purse ² |
| Goosegrass ⁵ | Signalgrass, Broadleaf |
| Henbit ² | Speedwell, Persian |
| Itchgrass | Sprangletop |
| Johnsongrass (from seed) | Spurge, Prostrate |
| Junglerice | Witchgrass |
| Knotweed ² | Woodsorrel, Yellow (from seed) |

¹In those areas where *Poa annua* is a winter annual, apply Barricade 65WG (see rate table) in August or September to established, non-overseeded turf before *Poa annua* seeds germinate. These timings are approximate. Consult State Extension Service for more specific timing for your area. Also see the section of this label "***Poa annua* control in Established Bermudagrass Overseeded with Perennial Ryegrass (Arizona, California, Nevada, & Texas Only)**"

²To control this weed, apply Barricade 65WG in late summer, fall, or winter before weed seeds germinate.

³ Fall Applications for Spring Crabgrass Control in Cool-Season Grasses.

In those areas where the ground freezes in the winter, Barricade 65WG can be applied in the fall at rates of 1.0 to 1.15 lbs/A after soil temperatures fall below 50^o F, but before the ground freezes. This application will control crabgrass the following spring.

⁴ Suppression only

⁵ In many areas a single application of 1 to 2.3 lbs/A of Barricade 65WG will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, weed control will be most effective by making an initial application of 1 to 1.5 lbs/A followed after 60 to 90 days by a second application that does not exceed the maximum rate for the turf species listed in the **Maximum Application Rates Table.**

When to Apply Barricade 65WG After Overseeding Turf

Injury to desirable seedlings is likely if Barricade 65WG is applied before the secondary roots of seedlings are in the second inch of soil, not thatch plus soil. To reduce the potential to injure overseeded turf, wait 60 days after seeding or until after the second mowing, whichever is longer, before applying Barricade 65WG.

When to Overseed After Application - All States

Barricade 65WG will inhibit the development of turfgrass species _ overseeded too soon after application. Follow rates and intervals in the table below for best overseeding/reseeding results

***Note: In Arizona, California, Nevada, and Texas, the overseeding interval can be shorter in established bermudagrass that has been overseeded with perennial ryegrass. See the next section, Poa Annua Control in Established Bermudagrass Overseeded with Perennial Ryegrass (Arizona, California, Nevada, and Texas only).**

Amount of Barricade 65WG Lbs. ProductA	Interval (Months Before Overseeding)*		
	North	Transition	South
0.75	4	4	4
1.00	5	4	4
1.15	6	5	5
1.25	---	6	6
1.50	---	7	7
1.75	---	---	9
2.00	---	---	10
2.30	--	---	12

Poa annua control in Established Bermudagrass Overseeded with Perennial Ryegrass (Arizona, California, Nevada and Texas only)

Use on golf courses (excluding golf course putting greens), lawns, and sod nurseries when overseeding with perennial rye grass. (minimum seeding rate of 350 pounds per acre).

How Much and When to Apply

Amount to Apply	When to Apply	Expected Control	Use Precautions
0.58 to 1.0 lb/A	<p>6 to 8 weeks before ryegrass overseeding</p> <p><i>second application: 4 to 8 weeks after</i> overseeding or when perennial ryegrass roots are in the second inch of soil</p>	<p>1 application for 70% or greater control of <i>Poa annua</i></p> <p><i>second application may enhance control</i></p>	<p>(1) Some seedling mortality and temporary reduction in root growth of new seedlings may occur.</p> <p>(2) To reduce the potential for seedling mortality maintain a moist seedbed with light, frequent irrigation.</p> <p>(3) Make no more than 2 applications per year for this use, and do not exceed a total of 1.3 lb/A per year.</p> <p>(4) Do not make a second application if any injury to the ryegrass is observed after the first application.</p> <p>(5) Do not make a second application unless the product was first applied before overseeding.</p>

**CONTAINER, FIELD-GROWN, & LANDSCAPE ORNAMENTAL PLANTINGS
(including Christmas Tree Farms)**

Application, Timing, and Information

Barricade 65WG:

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

Use Precautions:

To reduce injury potential:

- a. Direct application of Barricade 65WG to rapidly-growing tissue or buds may injure desirable plants. Avoid over-the-top application or wait to apply Barricade 65WG until newly -emerged vegetation has hardened off.
- b. After application immediately irrigate the treated area to wash Barricade 65WG from plant surfaces onto soil. (Watering plants before application may improve the washing process).

Ornamental and Christmas Tree Farms - Application Sites and Instructions

Site	Application Instructions
Newly-Transplanted Container or Field Nursery Stock	<ol style="list-style-type: none"> 1. Delay application until soil has settled around transplants. 2. Water transplants thoroughly before application. 3. Apply after cuttings form roots and are established. 4. To avoid inhibition of the tissue union, apply before budding/grafting or after buds/grafts have taken.
Established Container, Field Nursery Stock, or Landscape Plants	<ol style="list-style-type: none"> 1. Apply at any time as a broadcast, over-the-top, or directed spray.
Landscape (or Ornamental) Plantings	<ol style="list-style-type: none"> 1. Apply as a broadcast, over-the-top, or as a directed spray. 2. Delay applications to newly transplanted ornamentals until soil has settled around transplants.
Bare Ground Application for Container Placement	<ol style="list-style-type: none"> 1. Apply to soil (including mulch, gravel, wood chips, or other permeable base) upon which containerized ornamentals are placed. 2. After Barricade 65WG is applied, perform shallow cultivation or hand weeding only, to avoid disturbing the herbicide barrier.
In Shadehouses and Uncovered Polyhouses	<p>After Barricade 65WG is applied, uncovered polyhouses must remain open for at least 7 days and ornamentals must receive 2 irrigations totaling at least ½ inch of water.</p>
Ornamental Bulbs and Perennial Wildflower Plantings	<ol style="list-style-type: none"> 1. Barricade 65WG may be applied to bulbs or perennial wildflower species listed in the section, Apply before or after bulbs emerge but before bulbs bloom and weeds emerge. 2. In wildflowers, a post-emergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.

How Much and When to Apply - Ornamentals

Amount to Apply (Broadcast)*	When to Apply	Comments/Instructions
1 - 2.3 lbs/A or 0.36 - 0.83 oz/1,000 sq. ft.	In fall or spring before weeds germinate or after weeds are removed.	1. Use the higher rate for longer control. 2. Barricade 65WG may be applied more than once per year as long as the total amount of product applied does not exceed 2.3 lbs/A/year.

*NOTE: For band application, calculate amount per acre:

$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast rate} = \text{amount to apply/acre of field}$

Equivalent Measurements for Barricade 65WG

Lbs/A	oz./1000 sq. ft	Approximate Equivalent - Tablespoons/1000 sq. ft.
1.0	0.36	1
1.5	0.55	1 ½
2.0	0.74	2
2.3	0.83	2 ¼

Tank Mixtures For Use On Ornamentals

Barricade 65WG 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 Barricade 65WG 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 of this label.

Tank Mix Partners for Barricade 65WG on Ornamentals

Product	Precautions/Instructions
Goal® (use on conifers only)	(1) Mix with Barricade 65WG for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Princep®, Pennant®	See product labels for weed spectrum and tolerant ornamentals.
Roundup® or other glyphosate-based products, Finale®	(1) These non-selective tank-mix herbicides control most emerged annual broadleaves and grasses. (2) 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. (3) 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.

Tolerant Ornamental Species

Barricade 65WG will not harm most trees, shrubs, vines, and flowers. The species listed below in Table 1 are tolerant to Barricade). Barricade 65WG is approved for application, except in California, to the species in Table 2. Barricade 65WG 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 Barricade 65WG.

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>Dodonaea viscosa</i>	Hop Bush
<i>Elaeagnus pungens</i>	Silverberry
<i>Euonymus fortunei</i>	Wintercreeper
<i>Euonymus japonica</i>	Japanese Spindle Tree (Evergreen)
Euonymus)	

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

**Not for use on container grown plants.

<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>Malephora 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
<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>	Lily-of-the-Valley Shrub

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

** Not for use on container grown plants

<i>Pinus brutia</i>	Calabrian Pine
<i>Pinus canariensis</i>	Canary Island Pine
<i>Pinus eliottii</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</i> spp.	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</i> spp.	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</i> spp.	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

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

**Not for use on container grown plants.

<i>Tulipa</i> spp.	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</i> spp.	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.

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>Helianthemum</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>Lirope muscari</i> var. <i>variegata</i>	Lirope, Variegated
<i>Lirope spicata</i>	Lirope, 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 missouriensis</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> (including azalea)	'Delaware Valley White' 'Flame Creeper' 'Girard Crimson' 'George L. Tabor' Wakeiebisu White Gumpo
<i>Rudbeckia</i> spp.	Black-Eyed Susan: Goldstrum
<i>Saxifraga</i> spp.	Saxifrage; Purple Dome
<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>Syzyglum paniculatum</i>	Australian Brushcherry

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<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

NEW PLANTINGS, REPLANTING AND ROTATIONAL PLANTINGS (This section also appears previously on Barricade/Endurance loose pack label)

Nursery, landscape, or non-cropped land areas treated with Barricade 65WG 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, but do not apply more than 2.3 lbs/A per year

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

Do not reuse outer container. Dispose of empty box in a sanitary landfill or incinerate; or if allowed by state and local authorities, burn locally. Stay out of smoke from burning container.

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

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.

First Aid

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 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.

Barricade®, Pennant®, Princep® trademarks of Novartis

Finale® trademark of AgrEvo USA Company

Gallery® trademark of Dow Agrosiences

Goal® trademark of Rohm and Haas Company

Roundup® trademark of Monsanto Company

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

NCP 834M-L0

1/11/2000

1998- Created two weed lists and two tolerant ornamentals lists - one does not include species not yet approved in CA (corresponds with CA-approved label dated 4/10/98)

12/3/99- See last page of loose pack label for revisions

1/11/00 - See last page of loose pack label for revisions

This booklet manufactured using post-consumer, recycled paper.

[GANNONC.LABELS-SNDZ/BAR65WG] - ccg - CFB update 1/11/00

Container Label for WSB Barricade 65WG label (booklet is attached to this label)

Barricade® 65WG

HERBICIDE

Packaged in water-soluble packets

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

For selective preemergence control of grass and broadleaf weeds in:

- Established turfgrasses (excluding golf course putting greens), lawns and sod nurseries
- Container, field-grown and landscape ornamentals
- Hardwood seedling nurseries
- Established perennial and wildflower plantings
- Christmas tree farms

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.

EPA Reg. No. 100-834

EPA Est.

10 x 1/2 POUND
Water-Soluble Packets

5 POUNDS
Total Net Contents Per Container

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.

First Aid

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

If inhaled: Remove victim to clear air.

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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.

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 incinerate, or, if allowed by state and local authorities, burn locally. Stay out of smoke from burning container.

Chemigation

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

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

NCP 834M-L0

Jan. 5, 1999 - Created two weed lists and two tolerant ornamentals lists - one does not include species not yet approved in CA (corresponds with CA-approved label dated 4/10/98) Revised Ingredient Statement expression per PR-Notice 97-1; changed Statement of Practical Treatment to First Aid per PR Notice 98-10.

Nov 11, 1999 – revisions including comments from Brinkley/Mosdell – see loose pack label for detailed list of changes.

Jan 11, 2000 – additional changes per 12/7/99 fax from E. Wilson