# PRODIAMINE GROUP 3 HERBICIDE



# Herbicide

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

Active I	ngred	die	en	t:	
Prodian	nine*				

Other Ingredients:

Total: 100.0%

\*CAS No. 29091-21-2

Barricade 4FL contains 4 pounds active ingredient per gallon.

# KEEP OUT OF REACH OF CHILDREN. CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1139 EPA Est. 70815-GA-002 **Product of India** 

SCP 1139A-L10D 0224

# 1 gallon

**Net Contents** 



	FIRST AID
If swallowed	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious or convulsing person.
If in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes.     Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.     Call a poison control center or doctor for treatment advice.
If inhaled	Move person to fresh air.     If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.     Call a poison control center or doctor for treatment advice.
If on skin or clothing  Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.	
Have the prod	luct container or label with you when calling a poison control center or doctor,

or going for treatment

#### HOTLINE NUMBER

For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident)

1-800-888-8372

# PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

#### CAUTION

Harmful if swallowed, absorbed through skin, or inhaled. Avoid breathing vapor. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

#### Personal Protective Equipment

#### WPS Uses:

Applicators, mixers, loaders, and other handlers 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
- Shoes plus socks

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

#### **Engineering Control Statements**

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

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided with all of the PPE specified above for applicators and other handlers, and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

# **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
- After handling this product immediately remove PPE, wash yourself thoroughly and change into clean clothing.

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

NON-TARGET ORGANISM ADVISORY STATEMENT: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

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

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

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

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and, (2) Buyer and User assume the risk of any such use. To the extent permitted by applicable law, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

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

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

#### **DIRECTIONS FOR USE**

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

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

#### **AGRICULTURAL USE REQUIREMENTS**

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

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥14 mils, natural rubber ≥14 mils or neoprene rubber ≥14 mils or nitrile rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils or Viton™ ≥ 14 mils.
- Shoes plus socks

# NON-AGRICULTURAL USE REQUIREMENTS

The requirements of this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The "WPS" applies when this product is used to produce agricultural plants on farms, forest or nurseries. Applicators and handlers should wear long-sleeved shirt, long pants, chemical resistant gloves, shoes with socks and protective eyewear. Thoroughly wash face and hands with soap and water after exposure and before eating or smoking. Launder exposed clothing before reuse. Do not allow reentry to treated areas until dust has settled and the turf grass or soil is dry.

#### **USE INFORMATION**

#### WHERE TO USE

Barricade 4FL is a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in:

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

- Christmas tree farms
- Non-crop areas, including plantings on managed rights-of-way for transportation systems and utilities (including, roadways, roadsides, railways and equipment yards)
- Facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows

#### **HOW BARRICADE 4FL WORKS**

Barricade 4FL controls susceptible weeds by preventing growth and development of newly germinated weeds. Weed control is most effective when Barricade 4FL is activated by at least 0.5 inch of rainfall or irrigation or shallow incorporation (1-2 inches) before weed seeds germinate and within 14 days following application.

#### WEED RESISTANCE MANAGEMENT

PRODIAMINE GROUP 3 HERBICIDE

For resistance management, Barricade 4FL is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to Barricade 4FL and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of Barricade 4FL or other Group 3 herbicides within a growing season sequence
  or among growing seasons with different herbicide groups that control the same weeds in
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers

tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.

- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equip-ment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Syngenta Crop Protection at 1-800-334-9481.

#### **USE PRECAUTIONS AND RESTRICTIONS**

- 1. Do not graze or feed livestock forage cut from areas treated with Barricade 4FL
- 2. Follow all applicable directions, restrictions, and precautions on the labels of EPA-registered tank-mix partners.
- 3. Do not blend Barricade 4FL 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.

#### SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental

#### Controlling Droplet Size - Ground Boom

- Volume Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

  Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target
- spray volume and droplet size.

  Spray Nozzle Use a spray nozzle that is designed for the intended application. Consider using
- nozzles designed to reduce drift.

#### **BOOM HEIGHT - Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### SHIFLDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the

#### TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

#### TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

#### WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### **Boomless Ground Applications:**

· Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

# Handheld Technology Applications:

· Take precautions to minimize spray drift.

# MIXING AND APPLICATION PROCEDURES

#### MIXING BARRICADE 4FL ALONE

Barricade 4FL must be mixed thoroughly in the spray tank to ensure uniform application. Follow these steps.

- 1. Fill the spray tank 1/4 full with clean water only.
- Start agitation and check to ensure it is working properly.
- Add Barricade 4FL directly to the tank.
- Add the rest of the carrier to obtain the final spray volume. 5. For tank mixing instructions, refer to the section "Mixing Order for Tank Mixtures."
  6. Maintain vigorous agitation in the spray tank before and during the application. This will
- ressure a well-mixed spray suspension. If Barricade 4FL was mixed with fertilizer in the spray tank, the fertilizer may aid resuspension of Barricade 4FL if agitation is disrupted. However, it is recommended that the entire tank be used before stopping agitation.
- A spray colorant may be used with Barricade 4FL to mark areas as they are treated. This will improve application accuracy by minimizing swath skips and overlaps.
- 8. Thoroughly clean the sprayer after use by flushing the system with water containing a detergent
- 9. Refer to the Pesticide Disposal section of this label for waste disposal. Do not allow spray suspension to dry in the tank.

#### TANK MIXING BARRICADE 4FL

Barricade 4FL may be tank mixed with certain other EPA-registered herbicides to provide a broader spectrum of weed control or to control emerged weeds. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Tank mixes are permitted only in states where the tank-mix partner(s) are registered for the application site and the turf and ornamental

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 4FL with other pesticides in the spray tank, test for compatibility by mixing all components (carrier and pesticide products) in an appropriate container in proportionate quantities. For example, 1 qt would be 1/100 the volume of a 25 qal/A spray rate. At 1.0 lb/A, the Barricade 4FL rate would be proportional to 6 ml per quart. Add approximately 1 teaspoon to a quart of water. (See following table.)

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

	Rate Per		
<b>Component Formulations</b>	Acre	1,000 sq ft	Level Teaspoons
Barricade 4FL	21.0 fl oz	0.5 fl oz	1.0
Dry Tank-Mix Partners	1.0 lb	0.4 oz	1.5
Liquid Tank-Mix Partners	1.0 pt	0.4 fl oz	0.5

If components do not ball-up or form flakes, sludge, gels, oily films, or layers, then the mixture is compatible. Let the mixture stand for 15 minutes. 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

#### MIXING ORDER FOR TANK MIXTURES

Notes: (1) When mixing Barricade 4FL with other components (carrier and partner pesticide products), allow products to completely dissolve between steps. (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 products to disperse before adding any other tank-mix partners.
- 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.
- 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 Barricade 4FL, other flowable liquids (FL) or suspension concentrates (SC).
- 5. Add emulsifiable concentrates (EC) last.

#### APPLICATION

Apply Barricade 4FL in a minimum of 20 gal/A (0.5 gal/1,000 sq ft) of carrier (water and/or fluid fertilizer) using a calibrated, low-pressure sprayer with 50-mesh or coarser screens. A broadcast boom or handheld wand designed for herbicide or insecticide application will provide the best results. Select nozzle pressure and gallonage to provide complete coverage.

#### **SPECIFIC USE DIRECTIONS**

#### **ESTABLISHED TURF**

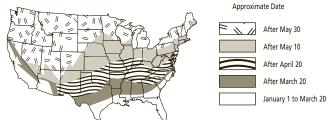
Barricade 4FL is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turfgrasses including:

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

The maximum amount of Barricade 4FL 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 4FL 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



# Use Precautions and Restrictions - Turfgrass: Golf Courses, Lawns, and Sod Nurseries

- Do not apply Barricade 4FL 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 4FL to turf stressed by conditions such as drought, low fertility, or pest damage.
- 4. Disturbing the herbicide barrier with cultural practices such as disking may result in reduced
- 5. Do not apply Barricade 4FL to golf course putting greens.
- 6. If you consistently mow creeping bentgrass at a height of less than 0.5 inch do not apply Barricade 4FL.

#### Application Timing And Rate - Turfgrass

Barricade 4FL may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications must be made before target weeds germinate because Barricade 4FL will not control weeds that have already emerged.

The amount of Barricade 4FL to apply depends upon:

- 1. the length of residual weed control desired (the higher the application rate, the longer the
- 2. the turf species.
- 3. 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.

#### Annual Use Rates - Turfgrass

Barricade 4FL can be applied to the turfgrass species listed in the following table. **Restriction**: Do not apply more than the highest rate listed for each species in a calendar year.

Maximum Application Rate of Barricade 4FL Per Calendar Year by Turf Species		
Turf Species	fl oz Product/A	fl oz Product/1,000 sq ft
Bermudagrass <sup>2</sup> Bahiagrass Centipedegrass Kikuyugrass Seashore Paspalum St. Augustinegrass <sup>3</sup> Tall Fescue (including turf-type) Zoysiagrass	21-48 <sup>1</sup>	0.5-1.1
Buffalograss Kentucky Bluegrass Perennial Ryegrass	10-30 <sup>1</sup>	0.23-0.70
Fine Fescue	10-24 <sup>1</sup>	0.23-0.55
Creeping Bentgrass (0.5 inch or more in height <sup>4</sup> )	10-21 <sup>1</sup>	0.23-0.48

- <sup>1</sup> Barricade 4FL 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.
- <sup>2</sup> May be used on newly sprigged or plugged bermudagrass at rates not to exceed 17 fl oz/A (0.39 fl oz/1,000 sq ft). Newly sprigged or plugged bermudagrass stolon rooting may be temporarily inhibited.
- <sup>3</sup> Use an initial rate of 16-32 fl oz/A per application.
- <sup>4</sup> To avoid grass injury, do not apply Barricade 4FL to creeping bentgrass mowed at less than 0.5 inch in height

#### Weeds Controlled

When used as directed in this label, Barricade 4FL will control the following weeds:

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

- <sup>1</sup> In those areas where *Poa annua* is a winter annual, apply Barricade 4FL (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
- <sup>2</sup> To control this weed, apply Barricade 4FL in late summer, fall, or winter before weeds
- <sup>3</sup> Fall Applications for Spring Crabgrass Control in Cool-Season Grasses: In those areas where the ground freezes in the winter, Barricade 4FL can be applied in the fall at rates of 21-24 fl oz/A after soil temperatures fall below 50°F, but before the ground freezes. This application will control crabgrass the following spring.
- <sup>4</sup> Suppression only.
- <sup>5</sup> In many areas a single application of 21-48 fl oz/A of Barricade 4FL 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 21-26 fl oz/A followed by a second application 60-90 days later. Note: Do not exceed the maximum rate for the turf species listed in the Maximum Application Rates Table.

#### When to Apply Barricade 4FL After Overseeding Turf

Injury to desirable seedlings is likely if Barricade 4FL 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 4FL.

#### When to Overseed After Application - All States\*

Barricade 4FL 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: See exceptions for Poa annua Control in Established Bermudagrass Overseeded with Perennial Ryegrass below.

Amount of Barricade 4FL	Interval (Months Before Overseeding)*		
fl oz Product/A	North	Transition	South
16	4	4	4
21	5	4	4
24	6	5	5
26		6	6
31		7	7
36			9
42			10
48			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 lb/A)

#### How Much Barricade 4FL and When to Apply

Amount to Apply	When to Apply	Expected Control	Use Precautions and Restrictions
12-21 fl oz/A	6-8 weeks before ryegrass overseeding second application: 4-8 weeks after	1 application for 70% or greater	Some seedling mortality and temporary reduction in root
		control of Poa annua	growth of new seedlings may occur.
	overseeding or when perennial ryegrass roots are in the second inch of soil	second application may enhance control	To reduce the potential for seedling mortality maintain a moist seedbed with light, frequent irrigation.
			3. Make no more than 2 applications per year for this use, and do not exceed a total of 27 fl oz/A per year.  3. Make no more than 2 applications applications are set of the s
			Do not make a second     application if any injury to     the ryegrass is observed after     the first application.
			Do not make a second     application unless the     product was first applied     before overseeding.

#### Control of Poa annua in Perennial Ryegrass Overseedings (Alabama, Louisiana, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee Only)

Use on golf courses (excluding golf course putting greens) when overseeding with perennial rye grass only (minimum seeding rate of 350 lb/A)  $\,$ 

#### How Much Barricade 4FL and When to Apply

Amount to Apply	When to Apply	Expected Control	Use Precautions
12-21 fl oz/A	8-10 weeks <b>before</b> ryegrass overseeding	70% or greater	Some seedling mortality and temporary reduction in root growth of new seedlings may occur.
			To reduce the potential for seedling mortality maintain a moist seedbed with light, frequent irrigation.
			To maximize seedling establishment, use lower rate and/or the maximum time interval before overseeding. To maximize Poa annua control, use higher rate and shorter time interval before overseeding.

#### CONTAINER, FIELD-GROWN, AND LANDSCAPE ORNAMENTAL PLANTINGS (INCLUDING CHRISTMAS TREE FARMS)

#### Application, Timing, and Information

#### Barricade 4FL:

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

#### Use Precautions

#### To reduce injury potential:

- 1. Direct application of Barricade 4FL to rapidly growing tissue or buds may injure desirable plants. In the spring when buds are rapidly growing and expanding, over-the-top application of Barricade 4FL may injure new growth of desirable plants, however, these effects are temporary. To reduce the possibility of injury at this time, wait to apply Barricade 4FL over the top of newly emerged vegetation until it has hardened off, unless your experience indicates that the ornamental plant will not be injured by the over-the-top application.
- After application immediately apply overhead irrigation to the foliage to wash Barricade 4FL from plant surfaces onto soil (watering the foliage of 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	Delay application until soil has settled around transplants.     Water transplants thoroughly before application.     Apply after cuttings form roots and are established.     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	Apply at any time as a broadcast, over-the-top, or directed spray.
Landscape (or Ornamental) Plantings	Apply as a broadcast, over-the-top, or as a directed spray.     Delay applications to newly transplanted ornamentals until soil has settled around transplants.
Bare Ground Application for Container Placement	Apply to soil (including mulch, gravel, wood chips, or other permeable base) upon which containerized ornamentals are placed.     After Barricade 4FL is applied, perform shallow cultivation or hand weeding only, to avoid disturbing the herbicide barrier.
In Shadehouses and Uncovered Polyhouses	After Barricade 4FL is applied, uncovered polyhouses must remain open for at least 7 days and ornamentals must receive 2 irrigations totaling at least 1/2 inch of water before covering.
Ornamental Bulbs and Perennial Wildflower Plantings	Barricade 4FL may be applied to bulbs or perennial wild-flower species listed in the section. Apply before or after bulbs emerge but before bulbs bloom and weeds emerge.     In wildflowers, a postemergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.

#### How Much Barricade 4FL and When to Apply - Ornamentals

Amount to Apply (Broadcast)*	When to Apply	Comments/Instructions
21-48 fl oz/A or 0.5-1.1 fl oz/1,000 sq ft	In fall or spring before weeds germinate or after weeds are removed.	Use the higher rate for longer control.     Barricade 4FL may be applied more than once per year as long as the total amount of product applied does not exceed 48 fl oz/A per year.

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

Row width in inches

Band width in inches x broadcast rate = amount to apply/acre of field

#### **Equivalent Measurements for Barricade 4FL**

fl oz/A	fl oz/1,000 sq ft	Approximate Equivalent – Tablespoons/1,000 sq ft
21	0.5	1.0
31	0.7	1.5
42	1.0	2.0
48	1.1	2.25

#### Tank Mixtures for Use on Container, Field Grown and Landscape Ornamentals

Barricade 4FL 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 4FL are for use only in states where the tank-mix partner(s), application site and intended use pattern are registered.

Follow the label directions of the tank-mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining a tank-mix partner in the spray tank, test for compatibility as described on this label.

#### Tank-Mix Partners for Barricade 4FL on Ornamentals

Product	Precautions/Instructions
Goal® (use on conifers only)	Mix with Barricade 4FL for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Princep®, Pennant Magnum®	1. See product labels for weed spectrum and tolerant ornamentals.
Roundup® or other glyphosate-based products, Finale®	These nonselective tank-mix herbicides control many emerged annual broadleaves and grasses.     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.  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 4FL will not harm most trees, shrubs, vines and flowers. The species listed below in Table 1 are tolerant to Barricade. Barricade 4FL may be used for application, except in CA, to the species in Table 2. Barricade 4FL may be applied over the top of the listed species. The species that are not tolerant to Barricade 4FL when grown in containers are indicated.

When plants are under stress (such as heat, drought, or frost damage), some cultivars of listed plants may be sensitive to Barricade 4FL.

Table 1. Tolerant Ornamental Species - All States

Scientific name	Common name
Abies spp.	Fir species** (Balsam, Fraser, Noble, etc.)
Acer palmatum	Japanese Maple
Acer platanoides Acer saccharum	Norway Maple*** Sugar maple**
Achillea spp.	Yarrow: King Edward
Actinidia chinensis	Kiwi*
Agapanthus africanus	Lily-of-the-Nile (African Lily)
Agastache rupestris	Sunset Hyssop
Aquilegia spp. Arctostaphylos densiflora	Aquilegia: Red and Gold Vine Hill Manzanita
Arctotheca calendula	Cape Weed
Aristida stricta	Wiregrass
Artemisia spp.	Wormwood; Silver Mound, Castle
Aspidistra elatior	Cast-iron plant
Aucuba japonica	Japanese Aucuba
Begonia spp. Berberis gladwynensis	Fibrous Begonia: Hardy Grandis   Barberry
Berberis julianae	Wintergreen Barberry
Berberis mentorensis	Mentor Barberry
Berberis thunbergii	Japanese Barberry
Berberis verruculosa	Warty Barberry
Brassica oleracea	Wild Cabbage
Buddleia spp. Buxus microphylla	Butterfly-Bush, Dwarf Blue; Royal Red Japanese Boxwood
Callistemon viminalis	Weeping Bottlebrush
Calluna vulgaris	Scotch Heather
Carpobrotus edulis	Hottentot Fig (Ice Plant)
Cassia artemisioides	Feathery Cassia
Ceanothus rigidus Centaurea gymnocarpa	Wild Lilac   Dusty Miller
Chamaecyparis pisifera	False Cypress
Cleyera japonica	Cleyera
Citrus spp.	Citrus species*
Cornus alernifolia	Pogoda Dogwood
Cornus florida Cornus stolonifera	Flowering Dogwood American Dogwood
Cortaderia selloana	Pampas Grass
Cotoneaster apiculatus	Cranberry Cotoneaster
Cotoneaster buxifolius	Cotoneaster
Cotoneaster dammeri	Bearberry Cotoneaster
Cotoneaster glacophylla	Gray-leaf Cotoneaster
Cotoneaster microphyllus Crataegus spp.	Rockspray Cotoneaster Hawthorne
Cupressus sempervirens	Italian Cypress
Delosperma alba	White Trailing Ice Plant
Dendranthemum spp.	Chrysanthemum
Diascia intergerrima	Twinspur
Digitalis spp. Dodonea viscosa	Foxglove Hop Bush
Elaeagnus pungens	Silverberry
Euonymus fortunei	Wintercreeper
Euonymus japonica	Japanese Spindle Tree (Evergreen Euonymus)
Euonymus kiautschovicka	Spreading Euonymus
Euonymus macrophylla Fatsia japonica	Euonymus   Japanese Aralia
Forsythia intermedia	Border Forsythia
Forsythia viridissima	Greenstem Forsythia
Gardenia jasminoides	Gardenia, Cape-Jasmine
Gladiolus spp.	Gladiolus species**
Gypsophila spp. Hedera helix	Baby's Breath
Hemerocallis spp.	English Ivy   Daylily: Aztec Gold, Stella De Oro, Tender Love
Hibiscus	Rose of Sharon**
Hibiscus Rosa-sinensis	Chinese Hibiscus**
Hosta spp.	Hosta, Plantain Lily (Fragrant)
llex cornuta llex crenata	Chinese Holly** Japanese Holly
llex opaca	American Holly
Ilex pernyi	Holly
Ilex vomitoria	Yaupon Holly
Iris spp.	Iris species**
Jasminium nudiflorum	Winter Jasmine
Juniperus chinensis Juniperus conferta	Chinese Juniper Shore Juniper
Juniperus horizontalis	Creeping Juniper
Juglans spp.	Walnut*
Justicia brandegeana	Shrimp Plant
Lagerstromia indica	Crape Myrtle
Lantana spp. Leucanthemum maximum	Lantana   Shasta Daisy
Ligustrum amurense	Amur Privet
Ligustrum japonicum	Japanese Privet
Ligustrum lucidum	Glossy Privet (Wax-Leaf)
1.115	Lily: Jazz
Lilium spp.	Big Blue Lillyturf
Liriope muscari	
Liriope muscari Liriope spicata	Liriope, Creeping
Liriope muscari Liriope spicata Lobelia erinus	Liriope, Creeping Lobelia
Liriope muscari Liriope spicata	Liriope, Creeping Lobelia Japanese Honeysuckle Tatarian Honeysuckle
Liriope muscari Liriope spicata Lobelia erinus Lonicera japonica	Liriope, Creeping Lobelia Japanese Honeysuckle

Scientific name	Common name		
Malus spp.	Crabapple*		
Nandina domestica	Heavenly Bamboo		
Narcissus spp. Nerium spp.	Narcissus species** Oleander		
Oenothera fruticosa	Narrow-leaf primrose		
Oenothera pallid	Pale Evening Primrose		
Olea europaea	Olive*		
Ophiopogon japonicus	Mondo Grass**		
Origanum libanoticum	Origanum*		
Osteospermum fruticosum Oxydendrum arboreum	Trailing African Daisy Sourwood		
Perovskia atriplicifolia	Russian Sage		
Persea americana	Avocado*		
Photinia fraseri	Frasier's Photinia (Redtip)		
Picea spp. Pieris compacta	Spruce species*** (Colorado Blue, Norway, etc.) Andromeda		
Pieris japonica	Lily-of-the-Valley Shrub		
Pinus brutia	Calabrian Pine		
Pinus canariensis	Canary Island Pine		
Pinus elliottii	Slash Pine		
Pinus halepensis	Aleppo Pine		
Pinus nigra Pinus palustrus	Austrian Black Pine Longleaf Pine		
Pinus radiata	Monterey Pine		
Pinus strobus	Eastern White Pine		
Pinus sylvestris	Scotch Pine		
Pinus taeda	Loblolly Pine		
Pinus thunbergiana Pinus virginiana	Japanese Black Pine Virginia Pine		
Pistacia spp.	Pistachio*		
Pittosporum rhombifolium	Queensland Pittosporum		
Pittosporum tobira	Japanese Pittosporum		
Podocarpus macrophyllus	Japanese Yew		
Prunus laurocerasus Prunus spp.	English Laurel Almond, Apricot, Nectarine,		
riulius spp.	Peach, Plum and Prune*		
Pseudotsuga menziesii	Douglas Fir***		
Pyracantha coccinea	Firethorn Scarlet		
Pyracantha fortuneana	Firethorn		
Pyracantha koidzumii	Firethorn Bradford Pear spp.		
Pyrus spp. Quercus borealis	Northern Red Oak		
Quercus rubra	Oak species		
Raphiolepsis indica	Indian Hawthorne		
Rhamnus smithii	Buckthorn		
Rhododendron	'Coral Bells'		
(including Azalea)	'Formosa' 'Hino-crimson'		
	'PJM'		
	'Roseum Elegans'		
Rosa banksiae	Lady Bank's Rose		
Rosmarinus officinalis	Rosemary*		
Rumohra adiantiformis Ruscus hypophyllum	Leatherleaf Fern Butcher's Broom		
Salvia daghestanica	Sage*		
Santolina virens			
Sedum spp.	Stonecrop		
Spirea japonica	Spirea		
Syzygium paniculatum	Japanese Boxcherry		
Tagetes spp. Trachelospermum jasminoides	Marigold Star Jasmine		
Taxus cuspidata	Japanese Yew		
Taxus media	Yew		
Thuja occidentalis	American Arborvitae		
Trachelospermum asiatum	Star Jasmine		
Tsuga canadensis Tulipa spp.	Canada Hemlock Tulip species		
Viburnum japonicum	Japanese Viburnum		
Viburnum lantana	Wayfaring Tree		
Viburnum odoratissimum	Sweet Viburnum		
Viburnum plicatum	Japanese Snowball		
Viburnum rigidum Viburnum tinus	Canary Island Viburnum Laurustinus		
Viburnum trilobium	Cranberry Bush		
Viburnum wrightii	Leatherleaf Viburnum		
Vinca major	Vinca		
Vinca minor	Dwarf Periwinkle		
Viola x wittrockiana Vitis spp.	Pansy		
	Grape*		
	Old Fashioned Weigela		
Weigela florida	Old Fashioned Weigela Spanish Bayonet		
	Old Fashioned Weigela Spanish Bayonet Yucca, Adam's Needle		

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

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

Table 2. Tolerant Omaniental Species	valleties - All States Except CA		
Scientific name	Common name		
Abelia grandiflora	Abelia: Sherwood		
Agapanthus orientalis			
Akebia quintata	Five-Leaf or Chocolate Vine		
Allium cernuum Anemone hybrida	Lady's Leek, Nodding Onion Japanese Anemone		
Aster spp.	Aster: Bonny Blue, Purple Dome		
Aster X frikartii	Ascer. Borniy Blue, I diple bonie		
Athyrium filix-femina	Lady Fern; Fern Lady		
Bergenia cordifolia			
Boltonia asteroides	Snowbank		
Bougainvillea spp.	Bougainvillea		
Callistemon citrinus	Crimson Bottlebrush		
Campanula carpatica Campis X tagliabuana	Tussock Bellflower; (White Clips) Trumpet Creeper, Trumpet Flower;		
Campis X tagiiabdana	Madame Galen		
Ceratostigma plumbaginoides			
Chrysanthemum nipponicum			
Coreopsis spp.	Coreopsis (Calliopsis): Early Sunrise, Moonbeam		
Crocosmia spp.	Lucifer		
Delosperma spp.	Cooperi Pink Larkspur; Blue Elf		
Delphinium spp. Dianthus deltoides	Dianthus, Maiden Pinks 'Zing'		
Dianthus gratianopolitanus	Cheddar Pink		
Echinacea purpurea	Coneflower, Purple; Magnus		
Forsythia suspensa	Weeping Forsythia		
Gaillardia spp.	Gaillardia, Blanket Flower: 'Goblin'		
Gaura spp.			
Gentiana dahurica	Gentian		
Geranium cinereum	Cranesbill		
Helianthemum spp.	Sunrose		
Heucherella spp. Hibiscus spp.	Coral Bell; Bridget Bloom Mallow: Disco Balla White		
Hosta sieboldiana	Mallow; Disco Belle White Hosta, 'Searsucker'		
Houttuynia cordata var. variegata	Trostal Scarsacker		
Hydrangea macrophylla	Bigleaf Hydrangea		
Inula ensifolia			
Iris ensata	Sword-Leaved Iris; Jodlesong		
Iris siberica	Siberian Iris; Cabernet		
Juniperus davurica	Parsoni		
Lagerstromia indica x fauriei Lantana montevidensis	Crape Myrtle; Tuscarora Weeping Lantana		
Lavender spp.	Lavender; Munstead		
Leontopodium alpinum	Edelweiss		
Ligustrum sinense	Chinese Privet; Variegata		
Liriope muscari var. variegata	Liriope, Variegated		
Lobelia cardinalis	Cardinal Flower, Indian Pink		
Loropetalum chinense	Burgundy		
Lythrum spp. Miscanthus sinensis	Loosestrife; Modern Pink		
Oenothera missourensis	Yaku Jima**, Silberfeder** Evening Primrose		
Osmanthus heterophyllus	Osmanthus (False Holly): Gulf Tide		
Paeonia suffruticosa	Tree Peony		
Pennisetum setaceum	Fountain Grass (Dwarf)**		
Physostegia virginiana	Dragonhead, False; Vivid		
Quercus shumardii	Oak, Shumard's Red		
Raphiolepsis umbellata	Yedda Hawthorne		
Rhododendron	'Delaware Valley White'		
(including Azalea)	'Flame Creeper' 'Girard Crimson'		
	'George L. Tabor'		
	'Wakeiebisu'		
	'White Gumpo'		
Rudbeckia spp.	Black-Eyed Susan: Goldstrum		
Saxifraga spp.	Saxifrage; Purple Dome		
Scabiosa spp.	Pincushion Flower		
Sedum cauticola	Stonecrop; Lidakense		
Sedum dasyphyllum	Stonecrop: Dragon's Placed		
Sedum spurium Spiraea bumalda	Stonecrop; Dragon's Blood Spirea: Anthony Waterer		
Syzygium paniculatum	Australian Brushcherry		
Teucrium spp.	Germander		
Thalictrum dipterocarpum	Meadow Rue		
Viburnum suspensum	Arrowood Viburnum		

<sup>\*\*</sup>Not for use on container grown plants.

### NEW PLANTINGS, REPLANTING AND ROTATIONAL PLANTINGS

Nursery, landscape, or non-cropped land areas treated with Barricade 4FL 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 48 fl oz/A per year.

#### VEGETATION MANAGEMENT

Barricade 4FL may be applied to soil surfaces for preemergence control of many grass and broadleaf weeds in:

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

#### Weeds Controlled - Vegetation Management

When used as directed in this label Barricade 4FL will control the following weeds:

Barnvardgrass Kochia

Bluegrass, Annual (Poa annua)<sup>1</sup> Lambsquarters, Common

Carpetweed Lovegrass Panicum, (Texas, Fall, Browntop)

Chickweed, Common<sup>1</sup> Chickweed, Mouseear (from seed) Pigweed Crabgrass (Large, Smooth)<sup>3</sup> Crowfootgrass Cupgrass, Woolly Foxtails, Annual Purslane, Common Pusley, Florida Rescuegrass<sup>2</sup> Shepherd's Purse<sup>1</sup>

Goosegrass<sup>3</sup> Henbit<sup>1</sup> Signalgrass, Broadleaf Speedwell, Persian Itchgrass Johnsongrass (from seed) Sprangletop Spurge, Prostrate Junglerice Witchgrass

Knotweed<sup>1</sup> Woodsorrel, Yellow (from seed)

- <sup>1</sup> To control this weed, apply Barricade 4FL in late summer, fall, or winter before weed seeds germinate
- <sup>2</sup> Suppression only.
- <sup>3</sup> Sequential applications may be made as long as the total amount of product applied does not exceed 48 fl oz/A per year (1.5 lb ai/A). To control weeds, all applications must be made before weed seeds germinate

#### Application Timing and Information – Vegetation Management

#### Barricade 4FL:

- 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-thetop spray.
- 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

To reduce injury potential:

- 1. Direct application of Barricade 4FL to rapidly growing tissue or buds may injure desirable plants. In the spring when buds are rapidly growing and expanding, over-the-top application of Barricade 4FL may temporarily injure new growth of desirable plants. To reduce the possibility of injury at this time, wait to apply Barricade 4FL over the top of newly emerged vegetation until it has hardened off unless your experience indicates that the ornamental plant will not be injured by the over-the-top application.
- After application (immediately for deciduous plants), apply overhead irrigation to wash Barricade 4FL from plant surfaces onto soil. Watering plants before application may improve the washing process.

### How Much and When to Apply - Vegetation Management

Amount to Apply (Broadcast)	When to Apply	Comments/Instructions
or	In fall and/or spring before weeds germinate or after weeds are removed.	Use the higher rate for longer control. Barricade 4FL may be applied more than once per year as long as the total amount of product applied does not exceed 2.3 lb/A per year.

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

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

#### Equivalent Measurements for Barricade 4FL

fl oz/A	fl oz/1,000 sq ft	Approximate Equivalent Tablespoons/1,000 sq ft
21	0.48	0.96
32	0.72	1.43
42	0.96	1.91
48	1.10	2.2

#### Application Sites and Use Precautions - Vegetation Management

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

#### Tank Mixtures – Vegetation Management

Barricade 4FL 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 4FL 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 4FL – Vegetation Management

Product	Precautions/Instructions		
Goal® (use on conifers only)	Mix with Barricade 4FL for postemergence control of certain broadleaf weeds including malva and filaree.		
Gallery®, Princep®, Pennant®	See product labels for weed spectrum and tolerant ornamentals.		
A glyphosate-based product, Reward® and Finale®	These non-selective tank mix herbicides control most emerged annual broadleaves and grases.  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.  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\* - Vegetation Management

# \*Not for use on container or field grown ornamentals

Barricade 4FL will not harm most trees, shrubs, vines, and flowers. The species listed below in Table 4 are tolerant to Barricade 4FL. Barricade 4FL is approved for application, except in California, to the species in Table 5. Barricade 4FL 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 4FL.

Table 3: - Tolerant Ornamental Species\* - Vegetation Management - All States

Scientific name	Common name	
Abies spp.	Fir species (Balsam, Fraser, Noble, etc.)	
Acer palmatum	Japanese Maple	
Acer platanoides	Norway Maple***	
Actinidia chinensis	Kiwi**	
Agapanthus africanus	Lily-of-the-Nile (African Lily)	
Arctostaphylos densiflora	Vine Hill Manzanita	
Arctotheca calendula	Cape Weed	
Aucuba japonica	Japanese Aucuba	
Berberis gladwynensis	Barberry	
Berberis julianae	Wintergreen Barberry	
Berberis mentorensis	Mentor Barberry	
Berberis thunbergii	Japanese Barberry	
Berberis verruculosa	Warty Barberry	
Buxus microphylla	Japanese Boxwood	
Callistemon viminalis	Weeping Bottlebrush	
Calluna vulgaris	Scotch Heather	
Carpobrotus edulis	Hottentot Fig (Ice Plant)	
Cassia artemisioides	Feathery Cassia	
Ceanothus rigidus	Wild Lilac	
Chamaecyparis pisifera	False Cypress	
Cleyera japonica	Cleyera	
Citrus spp.	Citrus species**	
Cornus florida	Flowering Dogwood	
Cornus stolonifera	American Dogwood	
Cortaderia selloana	Pampas Grass	
Cotoneaster apiculatus	Cranberry Cotoneaster	
Cotoneaster buxifolius	Cotoneaster	
Cotoneaster dammeri	Bearberry Cotoneaster	
Cotoneaster microphyllus	Rockspray Cotoneaster	
Crataegus spp.	Hawthorne	
Cupressus sempervirens	Italian Cypress	
Delosperma alba	White Trailing Ice Plant	
Dodonaea viscosa	Hop Bush	
Elaeagnus pungens	Silverberry	
Euonymus fortunei	Wintercreeper	
Euonymus japonica	Japanese Spindle Tree (Evergreen Euonymus)	
Euonymus kiautschovicks	Spreading Euonymus	
Fatsia japonica	Japanese Aralia	
Forsythia intermedia	Border Forsythia	
Forsythia viridissima	Greenstem Forsythia	
Gardenia jasminoides	Gardenia, Cape-Jasmine	
Gladiolus spp.	Gladiolus species	
Hedera helix	English Ivy	
Hibiscus	Rose of Sharon	
Hibiscus Rosa-sinensis	Chinese Hibiscus	
Ilex cornuta	Chinese Holly	
Ilex crenata	Japanese Holly	
Ilex opaca	American Holly	
Ilex pernyi	Holly	
Ilex vomitoria	Yaupon Holly	
Iris spp.	Iris species	
Jasminium nudiflorum	Winter Jasmine	
Juniperus chinensis	Chinese Juniper	
Juniperus conferta	Shore Juniper	
Juniperus horizontalis	Creeping Juniper	

Scientific name	Common name		
Juglans spp.	Walnut**		
Justicia brandegeana	Shrimp Plant		
Lagerstromia indica	Crape Myrtle		
Ligustrum amurense	Amur Privet		
Ligustrum japonicum	Japanese Privet		
Ligustrum lucidum	Glossy Privet (Wax-Leaf)		
Lirope muscari	Big Blue Lillyturf		
Lonicera japonica	Japanese Honeysuckle		
Lonicera tatarica Magnolia spp.	Tatarian Honeysuckle		
Malephora luteola	Magnolia species  Ice Plant		
Malus spp.	Crabapple**		
Nandina domestica	Heavenly Bamboo		
Narcissus spp.	Narcissus species		
Nerium spp.	Oleander		
Olea europaea	Olive**		
Ophiopogon japonicus	Mondo Grass		
Osteospermum fruticosum	Trailing African Daisy		
Oxydendrum arboreum	Sourwood		
Persea americana	Avocado**		
Photinia fraseri	Frasier's Photinia (Redtip)		
Picea spp.	Spruce species*** (Colorado Blue, Norway, etc.)		
Pieris japonica Pinus brutia	Lily-of-the-Valley Shrub  Calabrian Pine		
Pinus canariensis	Canary Island Pine		
Pinus elliottii	Slash Pine		
Pinus halepensis	Aleppo Pine		
Pinus nigra	Austrian Black Pine		
Pinus palustris	Longleaf Pine		
Pinus radiata	Monterey Pine		
Pinus strobus	Eastern White Pine		
Pinus sylvestris	Scotch Pine		
Pinus taeda	Loblolly Pine		
Pinus thunbergiana	Japanese Black Pine		
Pinus virginiana	Virginia Pine		
Pistacia spp.	Pistachio**		
Pittosporum rhombifolium Pittosporum tobira	Queensland Pittosporum  Japanese Pittosporum		
Podocarpus macrophyllus	Japanese Yew		
Prunus laurocerasus	English Laurel		
Prunus spp.	Almond, Apricot, Nectarine, Peach, Plum and Prune**		
Pseudotsuga menziesii	Douglas Fir***		
Pyracantha coccinea	Firethorn Scarlet		
Pyracantha fortuneana	Firethorn		
Pyracantha koidzumii	Firethorn		
Pyrus spp.	Bradford Pear spp.		
Quercus rubra Rhaphiolepis indica	Oak species		
Rhododendron (including Azalea)	Indian Hawthorne   'Coral Bells', 'Formosa', 'Hino-crimson', 'PJM',		
Milododenaron (including Azalea)	'Roseum Elegans'		
Rosa banksiae	Lady Bank's Rose		
Rosmarinus officinalis	Rosemary**		
Rumohra adiantiformis	Leatherleaf Fern		
Santolina virens			
Sedum album	Stonecrop		
Syzygium paniculatum	Japanese Boxcherry		
Taxus cuspidata	Japanese Yew		
Taxus media Thuja occidentalis	Yew		
Trachelospermum asiaticum	American Arborvitae Star Jasmine		
Tsuga canadensis	Canada Hemlock		
Tulipa spp.	Tulip species		
Viburnum japonicum	Japanese Viburnum		
Viburnum odoratissimum	Sweet Viburnum		
Viburnum plicatum	Japanese Snowball		
Viburnum rigidum	Canary Island Viburnum		
Viburnum tinus	Laurustinus		
Viburnum trilobum	Cranberry Bush		
Viburnum wrightii	Leatherleaf Viburnum		
Vinca major	Vinca		
Vinca minor	Dwarf Periwinkle		
Vitis spp.	Grape**		
Maigala florida	Old Fashioned Weigela		
Weigela florida	·		
Yucca aloifolia Yucca filamentosa	Spanish Bayonet Yucca, Adam's Needle		

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

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

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

Table 4: - Tolerant Ornamental Species\* - Vegetation Management - All States Except CA

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

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

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

#### Barricade 4FL

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

	Applica	ation Rate		
Site	fl oz/A	fl oz/1,000 sq ft	Timing	Comments/Instructions
Conifer and Hardwood Seedling Nurseries	21 - 48	0.48 – 1.1	Apply in fall or spring before weed seeds germinate or after weeds are removed.	Use higher rate for longer control.     More than one application per year is permitted, but do not apply more than 2.3 lb/A per year.
Southern Pine Seedbeds	16	0.36	Just after seed- ing and/or a minimum of 3 weeks after most seedlings have shed their seedcoat	To assist in the establishment of Southern pine seedbeds, apply this product preemergence just after seeding pines. Application after emergence of pine seedlings should not occur until 3 weeks after most seedlings have shed their seedcoat. Mix this product with clean water and broadcast spray at 20 to 40 psi in a minimum of 20 gal of water per treated area. After application, sprinkler irrigate beds with approximately ½ inch of water.
Hardwood Seedbeds: Oak (Quercus spp.), Sweetgum, Green Ash	16 -32	0.36 – 0.72	When seedlings are at least 6 weeks old (from time of 50% germination)	Use higher rate for longer control and when higher weed pressure is anticipated. The lower rate will provide 2 to 3 months of weed control. Broadcast to beds and apply approximately ½ inch of sprinkler irrigation afterwards.

#### Tank Mixtures - Conifer Seedling Nurseries - Vegetation Management

Barricade 4FL 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 4FL are for use only in states where the tank mix partner, application site and intended use pattern are registered.

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

### Tank Mixing and Application - Vegetation Management Tank Mix Partner for Barricade 4FL – Conifer Seedling Nurseries

Product	Precautions/Instructions
Goal (use on conifers only)	Mix with Barricade 4FL for postemergence control of certain broad- leaf weeds including malva and filaree.

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

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

	Application Rate			
Site	fl oz/A	fl oz/1,000 sq ft	Timing	Comments/ Instructions
Non Crop Areas, including ornamentals, on or surrounding managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, and equipment yards)	21 - 48	0.48 – 1.10	Before weed seeds germinate	Use higher rate for longer control.     This product may be applied more than once per year but do not apply more than 2.3 lb/A per year.
Facilities including substations, tank farms, pumping stations, parking and storage areas, and ungrazed fence rows				

Barricade 4FL 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 4FL are for use only in states where the tank mix partner(s) are registered for the application site.

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

Tank Mix Partners with Barricade 4FL - Vegetation Management

Products	Comments
A glyphosate-based product¹, Gramoxone®, Reward, Princep, Vanquish®, diuron-based productŝ¹, Finale, Gallery, Garlon®, Goal, Krovar IVM, Oust®, Arsenal®, Spike™, and Telar®	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.     Do not mix Barricade 4FL with any product whose label prohibits mixing with another pesticide.

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

# STORAGE AND DISPOSAL

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

#### **Pesticide Storage**

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.

#### **Pesticide Disposal**

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

#### Container Handling (less than 5 gallons)

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of container in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke

#### Container Handling (Bulk/Mini-bulk)

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container \(^1\)\set4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### Chemigation

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

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Arsenal® is a trademark of BASF

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

Manufactured for: Syngenta Crop Protection, LLC P.O. Box 18300 Greensboro, North Carolina 27419-8300

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