

100-1139

10-23-2001

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg.
Number:
100-1139

Date of Issuance:
OCT 23 2001

Term of Issuance:
Conditional

Name of Pesticide Product:
Barricade® 4SC
Herbicide

NOTICE OF PESTICIDE:

Registration
Reregistration

(Under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is registered in accordance with FIFRA sec. 5(c)(7)(A), provided that you comply with the following requirements:

1. Submit/cite all data required for the registration of your product when the Agency requires all registrants of similar products to submit data.

Comments 2, 3, 4 and 5 are on page 2 of this Notice.

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

Enclosure

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

Signature of Approving Official:

Joanne I. Miller

Date:

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2. Below the ingredient statement state the pounds of active ingredient, prodiamine per gallon. On page 5 of the labeling delete the word "jar" from the "Compatibility Test".
 3. On page 24, either add a telephone number for information on where to return refillable container, or add a statement to the record for this product that a phone or electronic site will accompany refillable containers.
 4. Submit the required Storage and Stability Study (EPA Guidelines Reference No. 830.6317) within 8 months from the date of this Notice.
 5. Submit the required Corrosion Characteristics Study (EPA Guidelines Reference No. 830.6320)) within 8 months from the date of this Notice.
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**ACCEPTED
with COMMENTS
In EPA Letter Dated
OCT 23 2001**

**Barricade® 4SC
HERBICIDE**

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
100-1139**

Active Ingredient:	
Prodiamine*	40.7%
Other Ingredients:	59.3%
Total:	100.0%

*(CAS No. 29091-21-2)

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-
EPA Est.

1, 30, or 110 Gallons
Net Contents

[label code]
June 7, 2001



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CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

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

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

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

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.



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DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

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

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

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

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

- Coveralls
- Chemical-resistant gloves such as butyl rubber >14 mils or natural rubber >14 mils or neoprene rubber >14 mils or nitrile rubber >14 mils
- Shoes plus socks

WHERE TO USE

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

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- 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 4SC WORKS

Barricade 4SC controls susceptible weeds by preventing growth and development of newly germinated weeds. Weed control is most effective when Barricade 4SC 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 4SC.
- (2) Follow all applicable directions, restrictions, and precautions on the labels of EPA-registered tank-mix partners.
- (3) Do not blend Barricade 4SC 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.

MIXING AND APPLICATION

Mixing Barricade 4SC Alone

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

- (1) Fill the spray tank $\frac{1}{4}$ full with clean water only.
- (2) Start agitation and check to ensure it is working properly.
- (3) For tank mixing instructions, refer to the section "**Mixing Order for Tank Mixtures**"

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- (4) Maintain vigorous agitation in the spray tank before and during the application. This will ensure a well-mixed spray suspension. If Barricade 4SC was mixed with fertilizer in the spray tank, the fertilizer may aid re-suspension of Barricade 4SC if agitation is disrupted. However, it is recommended that the entire tank be used before stopping agitation.
- (5) A spray colorant may be used with Barricade 4SC to mark areas as they are treated. This will improve application accuracy by minimizing swath skips and overlaps.
- (6) Thoroughly clean the sprayer after use by flushing the system with water containing a detergent.
- (7) 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 4SC

Barricade 4SC 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 refer to the label(s) of the individual tank mix partner(s) for use rate, application timing, weeds controlled, and specific precautions and/or restrictions. Tank mixes are permitted only in states where the tank mix partner(s) are registered for the application site and the turf and ornamental species listed. When using Barricade 4SC in a tank mixture with other pesticides, follow restrictions 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 4SC 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: A 1-quart jar would be 1/100 the volume of a 25 gal/A spray rate. At 1 lb./A, the Barricade 4SC rate would be proportional to 6 ml per quart. Add approximately 1 teaspoons to a quart of water.

(See following table)

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

Component Formulations	Rate Per		Level Teaspoons
	Acre	1000 Sq. Ft.	
Barricade 4SC	21 oz.	0.5 oz.	1
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. 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 not tank mix.

Mixing Order for Tank Mixtures

- Notes:**
- (1) When mixing Barricade 4SC 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.
- (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 Barricade 4SC, other flowable liquids (FL) or suspension concentrates (SC).
- (5) Add emulsifiable concentrates (EC) last.

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Application

Apply Barricade 4SC 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

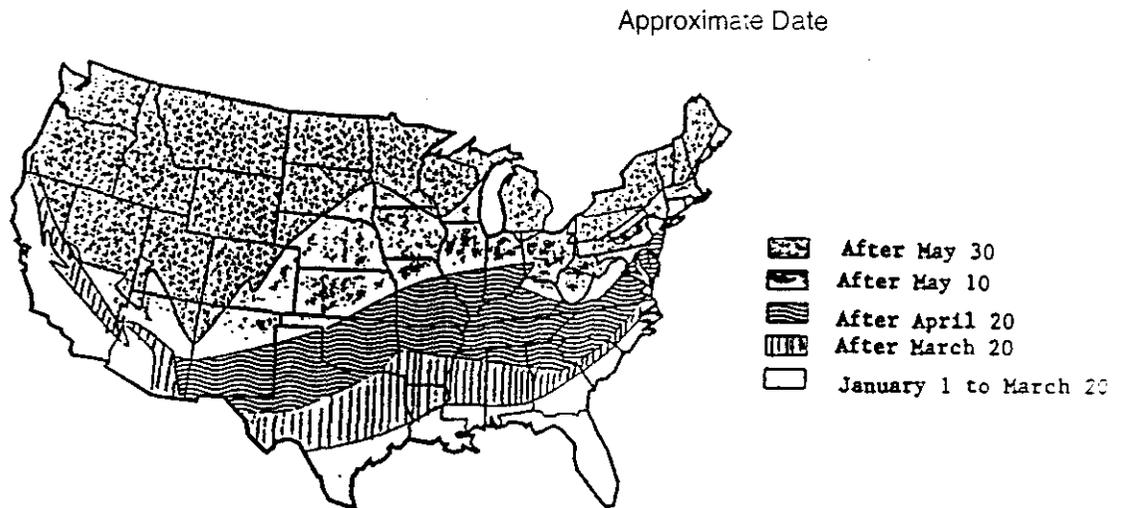
Barricade 4SC is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turfgrasses including:

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

The maximum amount of Barricade 4SC 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 4SC 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 Restrictions - Turfgrass: Golf Courses, Lawns, Sod Nurseries

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1. Do not apply Barricade 4SC 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 4SC 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 weed control.
5. ***Do not apply Barricade 4SC to golf course putting greens***
6. If you consistently mow creeping bentgrass at a height of less than 0.5 inches do not apply Barricade.

Application Timing and Rate - Turfgrass

Barricade 4SC 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 4SC will not control weeds that have already emerged.**

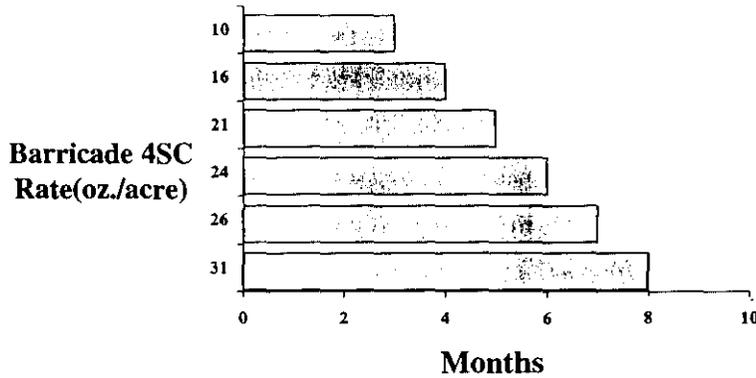
The amount of Barricade 4SC to apply depends upon:

- 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)

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Barricade 4SC, Length of Crabgrass Control*



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

Annual Use Rates –(Turfgrass)

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

Maximum Application Rate of Barricade Per Calendar Year by Turf Species		
Turf Species	Oz. Product/A	Oz. Product/1000 ft ²
Bermudagrass ² Bahia grass Centipedegrass Kikuyugrass Seashore Paspalum St. Augustinegrass ³ Tall Fescue (including turf-type) Zoysiagrass	21 -48 ¹	0.5 to 1.1
Buffalograss Kentucky Bluegrass Perennial Ryegrass	10 to 30 ¹	0.23 to 0.70
Fine Fescue	10 to 24 ¹	0.23 to 0.55
Creeping Bentgrass (0.5 inch or more in height ⁴)	10 to 21 ¹	0.23 to 0.48

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- ¹ Barricade 4SC 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 17 oz./A (0.39 oz./1000 sq. ft.). Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily inhibited.
- ³ Use an initial rate of 16 to 32 oz./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

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

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

- ¹ In those areas where *Poa annua* is a winter annual, apply Barricade 4SC (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 4SC in late summer, fall, or winter before weeds germinate.
- ³ **Fall Applications for Spring Crabgrass Control in Cool-Season Grasses.** In those areas where the ground freezes in the winter, Barricade 4SC can be applied in the fall at rates of 21 to 24 oz./A after soil temperatures fall below 50°

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F, but before the ground freezes. This application will control crabgrass the following spring.

⁴Suppression only

⁵ In many areas a single application of 21 to 48 oz/A of Barricade 4SC 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 to 26 oz/A followed by a second application 60 to 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 4SC After Overseeding Turf

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

When to Overseed After Application - All States

Barricade 4SC 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 4SC Ozs. ProductA	Interval (Months Before Overseeding)*		
	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

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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 Barricade 4SC and When to Apply

Amount to Apply	When to Apply	Expected Control	Use Precautions
12- 21 oz/A*	6 to 8 weeks before ryegrass overseeding <i>second application: 4 to 8 weeks after</i> overseeding or when perennial ryegrass roots are in the second inch of soil	1 application for 70% or greater control of <i>Poa annua</i> <i>second application may enhance control</i>	(1) Some seedling mortality and temporary reduction in root growth of new seedlings may occur. (2) 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 oz/A per year. (4) Do not make a second application if any injury to the ryegrass is observed after the first application. (5) Do not make a second application unless the product was first applied before overseeding.

*The amount of Barricade 4SC to apply depends upon:

- 1) The length of residual control desired (the higher the application rate the longer the control). NOTE: The higher the rate, the greater the potential for seedling mortality.

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

Application, Timing, and Information

Barricade 4SC:

- (1) Will not control emerged weeds.
- (2) 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 mulch.
- (4) Is activated when the treated area receives at least 0.5 inch of Irrigation or rainfall, or shallow (1-2 inches) mechanical incorporation..
- (5) Is most effective when the product is activated in the soil before weed seeds germinate and within 14 days after application.

Use Precautions:

To reduce injury potential:

- a. Direct application of Barricade 4SC 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 4SC 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 4SC 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.
- b. After application immediately apply overhead irrigation to the foliage to wash Barricade 4SC from plant surfaces onto soil. (Watering the foliage of plants before application may improve the washing process.)

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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 4SC is applied, perform shallow cultivation or hand weeding only, to avoid disturbing the herbicide barrier.
In Shadehouses and Uncovered Polyhouses	After Barricade 4SC 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 before covering.
Ornamental Bulbs and Perennial Wildflower Plantings	<ol style="list-style-type: none">1. Barricade 4SC 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.

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How Much Barricade 4SC and When to Apply - Ornamentals

Amount to Apply (Broadcast)*	When to Apply	Comments/Instructions
21 – 48 oz/A or 0.5 – 1.1 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 4SC may be applied more than once per year as long as the total amount of product applied does not exceed 48 oz/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 4SC

ozs/A	oz./1000 sq. ft	Approximate Equivalent - Tablespoons/1000 sq. ft.
21	0.5	1
31	0.7	1 ½
42	1.0	2
48	1.1	2 ¼

Tank Mixtures For Use On Ornamentals

Barricade 4SC 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 4SC 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.

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Tank Mix Partners for Barricade 4SC on Ornamentals

Product	Precautions/Instructions
Goal® (use on conifers only)	(1) Mix with Barricade 4SC for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Princep®, Pennant Magnum™	See product labels for weed spectrum and tolerant ornamentals.
Touchdown Pro®, Roundup® or other glyphosate-based products, Finale®	(1) These non-selective tank-mix herbicides control most many 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

The species listed below in Table 1 are tolerant to Barricade. Barricade 4SC may be used for application, except in California, to the species in Table 2. Barricade 4SC may be applied over the top of the listed species. The species that are not tolerant to Barricade 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 4SC.

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Table 1 - Tolerant Ornamental Species - All States

Scientific name	Common name
<i>Abies</i> spp.	Fir species** (Balsam, Fraser, Noble, etc.)
<i>Acer palmatum</i>	Japanese Maple
<i>Acer platanoides</i>	Norway Maple
<i>Actinidia chinensis</i>	Kiwi*
<i>Agapanthus africanus</i>	Lily-of-the-Nile (African Lily)
<i>Arctostaphylos densiflora</i>	Vine Hill Manzanita
<i>Arctotheca calendula</i>	Cape Weed
<i>Aucuba japonica</i>	Japanese Aucuba
<i>Berberis gladwynensis</i>	Barberry
<i>Berberis julianae</i>	Wintergreen Barberry
<i>Berberis mentorensis</i>	Mentor Barberry
<i>Berberis thunbergii</i>	Japanese Barberry
<i>Berberis verruculosa</i>	Warty Barberry
<i>Buxus microphylla</i>	Japanese Boxwood
<i>Callistemon viminalis</i>	Weeping Bottlebrush
<i>Calluna vulgaris</i>	Scotch Heather
<i>Carpobrotus edulis</i>	Hottentot Fig (Ice Plant)
<i>Cassia artemisioides</i>	Feathery Cassia
<i>Ceanothus rigidus</i>	Wild Lilac
<i>Chamaecyparis pisifera</i>	False Cypress
<i>Cleyera japonica</i>	Cleyera
<i>Citrus</i> spp.	Citrus species*
<i>Cornus florida</i>	Flowering Dogwood
<i>Cornus stolonifera</i>	American Dogwood
<i>Cortaderia selloana</i>	Pampas Grass
<i>Cotoneaster apiculatus</i>	Cranberry Cotoneaster
<i>Cotoneaster buxifolius</i>	Cotoneaster
<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster
<i>Cotoneaster microphyllus</i>	Rockspray Cotoneaster
<i>Crataegus</i> spp.	Hawthorne
<i>Cupressus sempervirens</i>	Italian Cypress
<i>Delosperma alba</i>	White Trailing Ice Plant
<i>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>	

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**Not for use on container grown plants.

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<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

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** Not for use on container grown plants

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<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>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

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**Not for use on container grown plants.

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<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>Crocasmia</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

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<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
Lavender spp.	Lavender; Munstead
<i>Leontopodium alpinum</i>	Edelweiss
<i>Ligustrum sinense</i>	Chinese Privet; Variegata
<i>Lilium</i> spp.	Lily: Jazz
<i>Liriope muscari</i> var. <i>variegata</i>	Liriope, Variegated
<i>Liriope spicata</i>	Liriope, Creeping
<i>Lobelia cardinalis</i>	Cardinal Flower, Indian Pink
<i>Loropetalum chinense</i>	Burgundy
<i>Lythrum</i> spp.	Loosestrife; Modern Pink
<i>Miscanthus sinensis</i>	Yaku Jima**, Silberfeder**
<i>Oenothera 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>	Spiraea: Anthony Waterer
<i>Syzygium 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

Nursery, landscape, or non-cropped land areas treated with Barricade 4SC 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 oz/A per year

STORAGE AND DISPOSAL

Storage

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

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 Disposal

(1 gallon plastic)

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of container in a sanitary landfill, or incinerate, or burn if allowed by state and local authorities. Stay out of smoke from burning container.

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(30 and 110-gallon reusable containers)

This is a refillable container that must be returned to an authorized Syngenta refilling facility for refilling or disposal.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

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

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

FIRST AID	
If swallowed	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice• Have a 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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.
HOT LINE NUMBER	
In the event of a major fire, spill, or other emergency call 1-800-888-8372 day or night.	

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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, 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.

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 clean clothing.
- After handling this product immediately remove PPE, wash yourself 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.

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