

8378-38

04-15-2010

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

APR 15 2010

Mr. Robert F. Bischoff
Agent, Total Turf Consulting LLC
Knox Fertilizer Company, Inc.
P.O. Box 248
Knox, IN 46534

RE: Notification of Removal of Toll Free Number from the Disposal Instructions Section
EPA Registration Number: 8378-38
Date of Submission: March 23, 2010

Dear Mr. Bischoff:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-1 dated March 23, 2010, for the above mentioned product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 2007-1 and finds that the actions requested fall within the scope of PRN 2007-1. The label submitted with the application has been stamped "Notification" will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Joyce Edwards of my staff at 703-308-5479.

Sincerely,

A handwritten signature in cursive script that reads "Linda Arrington".

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs



United States
Environmental Protection Agency
 Washington, DC 20460

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

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 8378-38	2. EPA Product Manager Kathryn Montague	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Shaw's Turf Food/Crabgrass Control Barricade 20	PM# 23	
5. Name and Address of Applicant (Include ZIP Code) Knox Fertilizer Company, Inc. P. O. Box 248 Knox, IN 46534 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. <u>N/A</u> Product Name <u>N/A</u>	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____	NOTIFICATION APR 15 2010
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.	
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.	

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of label change relative to PR Notice 2007-1. This notification is consistent with the guidance in PR Notice 2007-1 and the requirements of EPA's regulations at 40 CFR 156.10 and 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec.1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the guidance of PR Notice 2007-1 and the requirements of 40 CFR 156.10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 50 lbs		5. Location of Label Directions <input checked="" type="checkbox"/> on label	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph Paper glued Stenciled				<input checked="" type="checkbox"/> Other <u>Booklet/Printed Bag</u>	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Robert F. Bischoff	Title Agent, TotalTurf Consulting LLC	Telephone No. (Include Area Code) (317) 873-0222
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature <i>Robert F. Bischoff</i>	3. Title Agent, TotalTurf Consulting LLC	
4. Typed Name Robert F. Bischoff	5. Date March 23, 2010	

TotalTurf Consulting LLC
26 A. A. Cooper Rd.
Meigs, GA 31765

Direct: 843-384-2807
Fax: 229-683-3426

E-Mail: rbcooper@juno.com

March 23, 2010

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7505P)
U. S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

Attn: Linda Arrington

Subject: Shaw's Turf Food/Crabgrass Control Barricade 20
EPA Reg. No. 8378-38
Notification per PR Notice 2007-1
Removal of Toll Free Number from the Disposal Instructions Section

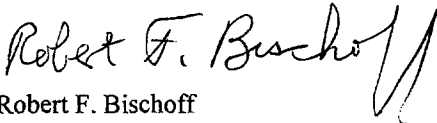
As allowed by PR Notice 2007-1 (Section II.C.3.), the subject product label has been revised to show the removal of the statement "or 1-800-CLEANUP" from the Disposal Instructions Section. The revised label is being submitted by notification on behalf of Knox Fertilizer Company, P. O. Box 248, Knox, IN 46534 by TotalTurf Consulting LLC, an authorized agent for Knox Fertilizer Company.

The following documents are included in the subject submission:

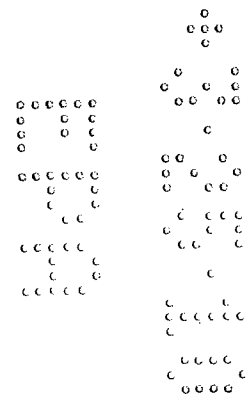
- Cover Letter
- Application for Pesticide (EPA Form No. 8570-1)
- One Copy of Highlighted Final Printed Label (Coded as 20100323.Final Label (PRN2007-1)) (Pages 1-4)
- One Copy of Highlighted Final Printed Supplemental Label (Coded as 20100323.Final Label (PRN2007-1)) (Pages 5-10)

If there are any questions or additional information is needed concerning this submission, do not hesitate to contact me at (317) 873-0222 or Raymond B. Cooper at (843) 384-2807.

Sincerely,



Robert F. Bischoff
Agent
TotalTurf Consulting LLC
26 A. A. Cooper Road
Meigs, GA 31765



Shaw's Turf Food/Crabgrass Control Barricade® 20

For Preemergence Control of Grass and Broadleaf Weeds in Established Turf Grasses, (excluding golf course putting greens) and Lawns - Also for Landscape Ornamentals Including Established Perennials and Wildflower Plantings (See Supplemental Label).

ACTIVE INGREDIENT:

Prodiamine [N³,N³-Di-*n*-propyl-2,4-dinitro-6-(trifluoromethyl)-*m*-phenylenediamine] 0.20%

INERT INGREDIENTS: 99.80%

TOTAL 100.00%

KEEP OUT OF REACH OF CHILDREN CAUTION

See the following section, Precautionary Statements, Hazards to Humans and Domestic Animals, for additional information. Barricade® is a Registered Trademark of Syngenta.

EPA REG. NO. 8378-38

EPA EST. NO. 8378-IN-1

NOTIFICATION

APR 15 2010

GUARANTEED FERTILIZER ANALYSIS

Total Nitrogen (N) XX%
Available Phosphoric Acid (P2O5) XX%
Soluble Potash (K2O) XX%
Ingredients: Ureaformaldehyde, Urea, Sulfur Coated Urea, Ammonium Phosphate, Muriate of Potash

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye injury (irritation). Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Prolonged or frequent repeated skin contact while handling the material may cause allergic reactions in some individuals.

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 by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing. 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 to 20 minutes. 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 ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice. Have the product container or label with you when calling a poison control center, or doctor, or going for treatment.

ENVIRONMENTAL HAZARDS

This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations 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 washwaters.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container away from other fertilizer, feed, or foodstuffs and separated from other pesticides.

PESTICIDE DISPOSAL: IF EMPTY: Do not reuse this bag. Place in trash or offer for recycling if available. **IF PARTLY FILLED:** Call

your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain. **If product is spilled,** sweep up and use as per label instructions or dispose of as indicated above. **CONTAINER DISPOSAL:** Nonrefillable container.

Do not reuse or refill this container, offer for recycling if available.

DIRECTIONS FOR USE

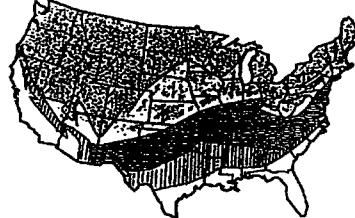
It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This product is a turf fertilizer and a pre-emergence herbicide that provides residual control of many grass and broadleaf weeds in established turf grasses (excluding golf course putting greens), and lawns, landscape ornamentals, established perennials and wildflower plantings. It controls susceptible weeds by inhibiting weed seeds germination and root development. Most effective weed control will be obtained when it is activated by at least 1/2 inch of rainfall, irrigation, or shallow (1 to 2 inches) incorporation, prior to weed seed germination and within 14 days following application.

Not for use on plants being grown: (1) for sale or other commercial use; (2) for commercial seed production or; (3) for research purposes. For use on plants intended for esthetic purposes or climatic modification and being grown in ornamental gardens, or parks, or on golf courses or lawns and grounds. Do not graze or feed livestock forage cut from areas treated with this product. Do not apply aerially. Do not apply to golf course putting greens. Failure to follow the directions for use and precautions on this label may result in poor weed control, crop injury, or illegal residues.

ESTABLISHED TURF

This product is a pre-emergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turf grass and lawns. The maximum amount of material that may be applied per year is given for each turf grass species in the Maximum Annual Rates section of this label. Most effective weed control in turf grasses will be obtained when this product is activated by at least 1/2 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application. See the map for approximate crabgrass seed germination dates.

Crabgrass Seed Germination Dates



- Approximate Date**
- After May 30
 - After May 10
 - After April 20
 - After March 20

USE PRECAUTIONS

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

Rates of Application

This product may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications must be made prior to germination of the target weeds. This product will not control established weeds. Maximum use rate selection should be based on turf species. The length of time of residual weed control provided by this product is related to the rate applied.

Maximum Annual Rates

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

Maximum Application Rate/Calendar Year Of Product by Turf Grass Species ⁽¹⁾		
Turf Species	Lbs. Product/Acre	Lbs. a.i./Acre
Creeping Bentgrass	330 lbs.	0.65 lb.
Creeping Red Fescue	370 lbs.	0.75 lb.
Buffalograss	500 lbs.	1.00 lb.
Kentucky Bluegrass	"	"
Perennial Ryegrass	"	"
Bermudagrass ⁽²⁾	750 lbs.	1.50 lb.
Bahiagrass	"	"
Centipedegrass	"	"
Seashore Paspalum	"	"
St. Augustinegrass	"	"
Tall Fescue (including turf type)	"	"

Zoysia	"	"
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(1) These are the maximum rates per calendar year by species limitations. (2) May be used on newly-sprigged or plugged Bermudagrass at rates not to exceed 260 lbs./A. Newly-sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded. Suppression only of Foxtail, Goosegrass and Rescuegrass due to reduced product rates used in sprigging situations. Do not apply more than 750 lbs. of this product per calendar year. Use higher rates of product to achieve higher levels of fertility and longer periods of weed control for each turf type, but do not exceed the maximum application rates specified in the Maximum Annual Rates section.

WEEDS CONTROLLED

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

Barneygrass	Henbit	Purslane, common
Bluegrass, Annual (Poa Annua)	Itchgrass	Pursley, Florida
Carpetweed	Johnsongrass (from seed)	Rescuegrass ⁽³⁾
Chickweed, Common	Junglerice	Shepherd's Purse ⁽²⁾
Chickweed, Mouseear (from seed)	Knotweed	Signalgrass, Broadleaf
Crabgrass (Large, Smooth)	Kochia	Speedwell, Persian
Crowfoot grass	Lambsquarter, common	Sprangletop
Cupgrass, Woolly	Lovegrass	Spurge, Prostrate
Foxtails, Annual	Panicum (Texas, Fall, Browntop)	Witchgrass
Goosegrass ⁽¹⁾	Pigweed	Woodsorrel, Yellow (from seed)

(1) In many areas a single application of 330 to 750 lbs/A will control goosegrass. However under heavy goosegrass pressure and/or an extended growing season, most effective weed control may be obtained by making an initial application of 330 to 500 lbs./A followed after 60 to 90 days by a second application at doses that would not exceed those given in the Maximum Annual Rate section. Do not exceed the maximum rate for turf grass species listed in the Maximum Annual Rate section. (2) Application for this weed should be made in late summer, fall, or winter prior to germination. (3) Suppression Only. Sequential application may be made as long as the total amount of product applied does not exceed the maximum annual application rates recommended for each turf species. All applications must be made prior to germination of the weed seeds.

WHEN TO APPLY AFTER OVERSEEDING TURF

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

WHEN TO OVERSEED AFTER APPLICATION

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

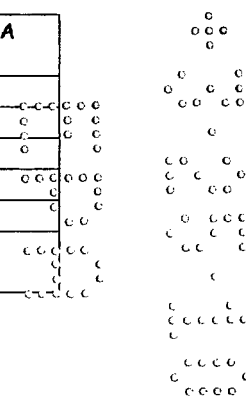
Product rate lbs./Acre		Months Before Overseeding		
Product	a.i./A	North	Transition	South
250	0.50	4	4	4
330	0.65	5	4	4
370	0.75	6	5	5
400	0.80	-	6	6
500	1.00	-	7	7
570	1.14	-	-	9
650	1.30	-	-	10
750	1.50	-	-	12

Application Directions

Apply uniformly with suitable, calibrated application equipment.

Spreader Recommendations

Spreader settings for 1000 sq. ft.	370 lbs. Product/A	500 lbs. Product/A	750 lbs. Product/A
Scott's Evergreen 18"	XX	XX	XX
Scott's Speedy Brdct.	XX	XX	XX
Red Devil Broadcast	XX	XX	XX
Republic EZ Drop 18"	XX	XX	XX
Republic EZ Broadcast	XX	XX	XX
Republic EZ Trctr. Brdct.	XX	XX	XX



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20100323.Final Label (PRN2007-1)

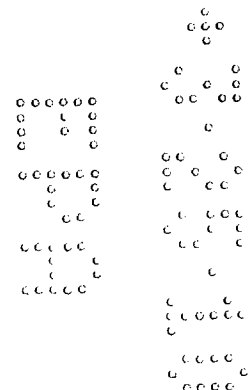
Calibrate your spreader according to the manufacturer's directions. Initial spreader setting may require adjustment to deliver the recommended Application rate under actual application conditions. Apply this product uniformly over the area to be treated. Avoid streaking, skips and overlaps during application. Calibration of spreader may be needed if conditions of area to be treated changes and rate or speed of application are changed.

NOTICE: Buyer and user assume all risk and liability of use, storage and/or handling of this product not in accordance with the terms of this label. If these terms are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid.

***FOR USE ON LANDSCAPE ORNAMENTALS**
(including Established Perennials and Wildflower Plantings). This product may be applied for residual preemergence weed control in ornamental plantings.
FOR COMPLETE DETAILS AND DIRECTIONS FOR USE ON ORNAMENTAL PLANTS REFER TO THE SUPPLEMENTAL LABEL FOR USE OF THIS PRODUCT ON LANDSCAPE ORNAMENTALS.

NET WEIGHT XX LBS.
KNOX FERTILIZER COMPANY, INC.
P.O. BOX 248
KNOX, IN 46534

Batch No.



Supplemental labeling

Shaw's Turf Food/Crabgrass Control Barricade® 20

For Preemergence Control of Grass and Broadleaf Weeds in Landscape Ornamentals Including Established Perennials and Wildflower Plantings.

ACTIVE INGREDIENT:

Prodiamine [N ³ ,N ³ -Di- <i>n</i> -propyl-2,4-dinitro-6-(trifluoromethyl)- <i>m</i> -phenylenediamine]	0.20%
INERT INGREDIENTS:	99.80%
TOTAL	100.00%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

See the following section, Precautionary Statements, Hazards to Humans and Domestic Animals, for additional information.
Barricade® is a registered trademark of Syngenta

PA Reg. No. 8378-38

EPA Est. No. 8378-IN-1

NOTIFICATION

APR 15 2010

GUARANTEED FERTILIZER ANALYSIS

Total Nitrogen (N)	XX%
Available Phosphoric Acid (P2O5)	XX%
Soluble Potash (K2O)	XX%
Ingredients: Ureaformaldehyde, Urea, Sulfur Coated Urea, Ammonium Phosphate, Muriate of Potash	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye injury (irritation). Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact while handling the material may cause allergic reactions in some individuals.

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 by a poison control center or doctor. No not give anything by mouth to an unconscious person.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing. 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 to 20 minutes. 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 ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice. Have the product container or label with you when calling a poison control center, or doctor, or going for treatment.


ENVIRONMENTAL HAZARDS

This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations 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 washwaters.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container away from other fertilizer, feed, or foodstuffs and separated from other pesticides.

PESTICIDE DISPOSAL: IF EMPTY: Do not reuse this bag. Place in trash or offer for recycling if available. **IF PARTLY FILLED:** 

your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain. If product is spilled, sweep up and use as per label instructions or dispose of as indicated above. **CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container, offer for recycling if available.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This product is a preemergence herbicide that provides residual control of many grass and broadleaf weeds in established landscape ornamentals, established perennials and wildflower plantings. It controls susceptible weeds by inhibiting weed seeds germination and root development. Most effective weed control will be obtained when it is activated by at least 1/2 inch of rainfall, irrigation, or shallow (1 to 2 inches) incorporation, prior to weed seed germination and within 14 days following application.

Not for use on plants being grown for: (1) Sale or other commercial use; (2) for commercial seed production or; (3) for research. For use on plants intended for esthetic purposes or climatic modification and being grown in ornamental gardens, or parks, or on golf courses and grounds. Do not graze or feed livestock forage cut from areas treated with this product. Do not apply this product through any type of irrigation systems. Do not apply aerially. Do not apply to golf course putting greens. Failure to follow the directions for use and precautions on this label may result in poor weed control, crop injury, or illegal residues.

Application Directions

Apply uniformly through suitable, calibrated, hand held, push or pull type granule spreader equipment. See "Spreader Recommendations" section for spreader setting and calibration instructions.

Rates of Application

This product may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications must be made prior to germination of the target weeds. It will not control established weed. The length of time of residual weed control provided by this product is related to the rate applied.

WEEDS CONTROLLED

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

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

(1) In many areas a single application of 330 to 750 lbs./A will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective weed control may be obtained by making an initial application of 330 to 500 lbs./A followed after 60 to 90 days by a second application at doses that would not exceed a total of 750 lbs. per acre. (2) Application for this weed should be made in late summer, fall, or winter prior to germination. (3) Suppression Only. Sequential application may be made as long as the total amount of product applied does not exceed the maximum annual application rate of 750 lbs. per acre. All applications must be made prior to germination of the weed seeds.

LANDSCAPE ORNAMENTALS

Including Established Perennials and Wildflower Plantings

This product may be applied for residual preemergence weed control in ornamentals.

Use Rates

Apply at 7.57 to 17.20 lbs./1,000 sq. ft. (equiv. to 330 to 750 lbs./A) in fall and/or spring. Use higher rates of application for longer control periods. Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rate of 750 lbs./acre.

Application Timing and Information

This product is a preemergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when this product is activated by at least 0.5 inches of rainfall or irrigation, or with shallow (1 to 2 inches) mechanical incorporation, prior to weed seed germination and within 14 days following application. Best weed control is obtained when this product is applied to soil free of clods, weeds and debris such as leaves. Prior to application of this product, control existing vegetation by hand weeding, cultivation, or the use of an appropriate postemergence herbicide.

Established Landscape Ornamentals

This product may be applied to established ornamentals as a broadcast, over the top, or directed application. Irrigation or rainfall soon after application will wash residues off plant foliage and activate it into the soil.

Newly Transplanted Landscape Ornamentals

This product may be applied to newly transplanted ornamentals as a broadcast, over the top, or directed application. Delay application to allow soil to settle around new transplants and water thoroughly before applying this product. Apply after cuttings form roots and become established. Apply before budding/grafting or after buds/grfts have taken to avoid any inhibition of the tissue union.

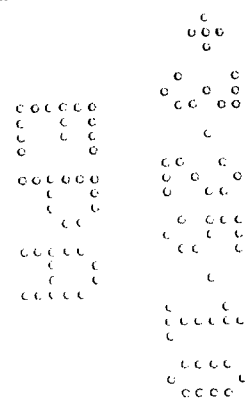
Tolerant Ornamental Species

This product will not harm most trees, shrubs, vines and flowers. The species listed below are tolerant to this product. Best results will be obtained when this product is uniformly applied to the soil surface; avoid applying to ornamental shoots which may defeat the effort to get uniform distribution on the surface. This product may be applied over the top of these species provided spray residue on shoots of plants is washed to the soil by over the top irrigation or by adequate rain soon after application. When plants are under stress (such as heat, drought or frost damage) some cultivars of listed plants may be sensitive to this product.

Scientific Name

Common Name

Abies spp.	Fir species** (Balsam, Fraser, Noble, etc.)
Abelia grandiflora	Abelia: Sherwood
Acer palmatum	Japanese Maple
A. platanoides	Norway maple
Achillea, sp.	Yarrow: King Edward
Actinidia chinensis	Kiwi*
Agapanthus africanus	Lily-of-the-Nile (African Lily)
Agapanthus orientalis	
Akebia quintata	Five-Leaf or Chocolate vine
Allium cernuum	Lady's Leek, Nodding Onion
Anemone hybrida	Japanese Anemone
Aquilegia sp.	Aquilegia; Red and Gold
Arctostaphylos densiflora	Vine Hill Manzanita
Arctotheca calendula	Cape Weed
Artemisia sp.	Wormwood; Silver Mound, Castle
Aster sp.	Aster: Bonny Blue, Purple Dome
Aster X Frikartii	
Athrium Filiz-femina	Lady Fern; Fern Lady
Aucuba japonica	Japanese Aucuba
Begonia sp.	Fibrous Begonia; Hardy Grandis
Berberis gladwynensis	Barberry
B. Julianae	Wintergreen Barberry
B. mentorensis	Mentor Barberry
B. thunbergii	Japanese Barberry
B. Verruculosa	Warty Barberry
Bergenia cordifolia	
Boltonia asteroides	Snowbank
Bougainvillea spp.	Bougainvillea
Buddleia davidii	Butterfly-bush (Dwarf Blue); Royal Red
Buxus microphylla	Japanese Boxwood
Callistemon viminalis	Weeping Bottlebrush
Calluna vulgaris	Scotch Heather
Campanula carpatica	Tussock Bellflower, (White Clips)
Campis X Tagliabuana	Trumpet Creeper, Trumpet Flower, Madame Galen
Carpobrotus edulis	Hottentot Fig (Ice Plant)
Cassia artemisoides	Feathery Cassia
Ceanothus rigidus	Wild Lilac
Ceratostigma plumbagonoides	
Chamaecyparis pisifera	False Cypress
Chrysanthemum nipponicum	
Cleyera japonica	Cleyera
Citrus spp.	Citrus species*
Coreopsis sp.	Coreopsis (Calliopsis); Early Sunrise, Moonbeam
Cornus florida	Flowering Dogwood
C. stolonifera	American Dogwood
Cortaderia selloana	Pampas Grass
Cotoneaster apiculatus	Cranberry Cotoneaster
C. buxifolius	Cotoneaster
C. dammeri	Bearberry Cotoneaster
C. microphyllus	Rockspray Cotoneaster
Cretaegus spp.	Hawthorne
Crocosmia sp.	Lucifer
Cupressus sempervirens	Italian Cypress
Delosperma alba	White Trailing Ice Plant



Delosperma sp.

Cooperi Pink

Scientific Name

Delphinium sp.
 Dianthus deltoides
 D. gratianopolitanus
 Dodonea viscosa
 Echinacea pupurea
 Elaeagnus pungens
 Euonymus fortunei
 E. japonica
 E. kiautschovica
 Fatsia japonica
 Forsythia intermedia
 Forsythia suspensa
 F. viridissima
 Gaillardia sp.
 Gardenia jasminoides
 Gaura sp.
 Gentiana dahurica
 Geranium cinereum
 Gladiolus spp.
 Gypsophila repens
 Hedera helix
 Hellanthenum sp.
 Hemerocallis sp.
 Hibiscus
 Hibiscus sp.
 Hibiscus rosa-sinensis
 Hosta plantaginea
 H. Sieboldiana
 Houttuynia cordata var. variegata
 Hydrangea macrophylla
 Ilex cornuta
 I. crenata
 I. opaca
 I. pernyi
 I. vomitoria
 Inula ensifolia
 Iris ensata
 Iris siberica
 Iris spp.
 Jasminium nudiflorum
 Juniperus chinensis
 J. Conferta
 J. davurica
 J. horizontalis
 Juglans sp.
 Justicia brandegeana
 Lagerstromia indica
 Lagerstromia indica X Fauriei
 Lantana montevidensis
 Lavender sp.
 Leontopodium aplinum
 Ligustrum sinense
 Ligustrum amurense
 L. japonicum
 L. lucidum
 Lillum sp.
 Liriope muscari

Common Name

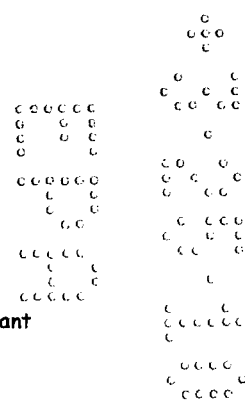
Larkspur; Blue Elf
 Dianthus; Maiden Pinks "Zing"
 Cheddar Pink
 Hop Bush
 Coneflower, Purple; Magnus
 Silverberry
 Wintercreeper
 Japanese Spindle Tree (Evergreen Euonymus)
 Spreading Euonymus
 Japanese Aralia
 Border Forsythia
 Weeping Forsythia
 Greenstem Forsythia
 Gaillardia, Blanket Flower: "Goblin"
 Gardenia, Cape-Jasmine, Radicans

 Gentian
 Cranesbill
 Gladiolus species**
 Baby's Breath
 English Ivy
 Sunrose
 Daylily: Aztec Gold, Stella De Oro, Tender Love
 Rose of Sharon**
 Mallow: Disco Belle White
 Chinese Hibiscus
 Hosta, Plantain Lily (Fragrant)
 Hosta, "Searsucker"

 Bigleaf Hydrangea
 Chinese Holly
 Japanese Holly; Helli
 American Holly
 Holly
 Yaupon Holly; Schillings

 Sword-Leaved Iris; Jodlesong
 Siberian Iris; Cabernet
 Iris species**
 Winter Jasmine
 Chinese Juniper; Nick's Compact, Parsonii
 Shore Juniper; Blue Pacific
 Parsoni
 Creeping Juniper
 Walnut*
 Shrimp Plant
 Crape Myrtle
 Crape Myrtle; Tuscarora

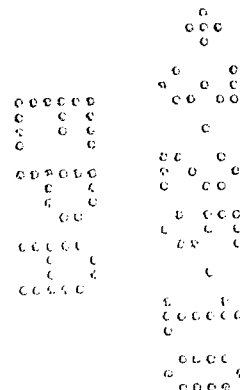
 Weeping Lantana
 Lavender; Munstead
 Edelweiss
 Chinese Privet; Variegata
 Amur Privet
 Japanese Privet
 Glossy Privet (waxleaf)
 Lily; Jazz
 Big Blue Lily; Turf; Silver Mound; Evergreen Giant



Liriope Muscari var. variegata
 Liriope spicata
 Lobelia Cardinalis
Scientific Name
 Lonicera japonica
 L. tatarica
 Loropetalum chinense
 Lythrum sp.
 Magnolia spp.
 Maleophora luteola
 Malus sp.
 Miscanthus sinensis
 Nandina domestica
 Narcissus spp.
 Nerium oleander
 Olea europaea
 Ophiopogon japonicus
 Osmanthus heterophyllus
 Osteopermum fruticosum
 Oxydendrum arboreum
 Paeonia suffruticosa
 Pennisetum setaceum
 Perovskia atriplicifolia
 Persea americana
 Photnia fraseri
 Physotegia Viginiana
 Picea spp.
 Pieris japonica
 Pinus brutia
 P. canariensis
 P. elliotii
 P. halepensis
 P. nigra
 P. palustris
 P. radiata
 P. thunbergiana
 P. strobus
 P. sylvestris
 P. taeda
 P. virginiana
 Pistachio sp.
 Pittosporum rhombilfolium
 P. tobira
 Podocarpus macrophyllus
 Prunus laurocerasus
 Prunus sp.
 Pseudotsuga menziesii
 Pyracantha coccinea
 P. fortuneana
 P. koidzumii
 Pyrus sp.
 Quercus Shumardii
 Quercus spp.
 Raphiolepis indica
 Raphiolepis umbellata
 Rhododendron
 (including Azalea)

Liriope, Variegated
 Liriope, Creeping
 Cardinal Flower, Indian Pink
Common Name
 Japanese Honeysuckle
 Tatarian Honeysuckle
 Burgundy
 Loosestrife; Modern Pink
 Magnolia species**
 Ice Plant
 Crabapple*
 Yaku Jima, Silberfeder
 Heavenly Bamboo
 Narcissus species**
 Oleaner
 Olive*
 Mondo Grass
 Osmanthus (False Holly): Gulf Tide
 Trailing African Daisy
 Sourwood
 Tree Peony
 Fountain Grass (Dwarf)

Avocado*
 Frasier's Photinia (Redtip)
 Dragonhead, False; Vivid
 Spruce species** (Colorado Blue, Norway, etc.)
 Lily-of-the-Valley Bush
 Calabrian Pine
 Canary Island Pine
 Slash Pine
 Aleppo Pine
 Austrian Pine
 Longleaf Pine
 Monterey Pine
 Japanese Black Pine
 Eastern White Pine
 Scotch Pine
 Loblolly Pine
 Virginia Pine
 Pistachio*
 Queensland Pittosporum
 Japanese Pittosporum
 Japanese Yew
 English Laurel
 Almond, Apricot, Nectarine, Peach, Plum and Prune*
 Douglas Fir**
 Firethorn (Scarlet)
 Firethorn
 Firethorn
 Bradford Pear sp.
 Oak, Shumard's Red
 Oak species
 Indian Hawthorne
 Yedda Hawthorn
 'Coral Bells'
 'Delaware Valley White'
 'Flame Creeper'
 'Formosa'
 'Girard Crimson'
 'George L. Tabor'



'Hino-crimson'
'PJM'
'Roseum Elegans'

Scientific Name

Common Name

Rosa banksiae
Rosmarinus officinalis
Rudbeckia sp.
Santolina, virens
Saxifraga sp.
Scabiosa sp.
Sedum album
Sedum caudicola
Sedum dasphyllum
Sedum spurium
Spiraea Bumalda
Syzygium paniculatum
Taxus cuspidata
T. media
Teucrium sp.
Thalictrum dipterocarpum
Thuja occidentalis
Trachelospermum asiaticum
Tsuga canadensis
Tulipa spp.
Veronicac sp.
Viburnum japonicum
V. odoratissimum
V. plicatum
V. rigidum
V. suspensum
V. tinus
V. trilobium
V. wrightii
Vinca major
Vinca minor
Vitis sp.
Weigela florida
Yucca aloifolia
Y. filamentosa

'Wakeiebisu'
'White Gumbo'
Lady Bank's Rose
Rosemary*
Black-eyed Susan; Goldstrum
Santolina
Saxifrage; Purple Dome
Pincushion Flower
Stonecrop
Stonecrop; Lidakense
Stonecrop
Stonecrop; Dragon's Blood
Spirea; Anthony Waterer
Australian Brushcherry
Japanese Yew
Yew
Germander
Meadow Rue
American Arborvitae
Star Jasmine
Canada Hemlock
Tulip species
Veronica, Speedwell; Sunny Border
Japanese Viburnum
Sweet Viburnum
Japanese Snowball
Canary Island Viburnum
Arrowood Viburnum
Laurustinus
Cranberry Bush
Leatherleaf Viburnum
Greater Periwinkle, Vinca
Common Periwinkle, Vinca
Grape*
Old Fashioned Weigela
Spanish Bayonet, Yucca
Adam's Needle, Yucca

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

** Not for use on container grown plants.

NOTICE: Buyer and user assume all risk and liability of use, storage and/or handling of this product not in accordance with the terms of this label. If these terms are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid.

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