8378-38

03-02-2012

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

> OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

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

MAR- 2 2011

Subject: EPA Reg. 8378-38 / Shaw's Turf Food / Crabgrass Control Barricade 20 Notification

Dear Mr. Bischoff:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated 11-5-10 for the product EPA Reg. 8378-78 / Shaw's Turf Food / Crabgrass Control Barricade 20. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records. The alternate brand name is acceptable.

If you have any questions please call Erik Kraft at 703-308-9358 or email at <u>Kraft.Erik@epa.gov</u> or Kathryn Montague at 703-305-1243 or <u>Montague.Kathryn@epa.gov</u>.

Sincerely,

Uttum V. Monte

Kathryn Montague Team Leader Herbicide Branch, Team 23 Registration Division (7504P)

Please read instructions on	munme before comple	form.		Form Approv	10 No. 207	0.0060	. Approval expires 2-28-9
SEPA	ر Environmenta	United States			Registratic Amendme Other	on	OPP Identifier Number
······		Applicatio	n for Pesticid	e - Sectio	n I	l	
1. Company/Product Numbe 8378-38	r		1	oduct Manage Montague	r		oosed Classification
4. Company/Product (Name) Shaw's Turf Food/Crab		ricade 20	<b>РМ#</b> 23				
5. Name and Address of Applicant <i>(Include ZIP Code)</i> Knox Fertilizer Company, Inc. P. O. Box 248 Knox, IN 46534			(b)(i), my to:	6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. N/A			
Check if this	s is a new address		Produc	t Name N/A	4		
			Section - II				
Amendment - Explain	oonse to Agency lette	r dated	;	Final printed la Agency letter o 'Me Too" Appl Other - Explain	lication.		
Notification to add an alterna the provisions of PR Notice 9 of formula of this product. I to notification is not consistent enforcement action and pena	98-10 and EPA regulation understand that it is a vision with the terms of PR Notes.	ons at 40 CFR 1 iolation of 18 U.S otice 98-10 and 4	52.46, and no other c S.C. Sec. 1001 to will 0 CFR 152.46, this p	hanges have b ully make any f	een made to the lab	eling or t PA. I furt	he confidential statement ther understand that if this
1. Material This Product Wil	Be Packaged In:						
Child-Resistant Packaging Yes Vo No Certification must be submitted	Unit Packaging Yes Vo No If "Yes" Unit Packaging wgt	No. per . container	Water Soluble Pace Yes Volume No	No. per container	J Pl G Pl	ntainer letal lastic lass aper ther (Sp	ecify)
3. Location of Net Contents	Information	4. Size(s) Rete	l Conteiner	5.	Location of Label C	Direction	8
	Container		50 lbs	E	on label		
5. Manner in Which Label is	Affixed to Product	Lithogr Paper g Stencil	aph lued ad	✓ Other	Booklet/Printed B	ag	
			Section - IV				ο
1. Contact Point <i>(Complete</i>	items directly below t	for identification	of individual to be	contacted, if n	ecessary, to proce	ss this a	pplication.)
Name Robert F. Bischoff			<b>Title</b> Agent, TotalTurf Co	onsulting LLC	1 V 1	<mark>ອກູhone</mark> 17) <sub>ເ</sub> 873-0	No. (Include Area Code)
i certify that the state I acknowledge that an both under applicable	y knowlinglly false or		all attachments there			te.	3. Date Application Received (Stamped)
2. Signature	k.	3	. Title		· · · · · · · · · · · · · · · · · · ·		ι ε ( ( ( ( ( ( (
		Agent, TotalTurf Con	sulting LLC			()))))))))))))))))))))))))))))))))))))	
4. Typed Name Robert F. Bischoff	12	5	5. Date NOVE	ember 3, 2	010		
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# TotalTurf Consulting LLC 26 A. A. Cooper Rd. Meigs, GA 31765

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

E-Mail: rbcooper@juno.com

199

November 3, 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: Kathryn V. Montague

Subject: Shaw's Turf Food/Crabgrass Control Barricade 20 EPA Reg. No. 8378-38 Notification per PR Notice 98-10 II.A Addition of Alternate Brand Name

The enclosed labeling shows the addition of an alternate brand name for this registered product, namely, Shaw's Turf Food/Crabgrass Control Prodiamine 20. The revised labeling which includes the alternate brand name 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 Final Printed Label (Coded as 20101103.Final Label (ALT Brand) One Copy of Final Printed Supplemental Label (Coded as 20101103.Final Label (ALT Brand)

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 Robert F. Bischoff

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



# Shaw's Turf Food/Crabgrass Control Prodiamine 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-<u>n</u>-propyl-2,4-dinitro-6-(trifluoromethyl)-<u>m</u>-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.

EPA REG. NO. 8378-38

EPA EST. NO. 8378-IN-1

<u>GUARANTEED FERTILIZER ANALYSIS</u> XX%

 Total Nitrogen (N)
 XX%

 Available Phosphoric Acid (P2O5)
 XX%

 Soluble Potash (K2O)
 XX%

 Harrison and the second second lines
 Municipal Sulfur Costed Lines

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

<u>If swallowed</u>: 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.

<u>If in eyes:</u> 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.

<u>If on skin or clothing</u>: 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.

I<u>f inhaled:</u> 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.

<u>PESTICIDE STORAGE</u>: Store in original container away from other fertilizer, feed, or foodstuffs and separated from other pesticides. <u>PESTICIDE DISPOSAL</u>: <u>IF EMPTY</u>: Do not reuse this bag. Place in trash or offer for recycling if available. <u>IF PARTLY FILLED</u>: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain. <u>If product is</u> <u>spilled</u>, sweep up and use as per label instructions or dispose of as indicated above. <u>CONTAINER DISPOSAL</u>: Nonrefillable container. Do not reuse or refill this container, offer for recycling if available.

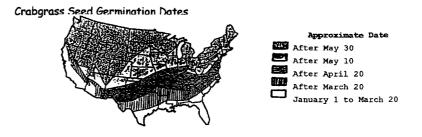
# DIRECTIONS FOR USE

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 preemergence 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  $\frac{1}{2}$  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 <u>purposes</u>. For use on plants intended for esthetic purposes or climatic modification and being grown in ornamental gardens, or parks, or <u>on golf courses or lawns and grounds</u>. 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 <u>Maximum</u> <u>Annual Rates</u> section of this label. Most effective weed control in turf grasses will be obtained when this product is activated by at least  $\frac{1}{2}$  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.



# **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 <sup>(1)</sup>				
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	n	*		
Perennial Ryegrass	u	u		
Bermudagrass <sup>(2)</sup>	750 lbs.	1.50 lb.		
Bahiagrass	<b>B</b>	u		
Centipedegrass	•	u		
Seashore Paspalum		u		
St. Augustinegrass	u	n		
Tall Fescue (including turf type)	<b>4</b>	n		
Zoysia	u	н		

(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 <u>Maximum Annual Rates section</u>.

#### 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 <sup>(3)</sup>
Chickweed, Common	Junglerice	Shepherd's Purse <sup>(2)</sup>
Chickweed, Mouseear (from seed)	Knotweed	Signalgrass, Broadleaf
Crabgrass (Large, Smooth)	Kochia	Speedwell, Persian
Crowfoot grass	Lambsquarter, common	Sprangletop
Cupgrass, Wooly	Lovegrass	Spurge, Prostrate
Foxtails, Annual	Panicum (Texas, Fall, Browntop)	Witchgrass
Goosegrass <sup>(1)</sup>	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 <u>Maximum Annual Rate section</u>. Do not exceed the maximum rate for turf grass species listed in the <u>Maximum Annual Rate section</u>. (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 II	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

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 Prodiamine 20

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

ACTIVE INGREDIENT:

Prodiamine [N³,N³-Di- <u>n</u> -propyl-2,4-dinitro-6-(trifluoromethyl)- <u>m</u> -phenylenediamine]	0.20%
INERT INGREDIENTS:	<u>99.80%</u>
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.

# EPA Reg. No. 8378-38

EPA Est. No. 8378-IN-1

**GUARANTEED FERTILIZER ANALYSIS** XX%

XX%

Total Nitrogen (N) Available Phosphoric Acid (P2O5) 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: 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 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  $\frac{1}{2}$  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 <sup>(3)</sup>
Chickweed, Common	Junglerice	Shepherd's Purse <sup>(2)</sup>
Chickweed, Mouseear (from seed)	Knotweed	Signalgrass, Broadleaf
Crabgrass (Large, Smooth)	Kochia	Speedwell, Persian
Crowfootgrass	Lambsquarter, common	Sprangletop
Cupgrass, Wooly	Lovegrass	Spurge, Prostrate
Foxtails, Annual	Panicum (Texas, Fall, Browntop)	Witchgrass
Goosegrass <sup>(1)</sup>	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/grafts 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 Abies spp. Abelia grandiflora Acer palmatum A. platanoides Achillea, sp. Actinidia chinensis Agapanthus africanus Agapanthus orientalis Akebia guintata Allium cernuum Anemone hybrida Aquilegia sp. Arctostaphylos densiflora Arctotheca calendula Artemesia sp. Aster sp. Aster X Frikartii Athrium Filiz-femina Aucuba japonica Begonia sp. Berberis gladwynensis B. Julianae **B.** mentorensis B. thunbergii **B.** Verruculosa Bergenia cordifolia Boltonia asteroides Bougainvillea spp. Buddleia davidii Buxus microphylla **Callistemon viminalis** Calluna vulgaris Campanula carpatica Campis X Tagliabuana Carpobrotus edulis Cassia artemisoides Ceanothus rigidus Ceratostigma plumbagonoides Chamaecyparis pisifera Chrysanthemum nipponicum Cleyera japonica Citrus spp. Coreopsis sp. Cornus florida C. stolonifera Cortaderia selloana Cotoneaster apiculatus C. buxifolius C. dammeri C. microphyllus Cretaegus spp. Crocosmia sp. Cupressus sempervirens Delosperma alba Delosperma sp.

Common Name Fir species\*\* (Balsam, Fraser, Noble, etc.) Abelia: Sherwood Japanese Maple Norway maple Yarrow: King Edward Kiwi\* Lily-of-the-Nile (African Lily) Five-Leaf or Chocolate vine Lady's Leek, Nodding Onion Japanese Anemone Aquilegia; Red and Gold Vine Hill Manzanita Cape Weed Wormwood; Silver Mound, Castle Aster: Bonny Blue, Purple Dome Lady Fern; Fern Lady Japanese Aycuba Fibrous Begonia; Hardy Grandis Barberry Wintergreen Barberry Mentor Barberry Japanese Barberry Warty Barberry Snowbank Bougainvillea Butterfly-bush (Dwarf Blue); Royal Red Japanese Boxwood Weeping Bottlebrush Scotch Heather Tussock Bellflower, (White Clips) Trumpet Creeper, Trumpet Flower, Madame Galen Hottentot Fig (Ice Plant) Feathery Cassia Wild Lilac **False** Cypress Cleyera Citrus species\* Coreopsis (Calliopsis); Early Sunrise, Moonbeam Flowering Dogwood American Dogwood Pampas Grass Cranberry Cotoneaster Cotoneaster **Bearberry** Cotoneaster

Rockspray Cotoneaster Hawthorne Lucifer Italian Cypress

White Trailing Ice Plant

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 Forysythia suspensa F. viridissima Gaillardia sp. Gardenia jasminoides Gaura sp. Gentiana dahurica Geranium cinereum Gladiolus spp. Gypsophila repens Hedera helix Hellanthemum 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 Liriope Muscari var. variegata Liliope spicata Lobelia Cardinalis

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 Gladious 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; Helleri American Holly Holly Yaupon Holly; Schillings Sword-Leaved Iris; Jodlesong Siberian Iris; Cabernet Iris species\*\* Winter Jasmine Chinese Juniper; Nick's Compact, Parsonnii 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, Variegated Liriope, Creeping Cardinal Flower, Indian Pink

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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 heterphyllus Osteopermum fruticosum Oxydendrum arboreum Paeonia suffruticosa Pennisetum setaceumi Perovskia atriplicifolia Persea americana Photnia fraseri Physotegia Viginiana Picea spp. Pieris japonica Pinus brutia P. canariensis P. elliottii P. halepensis P. nigra P. palustrus 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 Raphiolepsis umbellata Rhododendron (including Azalea)

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'

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### Scientific Name

Rosa banksiae Rosmarinus officinalis Rudbeckia sp. Santolina, virens Saxifraga sp. Scabiosa sp. Sedum album Sedum cauticola Sedum dasyphyllum Sedum spurium Spiraea Bumalda Syzygium paniculatum Taxus cuspidata T. media Teucrium sp. Thalictrum dipterocarpum Thuja occidentalis Trachelospermum asiatum Tsuga canadensis Tulipa spp. Veroniac 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

Common Name '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.

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