

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

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Ms. Regiane Pereira
Project Manger
Registration and Regulatory Affairs
Valent U.S.A. Corporation
1600 Riviera Ave., Suite 200
Walnut Creek, CA 94596-8025

MAR 11 2009

Subject: Notification(s) for Label Revisions under PRN 98-10 and PRN 2007-4

Dear Ms. Pereira:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notices (PRN) 98-10 and 2007-4 dated, December 10, 2008 for:

EPA Registration 59639-128 BroadStar Herbicide

The Registration Division (RD) has conducted a review of the request(s) for applicability under PRN 98-10 and PRN 2007-4 and finds that the label changes requested fall within the scope of PRN-98-10 and PRN-2007-4. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

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

Sincerely,

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

Please read instructions on reverse before co	mpleting form.	Form Appro	ved. OMB No. 207	0-0060 Print Form
	United States ntal Protection Agrashington, DC 20460	ency	Registrati Amendme Other	
	Application for	Pesticide - Secti	on I	
1. Company/Product Number 59639-128		2. EPA Product Manag Ms. Joanne Miller	ger	3. Proposed Classification
4. Company/Product (Name) BroadStar Herbicide		PM# 23		None Restricted
5. Name and Address of Applicant (Include 2.) Valent U.S.A. Corporation - 1600 Riviera Walnut Creek, CA 94596-8025			similar or identica	e with FIFRA Section 3(c)(3) al in composition and labeling IFICATION
Check if this is a new address	3	Product Name	MAI	R 1 1 2009
	Se	ction - II		
Amendment - Explain below. Resubmission in response to Agency I	etter dated	Final printed Agency letter "Me Too" Ap		0
X Notification - Explain below.		Other - Expla	in below.	
Explanation: Use additional page(s) If necessary Update to product label by add a sticker Update container disposal language acc	with language "New For	mula", according to No	otification per PR I	Notice 98-10 (II.K.5)
	Sec	ction - III		
1. Material This Product Will Be Packaged In:		,0011 - 111		
Child-Resistant Packaging Unit Packaging	Wate	r Soluble Packaging	2. Type of Co	ontainer
Yes* Yes		Yes		Metal
X No X No	×	No		Plastic Glass
* Certification must be submitted If "Yes" Unit Packaging	No. per wgt. container Packs	es" No. per age wgt container		Paper Other (Specify)
3. Location of Net Contents Information Lebel Container	4. Size(s) Retail Cont. 50 lbs - 1500 l		Con Label On Label On Labeling	Directions geccompenying product
6. Manner in Which Label is Affixed to Produc	Lithograph Paper glued Stenciled	Other		
		tion - IV		
1. Contact Point	low for identification of indi	vidual to be contacted, if	necessary, to proc	ess this application.)
Name Regiane Pereira	Title Projec	t Manager		elephone No. (Include Area Code) 925) 256-2786
I certify that the statements I have mad I acknowledge that any knowingly false both under applicable law.	Certification le on this form and all attac or misleading statement n	chments thereto are true, nay be punishable by fine	accurate and comp or imprisonment or	6. Date Application Received (Stamped)
2. Signeture	3. Title Projec	t Manager		
4. Typed Name () Regiane Pereira	5. Date Dece	mber 10, 2008		

.



1600 Riviera Avenue Suite 200 PO. Box 8025 Walnut Creek, CA 94596-8025 (925) 256-2700



December 10, 2008

BroadStar™ Herbicide EPA Reg. No. 59639-128 Notification

CERTIFICATION STATEMENT

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 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 terms of PR Notice 98-10 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.

Regiane Pereira Project Manager

Registration and Regulatory Affairs

Valent U.S.A. Corporation

1600 Riviera Avenue Suite 200 PO. Box 8025 Walnut Creek, CA 94596-8025 (925) 256-2700



Certification with Respect to Label Integrity

version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

	PROPO	SED LABEL
EPA Registration #	Date Submitted to EPA	Electronic file name
59639-128	12/10/08	059639-00128.20081210.BSR.NOTIF.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

Signature

<u>December 10, 2008</u>

Date

Linda Obrestad

Labeling Specialist

Registration and Regulatory Affairs

Valent U.S.A. Corporation

1600 Riviera Avenue Suite 200 PO. Box 8025 Walnut Creek, CA 94596-8025 (925) 256-2700



December 10, 2008

BroadStar[™] Herbicide (EPA Reg. No. 59639-128) NOTIFICATION

Ms. Joanne Miller
Product Manager, Team 23
Herbicide Branch
Registration Division
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Document Processing Desk (NOTIF)
One Potomac Yard – Room S4900
2777 S. Crystal Drive
Arlington, Virginia 22202

Dear Ms. Miller:

Valent USA Corporation would like to submit a notification to the Agency as permitted under the Agency's PR-Notice 98-10, Section II, K, 5, <u>Changed Formulation</u>, which permits a registrant to add truthful statements pertaining to alternate formulations or minor formulation changes (such as "new" or "new formula") by the notification process. Valent USA Corporation received a label approval from the Agency on 127, 2008 for a revised formulation for our product registration, BroadStar Herbicide (EPA Reg. No.59639-128).

Valent has not manufactured or distributed this revised formulation to date, but will initiate the manufacturing and distribution of this revised formulation in March 2009. Valent, in accordance with the guidelines set in PR Notice 98-10 Section II-K-5, wishes to notify the Agency of our intentions to add a sticker to our packaging that identifies our product to be a "new formula".

Also, Valent USA Corporation has updated the container disposal language according to PR Notice 2007-4.

* Sheradar Hobgara sparke with Rigimore to 3/6/09 novaling the excessed States

Valent U.S.A. Corporation



GROUP 14 HERBICIDE

NOTIFICATION – REDLINE COPY BroadStar™ Herbicide

[Sticker] **NEW FORMULA**

PROVIDES PREEMERGENCE WEED CONTROL IN CONTAINER AND FIELD GROWN WOODY SHRUBS, TREES AND GROUND COVERS

VERY EFFECTIVE AGAINST BITTERCRESS, SPURGE, LIVERWORT AND MANY OTHER ANNUAL BROADLEAF AND GRASSY WEEDS

PROVIDES AT LEAST 8-12 WEEKS OF PREEMERGENT CONTROL UNDER NORMAL GROWING CONDITIONS

FOR APPLICATION TO ESTABLISHED PLANTS WITH DRY FOLIAGE

NOT FOR APPLICATION TO RECENTLY TRANSPLANTED LINERS

Active Ingredient	By Wt.
*Flumioxazin	0.25%
Other Ingredients	<u>99.75</u> %
Total	

*(2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione)

BroadStar Herbicide is a granule containing 0.25% active ingredient.

NOTIFICATION

KEEP OUT OF REACH OF CHILDREN

MAR 1 1 2009

CAUTION

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

NET WEIGHT POUNDS

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PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Harmful if absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing dust and spray mist.

FIRST AID

If on skin or clothing:

- · Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

If in eyes:

- · Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eve.
- · Call a poison control center or doctor for treatment advice.

If inhaled:

- · Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

If swallowed:

- Call a poison control center or doctor immediately for treatment advice.
- · Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- · Do not give anything by mouth to an unconscious person.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear: long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride, shoes and socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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.

ENVIRONMENTAL HAZARDS:

This product is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

This pesticide is toxic to plants and should be used strictly in accordance with the drift and runoff precautions on this label in order to minimize off-site exposures.

Under some conditions this product may have a potential to runoff to surface water or adjacent land. Where possible, use methods which reduce soil erosion, such as no till, limited till and contour plowing; these methods also reduce pesticide runoff. Use of vegetation filter strips along rivers, creeks, streams, wetlands or on the downhill side of fields where runoff could occur will minimize water runoff is recommended.

DIRECTIONS FOR USE

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

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

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 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.

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 made of any waterproof material, shoes plus socks.

DISCLAIMER, RISKS OF USING THIS PRODUCT, LIMITED WARRANTY AND LIMITATION OF LIABILITY

IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.

RISKS OF USING THIS PRODUCT

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

LIMITED WARRANTY

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label and subject to the Risks of Using This Product as described above. EXCEPT AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

LIMITATION OF LIABILITY

In no event shall Valent or Seller be liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR 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 THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

PROMPT NOTICE OF CLAIM

Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

If Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

NO AMENDMENTS

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing **Disclaimer**, **Risks of Using This Product**, **Limited Warranty** and **Limitation of Liability**, which may not be modified by any oral or written agreement.

TANK MIXES

NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor.

Read and follow the entire label of each product to be used in the tank mix with this product.

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GENERAL INFORMATION

BroadStar Herbicide is a selective preemergence herbicide that provides extended residual control of a wide variety of annual broadleaf and grassy weeds. BroadStar is labeled for use in containerized and field grown (in-ground) woody, ornamental shrubs and trees, ground covers and non-bearing fruit and nut trees that are grown in nurseries. BroadStar should not be applied in residential or commercial landscapes.

BroadStar controls weeds by inhibiting protoporphyrinogen oxidase, an essential enzyme required by plants for chlorophyll biosynthesis. Seedling weeds are controlled preemergence when exposed to sunlight following contact with the soil applied herbicide. BroadStar has only limited post-emergent activity against certain weed species. Therefore, in order to optimize weed control, BroadStar should be applied before weeds germinate, or immediately after cultivation.

Most hardy woody ornamental shrubs and trees are tolerant to *BroadStar* so long as the product is applied in accordance with the label. *BroadStar* may cause leaf spotting on some tolerant species if granules are allowed to remain in contact with leaf surfaces, especially on new flush or on foliage that is wet at the time of application. However, subsequent plant growth is generally unaffected. *BroadStar* may injure some otherwise tolerant species if not applied in accordance with the label, and may also injure ornamental species that are not listed on the label. Therefore, read all label precautions and restrictions before applying *BroadStar* to ornamental plants.

General Restrictions and Limitations

- · Do not apply by air.
- Do not apply to moist or wet foliage.
- Do not apply when winds are gusty or above 8 mph.
- Use caution when applying to plants that are producing a new flush of growth because herbicide may
 injure tender, newly formed leaves if granules remain in contact with leaf surfaces.
- Do not apply to plants whose leaves channel the herbicide granules to the leaf base.
- Do not apply to bedding plants or areas where bedding plants will be planted or transplanted within one year following application.
- Do not apply to plants while in propagation.
- Do not apply to liners that are in pots less than 4 inches in diameter.
- Do not apply to recently transplanted liners until liners have been actively growing for at least 6 weeks after transplanting.
- Non-bearing fruit trees such as citrus, apples, pears, peaches, etc. are defined as plants that will not bear fruit for at least one year after application.
- Do not incorporate product into soil or potting media.
- Do not apply to flowers, vegetables, turf or ornamentals growing in residential or commercial landscapes.

Preemergence Application

BroadStar provides effective preemergence control of weeds listed in Table 4. For optimal preemergence control, apply BroadStar to clean, weed free soil before weed seeds germinate. Disturbing soil surfaces after application may reduce herbicide efficacy. Remove existing weeds, weed residues and trash before application of BroadStar. Soil should be in good condition and free of clods at the time of application. Approximately 1/2 to 3/4 inch of rainfall, overhead sprinkler irrigation or hand irrigation is required to activate BroadStar. Inadequate irrigation or rainfall following application may reduce effectiveness of BroadStar. If adequate soil moisture is maintained following application, BroadStar should provide at least 8 to 12 weeks of preemergent control of labeled weeds, except under unusual environmental conditions (excessive rainfall, irrigation or temperature). Control is generally most persistent under cooler temperatures.

Application Instructions

Apply *BroadStar* with clean, well maintained drop or rotary type granular application equipment. Calibrate application equipment prior to use according to manufacturer's directions. Refer to Table 1 for calibration of hand cranked rotary spreaders. Check frequently to be sure equipment is working properly and distributing granules uniformly. Avoid skips and overlaps, as poor weed control or crop injury may occur. Clean equipment before adding *BroadStar* to ensure that no residue from the previous operation remains. Some pesticides are active at very trace quantities and can cause injury when applied to susceptible plants.

Application Recommendations

- Apply to dry foliage only. To test for moisture, rub hands over plant foliage.
- Remove any existing weeds before applying BroadStar.
- Irrigate plants within 1 hour after application with 1/2 to 3/4 inch of water to wash the particles off plant foliage and to activate the herbicide. If herbicide granules are allowed to remain on plant foliage for an extended period, herbicide residues may be released and cause leaf spotting on some sensitive ornamental species.

Application Techniques

Apply *BroadStar* with a properly calibrated drop or rotary type spreader that will ensure accurate, even particle distribution.

- When using a drop type spreader, a splashboard mounted under the hopper will provide more even granule distribution.
- When using a hand held or push type rotary applicator, such as a whirlybird or cyclone unit, walk and turn the crank at a constant rate of speed.
- Use a hand shaker to treat small numbers of plants, or areas that are difficult to reach with a
 whirlybird or cyclone spreader. Construct hand shakers by punching holes in the lid of a small plastic
 container. Calculate amount of *BroadStar* needed to treat area, place this amount in shaker and apply
 evenly over plants. Refer to Table 3 for amounts needed to treat individual containers.

Spray Drift Management

Do not apply under circumstances where possible drift to unprotected persons or to food, forage or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption can occur.

- Make applications when the wind velocity favors on-target product deposition. Apply only when the
 wind speed is less than or equal to 10 mph. For all applications, wind speed must be measured
 adjacent to the application site on the upwind side, immediately prior to application.
- Do not make applications into areas of temperature inversions. Inversions are characterized by stable
 air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate
 the presence of an inversion in humid areas. Where permissible by local regulations, the applicator
 may detect the presence of an inversion by producing smoke and observing a smoke layer near the

ground surface.

All application equipment must be properly maintained and calibrated using appropriate carriers.

Resistance Management

Any weed population may contain or develop plants naturally resistant to herbicides in various mode of action classes. Resistant biotypes may eventually dominate the weed population if the same class of chemistry/mode of action herbicides are used repeatedly in the same field or in successive years. These resistant biotypes may not be adequately controlled by herbicides in a mode of action class for which resistance has developed. A gradual or total loss of weed control may occur over time. Other resistance mechanisms that are not linked to site of action, such as enhanced metabolism, may also exist. Appropriate resistance management strategies should be followed.

To Delay Herbicide Resistance

- Avoid the use of herbicides that have a similar target site mode of action in consecutive years.
- Herbicide use should be based on an Integrated Pest Management (IPM) program that includes scouting, record keeping, and consideration of cultivation practices, water management, weed free crop seed, crop rotation, and other chemical or cultural control practices.
- Monitor treated weed population for resistance development and report suspected resistance.
- Contact your local extension or crop expert (advisor) for any additional pesticide resistance management and/or IPM recommendations for specific crops and weed biotypes.
- For further information contact Valent U.S.A. Corporation at the following toll free number 800-682-5368.

CALIBRATION OF HERBICIDE APPLICATION EQUIPMENT

BroadStar is a very active herbicide and can injure some otherwise tolerant plants if applied at excessive rates. The user is responsible for accurately calibrating herbicide application equipment so that BroadStar is applied at the labeled rate of 150 lbs. per acre. The user assumes responsibility for any plant damage or other liability resulting from application of BroadStar at excessive rates.

Hand Cranked Spreaders

The application rate (lbs./acre) of *BroadStar* with hand cranked spreaders will depend on the width of the plant bed to be treated, the operator's walking speed, the speed at which the operator turns the crank and the spreader setting (opening). The walking and cranking speed will vary among individual operators. Therefore, hand cranked spreaders must be calibrated for individual operators in order to apply *BroadStar* at the labeled rate of 150 lbs. per acre.

Use the spreader settings in Table 1 as a starting point when calibrating hand cranked spreaders for application of *BroadStar*. These settings assume a walking speed of 3 mph, a cranking speed of 60 revolutions per minute (rpm) and that the operator makes one pass down each aisle between each plant bed.

To more precisely calibrate hand cranked spreaders for application of *BroadStar* by individual operators, first select a test area that does not have plants present. Calculate the number of square feet in the test area by multiplying the length by the width (in feet) of the area to be treated. Include aisle space between beds when determining length and width of the test area. Then calculate the amount of *BroadStar* needed to treat the test area by multiplying the number of square feet in the test area by 150, and dividing this result by 43,560. If the hand cranked spreader is listed in Table 1, set the spreader opening to the position indicated for the appropriate bed width. Place *BroadStar* calibration trays in test area. Weigh out calculated amount of *BroadStar*, place in the spreader, and apply to the test area at applicator's standard walking and cranking speed. Adjust spreader opening if measured amount of *BroadStar* does not evenly cover the test area and/or if calibration trays indicate that too much or too little *BroadStar* has been

14/25-

applied.

Example: there is room for six plant beds in the test area that will be treated with BroadStar. Beds are 60 feet in length, six feet wide, and are separated by two-foot aisles. Therefore, the width of test area (i.e. distance between outside of Bed 1 and outside of Bed 6) is 46 ft., and the number of square feet in the test area = 60 ft x 46 ft = 2,760 square feet. Amount of BroadStar needed to treat the test area = 2,760 x 150/43,560 = 9.5 pounds.

Table 1. Settings (Port Opening) for Hand Cranked Rotary Spreaders

Spreader	One Sided Operation		Two Sided Operation	
Spreader	Bed Width (ft.)	Spreader Setting	Bed Width (ft.)	Spreader Setting
Spyker 75	4	2.5	4	3.0
	6	3.0	6	3.5 - 4.0
	8	3.5	8	4.5
	10	3.5 – 4.0	10	4.5 – 5.0
	12	4.0	12	5.0 - 6.0
Warren T-7 11	4		4	4.0
	6	3.5 – 4.0	6	4.5
	8	4.0 – 4.5	8	5.0 - 5.5
	10	4.5	10	6.0
	12	5.0	12	
Earthway 3100	4	8	4	8 – 10
-	6	10 – 12	6	10
	8	10 – 12	8	10 – 12
	10	12	10	12
	12	12	12	12 – 14
Solo 421S	4	1	4	2
	6	1 – 2	6	3
	8	1 – 2	8	4
	10	2	10	5 – 6
	12	3 – 4	12	

Table 2. Weight To Volume Conversion Table

Rate	Amount/1000 sq. ft.		e Amount/1000 sq. ft. Amount/100 sq. ft.		100 sq. ft.
Lbs./Acre	Lbs.	Qts.	Lbs.	Cups	
150	3.4	2.4	0.34	1.0	

One pound of BroadStar = 0.7 quarts = 2.8 cups

Application to Individual Containers

BroadStar may be applied to the soil surface of individual containers, but only at a rate that is equivalent to the amount of product that would land on the media surface of an individual container if broadcast at 150 lbs. per acre. Use the conversions in Table 3 to determine how much BroadStar to apply to an individual container, and then use a hand shaker to evenly distribute over the media surface.

Table 3. Application Amounts for Individual Containers (equivalent to 150 lbs./A)

Pot Diameter (inches)	Gram(s) BroadStar/pot	Teaspoon(s) BroadStar/pot		Pot Diameter (inches)	Grams <i>BroadStar</i> /pot	Teaspoon(s) BroadStar/pot
4	0.14	1/28		24	4.91	1-1/4
5	0.21	1/18	42.4	25	5.33	1-1/2
6	0.31	1/12		26	5.76	1-1/2
7	0.42	1/9	1	27	6.21	1-3/4
8	0.55	1/7	\$3.55 \$1.55	28	6.68	1-3/4
9	0.69	1/6		29	7.17	2
10	0.85	1/5	12 12	30	7.67	2
11	1.03	1/4		31	8.19	2
12	1.23	1/3		32	8.73	2-1/4
13	1.44	1/3	175 44 76	33	9.28	2-1/2
14	1.67	1/2		34	9.85	2-1/2
15	1.92	1/2	les de	35	10.44	2-3/4
16	2.18	5/8		36	11.05	3
17	2.46	5/8	建 34.5	37	11.67	3
18	2.79	3/4		38	12.31	3-1/4
19	3.08	3/4		39	12.96	3-1/2
20	3.41	7/8	32	40	13.64	3-1/2
21	3.76	1		41	14.33	3-3/4
22	4.12	1	2	42	15.03	4
23	4.51	1-1/4				

One level teaspoon of *BroadStar* weighs approximately 3.8 grams One heaping teaspoon of *BroadStar* weighs approximately 5.9 grams One level tablespoon of *BroadStar* weighs approximately 11.2 grams

ORNAMENTAL PLANT TOLERANCE INFORMATION

IMPORTANT: Most woody ornamental plants are tolerant to *BroadStar* when the product is applied according to the label. However, *BroadStar* is a very active herbicide and should not be applied on a commercial scale until the user has first confirmed its safety on a small number of test plants grown under his or her standard production practices. Test plants should be actively growing at the time of application, and examined for 4 to 8 weeks for symptoms of plant injury. If test plants are dormant at the time of application, or enter dormancy within 8 weeks after application, continue the injury evaluation until after plants break dormancy in the spring.

Mild leaf spotting is the most common symptom of *BroadStar* injury on tolerant ornamental plants, and usually appears within 1 to 2 days after application. Leaf spotting is most likely to occur when *BroadStar* is applied to wet foliage. In order to minimize the risk of leaf spotting, only apply *BroadStar* to dry foliage and apply 1/2 to 3/4 inch of overhead irrigation within 1 hour after application. Irrigation should be sufficient to wash herbicide granules off of plants. If there is a significant delay between application of

BroadStar and irrigation, herbicide residues may be released from granules remaining on leaf surfaces, and cause leaf spotting on some plant species. In most cases, new growth will be unaffected, and will rapidly cover up any leaf spotting on older foliage.

If NOT applied in accordance with the label, *BroadStar* may cause unacceptable injury to some otherwise tolerant ornamental plant species. Injury to tolerant species is most likely if *BroadStar* is applied to wet foliage, recently transplanted liners, and/or at rates in excess of the labeled use rate of 150 lbs. per acre.

Treatment of Ornamental Plant Species Labeled as Sensitive

BroadStar can cause significant injury to woody ornamental plants listed in Table 5. In some cases, only specific cultivars are listed for a particular species because injury has not been observed on other cultivars or growth stages. It is recommended that *BroadStar* NOT be applied to the plants listed in Table 5. **The user assumes responsibility for any plant damage that results from the application of** *BroadStar* **to plants listed as sensitive.**

Treatment of Ornamental Plant Species NOT Listed on Label

BroadStar can be applied to woody ornamental shrubs and trees not specifically listed on this label. However, the user should NOT begin commercial scale application of *BroadStar* on non-listed species until after first confirming the product's safety on a small number of plants grown under standard production practices. The user assumes responsibility for any plant damage that results from the application of *BroadStar* to non-listed plant species.

Treatment of Wet Foliage

When *BroadStar* is applied to dry plants, most *BroadStar* granules will bounce or roll off of foliage before releasing herbicide residues. However, if *BroadStar* is applied to plants that are wet from dew, irrigation water or rainfall, some granules may stick to foliage and release herbicide residues. Herbicide release *onto* wet foliage can injure some plant species, including those that are tolerant, when *BroadStar* is applied to dry foliage. Therefore, *BroadStar* should NOT be applied to wet plants, especially those with pubescent foliage or a leaf structure that tends to trap granules at growing points.

Treatment of Recently Transplanted Liners

Under certain conditions, *BroadStar* can cause significant injury to recently transplanted liners of some plant species that are tolerant when more established (i.e. have formed a well developed root system). Injury to recently transplanted liners is most likely when *BroadStar* is applied to smaller liners (less than one gallon container size), is applied at above labeled rates, and is applied before potting media has been settled by irrigation or rainfall. Therefore, *BroadStar* should NOT be applied to recently transplanted liners until plants have been actively growing for at least 6 weeks after transplanting and have established a vigorous root system.

Treatment of Herbaceous Plants, Tropical Shrubs and Foliage Plants

BroadStar will severely injure many annual bedding plants (e.g. Petunia), and some herbaceous perennials (e.g. Hosta), tropical shrubs and foliage plants. Therefore, BroadStar should NOT be applied to herbaceous annual plants, and should NOT be applied to herbaceous perennials, tropical shrubs or foliage plants until after the user has confirmed the product's safety on a small number of plants grown under standard production practices.

Treatment of Seedling Trees and Shrubs

BroadStar may injure seedlings of some trees and shrubs if applied before seedlings have established a vigorous root system. Therefore, *BroadStar* should NOT be applied to tree and shrub seedlings within one year after germination, unless the user has first confirmed the product's safety on a small number of plants grown under standard production practices.

DIRECTIONS FOR USE IN CONTAINER OR FIELD GROWN ORNAMENTAL SHRUBS, TREES, GROUND COVERS, NON-BEARING FRUIT AND NUT TREES AND CONIFERS

Preemergence Application

Apply 150 lbs. per acre (approximately 3.5 lbs. per 1000 sq. ft.) of *BroadStar* before weeds germinate. Apply 1/2 to 3/4 inch of irrigation by hand, overhead sprinkler or fan emitter within 1 hour after application of *BroadStar*. Irrigation after application is an important step for herbicide activation. Irrigation releases active ingredient from the granule. Effective irrigation and herbicide activation is especially important under cooler temperatures when granules may release herbicide more slowly than under warmer temperatures. Drip irrigation may not be sufficient to release *BroadStar* residues from granules.

Product Use Restrictions and Limitations

- Remove existing weeds or weed debris BEFORE application.
- Do not apply to plants grown from seed until at least one year after seed germination, unless tolerance is first confirmed on a small number of plants.
- Do not apply to plants that are under moisture stress or stress from insects, diseases, animals, winter injury, planting shock or any other stresses.
- Do not apply more than 150 lbs. per acre in a single application.
- Do not apply more than 300 lbs. per acre in a single year.
- Do not treat the same plants more than one time every 8 weeks.
- Do not treat the same plants more than two times per year.
- · Do not apply to moist or wet foliage
- Do not apply in an enclosed greenhouse structure.
- Do not apply to pots less than four inches wide.
- Do not place treated plants in an enclosed structure until after applying 1 inch of irrigation to plants and for 7 days after treatment.
- Do not graze or feed livestock forage cut from treated areas.

WEEDS CONTROLLED

When applied at the recommended rate before weeds germinate, *BroadStar* will provide good to excellent preemergent control of the following annual grass and broadleaf weeds.

Table 4. WEEDS CONTROLLED		
COMMON NAME	SCIENTIFIC NAME	
Alyssum, Hoary	Berteroa incana	
Amaranth		
Palmer	Amaranthus palmeri	
Spiny	Amaranthus spinosus	
Barnyardgrass	Echinochloa crus-galli	
Beggarweed, Florida	Desmodium tortuosum	
Bittercress, Hairy	Cardamine hirsuta	
Bluegrass, Annual	Poa annua	
Burclover, California	Medicago hispida	
Carpetweed	Mollugo verticillata	
Chickweed		
Common	Stellaria media	
Mouseear	Cerastium vulgatum	
Crabgrass		
Large	Digitaria sanguinalis	
Smooth	Digitaria ischaemum	
Southern	Digitaria ciliaris	
Croton, Tropic	Croton glandulosus var. septentrionalis	
Dandelion	Taraxacum officinale	
Dogfennel	Eupatorium capillifolium	
Doveweed	Murdannia nudiflora	
Eclipta	Eclipta prostrata	
Filaree, Redstem	Erodium cicutarium	
Foxtail		
Bristly	Setaria verticillata	
Giant	Setaria faberi	
Green	Setaria viridis	
Yellow	Setaria glauca	
Galinsoga, Hairy	Galinsoga ciliata	
Geranium, Carolina	Geranium carolinianum	
Goosegrass	Eleusine indica	
Groundsel, Common	Senecio vulgaris	
Henbit	Lamium amplexicaule	
Horseweed	Conyza canadensis	
Indigo, Hairy	Indigofera hirsuta	

Table 4. WEEDS CONTROLLED (continued)

Table 4. WEEDS CONTROLLED (continued)		
COMMON NAME	SCIENTIFIC NAME	
Jimsonweed	Datura stramonium	
Kochia	Kochia scoparia	
Ladysthumb	Polygonum persicaria	
Lambsquarters, Common	Chenopodium album	
Liverwort*	Marchantia polymorpha	
Lovegrass, California	Eragrostis diffusa	
Mallow		
Common	Malva neglecta	
Little	Malva parviflora	
Venice	Hibiscus trionum	
Mayweed	Anthemis cotula	
Morningglory		
Entireleaf	Ipomoea hederacea var. integriuscula	
lvyleaf	Ipomoea hederacea	
Smallflower	Jacquemontia tamnifolia	
Tall	Ipomoea purpurea	
Moss species	Bryum spp.	
Mulberry Weed	Fatuoa villosa	
Nightshade		
Black	Solanum nigrum	
Eastern Black	Solanum ptycanthum	
Panicum		
Fall	Panicum dichotomiflorum	
Texas	Panicum texanum	
Parsley-Piert	Alchemilla arvensis	
Pearlwort, Birdseye	Sagina procumbens	
Pennycress, Field	Thlaspi arvense	
Phyllanthus, Longstalk	Phyllanthus tenellus	
Pigweed		
Prostrate	Amaranthus blitoides	
Redroot	Amaranthus retroflexus	
Smooth	Amaranthus hybridus	
Tumble	Amaranthus albus	
Pineapple-weed	Matricaria matricarioides	
Plantain		
Broadleaf	Plantago major	
Buckhorn	Plantago lanceolata	
Puncturevine	Tribulus terrestris	
Purslane, Common	Portulaca oleracea	
Pusley, Florida	Richardia scabra	

^{*}Will provide some postemergent control of liverwort which will be enhanced at higher temperatures and light levels.

COMMON NAME	SCIENTIFIC NAME
Ragweed	
Common	Ambrosia artemisiifolia
Giant	Ambrosia trifida
Redmaids	Calandrinia ciliata
Rocket, Yellow	Barbarea vulgaris
Senna, Coffee	Cassia occidentalis
Sesbania, Hemp	Sesbania exaltata
Shepherd's-purse	Capsella bursa-pastoris
Sida, Prickly (Teaweed)	Sida spinosa
Signalgrass	Brachiaria platyphylla
Smartweed, Pennsylvania	Polygonum pensylvanicum
Sowthistle, Annual	Sonchus oleraceus
Spurge	
Prostrate	Euphorbia humistrata
Spotted	Euphorbia maculata
Starbur, Bristly	Acanthospermum hispidum
Thickhead	Crassocephalum crepidioides
Thistle	
Canada	Cirsium arvense
Russian	Salsola iberica
Velvetleaf	Abutilon theophrasti
Waterhemp	
Common	Amaranthus rudis
Tall	Amaranthus tuberculatus
Woodsorrel, Common Yellow	Oxalis stricta

SENSITIVE ORNAMENTAL SPECIES

Injury has been reported after application of *BroadStar* to the plants listed below in Table 5, especially on recently transplanted liners. In some cases, only specific cultivars are listed because injury has not been reported on other cultivars of this species (See Tables 6-8). It is recommended that *BroadStar* not be applied to these plant species or cultivars.

Table 5. SENSITIVE SPECIES

COMMON NAME	SCIENTIFIC NAME
Azalea	Rhododendron spp. "Delaware Valley White"
Butterfly Bush	Buddleia davidii
Clethra, Summersweet	Clethra alnifolia
Deutzia, Slender	Deutzia gracilus "Nikko"
Holly, Winterberry	llex verticillata
Hydrangea	Hydrangea spp.
Nandina	Nandina domestica "Firepower"
Plumbago, Cape	Plumbago auriculata
Spirea, Japanese	Spiraea japonica
Wax Myrtle, Southern (seedling)	Myrica cerifera

TOLERANT ORNAMENTAL SPECIES

IMPORTANT: Injury other than temporary leaf spotting has not been observed on species listed in Tables 6-8 when *BroadStar* was applied at the labeled rate after transplanted liners had established a well developed root system. Some otherwise tolerant species may be injured if *BroadStar* is applied to recently transplanted liners. *BroadStar* has not been applied to all cultivars of listed species, or under all environmental conditions and cultural practices under which these species could be grown. Therefore, before beginning commercial scale application of *BroadStar* to plants labeled as tolerant, the user should first confirm the product's safety on a small number of plants grown under standard production practices.

Table 6. TREES

Table 6. TREES		
COMMON NAME	SCIENTIFIC NAME	
Arborvitae		
American	Thuja occidentalis	
Giant	Thuja plicata	
Oriental	Thuja orientalis	
Ash	_	
Green	Fraxinus pennsylvanica	
White	Fraxinus americana	
Birch	Betula spp.	
Cedar, Deodora	Cedrusdeodora	
Crabapple, Flowering	Malus spp.	
Cottonwood	Populus deltoids	
Cypress		
Italian	Cupressus sempervirens	
Templehoff	Chamaecyparis obtusa	
Dogwood, Florida	Cornus florida	
Elm, Chinese	Ulmus parvifolia	
Eucalyptus		
Mealy	Eucalyptus cinerea	
Red Gum	Eucalyptus camaldulensis	
Ficus	Ficus benjamina	
Fir		
Balsam	Abies balsamea	
Douglas	Pseudotsuga menzesii	
Fraser	Abies fraseri	
Grand	Abies grandis	
Korean	Abies koreana	
Noble	Abies procera	
Ginkgo	Ginkgo biloba	
Hemlock		
Eastern	Tsuga canadensis	
Mountain	Tsuga mertensiana	
Western	Tsuga heterophylla	

TOLERANT ORNAMENTAL SPECIES (continued) Table 6. TREES

Lilac, Hungarian Magnolia, Lily Maple Flame Flowering Japanese Red Acer palmatum Acer rubrum Striped Melberry, White Oak Bear Live Pin Willow Pine Eastern White Jack Lacebark Loblolly Lodgepole Longleaf Mugo Ponderosa Sand Scotch Shortleaf Slash Virginia Plum Slash Pinus echinata Scotch Pinus back Pinus barksina Pinus ponderosa Sand Pinus causa Scotch Pinus echinata Pinus wirginiana Pinus echinata Pinus wirginiana Pinus ponderosa Pinus ponderosa Pinus echinata Pinus echinata Pinus wirginiana Pinus wirginiana Pinus mugo Podocarpus Podocarpus Popolar Podocarpus Popolar Podocarpus Popolar Populus spp. Populus sp	Table 6. TREES		
Magnolia, Lily Maple Flame Flowering Japanese Red Acer palmatum Morus alba Oak Bear Live Pin Willow Pine Eastern White Jack Lacebark Loblolly Lodgepole Longleaf Mugo Ponderosa Sand Scotch Shortleaf Slash Virginia Plum, Beach Podocarpus Poplar Red Cedar, Eastern Redbud Sering Red Picea pungens Porcea abies Serica Picea abies Serica Picea omorika Picea abies Picea pingala Magnolia lilliflora Magnolia lilliflora Magnolia lilliflora Magnolia lilliflora Acer ginnala Acer rubrum Acer palvaticum Acer rubrum Acer rubrum Acer rubrum Acer rubrum Acer rubrum Acer palvaticum Acer punes Pinus palvatica Pin	COMMON NAME	SCIENTIFIC NAME	
Maple Flame Flame Flowering Japanese Red Acer palmatum Acer pensylvanicum Mulberry, White Oak Bear Live Pin Pin Pin Eastern White Jack Lacebark Loblolly Lodgepole Longleaf Mugo Ponderosa Sand Scotch Shortleaf Slash Virginia Plum, Beach Podocarpus Poplar Red Cedar, Eastern Red Darens Pinus Acer pensylvanicum Morus alba Acer punsulum Acer pensylvanicum Morus alba Acer pensylvanicum Morus alba Acer pensylvanicum Morus alba Acer palmatum Acer palmatur Acer palmatum Acer palmatum Pinus strobus Pinus banksiana Pinus banksiana Pinus contorta Pinus ponderosa Pinus ponderosa Pinus ponderosa Pinus echinata Slish Pinus elliottii Pinus virginiana Prunus maritima Podocarpus podocarpus spp. Populus spp.	Lilac, Hungarian	Syringa josikaea	
Flame Flowering Japanese Acer palmatum Acer rubrum Striped Acer pensylvanicum Mulberry, White Oak Bear Live Pin Red Willow Pine Eastern White Jack Lacebark Loblolly Lodgepole Longleaf Mugo Ponderosa Sand Scotch Shortleaf Slash Virginia Slash Pinus bach Pinus calusa Scotch Pinus bach Pinus chinata Slash Pinus ponderosa Sand Pinus chinata Slash Pinus mugo Pondocarpus Popolar Podocarpus Popolar Red Cedar, Eastern Picea glauca conica Norway Serbian Picea omorika Picea giauca conica Picea gauca conica Norway Serbian Picea giauca conica Picea giauca conica Picea giauca conica Picea omorika Picea sitchensis	Magnolia, Lily	Magnolia lilliflora	
Flowering Japanese Red Striped Acer palmatum Acer pensylvanicum Mulberry, White Oak Bear Live Pin Red Willow Pine Eastern White Jack Loblolly Lodgepole Longleaf Mugo Ponderosa Sand Scotch Shortleaf Slash Virginia Pium, Beach Podocarpus Poplar Red Pine Pastern Podocarpus Poplar Powarf Alberta Norway Serbian Picea glauca conica Norway Serbian Pines Acer palmatum Acer palmatur Ace	Maple		
Japanese Red Striped Acer rubrum Acer pensylvanicum Mulberry, White Oak Bear Live Pin Pin Pin Eastern White Jack Lacebark Loblolly Lodgepole Longleaf Mugo Ponderosa Sand Scotch Shortleaf Slash Pinus echinata Slash Pinus Beach Pinus echinata Slash Podocarpus Poplar Red Virea plustris Pinus strobus Pinus banksiana Pinus bungeana Pinus bungeana Pinus palustris Pinus palustris Pinus ponderosa Pinus ponderosa Pinus sylvestris Shortleaf Slash Pinus echinata Slash Pinus echinata Slash Pinus echinata Slash Pinus podocarpus spp. Poplar Podocarpus Podocarpus Populus spp. Red Cedar, Eastern Redbud Spruce Blue Picea pungens Dwarf Alberta Norway Picea abies Serbian Picea omorika Picea sitchensis	Flame	Acer ginnala	
Red Striped Acer rubrum Acer pensylvanicum Mulberry, White Oak Bear Live Pin Red Willow Pin Eastern White Jack Lacebark Loblolly Lodgepole Longleaf Mugo Ponderosa Sand Scotch Shortleaf Slash Pinus echinata Slash Pinus echinata Slash Podocarpus Popular Red Striped Acer rubrum Acer pensylvanicum Morus alba Acer pensylvanicum Acer pensylvanicum Morus alba Quercus ilicifolia Quercus virginiana Pinus banksiana Pinus banksiana Pinus banksiana Pinus banksiana Pinus contorta Pinus palustris Pinus ponderosa Pinus ponderosa Pinus clausa Pinus echinata Slash Pinus elliottii Virginia Pinus virginiana Pinus virginiana Podocarpus spp. Populus canadensis Picea pungens Picea glauca conica Norway Picea abies Serbian Picea omorika Picea sitchensis	Flowering	Abutilon hybridum	
Striped Mulberry, White Oak Bear Live Pin Red Willow Pine Eastern White Lodgepole Longleaf Mugo Ponderosa Sand Scotch Shortleaf Slash Virginia Pium, Beach Popular Podocarpus Poplar Red Cak Pinus Pinus strobus Pinus banksiana Pinus banksiana Pinus banksiana Pinus palustris Mugo Pinus palustris Ninus ponderosa Pinus ponderosa Pinus clausa Pinus echinata Slash Pinus elliottii Virginia Pinus, palustrima Podocarpus Populus spp. Populus spp. Populus spp. Populus spp. Populus canadensis Picea glauca conica Norway Picea omorika Picea sitchensis	Japanese	Acer palmatum	
Mulberry, White Oak Bear Live Pin Red Willow Pine Eastern White Jack Loblolly Lodgepole Longleaf Shortleaf Shortleaf Slash Virginia Pium, Beach Podocarpus Poplar Red Ouercus ilicifolia Quercus virginiana Quercus palustris Quercus phellos Pinus strobus Pinus strobus Pinus banksiana Pinus bungeana Pinus bungeana Pinus contorta Pinus palustris Mugo Pinus mugo Pinus mugo Pinus mugo Pinus ponderosa Pinus ponderosa Pinus echinata Pinus elliottii Pinus virginiana Plum, Beach Podocarpus Populus spp. Populus spp. Populus spp. Populus spp. Populus spp. Porea pungens Dwarf Alberta Norway Picea abies Serbian Picea omorika Picea sitchensis	Red	Acer rubrum	
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Mugo Ponderosa Pinus mugo Pinus ponderosa Sand Pinus clausa Scotch Pinus sylvestris Pinus echinata Slash Pinus elliottii Virginia Pinus virginiana Plum, Beach Podocarpus Podocarpus Populus spp. Populus spp. Red Cedar, Eastern Redbud Spruce Blue Dwarf Alberta Norway Serbian Sitka Pinus mugo Pinus ponderosa Pinus sylvestris Pinus elliottii Pinus virginiana Pinus virginiana Picea canadensis Picea pungens Picea glauca conica Picea omorika Picea sitchensis	Lodgepole	Pinus contorta	
Ponderosa Sand Pinus clausa Scotch Pinus sylvestris Pinus echinata Pinus echinata Pinus elliottii Virginia Pinus virginiana Plum, Beach Podocarpus Podocarpus Populus spp. Populus spp. Red Cedar, Eastern Redbud Spruce Blue Dwarf Alberta Norway Serbian Sitka Pinus ponderosa Pinus clausa Pinus echinata Pinus elliottii Pinus virginiana Pinus virginiana Prunus maritima Podocarpus spp. Populus spp. Populus spp. Populus virginiana Cercis canadensis	Longleaf	Pinus palustris	
Sand Scotch Shortleaf Slash Virginia Plum, Beach Podocarpus Poplar Red Cedar, Eastern Redbud Spruce Blue Dwarf Alberta Norway Serbian Sitka Pinus clausa Pinus sylvestris Pinus echinata Pinus elliottii Pinus virginiana Pinus virginiana Pinus maritima Podocarpus spp. Populus spp. Juniperus virginiana Cercis canadensis Picea pungens Picea glauca conica Picea omorika Picea sitchensis	Mugo	Pinus mugo	
Scotch Shortleaf Slash Virginia Plum, Beach Podocarpus Populus spp. Populus spp. Populus spp. Populus spp. Populus spp. Populus spp. Populus virginiana Plum, Beach Prunus maritima Podocarpus spp. Populus spp. Juniperus virginiana Cercis canadensis Spruce Blue Picea pungens Dwarf Alberta Picea glauca conica Norway Picea omorika Sitka Picea sitchensis	Ponderosa	Pinus ponderosa	
Shortleaf Slash Virginia Pinus elliottii Pinus virginiana Plum, Beach Podocarpus Populus spp. Populus spp. Populus spp. Juniperus virginiana Redbud Cercis canadensis Spruce Blue Dwarf Alberta Norway Serbian Sitka Pinus echinata Pinus elliottii Pinus virginiana Pinus virginiana Podocarpus spp. Juniperus virginiana Cercis canadensis	Sand	Pinus clausa	
Slash Virginia Pinus elliottii Pinus virginiana Plum, Beach Podocarpus Podocarpus spp. Populus spp. Populus spp. Juniperus virginiana Redbud Cercis canadensis Spruce Blue Picea pungens Dwarf Alberta Norway Serbian Sitka Picea sitchensis	Scotch	Pinus sylvestris	
Virginia Plum, Beach Podocarpus Podocarpus Poplar Red Cedar, Eastern Redbud Spruce Blue Dwarf Alberta Norway Serbian Sitka Pinus virginiana Prunus maritima Podocarpus spp. Populus spp. Juniperus virginiana Cercis canadensis Picea pungens Picea glauca conica Picea abies Picea omorika Picea sitchensis	Shortleaf	Pinus echinata	
Plum, Beach Podocarpus Podocarpus spp. Poplar Red Cedar, Eastern Redbud Spruce Blue Dwarf Alberta Norway Serbian Sitka Prunus maritima Podocarpus spp. Populus spp. Juniperus virginiana Cercis canadensis Picea pungens Picea glauca conica Picea abies Picea omorika Picea sitchensis	Slash	Pinus elliottii	
Podocarpus Podocarpus spp. Poplar Populus spp. Red Cedar, Eastern Juniperus virginiana Redbud Cercis canadensis Spruce Picea pungens Dwarf Alberta Picea glauca conica Norway Picea abies Serbian Picea omorika Sitka Picea sitchensis	Virginia	Pinus virginiana	
Poplar Red Cedar, Eastern Redbud Spruce Blue Dwarf Alberta Norway Serbian Sitka Populus spp. Juniperus virginiana Cercis canadensis Picea pungens Picea glauca conica Picea abies Picea omorika Picea sitchensis	Plum, Beach		
Red Cedar, Eastern Redbud Spruce Blue Dwarf Alberta Norway Serbian Sitka Juniperus virginiana Cercis canadensis Picea pungens Picea glauca conica Picea abies Picea omorika Picea sitchensis	Podocarpus	Podocarpus spp.	
Redbud Spruce Blue Dwarf Alberta Norway Serbian Sitka Cercis canadensis Picea pungens Picea glauca conica Picea abies Picea omorika Picea sitchensis	Poplar	Populus spp.	
Spruce Blue Picea pungens Dwarf Alberta Picea glauca conica Norway Picea abies Serbian Picea omorika Sitka Picea sitchensis	Red Cedar, Eastern		
Blue Picea pungens Dwarf Alberta Picea glauca conica Norway Picea abies Serbian Picea omorika Sitka Picea sitchensis	Redbud	Cercis canadensis	
Dwarf Alberta Picea glauca conica Picea abies Picea omorika Picea sitchensis			
Norway Picea abies Serbian Picea omorika Sitka Picea sitchensis	Blue	Picea pungens	
Serbian Picea omorika Sitka Picea sitchensis	Dwarf Alberta	Picea glauca conica	
Sitka Picea sitchensis		Picea abies	
	Serbian	E .	
	=	Picea sitchensis	
	Sumac, Staghorn		
Sweetgum, American Liquidambar styraciflua		Liquidambar styraciflua	
Sycamore			
American Platanus occidentalis		, · · · · · · · · · · · · · · · · · · ·	
California Platanus racemosa			
Yew, Japanese Taxus cuspidata	Yew, Japanese	Taxus cuspidata	

TOLERANT ORNAMENTAL SPECIES (continued)

Table C. CHRURE AND CROUND COVERS

Table 6. SHRUBS AND GR	OUND COVERS
COMMON NAME	SCIENTIFIC NAME
Abelia, Glossy	Abelia x grandiflora
Acacia	Acacia spp.
Anise, Purple	Illicium floridanum
Azalea ¹	Rhododendron spp.
Barberry	Berberis spp.
Japanese	Berberis thunbergii
William Penn	Berberis x gladwynensis
Bayberry	Myrica pensylvanica
Bottlebrush	Callistemon spp.
Boxwood, Littleleaf	Buxus microphylla
Camellia	Camellia japonica
Cinquefoil, Shrubby	Potentilla fruticosa
Cotoneaster, Bearberry	Cotoneaster dammeri
Crape Myrtle ²	Lagerstroemia indica spp.
Elaeagnus	Elaeagnus spp.
English Ivy	Hedera helix
Euonymus, Winged ³	Euonymus alatus
Firethorn, Scarlet	Pyracantha coccinea
Forsythia	
Border	Forsythia x intermedia
Weeping	Forsythia suspensa
White	Abeliophyllum distichum
Gardenia, Cape Jasmine	Gardenia jasminoides
Heath	Erica cinerea
Holly	1
Chinese	llex cornuta
Inkberry	llex glabra
Japanese ³	llex crenata
Meserve ³	llex x meserveae
Nellie R. Stevens	II x Nellie R. Stevens
Honeysuckle, Japanese	Lonicera japonica
Indian Hawthorn	Rhaphiolepis indica
Juniper	
Creeping	Juniperus horizontalis
Shore	Juniperus conferta
Singleseed	Juniperus squamata
Myoporum	Myoporum parvifolium
Oleander	Nerium spp.
Oregon Grape	Mahonia spp.
Pachysandra	Pachysandra terminalis
Photinia	Photinia x fraseri
Pieris, Japanese	Pieris japonica
Pittosporum, Japanese	Pittosporum tobira

¹Injury reported on some cultivars. See Table 5. ²Temporary injury reported at bud break on some cultivars. ³Injury reported following application to newly transplanted liners.

TOLERANT ORNAMENTAL SPECIES (continued)

Table 7. SHRUBS AND GROUND COVERS

COMMON NAME	SCIENTIFIC NAME
Privet	
Chinese ¹	Ligustrum sinense
Japanese	Ligustrum japonicum
Pyracantha	Pyracantha spp.
Rhododendron, Catawba	Rhododendroncatawbiense
Rose	Rosa spp.
Sweet Flag	Acorus calamus
Sweetspire, Virginia	Itea virginica
Tea Olive	Osmanthus fragrans
Viburnum	_
Arrowwood	Viburnum dentatum
Pink Dawn	Viburnum x bodnantense
Sweet ³	Viburnum odoratissimum
Weigela	Weigela florida

¹Injury reported following application to newly transplanted liners.

Table 8. NON-BEARING FRUIT AND NUT TREES AND VINES

COMMON NAME	SCIENTIFIC NAME
Apples	Malus spp.
Blueberry, Huckleberry	Vaccinium spp.
Bramble	Rubus spp.
Cherry, Sweet	Prunus avium
Citrus Fruits	Citrus spp.
Grapes	Vitis spp.
Olives	Olea spp.
Peach	Prunum persica
Pears	Pyrus communis
Prunes	Prunus spp.
Stone Fruits	Prunus spp.
Tree Nuts	
Walnut	Juglans spp.
Chestnut	Castanea spp.
Pecan	Carya illionoinensis
Pistachio	Pistacia vera
Almond	Prunus dulcis
Filbert	Corylus maxima

STORAGE AND DISPOSAL

PROHIBITIONS

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

PESTICIDE STORAGE

Keep pesticide in original container.

Store in a cool, dry, secure place.

Do not put formulation or dilute spray solution into food or drink containers.

Do not contaminate food or foodstuffs.

Do not store or transport near feed or food.

Not for use or storage in or around the home.

For help with any spill, leak, fire or exposure involving this material, call day or night (800) 892-0099.

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

Nonrefillable outer bag. Do not reuse or refill the outer bag. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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