



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

JUN 23 2005

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

James Pensyl  
Valent U.S.A. Corporation  
1600 Riviera Avenue  
PO Box 8025  
Walnut Creek, CA 94596-8025

Dear Mr. Pensyl:

Subject: Revised Labeling  
SureGuard Herbicide  
EPA Registration No. 59639-120  
Your Submission Dated June 9, 2005

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) or 4(a) when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
  - a. The referral statement states "See Next Page For Additional Precautionary Statements". 40 CFR 156.10(i)(1)(ii) states that only the directions for use may appear on printed or graphic matter which accompanies the pesticide. If all of the Precautionary Statements and First Aid Statements cannot appear on the container label due to size constraints, you should formally submit a request for a size exemption from the regulations.
  - b. On the front panel of the first label to be consistent with the directions for use change "maintain bare ground non-crop areas" to read "maintain bare ground non-crop areas in and around ornamental nurseries".
3. Submit one (1) copy of your final printed labeling before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

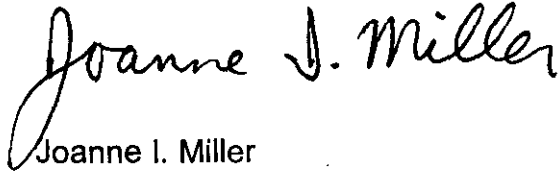
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A stamped copy of the label is enclosed for your records.

If you have any questions concerning this letter, please contact Mr. James Stone at 703-305-7391.

Sincerely yours,

A handwritten signature in black ink that reads "Joanne I. Miller". The signature is written in a cursive style with a large, looping initial "J".

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

Enclosure

3 8 45



GROUP 14 HERBICIDE

[MASTER LABEL]

ACCEPTED with COMMENTS In EPA Letter Dated:

JUN 23 2005 Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

# SureGuard™ Herbicide

59639-120

DIRECTIONS FOR USE IN CONTAINER AND FIELD GROWN ORNAMENTALS, CONIFERS & DECIDUOUS TREES AND TO MAINTAIN BARE GROUND NON-CROP AREAS.

Active Ingredient	By Wt.
*Flumioxazin.....	51%
Other Ingredients .....	49%
Total .....	100%

\*(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)

SUREGUARD™ Herbicide is a water dispersible granule containing 51% active ingredient.

KEEP OUT OF REACH OF CHILDREN

## CAUTION

SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

NET WEIGHT 5 POUNDS

4 3 45

[Sub Label 1]

SUREGUARD™ Herbicide

For use in container and field grown ornamentals, conifers & deciduous trees and to maintain bare ground non-crop areas.

5 8 45



GROUP 14 HERBICIDE

# SureGuard™ Herbicide

**DIRECTIONS FOR USE IN CONTAINER AND FIELD GROWN ORNAMENTALS, CONIFERS AND DECIDUOUS TREES AND TO MAINTAIN BARE GROUND NON-CROP AREAS**

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**NET WEIGHT 5 POUNDS**

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS & DOMESTIC ANIMALS

#### CAUTION

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing dust and spray mist. Avoid contact with skin, eyes or clothing.

#### FIRST AID

- |                                |  |
|--------------------------------|--|
| <b>If inhaled:</b>             | <ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>  |
| <b>If on skin or clothing:</b> | <ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>  |
| <b>If in eyes:</b>             | <ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>  |
| <b>If swallowed:</b>           | <ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul> |

#### 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.

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### **ENVIRONMENTAL HAZARDS:**

This product is toxic to non-target plants and 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. Drift and runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas. 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 run-off precautions on this label in order to minimize off-site exposures.

Under some conditions this product may have a potential to run off 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 run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands or on the downhill side of fields where run-off could occur will minimize water run-off 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 waterproof material, shoes plus socks.

#### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forest, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

Do not enter or allow others to enter treated areas until sprays have dried.

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**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

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SUREGUARD is a preemergence and/or postemergence herbicide for control of selected grass and broadleaf weeds on and around outdoor container and field grown ornamental plants, conifers & deciduous trees and to maintain bare ground non-crop areas when used in accordance with this label. SUREGUARD 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. Preemergence weed control with SUREGUARD is most effective when applied to clean, weed free soil surfaces. Disturbing soil surfaces may reduce herbicide efficacy. Emerged weeds are controlled postemergence with SUREGUARD by inhibiting the same enzyme in plants with preemergence application. The most effective postemergence weed control with SUREGUARD occurs when applied in combination with a surfactant to weeds less than 2 inches in height.

Spotting or speckling may be observed following an application of SUREGUARD, if the spray solution directly contacts actively growing plant foliage or green bark. Leaves that receive indirect (drift) spray contact may be affected in a similar manner. Translocation of SUREGUARD is limited, thus established vigorous growing ornamentals outgrow this condition rapidly and develop normally.

**IMPORTANT:** When applied as directed, the conifer and deciduous tree species listed on this label have shown tolerance to SUREGUARD. However, SUREGUARD is a very active herbicide and the user should exercise responsible judgment and caution until familiarity is gained with this product. Due to variability within species, crop growth stage, environmental conditions and application techniques, it is recommended that users test this product under local growing conditions on a small number of plants and evaluate for 4 to 6 weeks for phytotoxicity. Testing SUREGUARD on a small number of plants will determine if the herbicide can be used safely on a widespread application. Neither the seller nor the manufacturer of SUREGUARD has investigated the safety to plants not listed on the label.

### GENERAL RESTRICTIONS AND LIMITATIONS

- Do not apply in enclosed greenhouse structures as injury to plant foliage may occur.
- Do not apply when weather conditions favor spray drift from treated areas.
- Do not graze treated fields or feed treated forage or hay to livestock.
- Do not incorporate into soil after application.
- Do not apply this product through any type of irrigation system.
- Only apply to healthy established trees and ornamentals. Do not apply when plants are under stress from insects, diseases, animals or winter injury, planting shock or any other stresses.
- Do not apply more than 12 oz. of SUREGUARD per acre per application.
- Do not apply more than 24 oz. of SUREGUARD per acre per year.
- Do not apply to moist or wet plant foliage.
- Do not place treated containers in an enclosed structure until receiving 1" of irrigation or rainfall and for 7 days after treatment.
- Do not apply this product to concrete or other impermeable surfaces.
- Not for use in forest management programs or for forest regeneration applications, bearing tree fruit, or bearing nut and vine crops.

## 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 1-800-682-5368.

## PREEMERGENCE APPLICATION

Preemergence applications of SUREGUARD must be made prior to weed emergence. Moisture is necessary to activate SUREGUARD on soil for residual weed control. Dry weather following application of SUREGUARD may reduce effectiveness. However, when adequate moisture is received after dry conditions, SUREGUARD will control susceptible germinating weeds.

When adequate moisture is not received after soil applied treatment of SUREGUARD, weed control may be improved by utilizing shallow cultivation. If weeds begin to emerge, irrigate (1/2" of water) or cultivate uniformly with shallow tillage equipment that will not damage the crop. Deep cultivation reduces the effectiveness of SUREGUARD and should be avoided.

## POSTEMERGENCE APPLICATION

For best results, SUREGUARD should be applied to actively growing weeds. Applying SUREGUARD under conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply SUREGUARD when the crop or weeds are under stress due to drought, excessive water, extremes in temperatures or disease. Weeds under stress tend to become less susceptible to herbicidal action. SUREGUARD is most effective when applied under sunny conditions at temperatures above 65°F.

SUREGUARD is rainfast one hour after application. Applications should not be made if rain is expected within one hour of application or efficacy may be reduced.

## SOIL CHARACTERISTICS

Application of SUREGUARD to soils with high organic matter and/or high clay content may require higher dosages than with soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

## CARRIER VOLUME AND SPRAY PRESSURE

### PREEMERGENCE APPLICATION

To ensure uniform coverage, use 10 to 30 gals. of spray solution per acre. Nozzle selection should meet manufacturer's gallonage and pressure recommendation for preemergence herbicide application.

### POSTEMERGENCE APPLICATION

To ensure thorough coverage, use 15 to 30 gals. of spray solution per acre. Use 20 to 30 gals. per acre if dense vegetation or heavy residue is present on the soil surface. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for postemergence herbicide application.

## ADDITIVES

### POSTEMERGENCE APPLICATION

Using SUREGUARD to control weeds after they emerge requires the addition of an agronomically approved adjuvant to the spray mixture. A crop oil concentrate which contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant containing at least 80% active ingredient should be used when applying SUREGUARD as part of a postemergence weed control program. Mixing compatibility should be verified by a jar test before using.

A spray-grade nitrogen source (either ammonium sulfate at 2.0 to 2.5 lb./A or a 28 to 32% nitrogen solution at 1 to 2 qts./A) may be added to the spray mixture along with a crop oil concentrate or non-ionic surfactant to enhance weed control. The addition of a nitrogen source does not replace the need for crop oil concentrate or non-ionic surfactant.

### JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND SUREGUARD

A jar test should be performed before mixing commercial quantities of SUREGUARD, when using SUREGUARD for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pt. of water to a quart jar. The water should be from the same source and have the same temperature as the water used in the spray tank mixing operation.
2. Add 3 grams (approximately 1 level tsp.) of SUREGUARD for the 8 oz./A rate or 4 grams (approximately 1-1/2 tsp.) for 12 oz./A rate to the jar. Gently mix until product disperses.
3. Add 60 ml (4 Tbsp. or 2 fl. oz.) of additive to the quart jar and gently mix.
4. If nitrogen is being used, add 16 ml (1 Tbsp.) of the 28 to 32% nitrogen source to the quart jar. If ammonium sulfate is being used, add 19 grams of AMS to the quart jar in place of the 28 to 32% nitrogen.
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank mix combination will be uniform and free of suspended particles. If any of the following conditions are observed the choice of adjuvant should be questioned:
  - a) Layer of oil or globules on the solution surface.
  - b) Flocculation: Fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: Thickening texture (coagulated) like gelatin.

### APPLICATION EQUIPMENT

**Important:** Spray equipment, including all tanks, hoses, booms, screens and nozzles, should be thoroughly cleaned. Spray equipment used to apply SUREGUARD should not be used to apply other materials to any plant foliage. Equipment with SUREGUARD residue remaining in the system may result in crop injury to subsequently treated crops.

### SPRAYER PREPARATION

Before applying SUREGUARD, start with clean, well maintained application equipment. The spray tank, as well as all hoses and booms should be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to the sulfonylurea and phenoxy herbicides, are active at very small amounts and can cause crop injury when applied to susceptible crops. The spray equipment should be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply SUREGUARD. If two or more products were tank mixed prior to SUREGUARD application, the most restrictive cleanup procedure should be followed.

**MIXING INSTRUCTIONS**

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. To ensure a uniform spray mixture, pre-slurry the required amount of SUREGUARD with water prior to addition to the spray tank. Use a minimum of 1 gal. of water per 10 oz. of SUREGUARD.
3. While agitating, slowly add the pre-slurried SUREGUARD to the spray tank. Agitation should create a rippling or rolling action on the water surface.
4. If tank mixing SUREGUARD with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
5. Add any required adjuvants.
6. Fill spray tank to desired level with water. **Agitation should continue until spray solution has been applied.**
7. Mix only the amount of spray solution that can be applied the day of mixing. **SUREGUARD should be applied within 6 hours of mixing.**

**SPRAYER CLEANUP**

Spray equipment must be cleaned each day following SUREGUARD application. After SUREGUARD is applied, the following steps must be used to clean the spray equipment:

1. Completely drain the spray tank and rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the tank with clean water and flush all hoses, booms, screens and nozzles.
3. Top off tank with clean water and household ammonia. Use 1 gal. of 3% household ammonia for every 100 gals. of water.
4. Circulate through sprayer for 5 minutes.
5. Then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes.
6. Loosen any diaphragms before flushing the spray system, allowing cleaning solution to spray through the open diaphragm.
7. Drain tank completely.
8. Add enough clean water to the spray tank to flush hoses, booms, screens and nozzles for 2 minutes.
9. Remove all nozzles and screens and rinse them with clean water.

**APPLICATION EQUIPMENT**

Application equipment should be clean and in good repair. Nozzles should be uniformly spaced on boom and frequently checked for accuracy.

**BROADCAST APPLICATION**

Apply SUREGUARD, and SUREGUARD tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume.

**BAND APPLICATION**

When banding, use proportionately less water and SUREGUARD per acre.

**BACKPACK APPLICATION**

When applying SUREGUARD with a backpack sprayer follow all above restrictions. Backpack sprayers should be calibrated to deliver 100 gals. of spray solution per acre with 1 gal. of spray solution covering 436 sq. ft. (example: 87' X 5').

SUREGUARD RATES OZ./A	SUREGUARD RATES GRAMS/GAL.	SUREGUARD RATES PER GAL.
8	2.3	3/4 tsp.
10	2.8	1 level tsp.
12	3.4	1-1/4 tsp.

**SPRAY DRIFT REDUCTION**

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.

- Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure. For ground boom and aerial applications, use medium or coarser spray nozzles according to ASAE 572 definition for standard nozzles or a volume mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles.
- Make aerial or ground 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 non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.
- Do not make aerial or ground 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.
- Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures.
- All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.
- For ground boom applications, apply with nozzle height no more than 4 ft. above the ground or crop canopy.

## WEEDS CONTROLLED

When SUREGUARD is applied preemergence or postemergence at recommended rates and weed stages, the following grasses and broadleaf weeds are controlled.

**TABLE 1. WEEDS CONTROLLED BY SUREGUARD**

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

\*Preemergence control only.

continued

TABLE 1. WEEDS CONTROLLED BY SUREGUARD continued

COMMON NAME	SCIENTIFIC NAME
Jimsonweed	<i>Datura stramonium</i>
Kochia	<i>Kochia scoparia</i>
Kyllinga, Green*	<i>Kyllinga brevifolia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, Common	<i>Chenopodium album</i>
Liverwort	<i>Marchantia polymorpha</i>
Lovegrass, California*	<i>Eragrostis diffusa</i>
Mallow	
Common	<i>Malva neglecta</i>
Little	<i>Malva parviflora</i>
Venice	<i>Hibiscus trionum</i>
Mayweed*	<i>Anthemis cotula</i>
Morningglory	
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integruscula</i>
Ivyleaf	<i>Ipomoea hederacea</i>
Red/Scarlet	<i>Ipomoea coccinea</i>
Smallflower	<i>Jacquemontia tamnifolia</i>
Tall	<i>Ipomoea purpurea</i>
Moss	<i>Bryum</i> spp.
Mustard	
Tumble	<i>Sisymbrium altissimum</i>
Wild	<i>Brassica kaber</i>
Nightshade	
Black	<i>Solanum nigrum</i>
Eastern Black	<i>Solanum ptycanthum</i>
Hairy	<i>Solanum sarrachoides</i>
Panicum	
Fall*	<i>Panicum dichotomiflorum</i>
Texas*	<i>Panicum texanum</i>
Parsley-Piert	<i>Alchemilla arvensis</i>
Pearlwort, Birdseye*	<i>Sagina procumbens</i>
Pennycress, Field	<i>Thlaspi arvense</i>
Phyllanthus, Longstalked	<i>Phyllanthus tenellus</i>
Pigweed	
Prostrate	<i>Amaranthus blitoides</i>
Redroot	<i>Amaranthus retroflexus</i>
Smooth	<i>Amaranthus hybridus</i>
Tumble	<i>Amaranthus albus</i>
Pineapple-weed*	<i>Matricaria matricarioides</i>
Plantain	
Broadleaf*	<i>Plantago major</i>
Buckhorn*	<i>Plantago lanceolata</i>
Poinsettia, Wild	<i>Euphorbia heterophylla</i>
Puncturevine	<i>Tribulus terrestris</i>
Purslane, Common	<i>Portulaca oleracea</i>

\*Preemergence control only.

continued



TABLE 1. WEEDS CONTROLLED BY SUREGUARD continued

COMMON NAME	SCIENTIFIC NAME
Pusley, Florida	<i>Richardia scabra</i>
Ragweed	
Common	<i>Ambrosia artemisiifolia</i>
Giant	<i>Ambrosia trifida</i>
Redmaids	<i>Calandrinia ciliata</i>
Redweed	<i>Melochia corchorifolia</i>
Rocket, Yellow	<i>Barbarea vulgaris</i>
Senna, Coffee	<i>Cassia occidentalis</i>
Sesbania, Hemp	<i>Sesbania exaltata</i>
Shepherd's-Purse	<i>Capsella bursa-pastoris</i>
Sida, Prickly (Teaweed)	<i>Sida spinosa</i>
Signalgrass*	<i>Brachiaria platyphylla</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sowthistle, Annual	<i>Sonchus oleraceus</i>
Spurge	
Prostrate	<i>Euphorbia humistrata</i> Engelm
Spotted	<i>Euphorbia maculata</i>
Starbur, Bristly*	<i>Acanthospermum hispidum</i>
Thistle	
Canada*	<i>Cirsium arvense</i>
Russian	<i>Salsola iberica</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Waterhemp	
Common	<i>Amaranthus rudis</i>
Tall	<i>Amaranthus tuberculatus</i>
Woodsorrel, Yellow*	<i>Oxalis stricta</i>

\*Preemergence control only.

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## DIRECTIONS FOR USE IN ESTABLISHED CONTAINER AND FIELD GROWN CONIFERS

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SUREGUARD may be applied in a single or split application to established container and field grown conifers. The conifer tree species listed in Table 2 of the "Tolerant Conifers" Section have shown tolerance to applications of SUREGUARD only when applied to hardened off plant material. All over the top applications of SUREGUARD should be applied prior to spring bud break or delayed until conifers have sufficiently hardened off prior to herbicide application. During periods of cool, cloudy weather, use caution to ensure conifers have hardened off prior to herbicide application. **Do not apply to conifers within 2 years of seedling emergence.**

### PREEMERGENCE APPLICATION

Apply 8 to 12 oz. (0.25 to 0.38 lb. ai/A) of SUREGUARD per broadcast acre as preemergence (prior to weed emergence) application. SUREGUARD will provide preemergence control of broadleaf weeds and grasses listed in **Table 1**. SUREGUARD may be incorporated with 0.5 to 0.75 inch of water following application. Mechanically incorporating SUREGUARD will disturb soil surfaces, which may reduce herbicidal efficacy.

Preemergence applications of SUREGUARD should be made to tilled weed free established conifer plantings or to weed free container grown conifers. A preemergence application of SUREGUARD may be sprayed directly over conifers provided bud break has not occurred. Do not make applications of SUREGUARD over conifers when plants have moist or wet foliage.

### POSTEMERGENCE APPLICATION

Apply 8 to 12 oz. (0.25 to 0.38 lb. ai/A) of SUREGUARD per broadcast acre as a postemergence (after weed emergence) application. SUREGUARD will provide postemergence control of broadleaf weeds and grasses listed in **Table 1**. Postemergence applications of SUREGUARD should be made when weeds are actively growing and are no larger than 2 inches in height. The addition of a crop oil concentrate or non-ionic surfactant enhances SUREGUARD activity on emerged weeds (0.25% v/v non-ionic surfactant or 1 qt./A crop oil concentrate).

Conifers will tolerate postemergence applications of SUREGUARD if the applications are made before bud break or after foliage has hardened off. Needle burn may be observed on the youngest conifers growth following applications if plants are not hardened off. However, SUREGUARD will not adversely affect new growth, and vigorous growth will continue under favorable environmental conditions. Do not make applications of SUREGUARD over conifers when plants have moist or wet foliage.

**AERIAL APPLICATION**

To obtain satisfactory weed control with aerial application of SUREGUARD, uniform coverage must be obtained. Do not spray when drift is possible or when wind velocity is more than 10 mph. Avoid spraying SUREGUARD within 200 feet of dwellings, adjacent sensitive crops or environmentally sensitive areas. To obtain satisfactory application and drift, the following directions must be observed:

**Volume Pressure**

Use SUREGUARD in 5 to 10 gals. of water per acre with a maximum spray pressure of 40 PSI. Application at less than 5 gals. per acre will provide inadequate weed control. Higher gallonage applications generally provide more consistent weed control.

**Nozzle and Nozzle Operation**

Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles such as diaphragm type nozzles to avoid unwanted discharge of spray solution. The nozzle must be directed toward the rear of the aircraft, at an angle between 0 and 15° downward. Do not place nozzles on the outer 25% of the wings or rotors.

**Adjuvants**

Refer to the additive section or the tank mix partners label for adjuvant recommendation.

**TANK MIXTURES FOR CONTAINER AND FIELD GROWN CONIFERS**

In addition to the weeds controlled by SUREGUARD used alone, tank mixtures with other preemergence and postemergence herbicides registered for use on conifers may provide a broader spectrum of weed control. SUREGUARD may also be applied as part of a postemergence weed control program to assist in postemergence burndown of annual and perennial weeds. Tank mixing SUREGUARD with glyphosate will increase the speed of burndown activity compared to glyphosate applied alone. SUREGUARD may be tank mixed with products containing the following active ingredient labeled for use in conifers:

- clethodim
- glyphosate
- oryzalin
- napropamide
- prodiamine
- pronamide
- simazine

**IMPORTANT:** Completely read and follow the label of any potential SUREGUARD tank mix partner. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label. When applied according to label use directions SUREGUARD will control the broadleaf weeds and grasses listed in **Table 1**.

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**TABLE 2. TOLERANT CONIFERS**

SUREGUARD may be applied to a number of species including the following:

<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>
Arborvitae	
American	<i>Thuja occidentalis</i>
Oriental	<i>Thuja orientalis</i>
Fir	
Concolor	<i>Abies concolor</i>
Cork Bark	<i>Abies lasiocarpa</i>
Douglas	<i>Pseudotsuga menziesii</i>
Fraser	<i>Abies fraseri</i>
Grand	<i>Abies grandis</i>
Noble	<i>Abies procera</i>
Turkish	<i>Abies bommuelleriana</i>
Hemlock	
Eastern	<i>Tsuga canadensis</i>
Western	<i>Tsuga heterophylla</i>
Juniper	
Blue Star	<i>Juniperus scopularum</i>
Creeping	<i>Juniperus horizontalis</i>
Japanese Garden	<i>Juniperus chinensis</i>
Tamarix	<i>Juniperus sabina</i>
Pine	
Austrian	<i>Pinus nigra</i>
Eastern White	<i>Pinus strobus</i>
Jack	<i>Pinus banksiana</i>
Japanese Black	<i>Pinus thunbergiana</i>
Loblolly	<i>Pinus taeda</i>
Lodgepole	<i>Pinus contorta</i>
Longleaf	<i>Pinus palustris</i>
Mugo	<i>Pinus mugo</i>
Ponderosa	<i>Pinus ponderosa</i>
Sand	<i>Pinus clausa</i>
Scotch	<i>Pinus sylvestris</i>
Shortleaf	<i>Pinus echinata</i>
Slash	<i>Pinus elliotii</i>
Virginia	<i>Pinus virginiana</i>
Spruce	
Blue	<i>Picea pungens</i>
Dwarf Alberta	<i>Picea glauca conica</i>
Norway	<i>Picea abies</i>
Sitka	<i>Picea sitchensis</i>
Yew	
English	<i>Taxus baccata</i>
Japanese	<i>Taxus cuspidata</i>

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**DIRECTIONS FOR USE IN  
CONTAINER AND FIELD GROWN DECIDUOUS TREES AND  
NON-BEARING FRUIT AND NON-BEARING NUT TREES**

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SUREGUARD may be applied as single or split applications to established container and field grown deciduous trees. The deciduous trees listed in Table 3 of the "Tolerant Deciduous Trees" section have shown tolerance to applications of SUREGUARD only when applied to the soil and base of the plant.

For maximum safety to deciduous trees, directed applications of SUREGUARD should be made to the soil surface prior to bud swell in the spring or after dormancy has initiated in the fall. Avoid making applications under environmental conditions that favor drift to non-targeted areas.

SUREGUARD may be applied to newly established (or transplanted) container and field grown deciduous trees. Do not apply to trees that are less than one year old, unless completely protected by non-porous wraps, grow tubes, waxed protectors or other forms of protection to young foliage and/or green bark. Newly established or transplanted trees should be sufficiently watered-in prior to application to settle soil around the plant. Do not harvest fruit or nuts from treated trees within one year of application.

**IMPORTANT:** Direct application of SUREGUARD to the soil surface and away from plant material. Avoid direct spray onto plant surfaces, foliage and green bark. SUREGUARD applications made after bud swell may result in injury if herbicide contacts foliage of trees. Splashing of herbicide treated soil onto foliage can result in injury and should be avoided.

**PREEMERGENCE APPLICATION**

Apply 8 to 12 oz. (0.25 to 0.38 lb. ai/A) of SUREGUARD per broadcast acre as a preemergence (to weed emergence) application. Mechanically incorporating SUREGUARD will disturb soil surfaces, which may reduce herbicidal efficacy. The use of spray shields that limit exposure of foliage and bark to SUREGUARD is suggested.

Preemergence applications of SUREGUARD should be made to tilled, weed free and deciduous tree plantings or to weed free container grown deciduous trees. A preemergence application of SUREGUARD may be applied directly to the soil surface or the base of a deciduous tree, provided that direct and indirect (drift) applications to plant foliage, flowers and green bark do not occur.

**POSTEMERGENCE APPLICATION**

Apply 8 to 12 oz. (0.25 to 0.38 lb. ai/A) of SUREGUARD per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt./A crop oil concentrate). The addition of an adjuvant enhances SUREGUARD activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of SUREGUARD. The use of spray shields that limit the exposure of SUREGUARD is suggested.

Postemergence (to weed emergence) applications of SUREGUARD should be made when weeds are actively growing and are no larger than 2 inches in height. Applied postemergence, SUREGUARD will provide both preemergence and postemergence control of broadleaf weeds and grasses listed in **Table 1**.

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### **TANK MIXTURES FOR FIELD AND CONTAINER GROWN DECIDUOUS TREES**

In addition to the weeds controlled by SUREGUARD used alone, tank mixtures with other preemergence and postemergence herbicides registered for use on deciduous trees may provide a broader spectrum of weed control. SUREGUARD may also be applied as part of a postemergence weed control program to assist in postemergence burndown of annual and perennial weeds. Tank mixing SUREGUARD with glyphosate will increase the speed of burndown activity compared to glyphosate applied alone. SUREGUARD may be tank mixed with products containing the following active ingredient labeled for use in deciduous trees:

- clethodim
- glyphosate
- metolachlor
- oryzalin
- napropamide
- pendimethalin
- prodiamine
- pronamide
- simazine

**IMPORTANT:** Completely read and follow the label of any potential SUREGUARD tank mix partner. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label. When applied according to label use directions SUREGUARD will control the broadleaf weeds and grasses listed in **Table 1**.

**TOLERANT DECIDUOUS TREES, NON-BEARING FRUIT AND NON-BEARING NUT TREES**

SUREGUARD may be applied to a number of deciduous trees, non-bearing fruit and non-bearing nut trees including the species listed in Table 3. If a desired tree species is not included in Table 3, it is recommended that users test this product under growing conditions on a small number of trees and evaluate for four to six weeks for phytotoxicity. Testing SUREGUARD on a small number of plants will determine if the herbicide can be used safely on a widespread application.

**TABLE 3. TOLERANT DECIDUOUS TREE SPECIES**

<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>
Apple*	<i>Malus</i> spp.
Apricot*	<i>Prunus</i> spp.
Ash	<i>Fraxinus</i> spp.
Birch	<i>Betula</i> spp.
Buckeye	<i>Aesculus</i> spp.
Cherry*	<i>Prunus</i> spp.
Chestnut	<i>Castanea</i> spp.
Citrus*	<i>Citrus</i> spp.
Dogwood	<i>Cornus</i> spp.
Eucalyptus	<i>Eucalyptus</i> spp.
Ginkgo	<i>Ginkgo</i> spp.
Hawthorn	<i>Crataegus</i> spp.
Honeylocust	<i>Gleditsia</i> spp.
Larch	<i>Larix</i> spp.
Lilac	<i>Syringa</i> spp.
Maple**	<i>Acer</i> spp.
Mrytle, Crepe	<i>Lagerstroemia indica</i>
Oak	<i>Quercus</i> spp.
Poplar	<i>Populus</i> spp.
Peach*	<i>Prunus</i> spp.
Pear*	<i>Pyrus</i> spp.
Plum*	<i>Prunus</i> spp.
Pecan*	<i>Carya</i> spp.
Redbud	<i>Cercis canadensis</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Platanus</i> spp.
Walnut, Black	<i>Juglans nigra</i>
Willow	<i>Salix</i> spp.

\*Non-bearing trees only.

\*\*Not for use on maple trees used for production of maple sap or syrup.

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**DIRECTIONS FOR USE  
TO MAINTAIN BARE GROUND NON-CROP AREAS IN AND  
AROUND ORNAMENTAL NURSERIES**

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SUREGUARD, when used as directed, can be used for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed-free. Apply SUREGUARD only to:

- 
- Bare ground areas around buildings and other structures. Do not apply within any structure.
- Bare ground along fence rows.
- Gravel surfaces and driveways.
- Ground matting and gravel pads prior to the addition of containerized plants (conifers, deciduous trees and ornamentals).

**IMPORTANT:** Follow all applicable directions as outlined above under General Information. See Table 1 for a list of grasses and broadleaf weeds controlled by SUREGUARD.

SUREGUARD offers residual and postemergence control of susceptible grasses and broadleaf weeds as well as additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. The length of residual control is dependent on the rate of applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase.

**PREEMERGENCE APPLICATION**

Apply 8 to 12 oz. (0.25 to 0.38 lb. ai/A) of SUREGUARD per broadcast acre as a preemergence application. Preemergence (to weed emergence) applications of SUREGUARD should be made to a weed free soil surface. Preemergence applications of SUREGUARD must be completed prior to weed emergence. Moisture is necessary to activate SUREGUARD on soil for residual weed control. Dry weather following application of SUREGUARD may reduce effectiveness. However, when adequate moisture is received after dry conditions, SUREGUARD will control susceptible germinating weeds.

**POSTEMERGENCE APPLICATION**

Apply 8 to 12 oz. (0.25 to 0.38 lb. ai/A) of SUREGUARD per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt./A crop oil concentrate). The addition of an adjuvant enhances SUREGUARD activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of SUREGUARD. Emerged weeds are controlled postemergence with SUREGUARD, however, translocation of SUREGUARD within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with SUREGUARD occurs when applied in combination with a surfactant to weeds less than 2 inches in height.



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## 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 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

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

### CONTAINER DISPOSAL

Triple rinse (or equivalent). Do not reuse container. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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SureGuard™ - TM of Valent U.S.A. Corporation

Manufactured for:

**Valent U.S.A. Corporation**

P.O. Box 8025

Walnut Creek, CA 94596-8025

[www.valentpro.com](http://www.valentpro.com)

Made in U.S.A.

EPA Reg. No. 59639-120

EPA Est.

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[Sub Label 2]

SUREGUARD® Herbicide  
For use to maintain bare ground non-crop areas.

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GROUP 14 HERBICIDE

# SUREGUARD™ Herbicide

**DIRECTIONS FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS.**

Active Ingredient	By Wt.
*Flumioxazin.....	51%
Other Ingredients .....	49%
Total .....	100%

\*(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)

SUREGUARD® Herbicide is a water dispersible granule containing 51% active ingredient.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

**SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS.**

**NET WEIGHT 5 POUNDS**

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS & DOMESTIC ANIMALS

#### CAUTION

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing dust and spray mist. Avoid contact with skin, eyes or clothing.

#### FIRST AID

- If inhaled:**
- Move person to fresh air.
  - If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
  - Call a poison control center or doctor for further treatment advice.
- If on skin or clothing:**
- Take off contaminated clothing.
  - Rinse skin immediately with plenty of water for 15-20 minutes.
  - Call a poison control center or doctor for treatment advice.
- If in eyes:**
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
  - Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
  - Call a poison control center or doctor for treatment advice.
- If 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.

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### **ENVIRONMENTAL HAZARDS:**

This product is toxic to non-target plants and 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. Drift and runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas. 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 run-off precautions on this label in order to minimize off-site exposures.

Under some conditions this product may have a potential to run off 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 run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands or on the downhill side of fields where run-off could occur will minimize water run-off 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.

### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forest, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

Do not enter or allow others to enter treated areas until sprays have dried.

**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

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SUREGUARD is a selective herbicide to maintain bare ground non-crop areas when used in accordance with this label. SUREGUARD is effective as a preemergence and/or postemergence herbicide for control of selected grass and broadleaf weeds.

SUREGUARD 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. Preemergence weed control with SUREGUARD is most effective when applied to clean, weed free soil surfaces. Disturbing soil surfaces may reduce herbicide efficacy. Emerged weeds are controlled postemergence with SUREGUARD by inhibiting the same enzyme in plants with preemergence applications. The most effective postemergence weed control with SUREGUARD occurs when applied in combination with a surfactant to weeds less than 2 inches in height.

### GENERAL RESTRICTIONS AND LIMITATIONS

- Do not apply when weather conditions favor spray drift from treated areas.
- Do not graze treated fields or feed treated forage or hay to livestock.
- Do not incorporate into soil after application.
- Do not apply this product through any type of irrigation system.
- Do not apply more than 12 oz. of SUREGUARD per acre per application.
- Do not apply more than 24 oz. of SUREGUARD per acre per year.
- Do not apply to moist or wet desirable plant foliage.
- Do not apply to areas with adjacent non-dormant pome and stone fruit crops.
- Treatment of powdery, dry soil or light sandy soil, or light sandy soil when there is little to no likelihood of rainfall soon after may result in off target movement and possible damage to actively growing susceptible crops when soil particles are moved by wind or water. Do not apply when these soil and environmental conditions are present.
- Not for use in forest management programs or for forest regeneration applications, bearing fruit or bearing nut trees and vine crops.

**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 1-800-682-5368.

**PREEMERGENCE APPLICATION**

Preemergence application of SUREGUARD should be made prior to weed emergence. Moisture is necessary to activate SUREGUARD on soil for residual weed control. Moisture is needed to move SUREGUARD into the soil for preemergent weed control. Dry weather following application of SUREGUARD may reduce effectiveness.

**POSTEMERGENCE APPLICATION**

For best results, SUREGUARD should be applied to actively growing weeds. Applying SUREGUARD under conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply SUREGUARD when the crop or weeds are under stress due to drought, excessive water and extremes in temperatures or disease. Weeds under stress tend to become less susceptible to herbicidal action. SUREGUARD is most effective when applied under sunny conditions at temperatures above 65°F.

SUREGUARD is rainfast one hour after application. Applications should not be made if rain is expected within one hour of application or efficacy may be reduced.

## **APPLICATION EQUIPMENT**

**Important:** Spray equipment, including all tanks, hoses, booms, screens and nozzles, should be thoroughly cleaned. **Spray equipment used to apply SUREGUARD should not be used to apply other materials to any desirable plant foliage.** Equipment with SUREGUARD residue remaining in the system may result in crop injury to subsequently treated crops.

## **SPRAYER PREPARATION**

Before applying SUREGUARD, start with clean, well maintained application equipment. The spray tank, as well as all hoses and booms should be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to the sulfonylurea and phenoxy herbicides, are active at very small amounts and can cause crop injury when applied to susceptible crops. The spray equipment should be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply SUREGUARD. If two or more products were tank mixed prior to SUREGUARD application, the most restrictive cleanup procedure should be followed.

**MIXING INSTRUCTIONS**

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. To ensure a uniform spray mixture, pre-slurry the required amount of SUREGUARD with water prior to addition to the spray tank. Use a minimum of 1 gal. of water per 10 oz. of SUREGUARD.
3. While agitating, slowly add the pre-slurried SUREGUARD to the spray tank. Agitation should create a rippling or rolling action on the water surface.
4. If tank mixing SUREGUARD with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
5. Add any required adjuvants.
6. Fill spray tank to desired level with water. **Agitation should continue until spray solution has been applied.**
7. Mix only the amount of spray solution that can be applied the day of mixing. SUREGUARD should be applied within 24 hours of mixing.

**SPRAYER CLEANUP**

Except for dedicated bare ground herbicide application equipment, spray equipment should be cleaned each day following SUREGUARD application. The following steps should be used to clean the spray equipment:

1. Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.

2. Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles.
3. Top off tank, add suitable commercial spray tank cleaning material, following label directions, or add 1 gal. of 3% household ammonia for every 100 gals. of water, circulate through sprayer for 5 minutes, and then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes.
4. Drain tank completely.
5. Add enough clean water to the spray tank to allow all hoses, booms, screens and nozzles to be flushed for 2 minutes.
6. Remove all nozzles and screens and rinse them with clean water.

**Spray Drift Reduction**

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.

- Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure. For ground boom and aerial applications, use medium or coarser spray nozzles according to ASAE 572 definition for standard nozzles or a volume mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles.
- Make aerial or ground 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 non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.
- Do not make aerial or ground 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.
- Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures.
- All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.
- For ground boom applications, apply with nozzle height at the lowest boom height which provides uniform coverage and reduces exposure to evaporation and wind.

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## WEEDS CONTROLLED

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When SUREGUARD is applied preemergence or postemergence at recommended rates and weed stages, the following grasses and broadleaf weeds are controlled.

**TABLE 1. WEEDS CONTROLLED BY SUREGUARD**

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

\*Preemergence control only.

continued

TABLE 1. WEEDS CONTROLLED BY SUREGUARD continued

COMMON NAME	SCIENTIFIC NAME
Jimsonweed	<i>Datura stramonium</i>
Kochia	<i>Kochia scoparia</i>
Kyllinga, Green*	<i>Kyllinga brevifolia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, Common	<i>Chenopodium album</i>
Liverwort	<i>Marchantia polymorpha</i>
Lovegrass, California *	<i>Eragrostis diffusa</i>
Mallow	
Common	<i>Malva neglecta</i>
Little	<i>Malva parviflora</i>
Venice	<i>Hibiscus trionum</i>
Mayweed*	<i>Anthemis cotula</i>
Morningglory	
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriscula</i>
Ivyleaf	<i>Ipomoea hederacea</i>
Red/Scarlet	<i>Ipomoea coccinea</i>
Smallflower	<i>Jacquemontia tamnifolia</i>
Tail	<i>Ipomoea purpurea</i>
Moss	<i>Bryum</i> spp.
Mustard	
Tumble	<i>Sisymbrium altissimum</i>
Wild	<i>Brassica kaber</i>
Nightshade	
Black	<i>Solanum nigrum</i>
Eastern Black	<i>Solanum ptycanthum</i>
Hairy	<i>Solanum sarrachoides</i>
Panicum	
Fall*	<i>Panicum dichotomiflorum</i>
Texas*	<i>Panicum texanum</i>
Parsley-Piert	<i>Alchemilla arvensis</i>
Pearlwort, Birdseye*	<i>Sagina procumbens</i>
Pennycress, Field	<i>Thlaspi arvense</i>
Phyllanthus, Longstalked	<i>Phyllanthus tenellus</i>
Pigweed	
Prostrate	<i>Amaranthus blitoides</i>
Redroot	<i>Amaranthus retroflexus</i>
Smooth	<i>Amaranthus hybridus</i>
Tumble	<i>Amaranthus albus</i>
Pineapple-weed*	<i>Matricaria matricarioides</i>
Plantain	
Broadleaf*	<i>Plantago major</i>
Buckhorn*	<i>Plantago lanceolata</i>
Poinsettia, Wild	<i>Euphorbia heterophylla</i>
Puncturevine	<i>Tribulus terrestris</i>
Purslane, Common	<i>Portulaca oleracea</i>

\*Preemergence control only.

continued

TABLE 1. WEEDS CONTROLLED BY SUREGUARD continued

COMMON NAME	SCIENTIFIC NAME
Pusley, Florida	<i>Richardia scabra</i>
Ragweed	
Common	<i>Ambrosia artemisiifolia</i>
Giant	<i>Ambrosia trifida</i>
Redmaids	<i>Calandrinia ciliata</i>
Redweed	<i>Melochia corchorifolia</i>
Rocket, Yellow	<i>Barbarea vulgaris</i>
Senna, Coffee	<i>Cassia occidentalis</i>
Sesbania, Hemp	<i>Sesbania exaltata</i>
Shepherd's-Purse	<i>Capsella bursa-pastoris</i>
Sida, Prickly (Teaweed)	<i>Sida spinosa</i>
Signalgrass*	<i>Brachiaria platyphylla</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sowthistle, Annual	<i>Sonchus oleraceus</i>
Spurge	
Prostrate	<i>Euphorbia humistrata</i> Engelm
Spotted	<i>Euphorbia maculata</i>
Starbur, Bristly*	<i>Acanthospermum hispidum</i>
Thistle	
Canada*	<i>Cirsium arvense</i>
Russian	<i>Salsola iberica</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Waterhemp	
Common	<i>Amaranthus rudis</i>
Tall	<i>Amaranthus tuberculatus</i>
Woodsorrel, Yellow*	<i>Oxalis stricta</i>

\*Preemergence control only.



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## DIRECTIONS FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS

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SUREGUARD, when used as directed, can be used for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed-free. Apply SUREGUARD only to:

- Bare ground under guard rails, above-ground pipelines, and railroad beds, railroad yards and surrounding areas
- Bare ground in parking and storage areas, plant sites, substations, pumping stations, and tank farms
- Bare ground areas of airports, brick yards, industrial plant sites, lumber yards, military installations, and storage areas
- Bare ground around farm buildings and along fence rows
- Road surfaces, improved roadside areas and gravel shoulders

Follow all applicable directions as outlined above under General Information. See Table 1 for a list of broadleaf weeds and grasses controlled by SUREGUARD.

SUREGUARD offers residual and postemergence control of susceptible broadleaf and grass weeds as well as additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase.

### PREEMERGENCE APPLICATION

Apply 8 to 12 oz. (0.25 to 0.38 lb. ai/A) of SUREGUARD per broadcast acre as a preemergence application. Preemergence (to weed emergence) applications of SUREGUARD should be made to a weed free soil surface. Preemergence applications of SUREGUARD must be completed prior to weed emergence. Moisture is necessary to activate SUREGUARD on soil for residual weed control. Dry weather following application of SUREGUARD may reduce effectiveness. However, when adequate moisture is received after dry conditions, SUREGUARD will control susceptible germinating weeds.

### POSTEMERGENCE APPLICATION

Apply 8 to 12 oz. (0.25 to 0.38 lb. ai/A) of SUREGUARD per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt./A crop oil concentrate). The addition of an adjuvant enhances SUREGUARD activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of SUREGUARD. Emerged weeds are controlled postemergence with SUREGUARD, however, translocation of SUREGUARD within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with SUREGUARD occurs when applied in combination with a surfactant to weeds less than 2 inches in height.

### SOIL CHARACTERISTICS

Application of SUREGUARD to soils with high organic matter and/or high clay content may require higher dosages than with soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

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## **CARRIER VOLUME AND SPRAY PRESSURE**

### **PREEMERGENCE APPLICATION**

To ensure uniform coverage, use 10 to 30 gals. of spray solution per acre. Nozzle selection should meet manufacturer's gallonage and pressure recommendation for preemergence herbicide application.

### **POSTEMERGENCE APPLICATION**

To ensure thorough coverage, use 15 to 30 gals. of spray solution per acre. Use 20 to 30 gals. per acre if dense vegetation or heavy residue is present on the soil surface. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for postemergence herbicide application.

## **ADDITIVES**

### **POSTEMERGENCE APPLICATION**

Using SUREGUARD to control weeds after they emerge requires the addition of an agronomically approved adjuvant to the spray mixture. A crop oil concentrate which contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant containing at least 80% active ingredient should be used when applying SUREGUARD as part of a postemergence weed control program. Mixing compatibility should be verified by a jar test before using.

A spray grade nitrogen source (either ammonium sulfate at 2.0 to 2.5 lb./A or a 28 to 32% nitrogen solution at 1 to 2 qt./A) may be added to the spray mixture along with a crop oil concentrate or non-ionic surfactant to enhance weed control. The addition of a nitrogen source does not replace the need for crop oil concentrate or non-ionic surfactant.

### **JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND SUREGUARD**

A jar test should be performed before mixing commercial quantities of SUREGUARD, when using SUREGUARD for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pt. of water to a quart jar. The water should be from the same source and have the same temperature as the water used in the spray tank mixing operation.
2. Add 3 grams (approximately 1 level tsp.) of SUREGUARD for the 8 oz./A rate or 4 grams (approximately 1-1/2 tsp.) for 12 oz./A rate to the jar. Gently mix until product disperses.
3. Add 60 ml (4 Tbsp. or 2 fl. oz.) of additive to the quart jar and gently mix.
4. If nitrogen is being used, add 16 ml (1 Tbsp.) of the 28 to 32% nitrogen source to the quart jar. If ammonium sulfate is being used, add 19 grams of AMS to the quart jar in place of the 28 to 32% nitrogen.
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank mix combination will be uniform and free of suspended particles. If any of the following conditions are observed the choice of adjuvant should be questioned:
  - a) Layer of oil or globules on the solution surface.
  - b) Flocculation: Fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: Thickening texture (coagulated) like gelatin.

**APPLICATION EQUIPMENT**

Application equipment should be clean and in good repair. Nozzles should be uniformly spaced on boom and frequently checked for accuracy.

**BROADCAST APPLICATION**

Apply SUREGUARD, and SUREGUARD tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume.

**BAND APPLICATION**

When banding, use proportionately less water and SUREGUARD per acre.

**HANDGUN APPLICATION**

Applications may also be made using a handgun sprayer. Use a spray volume of at least 40 gals. per acre to insure uniform coverage.

**AERIAL APPLICATION**

- **Aerial applications are limited to maintaining weed free railroad beds, railroad yards and surrounding areas**

To obtain satisfactory weed control with aerial applications of SUREGUARD, uniform coverage must be obtained. Do not spray when drift is possible or when wind velocity is more than 10 mph. Avoid spraying SUREGUARD within 200 feet of dwellings, adjacent sensitive crops or environmentally sensitive areas. To obtain satisfactory application and drift, the following directions must be observed:

**Volume Pressure**

Use SUREGUARD in 5 to 10 gals. of water per acre with a maximum spray pressure of 40 PSI. Application at less than 5 gals. per acre will provide inadequate weed control. Higher gallonage applications provide more consistent weed control.

**Nozzle and Nozzle Operation**

Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles, such as diaphragm type nozzles to avoid unwanted discharge of spray solution. The nozzle must be directed toward the rear of the aircraft, at an angle between 0 and 15° downward. Do not place nozzles on the outer 25% of the wings or rotors.

**Adjuvants**

Refer to the additive section or the tank mix partners label for adjuvant recommendation.

**TANK MIX APPLICATION**

In addition to weeds controlled by SUREGUARD used alone, tank mixtures with other preemergence and postemergence herbicides registered for use in non-crop areas provide a broader spectrum of weed control. SUREGUARD must be tank mixed with other non-crop herbicides including, but not limited to those products listed below.

**TANK MIX COMBINATIONS FOR NON-SELECTIVE VEGETATION CONTROL**

2,4-D	imazapic	pramitol
bromacil	imazapyr	prodiamine
chlorsulfuron	metsulfuron methyl	simazine
clorpyralid	norflurazon	sulfometuron methyl
cicamba	oryzalin	tebuthiuron
ciuron	pendimethalin	triclopyr
glyphosate	picloram	
hexazinone		

**IMPORTANT:** Completely read and follow the label of any potential SUREGUARD tank mix partner. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label.

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## 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 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

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

### CONTAINER DISPOSAL

Triple rinse (or equivalent). Do not reuse container. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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SureGuard™ - TM of Valent U.S.A. Corp. for flumioxazin herbicide

Manufactured for:

**Valent U.S.A. Corporation**

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