

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

December 14, 2016

Julie B. Schlekau Manager Label and State Affairs Group Valent U.S.A. Corporation 1600 Riviera Ave, Ste. 200 Walnut Creek, CA 94596

Subject: Label Amendment – Combining two labels into one

Product Name: SureGuard Herbicide EPA Registration Number: 59639-120

Application Date: 7/15/2016 Decision Number: 519531

Dear Julie B. Schlekau:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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with FIFRA section 6. If you have any questions, please contact Nathan Mellor by phone at 703-347-8562, or via email at <a href="mellor.nathan@epa.gov">mellor.nathan@epa.gov</a>.

Shaja B. Joyner, Product Manager 20

Fungicide-Herbicide Branch Registration Division 7505P

Enclosure





GROUP 14 HERBICIDE

[MASTER LABEL]

**Note:** Bold italicized text is information for the reader and is not part of the label. [Bracketed text is optional]

# SureGuard® Herbicide

[Sub-Label A]

FOR USE IN CONTAINER AND FIELD GROWN CONIFERS (INCLUDING CHRISTMAS TREES) AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPES, TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES, AND DORMANT TURFGRASS. FOR THE MANAGEMENT OF UNDESIREABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS (TO CONTROL FLOATING AND EMERGED WEEDS USING SURFACE AND SUBSURFACE APPLICATIONS)

[Sub-Label B] FOR USE IN CONTAINER AND FIELD GROWN CONIFERS (INCLUDING CHRISTMAS TREES) AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPES AND TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES, AND DORMANT TURFGRASS

[Sub-Label C] TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES

[Sub-Label D] FOR THE MANAGEMENT OF UNDESIREABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS (TO CONTROL FLOATING AND EMERGED WEEDS USING SURFACE AND SUBSURFACE APPLICATIONS)

Active Ingredient	By Wt
*Flumioxazin	51%
Other Ingredients	<u>49%</u>
Total	100%

<sup>\*</sup>(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 1, 5, 12 and 25 POUNDS OR 500 KG (1102.3 LB)

[Sub Label A] SureGuard® Herbicide

FOR USE IN CONTAINER AND FIELD GROWN CONIFERS (INCLUDING CHRISTMAS TREES) AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPES, TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES, AND DORMANT TURFGRASS. FOR THE MANAGEMENT OF UNDESIREABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS (TO CONTROL FLOATING AND EMERGED WEEDS USING SURFACE AND SUBSURFACE APPLICATIONS)



14

**HERBICIDE** 



[Bracketed text is optional]

# SureGuard® Herbicide

FOR USE IN CONTAINER AND FIELD GROWN CONIFERS (INCLUDING CHRISTMAS TREES) AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPES, TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES, AND DORMANT TURFGRASS, FOR THE MANAGEMENT OF UNDESIREABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS (TO CONTROL FLOATING AND EMERGED WEEDS USING SURFACE AND SUBSURFACE APPLICATIONS)

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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 1 AND 5 POUNDS OR 500 KG (1102.3 LB)

# 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 eve.
- · 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 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 **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.

**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**[Terrestrial uses]

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 and is recommended.

# [Aquatic uses]

If not used in accordance with directions on the label, this product can be toxic to non-target plants and aquatic invertebrates. Do not apply to water except as specified on the label. Drift and runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas, if not used in accordance to label directions. 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.

# 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.

#### 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 TO THE FULLEST EXTENT ALLOWED BY LAW, 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. To the extent consistent with applicable law AND 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

To the fullest extent allowed by law, Valent or Seller is not 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. TO THE FULLEST EXTENT ALLOWED BY LAW, 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 OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

#### PROMPT NOTICE OF CLAIM

To the extent consistent with applicable law allowing such requirements, 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.

To the extent consistent with applicable law, 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, to the extent allowed by applicable law.

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

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# PRODUCT INFORMATION

# [Terrestrial Uses]

SureGuard Herbicide is a preemergence and early postemergence herbicide for control of selected grass and broadleaf weeds in and around ornamental woody shrubs, deciduous trees and conifers (including Christmas trees) grown outdoors in containers or in the field (in ground), to maintain bare ground noncrop areas, conifer and poplar re-forestation and dormant warm season turfgrass.

*SureGuard* Herbicide 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.

SureGuard Herbicide may cause spotting or speckling on foliage 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 Herbicide is limited, and under most conditions established and vigorously growing woody ornamentals will rapidly outgrow any injury symptoms. However, direct application to actively growing foliage can cause severe injury or death with sensitive ornamental plant species, especially in herbaceous bedding plants and flowers.

**IMPORTANT:** When applied as directed, plants listed on this label have shown tolerance to *SureGuard* Herbicide. However, *SureGuard* Herbicide 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* Herbicide 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* Herbicide has investigated the safety to plants not listed on the label.

# **USE RESTRICTIONS**

- Do not apply in enclosed greenhouse structures if plants are present.
- Do not move plants for 24 hours into enclosed greenhouses until the *SureGuard* Herbicide treated area has been watered.
- Do not apply when weather conditions favor spray drift from treated areas.
- Do not graze treated fields 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 when plants are under stress from insects, diseases, animals or winter injury, planting shock or any other stresses.
- Only apply to healthy established trees and ornamentals.
- Do not apply more than 12 oz (0.38 lb ai/A) of SureGuard Herbicide per acre per application.
- Do not apply more than 24 oz (0.76 lb ai/A) of SureGuard Herbicide per acre per year.

# [Aquatic Uses]

SureGuard Herbicide is a fast acting contact herbicide that controls selected submersed, emergent and floating aquatic weeds. It is most effective when applied to young, actively growing weeds in water with a pH of less than 8.5.

SureGuard Herbicide may be applied to the following quiescent or slow moving bodies of water:

- Bayous
- Canals
- Drainage ditches
- Lakes
- Marshes
- Ponds (including golf course ponds)
- Reservoirs

Application of *SureGuard* Herbicide to public aquatic areas may require special approval and/or permits. Consult with local state agencies, if required.

# **USE PRECAUTIONS AND RESTRICTIONS**

- Do not apply to intertidal or estuarine areas.
- There is no post-application holding restriction against use of treated water for drinking or recreational purposes (e.g. swimming, fishing).
- In areas with dense weed vegetation only treat 1/2 the water body at one time and wait 10-14 days before treating the remaining area. Do not retreat the same section of water within 28 days of application.
- Treated water may not be used for irrigation purposes on food crops until at least five (5) days after application.
- Treated water may be used for irrigation purposes on turf and landscape ornamentals as outlined in the *Irrigation Restrictions Following Application* table.
- Do not use in water utilized for crawfish farming.
- Do not re-treat the same section of water with SureGuard Herbicide more than 6 times per year.
- Do not exceed 400 ppb of SureGuard Herbicide during any one application.

# IRRIGATION RESTRICTIONS FOLLOWING APPLICATION

Application Method	Application Rate	Average Water Depth	Turf and Landscape Ornamentals	Ornamentals grown for production in Greenhouse and Nursery
Surface Spray	6 to 12 oz per	Greater than 3 feet	None	5 days
Surface Spray	surface acre		12 hours	5 days
	Less than 200 ppb	N/A	1 day	5 days
Subsurface	200 to 300 ppb	N/A	2 days	5 days
	300 to 400 ppb	N/A	3 days	5 days

# **RESISTANCE MANAGEMENT [Terrestrial uses]**

Any weed population may contain or develop plants naturally resistant to herbicides in various modes of action. Resistant biotypes may eventually dominate the weed population if herbicides with the same mode of action 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 800-898-2536.

#### PREEMERGENCE APPLICATION

Preemergence weed control with *SureGuard* Herbicide is most effective when applied to clean, weed free soil surfaces prior to weed emergence. Moisture is necessary to activate *SureGuard* Herbicide on soil for residual weed control. Dry weather following application of *SureGuard* Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, *SureGuard* Herbicide will control susceptible germinating weeds.

When adequate moisture is not received soon after *SureGuard* Herbicide is applied to soil, 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* Herbicide and should be avoided.

# POSTEMERGENCE APPLICATION

The most effective postemergence weed control with *SureGuard* Herbicide occurs when applied in combination with a surfactant to weeds less than 2 inches in height. Apply *SureGuard* Herbicide only to actively growing weeds. Applying *SureGuard* Herbicide under conditions that do not promote active weed growth will reduce herbicide effectiveness. *SureGuard* Herbicide is most effective when applied under sunny conditions at temperatures above 65°F.

*SureGuard* Herbicide 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* Herbicide 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.

# **RESISTANCE MANAGEMENT [Aquatic uses]**

SureGuard Herbicide is a Group 14 herbicide. Any weed population may contain or develop plants that are resistant to SureGuard Herbicide and other Group 14 herbicides. Weed species with acquired resistance to Group 14 herbicides may eventually dominate the weed population if Group 14 herbicides are used repeatedly in the same water body or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by SureGuard Herbicide or other Group 14 herbicides.

To delay or prevent herbicide resistance consider the following recommendations:

- Avoid the use of more than two consecutive applications of *SureGuard* Herbicide or other herbicides that have a similar target site of action.
- Alternate herbicides used for aquatic weed control.
- Base herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Monitor treated weed populations for loss of efficacy.
- Contact your local extension specialist, other experts appropriate to aquatic use, and/or manufacturer for resistance and/or integrated weed management recommendations.

For further information or to report suspected resistance, you may contact Valent U.S.A. Corporation at the following toll-free number: 800-89-VALENT (898-2536).

# CARRIER VOLUME AND SPRAY PRESSURE

# PREEMERGENCE APPLICATION

To ensure uniform coverage when using boom sprayers, use at least 10 gals of spray solution per acre. When making backpack applications, apply 50 to 100 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 when using boom sprayers apply at least 15 gals of spray solution per acre. Apply at least 20 gals per acre when using a boom sprayer if dense vegetation or heavy residue is present on the soil surface. When applying with a backpack sprayer, apply 1 gal of spray solution per 500 to 1,000 sq ft. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for postemergence herbicide application.

# **ADDITIVES**

# POSTEMERGENCE APPLICATION

When applying *SureGuard* Herbicide after weeds emerge, mix with an agronomically approved adjuvant. When an adjuvant is to be used with this product, Valent recommends the use of a Chemical Producers and Distributors Association certified adjuvant. Mix *SureGuard* Herbicide with a crop oil concentrate that contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant containing at least 80% active ingredient when applying *SureGuard* Herbicide as part of a postemergence weed control program. Mixing compatibility should be verified by a jar test before using. Do not mix *SureGuard* Herbicide with a surfactant when applying over the top of dormant woody ornamentals or conifer trees.

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 Herbicide

A jar test should be performed before mixing commercial quantities of *SureGuard* Herbicide, when using *SureGuard* Herbicide 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* Herbicide 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:** Thoroughly clean spray equipment, including all tanks, hoses, booms, screens and nozzles, after application of *SureGuard* Herbicide. Equipment with *SureGuard* Herbicide residue remaining in the system may result in crop injury to subsequently treated crops.

# SPRAYER PREPARATION

Before applying *SureGuard* Herbicide, clean the spray tank, as well as all hoses and booms 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. Clean spray equipment according to the manufacturer's directions for the last product used before the equipment is used to apply *SureGuard* Herbicide. If two or more products were tank mixed prior to *SureGuard* Herbicide application, follow the most restrictive cleanup procedure on the label of all products.

# **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* Herbicide with water prior to addition to the spray tank. Use a minimum of 1 gal of water per 10 oz of *SureGuard* Herbicide.
- 3. While agitating, slowly add the pre-slurried *SureGuard* Herbicide to the spray tank. Agitation should create a rippling or rolling action on the water surface.
- 4. If tank mixing *SureGuard* Herbicide 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. Continue agitation until spray solution has been applied.
- 7. Mix only the amount of spray solution that can be applied the day of mixing. **Apply SureGuard Herbicide within 12 hours of mixing.**

# SPRAYER CLEANUP

Spray equipment must be cleaned each day following *SureGuard* Herbicide application. After *SureGuard* Herbicide 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* Herbicide, and *SureGuard* Herbicide 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 Herbicide 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.

# **BACKPACK APPLICATION**

When applying *SureGuard* Herbicide with a backpack sprayer follow all above restrictions. Calibrate backpack sprayers to deliver 1 gal of spray solution per 500 to 1,000 sq ft.

For Backpack Applications of SureGuard Herbicide at 10 oz per acre

Application Volume	Amount of SureGuard Herbicide to mix in 1 gal of water	Amount of SureGuard Herbicide to mix in 2 gals of water	Amount of SureGuard Herbicide to mix in 3 gals of water
1 gal per 500 sq ft (= 87 GPA)	1 1/4 tsp	2 1/2 tsp	3 3/4 tsp
1 gal per 750 sq ft (= 58 GPA)	1 3/4 tsp	3 1/2 tsp	5 1/4 tsp
1 gal per 1,000 sq ft (= 43.5 GPA)	2 1/2 tsp	5 tsp	7 1/2 tsp

<sup>1</sup> level teaspoon (tsp) holds 2.8 grams of SureGuard Herbicide

Example: Applicator wants to spray 1 gal of *SureGuard* Herbicide solution per 1,000 sq ft of ground bed, and wants to mix up 2 gals of spray solution. Therefore, applicator should mix 5 teaspoons of *SureGuard* Herbicide in 2 gals of water.

# **AERIAL APPLICATION**

To obtain satisfactory weed control with aerial application of *SureGuard* Herbicide, coverage must be uniform. Do not spray when drift is possible or when wind velocity is more than 10 mph. Avoid spraying *SureGuard* Herbicide 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**

Apply *SureGuard* Herbicide 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 may not provide adequate weed control. Higher gallonage applications generally provide more consistent weed control.

# **Nozzles 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.

# **CALIBRATION TABLE**

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

# SPRAY DRIFT MANAGEMENT FOR FOLIAR OR SURFACE APPLICATIONS

# SPRAY DRIFT REDUCTION [Terrestrial Uses]

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.

#### [Aquatic Uses]

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

Do not spray *SureGuard* Herbicide under circumstances where spray droplets may drift on to unprotected persons, or plantings of food, forage or crops that might be damaged, or rendered unfit for sale, use or consumption. These precautions are not applicable for subsurface injection by closed systems.

- 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, ground or watercraft-based surface applications when wind velocity favors on-target product deposition. Apply only when the wind speed is less than or equal to 10 mph.
- 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.

Properly maintain and calibrate all aerial, ground and water based application equipment.

Where states have more stringent regulations, they should be observed.

# **WEEDS CONTROLLED**

When *SureGuard* Herbicide is applied preemergence or postemergence at recommended rates and weed stages, the following grasses, broadleaf weeds, floating and emerged weeds and submersed and floating weeds are controlled.

TABLE 1. WEEDS CONTROLLED BY SUREGUARD HERBICIDE

COMMON NAME	SCIENTIFIC NAME
Alyssum, Hoary	Berteroa incana
Amaranth	
Palmer	Amaranthus palmeri
Spiny	Amaranthus spinosus
American Burnweed	Erechetities hieracifolia
Barnyardgrass*	Echinochloa crus-galli
Beggarweed, Florida	Desmodium tortuosum
Bittercress, Hairy	Cardamine hirsuta
Bluegrass, Annual	Poa annua
Burclover, California	Medicago polymorpha
Carpetweed	Mollugo verticillata
Chamberbitter	Phyllanthus urinaria
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
Groundsel Tree	Baccharis halimifolia
Henbit	Lamium amplexicaule
Horseweed*	Conyza canadensis
Indigo, Hairy	Indigofera hirsuta
Ivy, Ground*	Glechoma hederacea

\*Preemergence control only.

continued

TABLE 1. WEEDS CONTROLLED BY SUREGUARD HERBICIDE (continued)

COMMON NAME	SCIENTIFIC NAME
Jimsonweed	Datura stramonium
Kochia	Kochia scoparia
Kyllinga, Green*	Kyllinga brevifolia
Ladysthumb	Polygonum persicaria
Lambsquarters, Common	Chenopodium album
Liverwort	Marchantia polymorpha
Lovegrass, California*	Eragrostis diffusa
Mallow	
Common	Malva neglecta
Little	Malva parviflora
Venice	Hibiscus trionum
Marsh Parsley	Apium leptophyllum
Marsh Yellowcress	Rorippa islandica
Mayweed*	Anthemis cotula
Morningglory	
Entireleaf	Ipomoea hederacea var. integriuscula
lvyleaf	Ipomoea hederacea
Red/Scarlet	Ipomoea coccinea
Smallflower	Jacquemontia tamnifolia
Tall	Ipomoea purpurea
Moss	Bryum spp.
Mulberry Weed	Fatuoa villosa
Mustard	
Tumble	Sisymbrium altissimum
Wild	Brassica kaber
Nightshade	
Black	Solanum nigrum
Eastern Black	Solanum ptycanthum
Hairy	Solanum sarrachoides
Northern Willowherb	Epilobium cillatum
Panicum	
Fall*	Panicum dichotomiflorum
Texas*	Panicum texanum
Parsley-Piert	Alchemilla arvensis
Pearlwort, Birdseye*	Sagina procumbens
Pennycress, Field	Thlaspi arvense
Phyllanthus, Longstalked	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 Inajor Plantago lanceolata
Poinsettia, Wild	Euphorbia heterophylla
Puncturevine	Tribulus terrestris
Purslane, Common	Portulaca oleracea

<sup>\*</sup>Preemergence control only.

TABLE 1. WEEDS CONTROLLED BY SUREGUARD HERBICIDE continued

COMMON NAME	SCIENTIFIC NAME
Pusley, Florida	Richardia scabra
Ragweed	
Common	Ambrosia artemisiifolia
Giant	Ambrosia trifida
Redmaids	Calandrinia ciliata
Redweed	Melochia corchorifolia
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
Spiderwort, Tropical	Commelina benghalensis
Spurge	
Petty	Euphorbia peplus
Prostrate	Euphorbia humistrata Engelm
Spotted	Euphorbia maculata
Starbur, Bristly*	Acanthospermum hispidum
Tassel-flower	Emilia spp.
Thickhead	Crassocephalum crepidoides
Thistle	
Canada*	Cirsium arvense
Russian	Salsola iberica
Velvetleaf	Abutilon theophrasti
Waterhemp	
Common	Amaranthus rudis
Tall	Amaranthus tuberculatus
Woodsorrel, Yellow*	Oxalis stricta

<sup>\*</sup>Preemergence control only.

# DIRECTIONS FOR USE IN ESTABLISHED CONTAINER AND FIELD GROWN CONIFERS (INCLUDING CHRISTMAS TREES)

Apply *SureGuard* Herbicide as a single or split application to established container and field grown conifers, which includes applications to Christmas tree plantations. The conifers listed in Table 2 have exhibited tolerance to *SureGuard* Herbicide only when the product is applied to dormant or hardened off plant material. If applied over the top of plant foliage, apply *SureGuard* Herbicide before spring bud break or after conifers have sufficiently hardened off. During periods of cool, cloudy weather, use caution to ensure conifers have hardened off prior to herbicide application. Do not apply to conifers within 1 year of seedling emergence.

# PREEMERGENCE APPLICATION

Apply 8 to 12 oz (0.25 to 0.38 lb ai/A) of *SureGuard* Herbicide per broadcast acre before weeds emerge. Apply to weed free, established conifers grown in containers or in the field (in ground). If possible, irrigate treated area with 0.5 to 0.75 inch of water immediately following application. *SureGuard* Herbicide may be sprayed directly over conifers listed in Table 2, provided bud break has not occurred or plants are hardened off. Needle burn may be observed on new flush if plants are actively growing at time of application. However, *SureGuard* Herbicide will typically not effect subsequent growth. If conifers are not dormant or hardened off at time of application, and foliar injury cannot be tolerated, apply *SureGuard* Herbicide as a directed spray, taking care to minimize direct contact or drift of sprays onto foliage. Mechanically incorporating *SureGuard* Herbicide after application will disturb soil surfaces, which may reduce herbicidal efficacy. When applied before weed germination, *SureGuard* Herbicide will control broadleaf and grassy weeds listed in Table 1.

#### POSTEMERGENCE APPLICATION

Apply 8 to 12 oz (0.25 to 0.38 lb ai/A) of *SureGuard* Herbicide per broadcast acre after weeds have emerged. *SureGuard* Herbicide may be sprayed directly over conifers listed in Table 2, provided bud break has not occurred or plants are hardened off. Needle burn may be observed on new flush if plants are actively growing at time of application. However, *SureGuard* Herbicide will typically not affect subsequent growth. If conifers are not dormant or hardened off at the time of application, and foliar injury cannot be tolerated, apply *SureGuard* Herbicide as a directed spray, taking care to minimize direct contact or drift of sprays onto foliage.

If applied when weeds are actively growing and no larger than 2 inches in height, *SureGuard* Herbicide will provide postemergence control of broadleaf weeds and grasses listed in Table 1. Postemergence control of *SureGuard* Herbicide may be more effective with certain weed species, and may not control mature, stressed or hardened off weeds that are not actively growing at the time of application.

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

Tank mixing *SureGuard* Herbicide with other preemergence and postemergence herbicides registered for use on conifers may provide a broader spectrum of weed control than *SureGuard* Herbicide applied alone. *SureGuard* Herbicide may also be applied as part of a postemergence burndown program for control of annual and perennial weeds. Tank mixing *SureGuard* Herbicide with glyphosate will increase the speed of burndown compared to glyphosate applied alone. *SureGuard* Herbicide may be tank mixed with products containing the following active ingredients labeled for use in conifers:

clethodim glyphosate\* oryzalin prodiamine simazine\*

<sup>\*</sup>Do not apply glyphosate or simazine to containerized ornamentals.

**IMPORTANT:** Completely read and follow the label of any potential *SureGuard* Herbicide tank mix partner. When tank mixing *SureGuard* Herbicide with other herbicides, always follow the most restrictive label limitations and precautions on the label of any tank mix partner.

#### **TOLERANT CONIFERS**

SureGuard Herbicide may be applied to the conifer species listed in Table 2. If a desired conifer species is not listed in Table 2, users should evaluate the safety of SureGuard Herbicide on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Testing SureGuard Herbicide on a small number of plants will determine if SureGuard Herbicide can be used safely on a widespread basis.

# **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

# **TABLE 2. TOLERANT CONIFERS**

COMMON NAME	SCIENTIFIC NAME
Arborvitae	
American	Thuja occidentalis
Oriental	Thuja orientalis
Fir	
Concolor	Abies concolor
Cork Bark	Abies lasiocarpa
Douglas	Pseudotsuga menzesii
Fraser	Abies fraseri
Grand	Abies grandis
Noble	Abies procera
Turkish	Abies bommuelleriana
Hemlock	
Eastern	Tsuga canadensis
Western	Tsuga heterophylla
Juniper	, ,
Blue Star	Juniperus scopularum
Creeping	Juniperus horizontalis
Japanese Garden	Juniperus chinensis
Tamarix	Juniperus sabina
Pine	, , , , , , , , , , , , , , , , , , , ,
Austrian	Pinus nigra
Eastern White	Pinus strobus
Jack	Pinus banksiana
Japanese Black	Pinus thunbergiana
Loblolly	Pinus taeda
Lodgepole	Pinus contorta
Longleaf	Pinus palustris
Mugo	Pinus mugo
Ponderosa	Pinus ponderosa
Sand	Pinus clausa
Scotch	Pinus sylvestris
Shortleaf	Pinus echinata
Slash	Pinus elliottii
Virginia	Pinus virginiana
Spruce	, and the second
Blue	Picea pungens
Dwarf Alberta	Picea glauca conica
Norway	Picea abies
Sitka	Picea sitchensis
Yew	
English	Taxus baccata
Japanese	Taxus cuspid <b>2</b> ®

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

SureGuard Herbicide may be applied as single or split applications to container and field grown deciduous trees with an established root system. The deciduous trees listed in Table 3 have exhibited tolerance to SureGuard Herbicide only when applied to the soil and base of plants. Application of SureGuard Herbicide to deciduous foliage or green bark may result in unacceptable injury.

SureGuard Herbicide may be applied to established (or transplanted) container and field grown deciduous trees. Do not apply to trees that are less than one year old or have been transplanted less than one year, unless completely protected by non-porous wraps, grow tubes, waxed protectors or other forms of protection to young foliage and/or bark. Do not harvest fruit or nuts from treated trees within one year of application.

**IMPORTANT:** Direct application of *SureGuard* Herbicide to the soil surface and away from plant foliage and bark. Avoid direct spray contact on plant surfaces, foliage and green bark or injury may result. Application of *SureGuard* Herbicide after bud swell may cause injury if herbicide contacts foliage. Avoid application under environmental conditions that favor drift to non-targeted areas.

# PREEMERGENCE APPLICATION

Apply 8 to 12 oz (0.25 to 0.38 lb ai/A) of *SureGuard* Herbicide per broadcast acre as a preemergence (to weed emergence) application. Apply *SureGuard* Herbicide to weed free deciduous trees grown in containers or in the field (in-ground). If possible, irrigate treated area with 0.5 to 0.75 inch of water immediately following application. *SureGuard* Herbicide may be applied to the soil surface and base of deciduous trees, provided that direct and indirect (drift) applications to plant foliage, flowers and green bark does not occur. Mechanically incorporating *SureGuard* Herbicide will disturb soil surfaces, which may reduce herbicidal efficacy. The use of spray shields that limit exposure of foliage and bark to *SureGuard* Herbicide is suggested. When applied before weed germination, *SureGuard* Herbicide will control broadleaf and grassy weeds listed in Table 1.

# POSTEMERGENCE APPLICATION

Apply 8 to 12 oz (0.25 to 0.38 lb ai/A) of *SureGuard* Herbicide per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt/A crop oil concentrate). Make postemergence (to weed emergence) applications of *SureGuard* Herbicide when weeds are actively growing and are no larger than 2 inches in height. The addition of a surfactant enhances *SureGuard* Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of *SureGuard* Herbicide. When applied after weed germination, *SureGuard* Herbicide will provide preemergence and postemergence control of broadleaf weeds and grasses listed in Table 1. If plant injury is a concern, use a spray shield to limit the exposure of trees to *SureGuard* Herbicide.

Postemergence control of *SureGuard* Herbicide may be more effective with certain weed species, and may not control mature, stressed or hardened off weeds that are not actively growing at the time of application.

# TANK MIXTURES FOR FIELD AND CONTAINER GROWN DECIDUOUS TREES

Tank mixing *SureGuard* Herbicide with other preemergence and postemergence herbicides registered for use on deciduous trees may provide a broader spectrum of weed control than *SureGuard* Herbicide alone. *SureGuard* Herbicide may also be applied as part of a postemergence burndown program of control of annual and perennial weeds. Tank mixing *SureGuard* Herbicide with glyphosate will increase the speed of burndown compared to glyphosate applied alone. *SureGuard* Herbicide may be tank mixed with products containing the following active ingredient labeled for use in deciduous trees:

clethodim glyphosate\* oryzalin pendimethalin prodiamine simazine\*

\*Do not apply glyphosate or simazine to containerized plants.

**IMPORTANT:** Completely read and follow the label of any herbicides mixed with *SureGuard* Herbicide. When tank mixing *SureGuard* Herbicide with other herbicides always follow the most restrictive limitations and precautions on the label of any tank mix partner..

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

SureGuard Herbicide may be applied as a directed spray to the deciduous, non-bearing fruit and non-bearing nut trees species listed in Table 3. If a desired tree species is not listed in Table 3, users should evaluate the safety of SureGuard Herbicide on a small number of plants under commercial growing conditions and monitor plant response for four to six weeks for phytotoxicity. Testing SureGuard Herbicide on a small number of plants will determine if SureGuard Herbicide can be used safely on a widespread basis.

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

TABLE 3. TOLERANT DECIDUOUS TREE SPECIES

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

<sup>\*</sup>Non-bearing trees only.

<sup>\*\*</sup>Not for use on maple trees used for production of maple sap or syrup.

# DIRECTIONS FOR USE AROUND ESTABLISHED WOODY LANDSCAPE ORNAMENTALS AND TO MAINTAIN BARE GROUND NON-CROP AREAS

In residential and commercial landscapes, *SureGuard* Herbicide should only be applied by commercial licensed applicators. Application of *SureGuard* Herbicide in the vicinity of ornamental plants is limited to directed sprays around well established woody shrubs and trees such as azalea, euonymus, holly, and the conifers and deciduous trees listed in Tables 2 and 3. *SureGuard* Herbicide may also be applied to maintain bare ground in non-crop areas in apartment complexes, fence rows, gravel surfaces, ground mats, golf courses, lumberyards, office complexes, parks, parking areas, recreational sites, schools, sidewalks, storage areas and other similar industrial sites. Do not apply *SureGuard* Herbicide within any enclosed structure in residential or commercial landscapes.

SureGuard Herbicide offers postemergence and residual control of susceptible grasses and broadleaf weeds, as well as additional mode of action to assist in the control of resistant weeds. The length of residual control is dependent on the rate applied, rainfall and temperature. Length of residual control will decrease as temperature and precipitation increase.

IMPORTANT: Contact with *SureGuard* Herbicide spray or spray drift may cause severe injury or destruction of certain desirable plants, especially herbaceous species such as bedding plants or direct seeded annual and perennial flowers. Therefore, do not apply *SureGuard* Herbicide over the top of ornamental plants growing in the landscape, and do not allow *SureGuard* Herbicide spray to contact, drift or splash from soil onto the foliage, green stems, exposed roots or fruit of desirable plants. Avoid application of *SureGuard* Herbicide under conditions that favor drift of sprays onto desired ornamentals or turfgrass. The use of spray shields that limit the plant exposure to *SureGuard* Herbicide is highly recommended when applying *SureGuard* Herbicide near desirable plants.

Do not apply *SureGuard* Herbicide around landscape ornamentals until plants have been actively growing for at least 30 days after transplanting, or for at least two months before ornamentals will be planted into treated areas.

# PREEMERGENCE APPLICATION (NO WEEDS ARE PRESENT)

Mix 1 1/4 to 2 1/2 tsp of *SureGuard* Herbicide per gal (10 oz/A) of spray solution, and apply 1 gal of spray solution to 500 – 1,000 sq ft (10 oz/A) prior to weed germination (see calibration table for backpack sprayers). Apply *SureGuard* Herbicide to weed free soil, mulch or gravel surfaces. Moisture is necessary to activate *SureGuard* Herbicide on soil for residual weed control. When applied before weed germination, *SureGuard* Herbicide will control the broadleaf weeds and grasses listed in Table 1.

Established landscape ornamentals have shown tolerance to *SureGuard* Herbicide **only** when applied to the soil at the base of the plant. For maximum plant safety when using around desirable ornamentals, direct applications of *SureGuard* Herbicide to the soil, and leave a sufficient untreated buffer to ensure spray solution does not contact desired plants. Do not harvest fruit or nuts from treated trees within one year of application.

# POSTEMERGENCE APPLICATION (WEEDS ARE PRESENT)

Mix 1 1/4 to 2 1/2 tsp of *SureGuard* Herbicide per gal (10 oz/A) and apply 1 gal of spray solution to 500 - 1,000 sq ft to actively growing weeds (see calibration chart for backpack sprayers). Tank mixing *SureGuard* Herbicide with glyphosate will increase the spectrum of postemergence weed control over *SureGuard* Herbicide alone, provide faster postemergence weed control than glyphosate alone, and provide pre and postemergence control of the broadleaf weeds and grasses listed in Table 1.

Established landscape ornamentals have shown tolerance to applications of *SureGuard* Herbicide plus glyphosate **only** when applied to the soil at the base of the plant, and sprays do not directly contact or drift onto desirable plants. For maximum plant safety when using around desirable ornamentals, direct applications of *SureGuard* Herbicide plus glyphosate towards the soil, and leave a sufficient non-treated buffer to ensure spray solution does not contact desired plants.

Thorough spray coverage of weeds is necessary to maximize weed control. Spray coverage should be uniform, but do not spray to the point of runoff.

Do not harvest fruit or nuts from treated trees within one year of application.

**IMPORTANT:** Completely read and follow the glyphosate label. When tank mixing *SureGuard* Herbicide with other products, always follow the most restrictive use conditions on either label.

# **RESTRICTIONS AND LIMITATIONS**

Do not apply more than 2 applications per year.

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

*SureGuard* Herbicide, 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* Herbicide only to:

- Bare ground areas around buildings and other structures. Do not apply within any enclosed 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* Herbicide.

SureGuard Herbicide offers residual and postemergence control of susceptible grasses and broadleaf weeds as well as additional mode of action to assist in the control of 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* Herbicide per broadcast acre as a preemergence application. Preemergence (to weed emergence) applications of *SureGuard* Herbicide should be made to a weed free surfaces. Moisture is necessary to activate *SureGuard* Herbicide for residual weed control. Dry weather following application of *SureGuard* Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, *SureGuard* Herbicide will control susceptible germinating weeds.

# POSTEMERGENCE APPLICATION

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

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

# DIRECTIONS FOR USE IN CONIFER RE-FORESTATION SITES FOLLOWING TIMBER HARVEST

SureGuard Herbicide is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in conifer re-forestation sites following timber harvest operations. SureGuard Herbicide may be used as a site preparation treatment prior to transplanting of conifers or as a conifer release treatment after stand establishment.

# **Site Preparation - Application Before Transplanting**

Apply 8 to 12 oz of *SureGuard* Herbicide per acre. Transplant operations must take place at least 2 months after application. To obtain optimal weed control, apply *SureGuard* Herbicide before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, *SureGuard* Herbicide may be tank mixed with a burndown herbicide to provide preemergence weed control.

Apply SureGuard Herbicide in at least 10 gals of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

# Conifer Release Treatments – Applications only within 3 years after transplanting.

Apply 8 to 12 oz of *SureGuard* Herbicide per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. Do not apply *SureGuard* Herbicide over the top of trees after budbreak or needle spotting and defoliation may occur. *SureGuard* Herbicide should not affect new growth of trees. See Table 4 for a list of tolerant conifers for over the top treatments. Do not apply *SureGuard* Herbicide over the top unless trees are more than two years past seedling, also known as 1+1 stock.

# **TANK MIXING – Conifer Release Treatments**

Certain liquid formulations of other pesticides may increase the postemergence activity of *SureGuard* Herbicide, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with *SureGuard* Herbicide may be more injurious than *SureGuard* Herbicide applied alone and need to be tested to determine if they can be used safely on a widespread basis.

# **ADJUVANTS – Conifer Release Treatments**

When using as a Conifer Release Treatment, do not mix SureGuard Herbicide with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, the conifers listed in Table 4 have shown tolerance to *SureGuard* Herbicide. However, *SureGuard* Herbicide is a very active herbicide and the user should exercise responsible judgment and caution until familiarity is gained with this product. If a desired conifer species is not listed in Table 4, evaluate the safety of *SureGuard* Herbicide on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Test *SureGuard* Herbicide on a small number of plants to determine if *SureGuard* Herbicide can be used safely on a widespread basis. The use of nylon mesh wraps, commonly used to deter animal browsing, may increase plant injury if placed on plants after over the top application of *SureGuard* Herbicide.

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

**TABLE 4: TOLERANT CONIFER TREE SPECIES:** 

TABLE 4: TOLERANT CONIFER TREE SPECIES:	
COMMON NAME	SCIENTIFIC NAME
Fir	·
Concolor	Abies concolor
Cork Bark	Abies lasiocarpa
Douglas	Pseudotsuga menzesii
Fraser	Abies fraseri
Grand	Abies grandis
Noble	Abies procera
Turkish	Abies bommuelleriana
Hemlock	
Eastern	Tsuga canadensis
Western	Tsuga heterophylla
Pine	
Austrian	Pinus nigra
Eastern White	Pinus strobus
Jack	Pinus banksiana
Japanese Black	Pinus thunbergiana
Loblolly	Pinus taeda
Lodgepole	Pinus contorta
Longleaf	Pinus palustris
Mugo	Pinus mugo
Ponderosa	Pinus ponderosa
Sand	Pinus clausa
Scotch	Pinus sylvestris
Shortleaf	Pinus echinata
Slash	Pinus elliottii
Virginia	Pinus virginiana
Spruce	
Blue	Picea pungens
Dwarf Alberta	Picea glauca conica
Norway	Picea abies
Sitka	Picea sitchensis

# DIRECTIONS FOR USE IN POPLAR PLANTATIONS AND TIMBER RE-FORESTATION SITES

SureGuard Herbicide is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in poplar plantations and timber re-forestation sites following timber harvest operations. SureGuard Herbicide may be used as a site preparation treatment prior to transplanting of trees or as a release treatment after stand establishment.

# **Site Preparation-Application Before Transplanting**

Apply 8 to 12 oz of *SureGuard* Herbicide per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply *SureGuard* Herbicide before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, *SureGuard* Herbicide may be tank mixed with a burndown herbicide to provide preemergence weed control.

Apply SureGuard Herbicide in at least 10 gals of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

# Release Treatments – Applications Within 3 Years After Transplanting

Apply 8 to 12 oz of *SureGuard* Herbicide per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. Do not apply *SureGuard* Herbicide over the top of trees after budbreak or leaf spotting and defoliation may occur. *SureGuard* Herbicide should not affect new growth of trees of tolerant poplars for over the top treatments. Do not apply *SureGuard* Herbicide over the top unless trees are more than one year old.

# **TANK MIXING – Poplar Release Treatments**

Certain liquid formulations of other pesticides may increase the postemergence activity of *SureGuard* Herbicide, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with *SureGuard* Herbicide may be more injurious than *SureGuard* Herbicide applied alone and need to be tested to determine if they can be used safely on a widespread basis.

#### **ADJUVANTS – Poplar Release Treatments**

When applying Release Treatments, do not mix SureGuard Herbicide with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, poplars (*Populus balsamifera, P. grandidentata, P. niger and P. tremuloides*), hybrid poplars (*P.* sp. x sp.), and cottonwoods (*P. deltoides and P. trichocarpa*) have shown tolerance to *SureGuard* Herbicide. However, *SureGuard* Herbicide is a very active herbicide and the user should exercise responsible judgment and caution until familiarity is gained with this product. Test *SureGuard* Herbicide on a small number of plants to determine if *SureGuard* Herbicide can be used safely on a widespread basis.

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

# DIRECTIONS FOR USE ON DORMANT WARM-SEASON TURFGRASS GROWN ON RESIDENTIAL SITES, GOLF COURSES, SOD PRODUCTION AND SIMILAR AREAS

SureGuard Herbicide may be applied as a single or split application to well established dormant turfgrass listed in Table 5. SureGuard Herbicide will provide Preemergence and early postemergence control of annual bluegrass, chickweed, henbit and other winter annual weeds found in Table 1. SureGuard Herbicide will provide preemergence control of crabgrass, goosegrass and other summer annual weeds found in Table 1. SureGuard Herbicide may be applied to dormant turfgrass in such areas as apartment complexes, golf courses, sod farms, roadsides, sports fields, campgrounds, office complexes, parks, parking areas, recreational sites, schools and other similar sites. Bermudagrass exhibits tolerance to SureGuard Herbicide only when applied to semi-dormant or completely dormant turf in the late fall and before active growth resumes in the late winter/early spring. Application of SureGuard Herbicide to actively growing turfgrass (warm season and cool season) or during green-up may cause unacceptable injury.

# **BROADCAST APPLICATIONS**

Apply 8 to 12 oz of *SureGuard* Herbicide per broadcast acre as a preemergence (to weed emergence) application. If weeds are present at the time of application apply *SureGuard* Herbicide plus an adjuvant (0.25% v/v non-ionic surfactant). Make postemergence (to weed emergence) applications of *SureGuard* Herbicide when weeds are actively growing and no larger than 2 inches in height. Thorough spray coverage is necessary to maximize the postemergence activity of *SureGuard* Herbicide. When applied after weed germination, *SureGuard* Herbicide will provide preemergence and postemergence control of broadleaf weeds and grasses listed in Table 1. Postemergence control of *SureGuard* Herbicide may be more effective on certain weed species, and may not control mature, stressed or hardened off weeds that are not actively growing at the time of application.

SureGuard Herbicide will provide best control of annual bluegrass when applied in the late fall while plants are small. Control may be less effective when applied in the winter under cold conditions when weeds are not actively growing. A second application of SureGuard Herbicide may be required to provide adequate season-long annual bluegrass control. SureGuard Herbicide will provide best control of crabgrass, goosegrass and other summer annual weeds when applied in the late winter before turfgrass resumes active growth.

#### SPOT TREATMENTS

Mix 2 1/2 tsp per gal of *SureGuard* Herbicide and 2 tsp (1/3 fl oz) of non-ionic surfactant in one gal of water and apply one gal of spray solution per 1,000 sq ft. Occasionally shake the spray solution while spraying to ensure the spray solution remains well mixed. Spray the target weeds until the leaves are wet.

# TANK MIXING WITH OTHER TURFGRASS HERBICIDES

SureGuard Herbicide will suppress, but will not effectively control established winter perennial weeds such as dandelion and clover. SureGuard Herbicide may be tank mixed with metsulfuron to control winter perennial weeds.

**IMPORTANT:** If applied in the fall to semi-dormant turfgrass, *SureGuard* Herbicide may accelerate dormancy. If applied in the spring after turfgrass resumes active growth, *SureGuard* Herbicide will cause temporary discoloration of turf and delay greenup. Read and follow the label of any herbicides mixed with *SureGuard* Herbicide. When tank mixing *SureGuard* Herbicide with other herbicides, always follow the most restrictive limitations and precautions on the label of any tank mix partner.

# **USE PRECAUTIONS**

Use around Bentgrass and Poa Greens: *SureGuard* Herbicide has limited potential for lateral movement on level terrain, but can potentially move down slope after excessive rainfall and affect sensitive turf species such as bentgrass and *Poa trivialis*. When applied upslope from bentgrass greens or bermudagrass greens overseeded with *Poa trivialis*, allow an adequate buffer zone between greens and the treated area. If uncertain about the size of the buffer, 15 feet is suggested. Risk of movement is decreased when *SureGuard* Herbicide is applied to soil at less than field capacity. Avoid application when heavy rain is imminent or when the soil is saturated.

# **RESTRICTIONS AND LIMITATIONS**

- Do not apply to golf course putting greens.
- Do not apply to warm season turfgrass that has been overseeded with cool season turfgrass (ex. perennial rye, *Poa trivialis*).
- Do not irrigate within 1 hour before or after application.
- Do not apply if rain is expected within 1 hour after application.
- Do not mow turfgrass within 12 hours after application.
- Do not apply within 30 days prior to cutting or lifting sod.
- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.
- Do not apply in fall before turfgrass has ceased active growth or in late winter/ early spring after turfgrass has resumed active growth.
- Allow 8 weeks between application and seeding or sodding of turfgrass.

#### TABLE 5. TOLERANT TURFGRASS SPECIES

COMMON NAME	SCIENTIFIC NAME
Bermudagrass	Cynodon spp.
Centipedegrass Seashore paspalum St. Augustinegrass Zoysiagrass	Eremochloa ophiuroides Paspalum vaginatum Stenotaphrum secundatum Zoysia spp.

# FOR THE MANAGEMENT OF UNDESIRABLE AQUATIC VEGETABLES IN SLOW MOVING OR QUIESCENT WATERS

#### APPLICATOR & SPRAYER INFORMATION

# **Mixing Instructions**

- Fill clean spray tank 1/2 full of desired level with water and add buffering agent if necessary.
- Add the required amount of SureGuard Herbicide to the spray tank while agitating.
- Fill spray tank to desired level with water. Ensure that *SureGuard* Herbicide is thoroughly mixed before making applications. Agitation should continue until spray solution has been applied.
- Mix only the amount of spray solution that can be applied the day of mixing. Apply SureGuard Herbicide within 12 hours of mixing.

#### **ADDITIVES**

When applying *SureGuard* Herbicide to the foliage of floating or emerged aquatic weeds, mix with an adjuvant approved for use in aquatic sites. Valent recommends the use of a Chemical Producers and Distributors Association certified adjuvant. Mix *SureGuard* Herbicide with a non-ionic surfactant containing at least 80% active ingredient. Follow adjuvant manufacturer's label rates. Mixing compatibility should be verified by a jar test before using.

# Jar Test to Determine Compatibility of Adjuvants and SureGuard Herbicide

Conduct a jar test before mixing commercial quantities of *SureGuard* Herbicide, when using 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* Herbicide 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. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
- 5. 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.

# **Sprayer Cleanup**

If spray equipment is dedicated to application of aquatic herbicides, the following steps are recommended to clean the spray equipment:

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

If spray equipment will be used for purposes other than applying aquatic herbicides, it must be thoroughly cleaned following application of *SureGuard* Herbicide. The following steps must be used to clean the spray equipment:

- 1. Completely drain the spray tank and rinse the application equipment 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.
- 4. Circulate through sprayer for 5 minutes.
- 5. Then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes.
- 6. Drain tank completely.
- 7. Remove all nozzles and screens and rinse them with clean water.

#### **AERIAL APPLICATION**

To obtain satisfactory weed control, aerial application of *SureGuard* Herbicide, must provide uniform coverage of surface weeds and sufficient contact time. When applied by air, *SureGuard* Herbicide may not provide adequate control of some submersed weeds. Do not apply by air when significant drift on to non-target plants may occur or when wind velocity is more than 10 mph. Avoid spraying *SureGuard* Herbicide within 200 feet of dwellings, adjacent sensitive crops or environmentally sensitive areas. To obtain satisfactory application and avoid drift, the following directions must be observed:

# **Volume and Pressure**

Apply *SureGuard* Herbicide in a minimum of 5 gals of water per acre with a maximum spray pressure of 40 PSI. Application at less than 5 gals per acre may not provide adequate weed control. Higher gallonage applications generally provide more consistent weed control.

# **Nozzles 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.

# DIRECTIONS FOR USE TO CONTROL FLOATING AND EMERGED WEEDS USING SURFACE APPLICATION

SureGuard Herbicide will control weeds and algae listed in Table 6, *Floating and Emerged Weeds*, when applied as a broadcast spray with appropriate equipment. For best results, apply *SureGuard* Herbicide to the foliage of actively growing weeds.

**Table 6. Floating and Emerged Weeds** 

Table 6.1 Touting and Emerged Weeds		
Common Name	Scientific Name	
Alligator Weed	Alternanthera philoxeroides	
Duckweed	Lemna spp.	
Frog's-bit	Limnobium spongia	
Water Fern	Salvinia spp.	
Water Lettuce	Pistia stratiotes	
Watermeal	Wolffia spp.	
Water Pennywort	Hydrocotyle spp.	
Filamentous algae	Pithophora	
Filamentous algae	Cladophora	

# **Surface Application**

Apply *SureGuard* Herbicide as a broadcast spray at 6 to 12 ounces of formulated product per acre plus an adjuvant approved for use in aquatics.

SureGuard Herbicide is a contact herbicide that quickly degrades in the water column so plants that do not initially come in contact with the herbicide will not be controlled. Apply SureGuard Herbicide in a minimum of 30 gals of water per acre to all areas of the water body where weeds exist. Coverage is essential for effective control as all floating weeds need to be exposed to lethal concentrations in all parts of the water body. Any untreated escapes or re-introductions of plants that were not treated will reestablish in areas where surface weeds had previously been controlled. If a second application is required to provide control, it is recommended that a treatment be made once the return of these weeds is first observed, but no sooner than 28 days after the last treatment.

Application of *SureGuard* Herbicide during early morning hours may enhance weed control. When applying to densely packed actively growing surface weeds, ensure adequate coverage. Rapid decomposition of vegetation resulting from herbicide treatment can result in loss of oxygen in water. A sudden decrease in dissolved oxygen can result in fish suffocation. If aquatic vegetation is dense, treat floating surface weeds in sections to avoid a rapid decrease in dissolved oxygen.

SureGuard Herbicide may be tank mixed with 2,4-D, diquat, glyphosate or other registered foliar applied herbicides for enhanced control of floating and emergent weeds.

Consult a manufacturer's label for specific rate restrictions and weeds controlled. Always follow the most restrictive label restrictions and precautions for all products used when making an application involving tank mixes.

# Application Equipment

Apply *SureGuard* Herbicide with sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. Apply by backpack or handgun sprayer, airboat, helicopter, airplane or other application equipment that will ensure thorough coverage of target plant foliage.

# DIRECTIONS FOR USE TO CONTROL SUBMERSED AND FLOATING WEEDS USING SUBSURFACE APPLICATION

SureGuard Herbicide will control submersed and floating weeds listed in Table 7, Submersed and Floating Weeds Controlled by Subsurface Application, when applied subsurface with appropriate equipment.

Table 7. Submersed and Floating Weeds Controlled by Subsurface Application

Common Name	Scientific Name
Coontail	Ceratophyllum demersum
Duckweed	Lemna spp.
Fanwort	Cabomba caroliniana
Hydrilla	Hydrilla verticillata
Hygrophila	Hygrophila polysperma
Naiad, Southern	Najas guadalupensis
Pondweed, Curlyleaf	Potamogeton crispus
Pondweed, Sago	Potamogeton pectinatus
Pondweed, Variable-Leaf	Potamogeton diversifolius
Water Fern	Salvinia spp.
Water Lettuce	Pistia stratiotes
Watermeal	Wolffia spp.
Watermilfoil, Eurasian	Myriophyllum spicatum
Watermilfoil, Variable-Leaf	Myriophyllum heterophyllum

# **Subsurface Application**

Apply *SureGuard* Herbicide at a rate that will produce an initial concentration of 200 to 400 ppb (of active ingredient flumioxazin) in the water column.

SureGuard Herbicide is rapidly absorbed by target plants, but also breaks down quickly in water with a pH greater than 8.5. The pH of water surrounding mats of submersed vegetation can exceed 8.5 by early to midday, due to photosynthetic processes. Application of SureGuard Herbicide under these conditions may provide only partial weed control, and regrowth is likely. For best control, apply SureGuard Herbicide in a minimum of 30 gals of water per acre in the early morning to actively growing weeds and early in the season before surface matting occurs. Complete coverage and sufficient contact time of submersed weeds with SureGuard Herbicide is required for optimal performance. Application of SureGuard Herbicide with subsurface trailing hoses designed to distribute the herbicide within the plant stand will provide more effective and longer term control of submersed weeds. Use Table 8, Subsurface Application Rates to determine the amount of SureGuard Herbicide needed to achieve desired concentration at different water depths. Use higher concentrations when weed biomass is heavy and/or weeds are more mature and topped out. Any untreated plants that are left in the water column can re-infest treated areas that had previously been controlled. If a second application is required to provide control, it is recommended that a treatment be made once the return of these weeds is first observed, but no sooner than 28 days after the last treatment.

When applying *SureGuard* Herbicide to densely packed actively growing submersed weeds, a rapid decomposition of vegetation resulting from herbicide treatment can result in loss of oxygen in water. A sudden decrease in dissolved oxygen can result in fish suffocation. If aquatic vegetation is dense, treat submersed weeds in sections to avoid a rapid decrease in dissolved oxygen.

SureGuard Herbicide may be tank mixed with other registered submersed applied herbicides for enhanced control of submersed and floating weeds.

# **Application Equipment**

To improve distribution in the water column and ensure adequate coverage apply *SureGuard* Herbicide with subsurface trailing hoses in order to place the herbicide under the surface and throughout the biomass of aquatic vegetation. Keep swath width to a minimum in order to maximize contact with submersed aquatic vegetation.

# Information on Hydrilla Control in Florida

SureGuard Herbicide should be applied as a subsurface treatment for hydrilla control. For best control of hydrilla apply during the late Winter/early Spring and/or early to late Fall. Efficacy of SureGuard Herbicide will be enhanced at these timings due to lower potential biomass present and lower pH of the water. If applied to mature topped out hydrilla, SureGuard Herbicide will cause some discoloration and loss of growing tips, but regrowth will be rapid.

Tank mixing *SureGuard* Herbicide with other registered herbicides is recommended, especially if hydrilla is approaching maturity or biomass is heavy.

**Table 8. Subsurface Application Rates** 

Water Depth (feet)	Pounds of <i>SureGuard</i> Herbicide Required Per Surface Acre to Achieve Desired Water Concentration		
	200 ppb	300 ppb	400 ppb
1	1.1	1.6	2.1
2	2.1	3.2	4.2
3	3.2	4.8	6.4
4	4.2	6.4	8.5
5	5.3	8.0	10.6
6	6.4	9.5	12.7
7	7.4	11.1	14.8

Example: to achieve an initial concentration of 200 ppb of flumioxazin in a 4 foot deep water column, apply 4.2 lbs of *SureGuard* Herbicide per surface acre.

# STORAGE AND DISPOSAL

#### 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.

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

#### 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 language for container sizes less than 5 gals]

# **CONTAINER HANDLING**

[Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. 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.]

[Container Disposal language for container greater than 5 gals or 50 lbs]

[Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. 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.]

Note to EPA reviewer: if this product is shipped in containers greater than 50 lbs, the following container handling statement will be added to the label:

[Container statement for nonrefillable container]

Nonrefillable bag: Do not reuse or refill this bag. Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into equipment. Do not reuse bag. Dispose of bag in a sanitary landfill or by incineration if allowed by State and local authorities.

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# [Sub Label B]

SureGuard® Herbicide
FOR USE IN CONTAINER AND FIELD GROWN CONIFERS (INCLUDING CHRISTMAS TREES)
AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN
LANDSCAPES, AND TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND
POPLAR RE-FORESTATION SITES, AND DORMANT TURFGRASS.



GROUP 14 HERBICIDE

[Bracketed text is optional]

# SureGuard® Herbicide

FOR USE IN CONTAINER AND FIELD GROWN CONIFERS (INCLUDING CHRISTMAS TREES) AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPES AND TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES, AND DORMANT TURFGRASS

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

<sup>\*(2-[7-</sup>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 1 AND 5 POUNDS OR 500 KG (1102.3 LB)

# 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 eve.
- 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 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 **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.

**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 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 and 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.

### 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 TO THE FULLEST EXTENT ALLOWED BY LAW, 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. To the extent consistent with applicable law AND 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

To the fullest extent allowed by law, Valent or Seller is not 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. TO THE FULLEST EXTENT ALLOWED BY LAW, 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

To the extent consistent with applicable law allowing such requirements, 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.

To the extent consistent with applicable law, 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, to the extent allowed by applicable law.

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

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# PRODUCT INFORMATION

SureGuard Herbicide is a preemergence and early postemergence herbicide for control of selected grass and broadleaf weeds in and around ornamental woody shrubs, deciduous trees and conifers (including Christmas trees) grown outdoors in containers or in the field (in ground), to maintain bare ground non-crop areas, conifer and poplar re-forestation and dormant warm season turfgrass.

SureGuard Herbicide 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.

SureGuard Herbicide may cause spotting or speckling on foliage 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 Herbicide is limited, and under most conditions established and vigorously growing woody ornamentals will rapidly outgrow any injury symptoms. However, direct application to actively growing foliage can cause severe injury or death with sensitive ornamental plant species, especially in herbaceous bedding plants and flowers.

**IMPORTANT:** When applied as directed, plants listed on this label have shown tolerance to *SureGuard* Herbicide. However, *SureGuard* Herbicide 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* Herbicide 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* Herbicide has investigated the safety to plants not listed on the label.

### **USE RESTRICTIONS**

- Do not apply in enclosed greenhouse structures if plants are present.
- Do not move plants for 24 hours into enclosed greenhouses until the SureGuard Herbicide treated area has been watered.
- Do not apply when weather conditions favor spray drift from treated areas.
- Do not graze treated fields 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 when plants are under stress from insects, diseases, animals or winter injury, planting shock or any other stresses.
- Only apply to healthy established trees and ornamentals.
- Do not apply more than 12 oz (0.38 lb ai/A) of SureGuard Herbicide per acre per application.
- Do not apply more than 24 (0.76 lb ai/A) oz of SureGuard Herbicide per acre per year.

### RESISTANCE MANAGEMENT

Any weed population may contain or develop plants naturally resistant to herbicides in various modes of action. Resistant biotypes may eventually dominate the weed population if herbicides with the same mode of action 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 800-898-2536.

# PREEMERGENCE APPLICATION

Preemergence weed control with *SureGuard* Herbicide is most effective when applied to clean, weed free soil surfaces prior to weed emergence. Moisture is necessary to activate *SureGuard* Herbicide on soil for residual weed control. Dry weather following application of *SureGuard* Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, *SureGuard* Herbicide will control susceptible germinating weeds.

When adequate moisture is not received soon after *SureGuard* Herbicide is applied to soil, 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* Herbicide and should be avoided.

# POSTEMERGENCE APPLICATION

The most effective postemergence weed control with *SureGuard* Herbicide occurs when applied in combination with a surfactant to weeds less than 2 inches in height. Apply *SureGuard* Herbicide only to actively growing weeds. Applying *SureGuard* Herbicide under conditions that do not promote active weed growth will reduce herbicide effectiveness. *SureGuard* Herbicide is most effective when applied under sunny conditions at temperatures above 65°F.

*SureGuard* Herbicide 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* Herbicide 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 when using boom sprayers, use at least 10 gals of spray solution per acre. When making backpack applications, apply 50 to 100 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 when using boom sprayers apply at least 15 gals of spray solution per acre. Apply at least 20 gals per acre when using a boom sprayer if dense vegetation or heavy residue is present on the soil surface. When applying with a backpack sprayer, apply 1 gal of spray solution per 500 to 1,000 sq ft. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for postemergence herbicide application.

# **ADDITIVES**

## POSTEMERGENCE APPLICATION

When applying *SureGuard* Herbicide after weeds emerge, mix with an agronomically approved adjuvant. When an adjuvant is to be used with this product, Valent recommends the use of a Chemical Producers and Distributors Association certified adjuvant. Mix *SureGuard* Herbicide with a crop oil concentrate that contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant containing at least 80% active ingredient when applying *SureGuard* Herbicide as part of a postemergence weed control program. Mixing compatibility should be verified by a jar test before using. Do not mix *SureGuard* Herbicide with a surfactant when applying over the top of dormant woody ornamentals or conifer trees.

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 Herbicide

A jar test should be performed before mixing commercial quantities of *SureGuard* Herbicide, when using *SureGuard* Herbicide 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* Herbicide 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:** Thoroughly clean spray equipment, including all tanks, hoses, booms, screens and nozzles, after application of *SureGuard* Herbicide. Equipment with *SureGuard* Herbicide residue remaining in the system may result in crop injury to subsequently treated crops.

# **SPRAYER PREPARATION**

Before applying *SureGuard* Herbicide, clean the spray tank, as well as all hoses and booms 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. Clean spray equipment according to the manufacturer's directions for the last product used before the equipment is used to apply *SureGuard* Herbicide. If two or more products were tank mixed prior to *SureGuard* Herbicide application, follow the most restrictive cleanup procedure on the label of all products.

# **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* Herbicide with water prior to addition to the spray tank. Use a minimum of 1 gal of water per 10 oz of *SureGuard* Herbicide.
- 3. While agitating, slowly add the pre-slurried *SureGuard* Herbicide to the spray tank. Agitation should create a rippling or rolling action on the water surface.
- 4. If tank mixing *SureGuard* Herbicide 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. Continue agitation until spray solution has been applied.
- 7. Mix only the amount of spray solution that can be applied the day of mixing. **Apply SureGuard Herbicide within 12 hours of mixing.**

### SPRAYER CLEANUP

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

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

# **BACKPACK APPLICATION**

When applying *SureGuard* Herbicide with a backpack sprayer follow all above restrictions. Calibrate backpack sprayers to deliver 1 gal of spray solution per 500 to 1,000 sq ft.

For Backpack Applications of SureGuard Herbicide at 10 oz per acre

Application Volume	Amount of SureGuard Herbicide to mix in 1 gal of water	Amount of SureGuard Herbicide to mix in 2 gals of water	Amount of SureGuard Herbicide to mix in 3 gals of water
1 gal per 500 sq ft (= 87 GPA)	1 1/4 tsp	2 1/2 tsp	3 3/4 tsp
1 gal per 750 sq ft (= 58 GPA)	1 3/4 tsp	3 1/2 tsp	5 1/4 tsp
1 gal per 1,000 sq ft (= 43.5 GPA)	2 1/2 tsp	5 tsp	7 1/2 tsp

<sup>1</sup> level teaspoon (tsp) holds 2.8 grams of SureGuard Herbicide

Example: Applicator wants to spray 1 gal of *SureGuard* Herbicide solution per 1,000 sq ft of ground bed, and wants to mix up 2 gals of spray solution. Therefore, applicator should mix 5 teaspoons of *SureGuard* Herbicide in 2 gals of water.

### **AERIAL APPLICATION**

To obtain satisfactory weed control with aerial application of *SureGuard* Herbicide, coverage must be uniform. Do not spray when drift is possible or when wind velocity is more than 10 mph. Avoid spraying *SureGuard* Herbicide 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**

Apply *SureGuard* Herbicide 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 may not provide adequate weed control. Higher gallonage applications generally provide more consistent weed control.

# **Nozzles 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.

## **CALIBRATION TABLE**

SUREGUARD HERBICIDE RATES OZ/A	SUREGUARD HERBICIDE RATES GRAMS/GAL	SUREGUARD HERBICIDE 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* Herbicide 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 HERBICIDE

COMMON NAME	SCIENTIFIC NAME
Alyssum, Hoary	Berteroa incana
Amaranth	
Palmer	Amaranthus palmeri
Spiny	Amaranthus spinosus
American Burnweed	Erechetities hieracifolia
Barnyardgrass*	Echinochloa crus-galli
Beggarweed, Florida	Desmodium tortuosum
Bittercress, Hairy	Cardamine hirsuta
Bluegrass, Annual	Poa annua
Burclover, California	Medicago polymorpha
Carpetweed	Mollugo verticillata
Chamberbitter	Phyllanthus urinaria
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
Groundsel Tree	Baccharis halimifolia
Henbit	Lamium amplexicaule
Horseweed*	Conyza canadensis
Indigo, Hairy	Indigofera hirsuta
Ivy, Ground*	Glechoma hederacea

<sup>\*</sup>Preemergence control only.

continued

TABLE 1. WEEDS CONTROLLED BY SUREGUARD HERBICIDE (continued)

Jimsonweed Kochia Kochia Kyllinga, Green* Ladysthumb Lambsquarters, Common Liverwort Lovegrass, California* Mallow Common Little Venice Marsh Parsley Marsh Yellowcress Mayweed* Morningglory Entireleaf Ivyleaf Red/Scarlet Smallflower Tall Moss Mulberry Weed Mustard Tumble Wild Nightshade Black Eastern Black Hairy Northern Willowherb Panicum Fall* Texas* Pennycress, Celifornia* Kyllinga brevifolia Kochia scoparia Kyllinga brevifolia Polygonum persicaria Chenopodium album Marchantia polymorpha Eragrostis diffusa Malva neglecta Hibiscus trionum Apium leptophyllum Apium le
Kyllinga, Green* Ladysthumb Ladysthumb Lambsquarters, Common Liverwort Lovegrass, California* Mallow Common Little Malva neglecta Marsh Parsley Marsh Yellowcress Mayweed* Morningglory Entireleaf Ivyleaf Red/Scarlet Smallflower Tall Moss Mulberry Weed Mustard Tumble Wild Nightshade Black Eastern Black Hairy Northern Willowherb Panicum Fall* Texas* Pansley-Piert Parsley-Piert Parsley Lopygonum persicaria Chenopodium album Marchantia polymorpha Eragrostis diffusa  Marchantia polymorpha Eragrostis diffusa  Malva neglecta Malva neglecta Malva neglecta Malva neglecta Paliva parviflora  Iragrostis diffusa  Eragrostis diffusa  Malva neglecta  Malva neglecta  Malva neglecta  Papomoea Hebosch rifusa  Sorippa islandica Anthemis cotula  Nonce hederacea var. integriuscula Ipomoea hederacea var. integriuscula Ipomoea hederacea var. integriuscula Ipomoea hederacea var. integriuscula Ipomoea purpurea Bryum spp. Fatuoa villosa  Sisymbrium altissimum Brassica kaber  Solanum nigrum Solanum nigrum Solanum ptycanthum Solanum ptycanthum Solanum sarrachoides Epilobium cillatum  Panicum dichotomiflorum Texas* Panicum texanum Alchemilla arvensis Sagina procumbens Thlaspi arvense
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Pennycress, Field Thlaspi arvense
Phyllanthus, Longstaiked   Phyllanthus tenellus
Pigweed Assessed Asse
Prostrate Amaranthus blitoides
Redroot Amaranthus retroflexus
Smooth Amaranthus hybridus
Tumble Amaranthus albus
Pineapple-weed*  Matricaria matricarioides
Plantain
Broadleaf* Plantago major
Buckhorn* Plantago lanceolata
Poinsettia, Wild Euphorbia heterophylla Puncturevine Tribulus terrestris
Purslane, Common Portulaca oleracea

<sup>\*</sup>Preemergence control only.

TABLE 1. WEEDS CONTROLLED BY SUREGUARD HERBICIDE continued

COMMON NAME	SCIENTIFIC NAME
Pusley, Florida	Richardia scabra
Ragweed	
Common	Ambrosia artemisiifolia
Giant	Ambrosia trifida
Redmaids	Calandrinia ciliata
Redweed	Melochia corchorifolia
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
Spiderwort, Tropical	Commelina benghalensis
Spurge	
Petty	Euphorbia peplus
Prostrate	Euphorbia humistrata Engelm
Spotted	Euphorbia maculata
Starbur, Bristly*	Acanthospermum hispidum
Tassel-flower	Emilia spp.
Thickhead	Crassocephalum crepidoides
Thistle	
Canada*	Cirsium arvense
Russian	Salsola iberica
Velvetleaf	Abutilon theophrasti
Waterhemp	
Common	Amaranthus rudis
Tall	Amaranthus tuberculatus
Woodsorrel, Yellow*	Oxalis stricta

<sup>\*</sup>Preemergence control only.

# DIRECTIONS FOR USE IN ESTABLISHED CONTAINER AND FIELD GROWN CONIFERS (INCLUDING CHRISTMAS TREES)

Apply *SureGuard* Herbicide as a single or split application to established container and field grown conifers, which includes applications to Christmas tree plantations. The conifers listed in Table 2 have exhibited tolerance to *SureGuard* Herbicide only when the product is applied to dormant or hardened off plant material. If applied over the top of plant foliage, apply *SureGuard* Herbicide before spring bud break or after conifers have sufficiently hardened off. During periods of cool, cloudy weather, use caution to ensure conifers have hardened off prior to herbicide application. Do not apply to conifers within 1 year of seedling emergence.

# PREEMERGENCE APPLICATION

Apply 8 to 12 oz (0.25 to 0.38 lb ai/A) of *SureGuard* Herbicide per broadcast acre before weeds emerge. Apply to weed free, established conifers grown in containers or in the field (in ground). If possible, irrigate treated area with 0.5 to 0.75 inch of water immediately following application. *SureGuard* Herbicide may be sprayed directly over conifers listed in Table 2, provided bud break has not occurred or plants are hardened off. Needle burn may be observed on new flush if plants are actively growing at time of application. However, *SureGuard* Herbicide will typically not effect subsequent growth. If conifers are not dormant or hardened off at time of application, and foliar injury cannot be tolerated, apply *SureGuard* Herbicide as a directed spray, taking care to minimize direct contact or drift of sprays onto foliage. Mechanically incorporating *SureGuard* Herbicide after application will disturb soil surfaces, which may reduce herbicidal efficacy. When applied before weed germination, *SureGuard* Herbicide will control broadleaf and grassy weeds listed in Table 1.

### POSTEMERGENCE APPLICATION

Apply 8 to 12 oz (0.25 to 0.38 lb ai/A) of *SureGuard* Herbicide per broadcast acre after weeds have emerged. *SureGuard* Herbicide may be sprayed directly over conifers listed in Table 2, provided bud break has not occurred or plants are hardened off. Needle burn may be observed on new flush if plants are actively growing at time of application. However, *SureGuard* Herbicide will typically not affect subsequent growth. If conifers are not dormant or hardened off at the time of application, and foliar injury cannot be tolerated, apply *SureGuard* Herbicide as a directed spray, taking care to minimize direct contact or drift of sprays onto foliage.

If applied when weeds are actively growing and no larger than 2 inches in height, *SureGuard* Herbicide will provide postemergence control of broadleaf weeds and grasses listed in Table 1. Postemergence control of *SureGuard* Herbicide may be more effective with certain weed species, and may not control mature, stressed or hardened off weeds that are not actively growing at the time of application.

## TANK MIXTURES FOR CONTAINER AND FIELD GROWN CONIFERS

Tank mixing *SureGuard* Herbicide with other preemergence and postemergence herbicides registered for use on conifers may provide a broader spectrum of weed control than *SureGuard* Herbicide applied alone. *SureGuard* Herbicide may also be applied as part of a postemergence burndown program for control of annual and perennial weeds. Tank mixing *SureGuard* Herbicide with glyphosate will increase the speed of burndown compared to glyphosate applied alone. *SureGuard* Herbicide may be tank mixed with products containing the following active ingredients labeled for use in conifers:

clethodim glyphosate\* oryzalin prodiamine simazine\*

\*Do not apply glyphosate or simazine to containerized ornamentals.

**IMPORTANT:** Completely read and follow the label of any potential *SureGuard* Herbicide tank mix partner. When tank mixing *SureGuard* Herbicide with other herbicides, always follow the most restrictive label limitations and precautions on the label of any tank mix partner.

# **TOLERANT CONIFERS**

SureGuard Herbicide may be applied to the conifer species listed in Table 2. If a desired conifer species is not listed in Table 2, users should evaluate the safety of SureGuard Herbicide on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Testing SureGuard Herbicide on a small number of plants will determine if SureGuard Herbicide can be used safely on a widespread basis.

# **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

# TABLE 2. TOLERANT CONIFERS

TABLE 2. TOLERANT CONIFERS		
COMMON NAME	SCIENTIFIC NAME	
Arborvitae		
American	Thuja occidentalis	
Oriental	Thuja orientalis	
Fir		
Concolor	Abies concolor	
Cork Bark	Abies lasiocarpa	
Douglas	Pseudotsuga menzesii	
Fraser	Abies fraseri	
Grand	Abies grandis	
Noble	Abies procera	
Turkish	Abies bommuelleriana	
Hemlock		
Eastern	Tsuga canadensis	
Western	Tsuga heterophylla	
Juniper		
Blue Star	Juniperus scopularum	
Creeping	Juniperus horizontalis	
Japanese Garden	Juniperus chinensis	
Tamarix	Juniperus sabina	
Pine		
Austrian	Pinus nigra	
Eastern White	Pinus strobus	
Jack	Pinus banksiana	
Japanese Black	Pinus thunbergiana	
Loblolly	Pinus taeda	
Lodgepole	Pinus contorta	
Longleaf	Pinus palustris	
Mugo	Pinus mugo	
Ponderosa	Pinus ponderosa	
Sand	Pinus clausa	
Scotch	Pinus sylvestris	
Shortleaf	Pinus echinata	
Slash	Pinus elliottii	
Virginia	Pinus virginiana	
Spruce		
Blue	Picea pungens	
Dwarf Alberta	Picea glauca conica	
Norway	Picea abies	
Sitka	Picea sitchensis	
Yew		
English	Taxus baccata	
Japanese	Taxus cuspidata	

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

SureGuard Herbicide may be applied as single or split applications to container and field grown deciduous trees with an established root system. The deciduous trees listed in Table 3 have exhibited tolerance to SureGuard Herbicide only when applied to the soil and base of plants. Application of SureGuard Herbicide to deciduous foliage or green bark may result in unacceptable injury.

SureGuard Herbicide may be applied to established (or transplanted) container and field grown deciduous trees. Do not apply to trees that are less than one year old or have been transplanted less than one year, unless completely protected by non-porous wraps, grow tubes, waxed protectors or other forms of protection to young foliage and/or bark. Do not harvest fruit or nuts from treated trees within one year of application.

**IMPORTANT:** Direct application of *SureGuard* Herbicide to the soil surface and away from plant foliage and bark. Avoid direct spray contact on plant surfaces, foliage and green bark or injury may result. Application of *SureGuard* Herbicide after bud swell may cause injury if herbicide contacts foliage. Avoid application under environmental conditions that favor drift to non-targeted areas.

### PREEMERGENCE APPLICATION

Apply 8 to 12 oz (0.25 to 0.38 lb ai/A) of *SureGuard* Herbicide per broadcast acre as a preemergence (to weed emergence) application. Apply *SureGuard* Herbicide to weed free deciduous trees grown in containers or in the field (in-ground). If possible, irrigate treated area with 0.5 to 0.75 inch of water immediately following application. *SureGuard* Herbicide may be applied to the soil surface and base of deciduous trees, provided that direct and indirect (drift) applications to plant foliage, flowers and green bark does not occur. Mechanically incorporating *SureGuard* Herbicide will disturb soil surfaces, which may reduce herbicidal efficacy. The use of spray shields that limit exposure of foliage and bark to *SureGuard* Herbicide is suggested. When applied before weed germination, *SureGuard* Herbicide will control broadleaf and grassy weeds listed in Table 1.

# POSTEMERGENCE APPLICATION

Apply 8 to 12 oz (0.25 to 0.38 lb ai/A) of *SureGuard* Herbicide per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt/A crop oil concentrate). Make postemergence (to weed emergence) applications of *SureGuard* Herbicide when weeds are actively growing and are no larger than 2 inches in height. The addition of a surfactant enhances *SureGuard* Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of *SureGuard* Herbicide. When applied after weed germination, *SureGuard* Herbicide will provide preemergence and postemergence control of broadleaf weeds and grasses listed in Table 1. If plant injury is a concern, use a spray shield to limit the exposure of trees to *SureGuard* Herbicide.

Postemergence control of *SureGuard* Herbicide may be more effective with certain weed species, and may not control mature, stressed or hardened off weeds that are not actively growing at the time of application.

# TANK MIXTURES FOR FIELD AND CONTAINER GROWN DECIDUOUS TREES

Tank mixing *SureGuard* Herbicide with other preemergence and postemergence herbicides registered for use on deciduous trees may provide a broader spectrum of weed control than *SureGuard* Herbicide alone. *SureGuard* Herbicide may also be applied as part of a postemergence burndown program of control of annual and perennial weeds. Tank mixing *SureGuard* Herbicide with glyphosate will increase the speed of burndown compared to glyphosate applied alone. *SureGuard* Herbicide may be tank mixed with products containing the following active ingredient labeled for use in deciduous trees:

clethodim glyphosate\* oryzalin pendimethalin prodiamine simazine\*

**IMPORTANT:** Completely read and follow the label of any herbicides mixed with *SureGuard* Herbicide. When tank mixing *SureGuard* Herbicide with other herbicides always follow the most restrictive limitations and precautions on the label of any tank mix partner..

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

SureGuard Herbicide may be applied as a directed spray to the deciduous, non-bearing fruit and non-bearing nut trees species listed in Table 3. If a desired tree species is not listed in Table 3, users should evaluate the safety of SureGuard Herbicide on a small number of plants under commercial growing conditions and monitor plant response for four to six weeks for phytotoxicity. Testing SureGuard Herbicide on a small number of plants will determine if SureGuard Herbicide can be used safely on a widespread basis.

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

<sup>\*</sup>Do not apply glyphosate or simazine to containerized plants.

TABLE 3. TOLERANT DECIDUOUS TREE SPECIES

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

<sup>\*</sup>Non-bearing trees only.

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

# DIRECTIONS FOR USE AROUND ESTABLISHED WOODY LANDSCAPE ORNAMENTALS AND TO MAINTAIN BARE GROUND NON-CROP AREAS

In residential and commercial landscapes, *SureGuard* Herbicide should only be applied by commercial licensed applicators. Application of *SureGuard* Herbicide in the vicinity of ornamental plants is limited to directed sprays around well established woody shrubs and trees such as azalea, euonymus, holly, and the conifers and deciduous trees listed in Tables 2 and 3. *SureGuard* Herbicide may also be applied to maintain bare ground in non-crop areas in apartment complexes, fence rows, gravel surfaces, ground mats, golf courses, lumberyards, office complexes, parks, parking areas, recreational sites, schools, sidewalks, storage areas and other similar industrial sites. Do not apply *SureGuard* Herbicide within any enclosed structure in residential or commercial landscapes.

SureGuard Herbicide offers postemergence and residual control of susceptible grasses and broadleaf weeds, as well as additional mode of action to assist in the control of resistant weeds. The length of residual control is dependent on the rate applied, rainfall and temperature. Length of residual control will decrease as temperature and precipitation increase.

IMPORTANT: Contact with *SureGuard* Herbicide spray or spray drift may cause severe injury or destruction of certain desirable plants, especially herbaceous species such as bedding plants or direct seeded annual and perennial flowers. Therefore, do not apply *SureGuard* Herbicide over the top of ornamental plants growing in the landscape, and do not allow *SureGuard* Herbicide spray to contact, drift or splash from soil onto the foliage, green stems, exposed roots or fruit of desirable plants. Avoid application of *SureGuard* Herbicide under conditions that favor drift of sprays onto desired ornamentals or turfgrass. The use of spray shields that limit the plant exposure to *SureGuard* Herbicide is highly recommended when applying *SureGuard* Herbicide near desirable plants.

Do not apply *SureGuard* Herbicide around landscape ornamentals until plants have been actively growing for at least 30 days after transplanting, or for at least two months before ornamentals will be planted into treated areas.

# PREEMERGENCE APPLICATION (NO WEEDS ARE PRESENT)

Mix 1 1/4 to 2 1/2 tsp of *SureGuard* Herbicide per gal (10 oz/A) of spray solution, and apply 1 gal of spray solution to 500 – 1,000 sq ft (10 oz/A) prior to weed germination (see calibration table for backpack sprayers). Apply *SureGuard* Herbicide to weed free soil, mulch or gravel surfaces. Moisture is necessary to activate *SureGuard* Herbicide on soil for residual weed control. When applied before weed germination, *SureGuard* Herbicide will control the broadleaf weeds and grasses listed in Table 1.

Established landscape ornamentals have shown tolerance to *SureGuard* Herbicide **only** when applied to the soil at the base of the plant. For maximum plant safety when using around desirable ornamentals, direct applications of *SureGuard* Herbicide to the soil, and leave a sufficient untreated buffer to ensure spray solution does not contact desired plants. Do not harvest fruit or nuts from treated trees within one year of application.

# POSTEMERGENCE APPLICATION (WEEDS ARE PRESENT)

Mix 1 1/4 to 2 1/2 tsp of *SureGuard* Herbicide per gal (10 oz/A) and apply 1 gal of spray solution to 500 - 1,000 sq ft to actively growing weeds (see calibration chart for backpack sprayers). Tank mixing *SureGuard* Herbicide with glyphosate will increase the spectrum of postemergence weed control over *SureGuard* Herbicide alone, provide faster postemergence weed control than glyphosate alone, and provide pre and postemergence control of the broadleaf weeds and grasses listed in Table 1.

Established landscape ornamentals have shown tolerance to applications of *SureGuard* Herbicide plus glyphosate **only** when applied to the soil at the base of the plant, and sprays do not directly contact or drift onto desirable plants. For maximum plant safety when using around desirable ornamentals, direct applications of *SureGuard* Herbicide plus glyphosate towards the soil, and leave a sufficient non-treated buffer to ensure spray solution does not contact desired plants.

Thorough spray coverage of weeds is necessary to maximize weed control. Spray coverage should be uniform, but do not spray to the point of runoff.

Do not harvest fruit or nuts from treated trees within one year of application.

**IMPORTANT:** Completely read and follow the glyphosate label. When tank mixing *SureGuard* Herbicide with other products, always follow the most restrictive use conditions on either label.

# **RESTRICTIONS AND LIMITATIONS**

Do not apply more than 2 applications per year.

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

SureGuard Herbicide, 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 Herbicide only to:

- Bare ground areas around buildings and other structures. Do not apply within any enclosed 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* Herbicide.

SureGuard Herbicide offers residual and postemergence control of susceptible grasses and broadleaf weeds as well as additional mode of action to assist in the control of 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* Herbicide per broadcast acre as a preemergence application. Preemergence (to weed emergence) applications of *SureGuard* Herbicide should be made to a weed free surfaces. Moisture is necessary to activate *SureGuard* Herbicide for residual weed control. Dry weather following application of *SureGuard* Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, *SureGuard* Herbicide will control susceptible germinating weeds.

# POSTEMERGENCE APPLICATION

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

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

# DIRECTIONS FOR USE IN CONIFER RE-FORESTATION SITES FOLLOWING TIMBER HARVEST

SureGuard Herbicide is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in conifer re-forestation sites following timber harvest operations. SureGuard Herbicide may be used as a site preparation treatment prior to transplanting of conifers or as a conifer release treatment after stand establishment.

# **Site Preparation - Application Before Transplanting**

Apply 8 to 12 oz of *SureGuard* Herbicide per acre. Transplant operations must take place at least 2 months after application. To obtain optimal weed control, apply *SureGuard* Herbicide before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, *SureGuard* Herbicide may be tank mixed with a burndown herbicide to provide preemergence weed control.

Apply SureGuard Herbicide in at least 10 gals of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

# Conifer Release Treatments – Applications only within 3 years after transplanting.

Apply 8 to 12 oz of *SureGuard* Herbicide per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. Do not apply *SureGuard* Herbicide over the top of trees after budbreak or needle spotting and defoliation may occur. *SureGuard* Herbicide should not affect new growth of trees. See Table 4 for a list of tolerant conifers for over the top treatments. Do not apply *SureGuard* Herbicide over the top unless trees are more than two years past seedling, also known as 1+1 stock.

#### **TANK MIXING – Conifer Release Treatments**

Certain liquid formulations of other pesticides may increase the postemergence activity of *SureGuard* Herbicide, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with *SureGuard* Herbicide may be more injurious than *SureGuard* Herbicide applied alone and need to be tested to determine if they can be used safely on a widespread basis.

### **ADJUVANTS – Conifer Release Treatments**

When using as a Conifer Release Treatment, do not mix *SureGuard* Herbicide with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, the conifers listed in Table 4 have shown tolerance to *SureGuard* Herbicide. However, *SureGuard* Herbicide is a very active herbicide and the user should exercise responsible judgment and caution until familiarity is gained with this product. If a desired conifer species is not listed in Table 4, evaluate the safety of *SureGuard* Herbicide on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Test *SureGuard* Herbicide on a small number of plants to determine if *SureGuard* Herbicide can be used safely on a widespread basis. The use of nylon mesh wraps, commonly used to deter animal browsing, may increase plant injury if placed on plants after over the top application of *SureGuard* Herbicide.

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

**TABLE 4: TOLERANT CONIFER TREE SPECIES:** 

TABLE 4: TOLERANT CONIFER TREE SPECIES:		
COMMON NAME	SCIENTIFIC NAME	
Fir		
Concolor	Abies concolor	
Cork Bark	Abies lasiocarpa	
Douglas	Pseudotsuga menzesii	
Fraser	Abies fraseri	
Grand	Abies grandis	
Noble	Abies procera	
Turkish	Abies bommuelleriana	
Hemlock		
Eastern	Tsuga canadensis	
Western	Tsuga heterophylla	
Pine		
Austrian	Pinus nigra	
Eastern White	Pinus strobus	
Jack	Pinus banksiana	
Japanese Black	Pinus thunbergiana	
Loblolly	Pinus taeda	
Lodgepole	Pinus contorta	
Longleaf	Pinus palustris	
Mugo	Pinus mugo	
Ponderosa	Pinus ponderosa	
Sand	Pinus clausa	
Scotch	Pinus sylvestris	
Shortleaf	Pinus echinata	
Slash	Pinus elliottii	
Virginia	Pinus virginiana	
Spruce		
Blue	Picea pungens	
Dwarf Alberta	Picea glauca conica	
Norway	Picea abies	
Sitka	Picea sitchensis	

# DIRECTIONS FOR USE IN POPLAR PLANTATIONS AND TIMBER RE-FORESTATION SITES

SureGuard Herbicide is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in poplar plantations and timber re-forestation sites following timber harvest operations. SureGuard Herbicide may be used as a site preparation treatment prior to transplanting of trees or as a release treatment after stand establishment.

# **Site Preparation-Application Before Transplanting**

Apply 8 to 12 oz of *SureGuard* Herbicide per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply *SureGuard* Herbicide before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, *SureGuard* Herbicide may be tank mixed with a burndown herbicide to provide preemergence weed control.

Apply *SureGuard* Herbicide in at least 10 gals of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

# Release Treatments - Applications Within 3 Years After Transplanting

Apply 8 to 12 oz of *SureGuard* Herbicide per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. Do not apply *SureGuard* Herbicide over the top of trees after budbreak or leaf spotting and defoliation may occur. *SureGuard* Herbicide should not affect new growth of trees of tolerant poplars for over the top treatments. Do not apply *SureGuard* Herbicide over the top unless trees are more than one year old.

# **TANK MIXING – Poplar Release Treatments**

Certain liquid formulations of other pesticides may increase the postemergence activity of *SureGuard* Herbicide, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with *SureGuard* Herbicide may be more injurious than *SureGuard* Herbicide applied alone and need to be tested to determine if they can be used safely on a widespread basis.

# **ADJUVANTS – Poplar Release Treatments**

When applying Release Treatments, do not mix SureGuard Herbicide with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, poplars (*Populus balsamifera*, *P. grandidentata*, *P. niger and P. tremuloides*), hybrid poplars (*P.* sp. x sp.), and cottonwoods (*P. deltoides and P. trichocarpa*) have shown tolerance to *SureGuard* Herbicide. However, *SureGuard* Herbicide is a very active herbicide and the user should exercise responsible judgment and caution until familiarity is gained with this product. Test *SureGuard* Herbicide on a small number of plants to determine if *SureGuard* Herbicide can be used safely on a widespread basis.

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

# DIRECTIONS FOR USE ON DORMANT WARM-SEASON TURFGRASS GROWN ON RESIDENTIAL SITES, GOLF COURSES, SOD PRODUCTION AND SIMILAR AREAS

SureGuard Herbicide may be applied as a single or split application to well established dormant turfgrass listed in Table 5. SureGuard Herbicide will provide Preemergence and early postemergence control of annual bluegrass, chickweed, henbit and other winter annual weeds found in Table 1. SureGuard Herbicide will provide preemergence control of crabgrass, goosegrass and other summer annual weeds found in Table 1. SureGuard Herbicide may be applied to dormant turfgrass in such areas as apartment complexes, golf courses, sod farms, roadsides, sports fields, campgrounds, office complexes, parks, parking areas, recreational sites, schools and other similar sites. Bermudagrass exhibits tolerance to SureGuard Herbicide only when applied to semi-dormant or completely dormant turf in the late fall and before active growth resumes in the late winter/early spring. Application of SureGuard Herbicide to actively growing turfgrass (warm season and cool season) or during green-up may cause unacceptable injury.

#### **BROADCAST APPLICATIONS**

Apply 8 to 12 oz of *SureGuard* Herbicide per broadcast acre as a preemergence (to weed emergence) application. If weeds are present at the time of application apply *SureGuard* Herbicide plus an adjuvant (0.25% v/v non-ionic surfactant). Make postemergence (to weed emergence) applications of *SureGuard* Herbicide when weeds are actively growing and no larger than 2 inches in height. Thorough spray coverage is necessary to maximize the postemergence activity of *SureGuard* Herbicide. When applied after weed germination, *SureGuard* Herbicide will provide preemergence and postemergence control of broadleaf weeds and grasses listed in Table 1. Postemergence control of *SureGuard* Herbicide may be more effective on certain weed species, and may not control mature, stressed or hardened off weeds that are not actively growing at the time of application.

SureGuard Herbicide will provide best control of annual bluegrass when applied in the late fall while plants are small. Control may be less effective when applied in the winter under cold conditions when weeds are not actively growing. A second application of SureGuard Herbicide may be required to provide adequate season-long annual bluegrass control. SureGuard Herbicide will provide best control of crabgrass, goosegrass and other summer annual weeds when applied in the late winter before turfgrass resumes active growth.

# **SPOT TREATMENTS**

Mix 2 1/2 tsp per gal of *SureGuard* Herbicide and 2 tsp (1/3 fl oz) of non-ionic surfactant in one gal of water and apply one gal of spray solution per 1,000 sq ft. Occasionally shake the spray solution while spraying to ensure the spray solution remains well mixed. Spray the target weeds until the leaves are wet.

# TANK MIXING WITH OTHER TURFGRASS HERBICIDES

SureGuard Herbicide will suppress, but will not effectively control established winter perennial weeds such as dandelion and clover. SureGuard Herbicide may be tank mixed with metsulfuron to control winter perennial weeds.

**IMPORTANT:** If applied in the fall to semi-dormant turfgrass, *SureGuard* Herbicide may accelerate dormancy. If applied in the spring after turfgrass resumes active growth, *SureGuard* Herbicide will cause temporary discoloration of turf and delay greenup. Read and follow the label of any herbicides mixed with *SureGuard* Herbicide . When tank mixing *SureGuard* Herbicide with other herbicides, always follow the most restrictive limitations and precautions on the label of any tank mix partner.

#### **USE PRECAUTIONS**

• Use Around Bentgrass and Poa Greens: SureGuard Herbicide has limited potential for lateral movement on level terrain, but can potentially move down slope after excessive rainfall and affect sensitive turf species such as bentgrass and Poa trivialis. When applied upslope from bentgrass greens or bermudagrass greens overseeded with Poa trivialis, allow an adequate buffer zone between greens and the treated area. If uncertain about the size of the buffer, 15 feet is suggested. Risk of movement is decreased when SureGuard Herbicide is applied to soil at less than field capacity. Avoid application when heavy rain is imminent or when the soil is saturated.

### **RESTRICTIONS AND LIMITATIONS**

- Do not apply to golf course putting greens.
- Do not apply to warm season turfgrass that has been overseeded with cool season turfgrass (ex. perennial rye, *Poa trivialis*).
- Do not irrigate within 1 hour before or after application.
- Do not apply if rain is expected within 1 hour after application.
- Do not mow turfgrass within 12 hours after application.
- Do not apply within 30 days prior to cutting or lifting sod.
- Do not apply more than 2 applications at 12 oz/A or 3 applications at 8 oz/A per year.
- Do not re-apply SureGuard Herbicide within 30 days.
- Do not apply in fall before turfgrass has ceased active growth or in late winter/ early spring after turfgrass has resumed active growth.
- Allow 8 weeks between application and seeding or sodding of turfgrass.

# **TABLE 5. TOLERANT TURFGRASS SPECIES**

COMMON NAME	SCIENTIFIC NAME
Bermudagrass	Cynodon spp.
Centipedegrass Seashore paspalum St. Augustinegrass Zoysiagrass	Eremochloa ophiuroides Paspalum vaginatum Stenotaphrum secundatum Zoysia spp.

# STORAGE AND DISPOSAL

# **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.

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

## 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 language for container sizes less than 5 gals]

# **CONTAINER HANDLING**

[Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. 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.]

[Container Disposal language for container greater than 5 gals or 50 lbs]

[Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. 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.]

Note to EPA reviewer: if this product is shipped in containers greater than 50 lbs, the following container handling statement will be added to the label:

[Container statement for nonrefillable container]

Nonrefillable bag: Do not reuse or refill this bag. Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into equipment. Do not reuse bag. Dispose of bag in a sanitary landfill or by incineration if allowed by State and local authorities.

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Manufactured for:

Valent U.S.A. Corporation P.O. Box 8025 Walnut Creek, CA 94596-8025 www.valentpro.com Made in U.S.A.

EPA Reg. No. 59639-120 EPA Est. 059639-00120.20160919.SGD.AMEND

# [Sub Label C]

SureGuard® Herbicide FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES.



GROUP 14 HERBICIDE

[Bracketed text is optional]

# SureGuard® Herbicide

# DIRECTIONS FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES

Active Ingredient	By Wt
*Flumioxazin	51%
Other Ingredients	<u>49%</u>
Total	100%

<sup>\*(2-[7-</sup>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 1, 5, 12 and 25 POUNDS OR 500 KG (1102.3 LB)

# **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 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 **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.

**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 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 and 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 TO THE FULLEST EXTENT ALLOWED BY LAW 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. To the extent consistent with applicable law AND 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

To the fullest extent allowed by law, Valent or Seller is not 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. TO THE FULLEST EXTENT ALLOWED BY LAW, 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

To the extent consistent with applicable law allowing such requirements, 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.

To the extent consistent with applicable law, 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, to the extent allowed by applicable law.

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

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#### PRODUCT INFORMATION

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

*SureGuard* Herbicide 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..

#### **USE RESTRICTIONS**

- Do not apply when weather conditions favor spray drift from treated areas.
- 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 (0.38 lb ai/A) of SureGuard Herbicide per acre per application.
- Do not apply more than 24 oz (0.76 lb ai/A) of SureGuard Herbicide per acre per year.
- Do not apply to moist or wet desirable plant foliage.
- Do not apply within 300 feet of non-dormant pome or stone fruit crops.

#### **USE PRECAUTIONS**

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.

#### **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 800-898-2536.

#### PREEMERGENCE APPLICATION

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

#### POSTEMERGENCE APPLICATION

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

*SureGuard* Herbicide 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* **Herbicide should not be used to apply other materials to any desirable plant foliage.** Equipment with *SureGuard* Herbicide residue remaining in the system may result in crop injury to subsequently treated crops.

#### SPRAYER PREPARATION

Before applying *SureGuard* Herbicide, 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* Herbicide. If two or more products were tank mixed prior to *SureGuard* Herbicide 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* Herbicide with water prior to addition to the spray tank. Use a minimum of 1 gal of water per 10 oz of *SureGuard* Herbicide.
- 3. While agitating, slowly add the pre-slurried *SureGuard* Herbicide to the spray tank. Agitation should create a rippling or rolling action on the water surface.
- 4. If tank mixing *SureGuard* Herbicide 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* Herbicide 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* Herbicide 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.
  Drift potential is lowest between wind speeds of 2-10 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.

# **WEEDS CONTROLLED**

When *SureGuard* Herbicide 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 HERBICIDE

Alyssum, Hoary Amaranth Palmer Spiny Barnyardgrass* Berteroa incana  Amaranthus palmeri Spiny Bergarweed, Florida Bittercress, Hairy Bluegrass, Annual* Burclover, California Carpetweed Chickweed Common Mouseear Crabgrass Large* Digitaria sanguinalis Smooth* Southern* Croton, Tropic Dandelion* Dogfennel Doveweed Elipta Filaree, Redstem* Foxtail Bristly* Giant* Green* Setaria glauca Galinsoga, Hairy Geranium, Carolonal Geranium amplexicaule Conyza canadensis Indigo, Hairy Indigotera incana Amaranthus palmeri Amaranthus pallifi Desmolium hedia	COMMON NAME	SCIENTIFIC NAME
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Smooth* Southern* Digitaria ischaemum Digitaria ciliaris Croton, Tropic Dandelion* Dogfennel Dogfennel Doveweed Eclipta Filaree, Redstem* Foxtail Bristly* Green* Setaria viridis Yellow* Galinsoga, Hairy Geranium, Carolina Goosegrass* Groundsel, Common Henbit Horseweed* Indigo, Hairy Indigofera hirsuta Indigofera indica Indigofera hirsuta Indigofera hirs	Crabgrass	
Southern* Croton, Tropic Dandelion* Dogfennel Dogfennel Doveweed Eclipta Filaree, Redstem* Foxtail Bristly* Green* Green* Yellow* Galinsoga, Hairy Geranium, Carolina Goosegrass* Groundsel, Common Henbit Horseweed* Croton glandulosus var. septentrionalis Taraxacum officinale Eupatorium capillifolium Murdannia nudiflora Eclipta prostrata Erodium cicutarium  Setaria verticillata Setaria faberi Setaria viridis Yellow* Setaria glauca Galinsoga, Hairy Geranium, Carolina Goosegrass* Eleusine indica Groundsel, Common Henbit Horseweed* Indigo, Hairy Indigofera hirsuta Indigofera hirsuta Indigofera hederacea	Large*	Digitaria sanguinalis
Croton, Tropic Dandelion* Dogfennel Doyeweed Eclipta Filaree, Redstem* Foxtail Bristly* Green* Yellow* Galinsoga, Hairy Geranium, Carolina Goosegrass* Groundsel, Common Henbit Horseweed* Dogfennel Doveweed Eupatorium capillifolium Murdannia nudiflora Eclipta prostrata Erodium cicutarium  Setaria verticillata Setaria verticillata Setaria faberi Setaria glauca Galinsoga ciliata Geranium carolinianum Goosegrass* Groundsel, Common Henbit Horseweed* Indigo, Hairy Indigofera hirsuta Indigofera hirsuta Indigofera hirsuta Indigofera hederacea	Smooth*	Digitaria ischaemum
Dandelion* Dogfennel Dogfennel Eupatorium capillifolium Doveweed Murdannia nudiflora Eclipta Filaree, Redstem* Foxtail Bristly* Giant* Green* Yellow* Galinsoga, Hairy Geranium, Carolina Goosegrass* Groundsel, Common Henbit Horseweed* Indigo, Hairy Indigofera hirsuta Indigofera hirsuta Eupatorium capillifolium Murdannia nudiflora Eclipta prostrata Erodium cicutarium  Setaria verticillata Setaria verticillata Setaria faberi Setaria viridis Setaria qlauca Galinsoga, Hairy Galinsoga ciliata Geranium carolinianum Senecio vulgaris Lamium amplexicaule Conyza canadensis Indigo, Hairy Indigofera hirsuta Ivy, Ground*	Southern*	Digitaria ciliaris
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Doveweed Eclipta Eclipta prostrata Filaree, Redstem* Erodium cicutarium  Foxtail Bristly* Setaria verticillata Giant* Setaria faberi Green* Setaria viridis Yellow* Galinsoga, Hairy Galinsoga ciliata Gosegrass* Eleusine indica Groundsel, Common Senecio vulgaris Henbit Lamium amplexicaule Horseweed* Conyza canadensis Indigo, Hairy Indigofera hirsuta Ivy, Ground* Gelechoma hederacea	Dandelion*	Taraxacum officinale
Eclipta	Dogfennel	Eupatorium capillifolium
Filaree, Redstem* Foxtail  Bristly* Giant* Green* Yellow* Galinsoga, Hairy Geranium, Carolina Goosegrass* Groundsel, Common Henbit Horseweed* Indigo, Hairy Indigofera hirsuta Frodium cicutarium  Setaria verticillata Setaria faberi Setaria viridis Setaria glauca Galinsoga ciliata Geranium carolinianum Geranium carolinianum Senecio vulgaris Lamium amplexicaule Conyza canadensis Indigo, Hairy Indigofera hirsuta Ivy, Ground*	Doveweed	Murdannia nudiflora
Foxtail Bristly* Giant* Setaria verticillata Green* Yellow* Setaria glauca Galinsoga, Hairy Geranium, Carolina Goosegrass* Groundsel, Common Henbit Horseweed* Indigo, Hairy Indigofera hirsuta Setaria verticillata Setaria faberi Setaria viridis Setaria glauca Galinsoga ciliata Geranium carolinianum Eleusine indica Senecio vulgaris Lamium amplexicaule Conyza canadensis Indigo, Hairy Indigofera hirsuta Ivy, Ground*	Eclipta	Eclipta prostrata
Bristly* Giant* Setaria verticillata  Green* Yellow* Setaria glauca  Galinsoga, Hairy Geranium, Carolina Goosegrass* Groundsel, Common Henbit Horseweed* Indigo, Hairy Indigofera hirsuta  Setaria verticillata Setaria faberi Setaria viridis Setaria verticillata Setaria plauca Galinsoga, ciliata Geranium carolinianum Senecio vulgaris Lamium amplexicaule Horseweed* Indigofera hirsuta Indigofera hirsuta	Filaree, Redstem*	Erodium cicutarium
Giant* Green* Setaria faberi Setaria viridis Yellow* Setaria glauca Galinsoga, Hairy Geranium, Carolina Goosegrass* Eleusine indica Groundsel, Common Henbit Lamium amplexicaule Horseweed* Indigo, Hairy Ivy, Ground* Setaria faberi Setaria viridis Setaria faberi Setaria faberi Setaria viridis Setaria faberi Setaria viridis Setaria plauca Galinsoga ciliata Geranium carolinianum Goosegrass* Eleusine indica Senecio vulgaris Lamium amplexicaule Horseweed* Indigofera hirsuta Selectoral viridis Geranium carolinianum Goosegrass* Senecio vulgaris Lamium amplexicaule Goosegrass Indigofera hirsuta	Foxtail	
Green* Yellow* Setaria viridis Yellow* Galinsoga, Hairy Geranium, Carolina Goosegrass* Groundsel, Common Henbit Horseweed* Indigo, Hairy Ivy, Ground* Setaria viridis Setaria glauca Galinsoga ciliata Geranium carolinianum Geranium carolinianum Senecio vulgaris Lamium amplexicaule Conyza canadensis Indigofera hirsuta Ivy, Ground* Setaria viridis Geranium carolinianum Geranium carolinianum Geranium carolinianum Indigofera indica Geranium carolinianum Geranium carolinianum Senecio vulgaris Lamium amplexicaule Conyza canadensis Indigofera hirsuta Glechoma hederacea	Bristly*	Setaria verticillata
Yellow* Galinsoga, Hairy Geranium, Carolina Goosegrass* Groundsel, Common Henbit Horseweed* Indigo, Hairy Ivy, Ground*  Setaria glauca Galinsoga ciliata Geranium carolinianum Eleusine indica Senecio vulgaris Lamium amplexicaule Conyza canadensis Indigofera hirsuta Ivy, Ground*	Giant*	Setaria faberi
Galinsoga, Hairy Geranium, Carolina Goosegrass* Eleusine indica Groundsel, Common Henbit Horseweed* Indigo, Hairy Ivy, Ground* Galinsoga ciliata Geranium carolinianum Senecio vulgaris Lamium amplexicaule Conyza canadensis Indigofera hirsuta Ivy, Ground* Galinsoga ciliata Geranium carolinianum Geranium carolinianum Indica Senecio vulgaris Lamium amplexicaule Conyza canadensis Indigofera hirsuta Glechoma hederacea	Green*	Setaria viridis
Geranium, Carolina Goosegrass* Eleusine indica Groundsel, Common Henbit Lamium amplexicaule Horseweed* Indigo, Hairy Ivy, Ground* Geranium carolinianum Eleusine indica Senecio vulgaris Lamium amplexicaule Lamium amplexicaule Conyza canadensis Indigofera hirsuta Glechoma hederacea	Yellow*	Setaria glauca
Goosegrass* Groundsel, Common Henbit Horseweed* Indigo, Hairy Ivy, Ground*  Eleusine indica Senecio vulgaris Lamium amplexicaule Conyza canadensis Indigofera hirsuta Glechoma hederacea	Galinsoga, Hairy	_
Groundsel, Common  Henbit  Horseweed*  Indigo, Hairy  Ivy, Ground*  Senecio vulgaris  Lamium amplexicaule  Conyza canadensis  Indigofera hirsuta  Glechoma hederacea	Geranium, Carolina	Geranium carolinianum
Henbit Horseweed* Indigo, Hairy Ivy, Ground*  Lamium amplexicaule Conyza canadensis Indigofera hirsuta Glechoma hederacea	Goosegrass*	Eleusine indica
Horseweed* Indigo, Hairy Ivy, Ground*  Conyza canadensis Indigofera hirsuta Glechoma hederacea		
Indigo, Hairy Ivy, Ground*  Indigofera hirsuta Glechoma hederacea	Henbit	· · · · · · · · · · · · · · · · · · ·
Ivy, Ground* Glechoma hederacea		
	Ivy, Ground*	Glechoma hederacea

<sup>\*</sup>Preemergence control only.

continued

TABLE 1. WEEDS CONTROLLED BY SUREGUARD HERBICIDE continued

COMMON NAME	SCIENTIFIC NAME
Jimsonweed	Datura stramonium
Kochia	Kochia scoparia
Kyllinga, Green*	Kyllinga brevifolia
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
Red/Scarlet	Ipomoea coccinea
Smallflower	Jacquemontia tamnifolia
Tall	Ipomoea purpurea
Moss	Bryum spp.
Mustard	
Tumble	Sisymbrium altissimum
Wild	Brassica kaber
Nightshade	Brassisa nasor
Black	Solanum nigrum
Eastern Black	Solanum ptycanthum
Hairy	Solanum sarrachoides
Panicum	Solutium sarraonoides
Fall*	Panicum dichotomiflorum
Texas*	Panicum texanum
Parsley-Piert	Alchemilla arvensis
Pearlwort, Birdseye*	Sagina procumbens
Pennycress, Field	Thlaspi arvense
Phyllanthus, Longstalked	Phyllanthus tenellus
Pigweed	Triyilaritrius terrelius
Prostrate	Amaranthus blitoides
Redroot	Amaranthus retroflexus
Smooth	Amaranthus hybridus
Tumble	Amaranthus albus
	Matricaria matricarioides
Pineapple-weed* Plantain	Matricana matricanoides
Broadleaf*	Plantago major
Buckhorn*	Plantago lanceolata
Poinsettia, Wild	Euphorbia heterophylla
Pondweed, Sago Puncturevine	Potamogeton pectinatus Tribulus terrestris
Puncturevine Purslane, Common	Portulaca oleracea
t arsiano, common	i ortalada dioradda

<sup>\*</sup>Preemergence control only.

TABLE 1. WEEDS CONTROLLED BY SUREGUARD HERBICIDE continued

COMMON NAME	SCIENTIFIC NAME
Pusley, Florida	Richardia scabra
Ragweed	
Common	Ambrosia artemisiifolia
Giant	Ambrosia trifida
Redmaids	Calandrinia ciliata
Redweed	Melochia corchorifolia
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 Engelm
Spotted	Euphorbia maculata
Starbur, Bristly*	Acanthospermum hispidum
Thistle	
Canada*	Cirsium arvense
Russian	Salsola iberica
Velvetleaf	Abutilon theophrasti
Waterhemp	·
Common	Amaranthus rudis
Tall	Amaranthus tuberculatus
Woodsorrel, Yellow*	Oxalis stricta

<sup>\*</sup>Preemergence control only.

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

*SureGuard* Herbicide, 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* Herbicide 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 ungrazed fence rows, wind breaks and shelter belts
- 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* Herbicide.

SureGuard Herbicide 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* Herbicide per broadcast acre as a preemergence application. Preemergence (to weed emergence) applications of *SureGuard* Herbicide 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* Herbicide on soil for residual weed control. Dry weather following application of *SureGuard* Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, *SureGuard* Herbicide will control susceptible germinating weeds.

#### POSTEMERGENCE APPLICATION

Apply 8 to 12 oz (0.25 to 0.38 lb ai/A) of *SureGuard* Herbicide 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* Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of *SureGuard* Herbicide. Emerged weeds are controlled postemergence with *SureGuard* Herbicide, however, translocation of *SureGuard* Herbicide 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* Herbicide occurs when applied in combination with a surfactant to weeds less than 2 inches in height.

#### SOIL CHARACTERISTICS

Application of *SureGuard* Herbicide 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 at least 10 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 at least 15 gals of spray solution per acre. Use at least 20 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

When applying *SureGuard* Herbicide after weed emergence, mix with an agronomically approved adjuvant. When an adjuvant is to be used with *SureGuard* Herbicide, Valent recommends the use of a Chemical Producers and Distributors Association certified adjuvant. 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* Herbicide 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 HERBICIDE

A jar test should be performed before mixing commercial quantities of *SureGuard* Herbicide, when using *SureGuard* Herbicide 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* Herbicide 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* Herbicide, and *SureGuard* Herbicide 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 Herbicide 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 and military installations.

To obtain satisfactory weed control with aerial applications of *SureGuard* Herbicide, uniform coverage must be obtained. Do not spray when drift is possible or when wind velocity is more than 10 mph. Avoid spraying *SureGuard* Herbicide 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* Herbicide 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 partner's label for adjuvant recommendation.

#### TANK MIX APPLICATION

In addition to weeds controlled by *SureGuard* Herbicide 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* Herbicide 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	hexazinone	picloram
bromacil	imazapic	pramitol
chlorsulfuron	imazapyr	prodiamine
dicamba	metsulfuron methyl	simazine
diuron	norfurazon	sulfometuron methyl
chlorpyralid	oryzalin	tebuthiuron
glyphosate	pendimethalin	triclopyr

**IMPORTANT:** Completely read and follow the label of any potential *SureGuard* Herbicide 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.

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

# DIRECTIONS FOR USE IN CONIFER RE-FORESTATION SITES FOLLOWING TIMBER HARVEST

SureGuard Herbicide is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in conifer re-forestation sites following timber harvest operations. SureGuard Herbicide may be used as a site preparation treatment prior to transplanting of conifers or as a conifer release treatment after stand establishment.

#### **Site Preparation - Application Before Transplanting**

Apply 8 to 12 oz of *SureGuard* Herbicide per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply *SureGuard* Herbicide before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, *SureGuard* Herbicide may be tank mixed with a burndown herbicide to provide preemergence weed control.

Apply *SureGuard* Herbicide in at least 10 gals of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

## Conifer Release Treatments – Applications only within 3 years after transplanting.

Apply 8 to 12 oz of *SureGuard* Herbicide per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. Do not apply *SureGuard* Herbicide over the top of trees after budbreak or needle spotting and defoliation may occur. *SureGuard* Herbicide should not affect new growth of trees. See Table 2 for a list of tolerant conifers for over the top treatments. Do not apply *SureGuard* Herbicide over the top unless trees are more than two years past seedling, also known as 1+1 stock.

#### **TANK MIXING – Conifer Release Treatments**

Certain liquid formulations of other pesticides may increase the postemergence activity of *SureGuard* Herbicide, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with *SureGuard* Herbicide may be more injurious than *SureGuard* Herbicide applied alone and need to be tested to determine if they can be used safely on a widespread basis.

#### **ADJUVANTS – Conifer Release Treatments**

When using as a Conifer Release Treatment, do not mix *SureGuard* Herbicide with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, the conifers listed in Table 2 have shown tolerance to *SureGuard* Herbicide. However, *SureGuard* Herbicide is a very active herbicide and the user should exercise responsible judgment and caution until familiarity is gained with this product. If a desired conifer species is not listed in Table 2, evaluate the safety of *SureGuard* Herbicide on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Test *SureGuard* Herbicide on a small number of plants to determine if *SureGuard* Herbicide can be used safely on a widespread basis. Do not apply *SureGuard* Herbicide over the top of conifers until trees have been growing in the treated area for at least one year. The use of nylon mesh wraps, commonly used to deter animal browsing, may increase plant injury if placed on plants after over the top application of *SureGuard* Herbicide.

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

TABLE 2: TOLERANT CONIFER TREE SPECIES:

TABLE 2: TOLERANT CONIFER TREE SPECIES:		
COMMON NAME	SCIENTIFIC NAME	
Fir		
Concolor	Abies concolor	
Cork Bark	Abies lasiocarpa	
Douglas	Pseudotsuga menzesii	
Fraser	Abies fraseri	
Grand	Abies grandis	
Noble	Abies procera	
Turkish	Abies bommuelleriana	
Hemlock		
Eastern	Tsuga canadensis	
Western	Tsuga heterophylla	
Pine		
Austrian	Pinus nigra	
Eastern White	Pinus strobus	
Jack	Pinus banksiana	
Japanese Black	Pinus thunbergiana	
Loblolly	Pinus taeda	
Lodgepole	Pinus contorta	
Longleaf	Pinus palustris	
Mugo	Pinus mugo	
Ponderosa	Pinus ponderosa	
Sand	Pinus clausa	
Scotch	Pinus sylvestris	
Shortleaf	Pinus echinata	
Slash	Pinus elliottii	
Virginia	Pinus virginiana	
Spruce		
Blue	Picea pungens	
Dwarf Alberta	Picea glauca conica	
Norway	Picea abies	
Sitka	Picea sitchensis	

# DIRECTIONS FOR USE IN POPLAR PLANTATIONS AND TIMBER RE-FORESTATION SITES

SureGuard Herbicide is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in poplar plantations and timber re-forestation sites following timber harvest operations. SureGuard Herbicide may be used as a site preparation treatment prior to transplanting of trees or as a release treatment after stand establishment.

#### **Site Preparation - Application Before Transplanting**

Apply 8 to 12 oz of SureGuard Herbicide per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply *SureGuard* Herbicide before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, *SureGuard* Herbicide may be tank mixed with a burndown herbicide to provide preemergence weed control.

Apply *SureGuard* Herbicide in at least 10 gals of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

## Release Treatments - Applications Within 3 Years After Transplanting

Apply 8 to 12 oz of *SureGuard* Herbicide per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. Do not apply *SureGuard* Herbicide over the top of trees after budbreak or leaf spotting and defoliation may occur. *SureGuard* Herbicide should not affect new growth of trees of tolerant poplars for over the top treatments. Do not apply *SureGuard* Herbicide over the top unless trees are more than one year old.

#### **TANK MIXING – Poplar Release Treatments**

Certain liquid formulations of other pesticides may increase the postemergence activity of *SureGuard* Herbicide, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with *SureGuard* Herbicide may be more injurious than *SureGuard* Herbicide applied alone and need to be tested to determine if they can be used safely on a widespread basis.

#### **ADJUVANTS – Poplar Release Treatments**

When applying Release Treatments, do not mix SureGuard Herbicide with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, poplars (*Populus balsamifera*, *P. grandidentata*, *P. niger and P. tremuloides*), hybrid poplars (*P.* sp. x sp.), and cottonwoods (*P. deltoides and P. trichocarpa*) have shown tolerance to *SureGuard* Herbicide. However, *SureGuard* Herbicide is a very active herbicide and the user should exercise responsible judgment and caution until familiarity is gained with this product. Test *SureGuard* Herbicide on a small number of plants to determine if *SureGuard* Herbicide can be used safely on a widespread basis.

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 2 applications at 12 oz/A (0.38 lb ai/A) or 3 applications at 8 oz/A (0.25 lb ai/A) per year.
- Do not re-apply SureGuard Herbicide within 30 days.

#### STORAGE AND DISPOSAL

#### **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.

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

#### PESTICIDE DISPOSAL

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

#### **CONTAINER HANDLING**

[Container Handling language for container sizes less than 5 gals]

[Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. 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.]

[Container Handling language for container sizes greater than 5 gals or 50 lbs]

[Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. 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.]

Note to EPA reviewer: if this product is shipped in containers greater than 50 lbs, the following container handling statement will be added to the label:

[Container statement for nonrefillable container]

[Nonrefillable bag: Do not reuse or refill this bag. Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into equipment. Do not reuse bag. Dispose of bag in a sanitary landfill or by incineration if allowed by State and local authorities.]

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SureGuard is a registered trademark 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

Made in U.S.A.

EPA Reg. No. 59639-120 EPA Est.

059639-00120.20160919.SGD.AMEND

# [Sub Label D]

# SureGuard® Herbicide

FOR THE MANAGEMENT OF UNDESIREABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS (TO CONTROL FLOATING AND EMERGED WEEDS USING SURFACE AND SUBSURFACE APPLICATIONS)





**HERBICIDE** 



Note: Bold italicized text is information for the reader and is not part of the label.

[Bracketed information is optional text]

# SureGuard<sup>®</sup> Herbicide

# FOR THE MANAGEMENT OF UNDESIRABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS

Active Ingredient	By Wt
Flumioxazin*	51%
Other Ingredients	<u>49%</u>
Total	100%

<sup>\*2-[7-</sup>fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2*H*-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1*H*-isoindole-1,3(2*H*)-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 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:	<ul> <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>		
If on skin or clothing:	<ul> <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>		
If in eyes:	<ul> <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>		
If swallowed:	<ul> <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 by a poison control center or doctor.</li> <li>Do not give anything to an unconscious person.</li> </ul>		
LIOT LINE NUMBER			

#### 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 **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. **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:**

If not used in accordance with directions on the label, this product can be toxic to non-target plants and aquatic invertebrates. Do not apply to water except as specified on the label. Drift and runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas, if not used in accordance to label directions. 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.

#### 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 treatment area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### 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. 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 TO THE FULLEST EXTENT ALLOWED BY LAW, 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 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. To the extent consistent with applicable law AND 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

To the fullest extent allowed by law, Valent or Seller is not liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. TO THE FULLEST EXTENT ALLOWED BY LAW, 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

To the extent consistent with applicable law allowing such requirements 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 the date of application so that an immediate inspection of the affected property can be made.

To the extent consistent with applicable law 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, to the extent allowed by applicable law.

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

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#### PRODUCT INFORMATION

SureGuard Herbicide is a fast acting contact herbicide that controls selected submersed, emergent and floating aquatic weeds. It is most effective when applied to young, actively growing weeds in water with a pH of less than 8.5.

SureGuard Herbicide may be applied to the following quiescent or slow moving bodies of water:

- Bayous
- Canals
- Drainage ditches
- Lakes
- Marshes
- Ponds (including golf course ponds)
- Reservoirs

Application of *SureGuard* Herbicide to public aquatic areas may require special approval and/or permits. Consult with local state agencies, if required.

#### **USE PRECAUTIONS AND RESTRICTIONS**

- 1. Do not apply to intertidal or estuarine areas.
- 2. There is no post-application holding restriction against use of treated water for drinking or recreational purposes (e.g. swimming, fishing).
- 3. In areas with dense weed vegetation only treat 1/2 the water body at one time and wait 10-14 days before treating the remaining area. Do not retreat the same section of water within 28 days of application.
- 4. Treated water may not be used for irrigation purposes on food crops until at least five (5) days after application.
- 5. Treated water may be used for irrigation purposes on turf and landscape ornamentals as outlined in the *Irrigation Restrictions Following Application* table.
- 6. Do not use in water utilized for crawfish farming.
- 7. Do not re-treat the same section of water with *SureGuard* Herbicide more than 6 times per vear.
- 8. Do not exceed 400 ppb of SureGuard Herbicide during any one application.

#### IRRIGATION RESTRICTIONS FOLLOWING APPLICATION

Application Method	Application Rate	Average Water Depth	Turf and Landscape Ornamentals	Ornamentals grown for production in Greenhouse and Nursery
Surface Spray	6 to 12 oz per	Greater than 3 feet	None	5 days
Surface Spray	surface acre	Less than 3 feet	12 hours	5 days
	Less than 200 ppb	N/A	1 day	5 days
Subsurface	200 to 300 ppb	N/A	2 days	5 days
	300 to 400 ppb	N/A	3 days	5 days

#### RESISTANCE MANAGEMENT

SureGuard Herbicide is a Group 14 herbicide. Any weed population may contain or develop plants that are resistant to SureGuard Herbicide and other Group 14 herbicides. Weed species with acquired resistance to Group 14 herbicides may eventually dominate the weed population if Group 14 herbicides are used repeatedly in the same water body or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by SureGuard Herbicide or other Group 14 herbicides.

To delay or prevent herbicide resistance consider the following recommendations:

- Avoid the use of more than two consecutive applications of *SureGuard* Herbicide or other herbicides that have a similar target site of action.
- Alternate herbicides used for aquatic weed control.
- Base herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Monitor treated weed populations for loss of efficacy.
- Contact your local extension specialist, other experts appropriate to aquatic use, and/or manufacturer for resistance and/or integrated weed management recommendations.

For further information or to report suspected resistance, you may contact Valent U.S.A. Corporation at the following toll-free number: 800-89-VALENT (898-2536).

#### SPRAY DRIFT MANAGEMENT FOR FOLIAR OR SURFACE APPLICATIONS

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

Do not spray *SureGuard* Herbicide under circumstances where spray droplets may drift on to unprotected persons, or plantings of food, forage or crops that might be damaged, or rendered unfit for sale, use or consumption. These precautions are not applicable for subsurface injection by closed systems.

- 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, ground or watercraft-based surface applications when wind velocity favors ontarget product deposition. Apply only when the wind speed is less than or equal to 10 mph.
- 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.

Properly maintain and calibrate all aerial, ground and water based application equipment.

Where states have more stringent regulations, they should be observed.

## **APPLICATION AND SPRAYER INFORMATION**

#### **Mixing Instructions**

- Fill clean spray tank 1/2 full of desired level with water and add buffering agent if necessary.
- Add the required amount of SureGuard Herbicide to the spray tank while agitating.
- Fill spray tank to desired level with water. Ensure that SureGuard Herbicide is thoroughly
  mixed before making applications. Agitation should continue until spray solution has been
  applied.
- Mix only the amount of spray solution that can be applied the day of mixing. Apply SureGuard Herbicide within 12 hours of mixing.

#### **ADDITIVES**

When applying *SureGuard* Herbicide to the foliage of floating or emerged aquatic weeds, mix with an adjuvant approved for use in aquatic sites. Valent recommends the use of a Chemical Producers and Distributors Association certified adjuvant. Mix *SureGuard* Herbicide with a nonionic surfactant containing at least 80% active ingredient. Follow adjuvant manufacturer's label rates. Mixing compatibility should be verified by a jar test before using.

#### Jar Test to Determine Compatibility of Adjuvants and SureGuard Herbicide

Conduct a jar test before mixing commercial quantities of *SureGuard* Herbicide, when using 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* Herbicide 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. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
- 5. 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.

## **Sprayer Cleanup**

If spray equipment is dedicated to application of aquatic herbicides, the following steps are recommended to clean the spray equipment:

• Completely drain the spray tank and rinse the application equipment thoroughly, including the inside and outside of the tank and all in-line screens.

If spray equipment will be used for purposes other than applying aquatic herbicides, it must be thoroughly cleaned following application of *SureGuard* Herbicide. The following steps must be used to clean the spray equipment:

- 1. Completely drain the spray tank and rinse the application equipment 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.
- 4. Circulate through sprayer for 5 minutes.
- 5. Then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes.
- 6. Drain tank completely.
- 7. Remove all nozzles and screens and rinse them with clean water.

#### **AERIAL APPLICATION**

To obtain satisfactory weed control, aerial application of *SureGuard* Herbicide, must provide uniform coverage of surface weeds and sufficient contact time. When applied by air, *SureGuard* Herbicide may not provide adequate control of some submersed weeds. Do not apply by air when significant drift on to non-target plants may occur or when wind velocity is more than 10 mph. Avoid spraying *SureGuard* Herbicide within 200 feet of dwellings, adjacent sensitive crops or environmentally sensitive areas. To obtain satisfactory application and avoid drift, the following directions must be observed:

#### **Volume and Pressure**

Apply *SureGuard* Herbicide in a minimum of 5 gals of water per acre with a maximum spray pressure of 40 PSI. Application at less than 5 gals per acre may not provide adequate weed control. Higher gallonage applications generally provide more consistent weed control.

#### **Nozzles 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.

#### Adiuvants

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

# DIRECTIONS FOR USE TO CONTROL FLOATING AND EMERGED WEEDS USING SURFACE APPLICATION

SureGuard Herbicide will control weeds and algae listed in Table 1, Floating and Emerged Weeds, when applied as a broadcast spray with appropriate equipment. For best results, apply SureGuard Herbicide to the foliage of actively growing weeds.

**Table 1. Floating and Emerged Weeds** 

Common Name	Scientific Name
Alligator Weed	Alternanthera philoxeroides
Duckweed	Lemna spp.
Frog's-bit	Limnobium spongia
Water Fern	Salvinia spp.
Water Lettuce	Pistia stratiotes
Watermeal	Wolffia spp.
Water Pennywort	Hydrocotyle spp.
Filamentous algae	Pithophora
Filamentous algae	Cladophora

#### **Surface Application**

Apply *SureGuard* Herbicide as a broadcast spray at 6 to 12 ounces of formulated product per acre plus an adjuvant approved for use in aquatics.

SureGuard Herbicide is a contact herbicide that quickly degrades in the water column so plants that do not initially come in contact with the herbicide will not be controlled. Apply SureGuard Herbicide in a minimum of 30 gals of water per acre to all areas of the water body where weeds exist. Coverage is essential for effective control as all floating weeds need to be exposed to lethal concentrations in all parts of the water body. Any untreated escapes or re-introductions of plants that were not treated will reestablish in areas where surface weeds had previously been controlled. If a second application is required to provide control, it is recommended that a treatment be made once the return of these weeds is first observed, but no sooner than 28 days after the last treatment.

Application of *SureGuard* Herbicide during early morning hours may enhance weed control. When applying to densely packed actively growing surface weeds, ensure adequate coverage. Rapid decomposition of vegetation resulting from herbicide treatment can result in loss of oxygen in water. A sudden decrease in dissolved oxygen can result in fish suffocation. If aquatic vegetation is dense, treat floating surface weeds in sections to avoid a rapid decrease in dissolved oxygen.

SureGuard Herbicide may be tank mixed with 2,4-D, diquat, glyphosate or other registered foliar applied herbicides for enhanced control of floating and emergent weeds.

Consult a manufacturer's label for specific rate restrictions and weeds controlled. Always follow the most restrictive label restrictions and precautions for all products used when making an application involving tank mixes.

# **Application Equipment**

Apply *SureGuard* Herbicide with sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. Apply by backpack or handgun sprayer, airboat, helicopter, airplane or other application equipment that will ensure thorough coverage of target plant foliage.

# DIRECTIONS FOR USE TO CONTROL SUBMERSED AND FLOATING WEEDS USING SUBSURFACE APPLICATION

SureGuard Herbicide will control submersed and floating weeds listed in Table 2, Submersed and Floating Weeds Controlled by Subsurface Application, when applied subsurface with appropriate equipment.

Table 2. Submersed and Floating Weeds Controlled by Subsurface Application

Common Name Scientific Name		
Common Name	Scientific Name	
Coontail	Ceratophyllum demersum	
Duckweed	Lemna spp.	
Fanwort	Cabomba caroliniana	
Hydrilla	Hydrilla verticillata	
Hygrophila	Hygrophila polysperma	
Naiad, Southern	Najas guadalupensis	
Pondweed, Curlyleaf	Potamogeton crispus	
Pondweed, Sago	Potamogeton pectinatus	
Pondweed, Variable-Leaf	Potamogeton diversifolius	
Water Fern	Salvinia spp.	
Water Lettuce	Pistia stratiotes	
Watermeal	Wolffia spp.	
Watermilfoil, Eurasian	Myriophyllum spicatum	
Watermilfoil, Variable-Leaf	Myriophyllum heterophyllum	

#### **Subsurface Application**

Apply *SureGuard* Herbicide at a rate that will produce an initial concentration of 200 to 400 ppb (of active ingredient flumioxazin) in the water column.

SureGuard Herbicide is rapidly absorbed by target plants, but also breaks down quickly in water with a pH greater than 8.5. The pH of water surrounding mats of submersed vegetation can exceed 8.5 by early to mid-day, due to photosynthetic processes. Application of SureGuard Herbicide under these conditions may provide only partial weed control, and regrowth is likely. For best control, apply SureGuard Herbicide in a minimum of 30 gals of water per acre in the early morning to actively growing weeds and early in the season before surface matting occurs. Complete coverage and sufficient contact time of submersed weeds with SureGuard Herbicide is required for optimal performance. Application of SureGuard Herbicide with subsurface trailing hoses designed to distribute the herbicide within the plant stand will provide more effective and longer term control of submersed weeds. Use Table 3, Subsurface Application Rates to determine the amount of SureGuard Herbicide needed to achieve desired concentration at different water depths. Use higher concentrations when weed biomass is heavy and/or weeds are more mature and topped out. Any untreated plants that are left in the water column can re-infest treated areas that had previously been controlled. If a second application is required to provide control, it is recommended that a treatment be made once the return of these weeds is first observed, but no sooner than 28 days after the last treatment.

When applying *SureGuard* Herbicide to densely packed actively growing submersed weeds, a rapid decomposition of vegetation resulting from herbicide treatment can result in loss of oxygen in water. A sudden decrease in dissolved oxygen can result in fish suffocation. If aquatic vegetation is dense, treat submersed weeds in sections to avoid a rapid decrease in dissolved oxygen.

*SureGuard* Herbicide may be tank mixed with other registered submersed applied herbicides for enhanced control of submersed and floating weeds.

#### **Application Equipment**

To improve distribution in the water column and ensure adequate coverage apply *SureGuard* Herbicide with subsurface trailing hoses in order to place the herbicide under the surface and throughout the biomass of aquatic vegetation. Keep swath width to a minimum in order to maximize contact with submersed aquatic vegetation.

## Information on Hydrilla Control in Florida

SureGuard Herbicide should be applied as a subsurface treatment for hydrilla control. For best control of hydrilla apply during the late Winter/early Spring and/or early to late Fall. Efficacy of SureGuard Herbicide will be enhanced at these timings due to lower potential biomass present and lower pH of the water. If applied to mature topped out hydrilla, SureGuard Herbicide will cause some discoloration and loss of growing tips, but regrowth will be rapid.

Tank mixing *SureGuard* Herbicide with other registered herbicides is recommended, especially if hydrilla is approaching maturity or biomass is heavy.

**Table 3. Subsurface Application Rates** 

Water Depth (feet)	Pounds of SureGuard Herbicide Required Per Surface Acre to Achieve Desired Water Concentration		
	200 ppb	300 ppb	400 ppb
1	1.1	1.6	2.1
2	2.1	3.2	4.2
3	3.2	4.8	6.4
4	4.2	6.4	8.5
5	5.3	8.0	10.6
6	6.4	9.5	12.7
7	7.4	11.1	14.8

Example: to achieve an initial concentration of 200 ppb of flumioxazin in a 4 foot deep water column, apply 4.2 lb of *SureGuard* Herbicide per surface acre.

#### STORAGE AND DISPOSAL

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 HANDLING**

## For containers with capacities greater than 5 gallons:

[Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.]

Note to EPA reviewer: the following is alternate container handling language for smaller container sizes:

#### For containers with capacities equal to or less than 5 gallons:

[Nonrefillable container. Do not reuse or refill this container.Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.]

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