

U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

70506 212

Date of Issuance:

70506-312

EPA Reg. Number:

5/15/15

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X Registration
Reregistration
(under FIFRA, as amended)

Term of Issuance:
Conditional

Name of Pesticide Product:

Surflan GT Herbicide

Name and Address of Registrant (include ZIP Code):

Ms. Rebecca Clemmer United Phosphorus, Inc. 630 Freedom Business Center Suite 402 King of Prussia, PA 19406

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(C). You must comply with the following conditions:

- 1. Submit and/or cite all data required for registration/registration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.
- 2. You are required to comply with the data requirements described in the DCI or EDSP Order identified below:

Oryzalin GDCI- 104201-900 Glyphosate EDSP-417300-232

Signature of Approving Official:

Date:

5/15/15

Kathryn V. Montague,
Product Manager 23
Herbicide Branch,
Registration Division (7505P)

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI or EDSP Order listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: http://www.epa.gov/oppsrtd1/contacts_prd.htm

- 3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.
- 4. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, "EPA Reg. No. 70506-312."
- 5. Submit one copy of the final printed label for the record before you release the product for shipment.

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.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

Basic CSF dated 4/08/2015

If you have any questions, please contact Beth Benbow by phone at 703-347-8072, or via email at Benbow.Bethany@epa.gov.

Sincerely,

Kathryn V. Montague, Product Manager 23

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Herbicide Branch

Registration Division (7505P) Office of Pesticide Programs

Enclosure

Rev. 4/22/15

ACCEPTED 05/15/2015

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 70506-312

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Surflan® GT herbicide

A dual mode of action preemergence and systemic, surface applied herbicide for the control of many annual grasses and certain broadleaf weeds in citrus, fruit and nut trees, vineyards, berry crops

Christmas tree plantations and established trees grown for pulp.

ACTIVE INGREDIENT: *oryzalin: 3,5-dinitro- N^4 , N^4 -dipropylsulfanilamide	30.3%
*glyphosate, N-(phosphonomethyl) glycine	10.0%
OTHER INGREDIENTS:	59.7%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

	FIRST AID				
IF ON SKIN: 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 by a poison control center or doctor.				
Do not give anything by mouth to an unconscious person.					
Have the product container or label with you when calling a poison control center or doctor or going for					
	treatment.				
You may also conta	You may also contact The Rocky Mountain Poison Control Center at 1-866-673-6671 for emergency				

For chemical emergency: spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

Shake Well Before Using.

medical treatment information.

EPA Reg.No Net C	Contents:
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^{**}Contains 360 grams per liter or 3 pounds per U.S. gallon of the active ingredient oryzalin.

^{*}Contains 162 grams per liter or 1.35 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 120 grams per liter or 1 pound per U.S. gallon of the acid, glyphosate.

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PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Mixers and loaders must wear a chemical-resistant apron in addition to other PPE.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls Statements

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This pesticide is toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Cover or incorporate spills.

Physical or Chemical Hazards

Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reactions may occur. Store, mix, and apply spray solutions of this product using only stainless steel, aluminum, fiberglass, plastic, or plastic-lined steel containers. DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Directions for Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read all directions for use carefully before applying.

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 instructions and exceptions pertaining to the 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 24 hours. Exception: If the product is soil-injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Workers may enter treated areas without required PPE during the reentry interval following 1/2 to 1 inch of rainfall or irrigation, if they are performing tasks that do not involve contact with the soil subsurface; otherwise, 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
- 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 Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: Keep all persons, children and pets out of treated area until sprays have dried.

Storage and Disposal

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

Pesticide Storage: Store in original container only. In case of leak or spill, use absorbent materials to contain liquids and dispose of as waste.

Pesticide Disposal: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

[for containers less than or equal to 5 gallons] 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 ¼ 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.

[for containers greater than 5 gallons] Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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. Turn 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.

[all sizes] Offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Product Information

Surflan GT herbicide is a soluble concentrate, soil residual herbicide with foliar systemic activity. Surflan GT herbicide provides both non-selective and pre-emergent broad-spectrum control of many annual and perennial weeds. Pre-emergent, Surflan GT herbicide controls susceptible annual weeds by disrupting plant growth processes during germination.

Surflan GT herbicide also contains the active ingredient *glyphosate*, which inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids. Susceptible weeds emerged at the time of application will be controlled by this product.

Time to Symptoms, Foliar Systemic Activity: The *glyphosate* component of Surflan GT herbicide moves through the plant from the point of foliage contact into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on many perennial weeds this may not occur for 7 days or more.

Extremely cool or cloudy weather following treatment may slow the activity of Surflan GT herbicide and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the treated weed which advances to complete browning of above-ground growth and deterioration of underground weed parts.

Surflan GT herbicide is orange in color and may cause temporary discoloration of sprayed surfaces. If this discoloration is undesirable, it may be altered by using a commercially available green colorant such as Blazon; or removed by spraying surface with water, or washing with an industrial cleaner immediately after application.

Surflan GT herbicide may be applied in liquid sprays of water, and may be tank mixed with other herbicides to control existing vegetation or improve the spectrum of weeds controlled. Susceptible annual weeds germinating from seed after application will be controlled. Un-emerged weeds arising from unattached underground rhizomes or root stocks of perennials will be partially controlled or suppressed.

Cultural Considerations: Reduced burndown control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to re-grow to the specified stage for treatment.

Rainfastness: Heavy rainfall within 4 hours after application may wash this product off of the foliage and reduce the burndown effectiveness of Surflan GT herbicide. This however, will not reduce the residual effectiveness of Surflan GT herbicide that reaches the soil surface.

Spray Coverage: For best results, ensure that spray coverage is uniform and complete.

Soil Preparation

Surflan GT herbicide controls weeds growing from seed and will also control established weeds growing from stolens, rhizomes, or root pieces. For best results, thoroughly mix weed residues, prunings, and trash into the soil or remove prior to treatment. In orchard or vineyard applications, ensure that the soil is free of clods at the time of application.

Activation

Surflan GT herbicide will remain stable on the soil surface up to 30 days following application. In the absence of timely rainfall, irrigation can be used to activate Surflan GT herbicide. A minimum of one-half (1/2) inch of rain or its equivalent in sprinkler irrigation is necessary to activate Surflan GT herbicide. If weeds begin to emerge due to lack of rainfall or irrigation, shallow cultivate 1-2 inches deep to destroy existing weeds, or remove them by hand. Shallow cultivation to a depth of 1-2 inches will enhance herbicidal effectiveness. Erratic weed control may result if Surflan GT herbicide is not activated by rainfall, irrigation, or cultivation within 21 days of application, or existing weeds have not been removed.

TANK MIXTURE WITH COLLIDE herbicide: A tank mixture of Surflan GT herbicide and a product containing oxyfluorfen (such as Collide herbicide) may be used for annual weeds in middles between rows of citrus trees, tree fruits, tree nuts and vine crops. This mixture is preferred when weeds are stressed or growing in dense populations or when post emergent glyphosate control is not satisfactory. The addition of 3 to 12 fl. oz. per acre of Collide herbicide will assist in the post emergence control of common cheeseweed (malva) or hairy fleabane (*Conyza bonariensis*) and horseweed/marestail (*Conyza canadensis*) with a maximum height or diameter of 3 inches , and annual weeds with a maximum height or diameter of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's-purse, annual sowthistle, filaree (suppression), stinging nettle and common purslane (suppression). See also the information in the "Surflan GT herbicide Tank Mix Combinations" section of this label.

MIXING DIRECTIONS

NOTE: REDUCED RESULTS MAY OCCUR IF CONTAMINATED WATER IS USED CONTAINING SOIL, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT ARE NOT CLEAR.

Use only clean stainless steel, aluminum, fiberglass, plastic or plastic-lined containers for mixing, storing, and application of spray solutions of Surflan GT herbicide. DO NOT MIX, STORE OR APPLY Surflan GT herbicide OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.

Precaution: Do not allow the spray mixture to siphon back into water source. Use approved anti-back-siphoning devices where required by State or local regulations.

If a buildup of material occurs on the walls of the spray tank, remove it between fillings by washing with soap and water and rinsing thoroughly. Clean tanks, lines, screens, and nozzles thoroughly after each use.

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

Mixing Order Surflan GT herbicide Alone:

Start with a clean spray tank.

Fill the sprayer 1/3 to 1/2 of the required spray volume.

Start agitation.

Shake the container well and add the correct amount of Surflan GT herbicide.

Continue agitation and fill spray tank to required spray volume.

Maintain continuous agitation from mixing through application.

During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and if needed, use an approved anti-foam or defoaming agent.

Surflan GT herbicide Tank Mix Combinations

This product provides residual weed control. For additional residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicide(s) being used. Use according to the most restrictive label directions for each product in the mixture.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified on this label. Mixing this product with herbicides or other materials not specified on this label may result in reduced performance and/or potential crop damage.

Tank Mix Restrictions

Do not exceed labeled application rates. For products packaged in water soluble packaging, do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment has been thoroughly cleaned.

Tank Mix Compatibility Testing: A jar test is recommended prior to tank mixing to ensure compatibility of Surflan GT herbicide and other products. Use a clear glass quart jar with lid and mix the tank mix

ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately $\frac{1}{2}$ hour. If the mixture balls-up, forms flakes, sludges, gels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Mixing Order Surflan GT herbicide in a Tank Mix:

Start with a clean spray tank.

Fill the tank ½ to 3/4 full with clean water.

Start agitation and add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for dry flowable products.

Add different formulation types in the following order:

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Dry flowables (DF);
Wettable powders (WP);
Surflan GT herbicide and other aqueous suspensions (AS),
Flowables (F);
Liquids (L);
Solutions (S);
Emulsifiable concentrates (EC)
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Continue agitation and finish filling the spray tank with clean water. Maintain agitation until application is completed. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be completely re-suspended before spraying is continued. A sparger agitator is particularly useful for this purpose.

Premixing: When tank mixing, initial mixing and dispersion of certain dry flowable or wettable powder products may be improved by premixing with water (slurrying). Adding the slurried material to the spray tank through a wetting screen of 20 or 35 mesh will help assure good initial dispersion.

Surfactants

Nonionic surfactants (NIS) or wetting agents that have at least 70 % active ingredient and which are labeled for use with herbicides may be added to the spray solution, unless otherwise directed. Do not reduce rates of this herbicide when adding surfactants. Read and follow the cautionary statements and other information appearing on the adjuvant label.

Ammonium Sulfate

The addition of 1-2 percent dry ammonium sulfate by weight, or 8.5 to 17 pounds per 100 gallons of water, may increase the performance of this product, particularly under hard water conditions, drought conditions or when tank mixed with certain residual herbicides. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding herbicides or surfactants. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

Drift Reduction Additives

Drift reduction additives may be used with all equipment types, and Controlled Droplet Applicator (CDA) equipment. When a drift reduction additive is used, read and carefully observe the cautionary

statements and all other information appearing on the additive label. The use of drift reduction additives can affect spray coverage which may result in reduced performance.

APPLICATION TECHNIQUES AND EQUIPMENT

Do not apply Surflan GT herbicide through any type of irrigation system.

This product may be applied with the following application equipment:

Ground Broadcast Spray – boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Apply Surflan GT herbicide directly to the foliage of weeds and the soil surface. Use herbicide nozzle tips and screens no finer than 50 mesh for nozzle and in-line strainers. As the amount of spray volume per acre decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily to insure proper calibration and uniform application. Avoid boom overlaps that will increase rates above those labeled. Use sufficient water volume to obtain uniform coverage and deliver the desired rate of Surflan GT herbicide to the treated area.

Band Application

For band application, use the following formula to calculate the required amount of product per acre.

<u>Band Width (inches)</u> X Broadcast rate per acre = Amount required per acre Row Width (inches)

If you have questions about calibration contact state extension specialists, equipment manufacturers or other experts.

Selective Equipment

This product may be applied through industrial or agricultural spray systems, shielded applicators, or hooded sprayers, after dilution and thorough mixing with water, to listed weeds specified in any noncrop site specified on this label.

AVOID CONTACT OF SURFLAN GT herbicide WITH DESIRABLE VEGETATION. Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Crop injury may occur when the foliage of treated weeds comes into contact with leaves of the crop. Do not apply this product when orchard or vineyard leaves are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. Poor weed contact may occur when weeds are in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted.

With ground application equipment, use flat spray nozzles. Check for even distribution of spray droplets.

Shielded and Hooded Applicators:

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at specified rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. A hooded sprayer is a type of

shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SURFLAN GT herbicide WITH DESIRABLE VEGETATION.**

This equipment must be set up and operated in a manner that avoids excessive bouncing or raising the hood off the ground. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of desirable vegetation. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

These procedures will reduce the potential for injury to crop or desirable vegetation:

- The spray hoods must be operated on the ground or skimming across the ground.
- Maximum tractor speed: 5 miles per hour to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 miles per hour.
- Use low-drift nozzles that provide uniform coverage within the treated area.

Controlled Droplet Applicator (CDA) – Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes. APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

Restrictions for All Uses:

- Do not graze or feed forage from treated areas to livestock.
- Do not use on soils containing more than 5% organic matter.
- Do not aerially apply this product.
- Do not exceed the maximum single and yearly application rates specified on this label. Overapplication may result in tree and vine crop injury, residues that exceed tolerance regulations, or in excessive soil residue that may be injurious to rotational crops.
- Do not apply through any type of irrigation system.

Rotation Crop Interval:

To avoid crop injury, observe a 24 month rotational interval when rotating from tree and vine crops to row crops. For any crop not listed in this label, applications must be made at least 30 days before planting. Do not plant any root crop for 12 months following application.

Precautions for All Uses:

- Poor weed control may result if directions are not carefully followed.
- Take every precaution to minimize spray drift to non-target areas when applying Surflan GT herbicide. Spray drift may result in reduced emergence of non-target plants adjacent to the treated area.
 - Apply this product directly to the soil surface in orchards and vineyards. Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops as severe injury or destruction may result.

^{*}This product is not registered in California or Arizona for use in mist blowers.

Weed Resistance Management

The *oryzalin* active ingredient in Surflan GT herbicide is a Group 3 herbicide and the *glyphosate* active ingredient in Surflan GT herbicide is a Group 9 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 3 or Group 9 herbicides. Weed species resistant to Group 3 or Group 9 herbicides may be effectively managed by using another herbicide from a different herbicide Group or by using other cultural or mechanical practices.

Weed Management Directions

To minimize the occurrence of glyphosate-resistant biotypes, observe the following general weed management guidelines:

- Scout fields before and after herbicide applications.
- Start with a clean field, using either a different class of a burndown herbicide application or tillage.
- Control emerged weeds early when they are relatively small.
- Add other herbicides (selective and/or a residual) and cultural practices (e.g. tillage or crop rotation) where appropriate.
- Use the maximum specified label rate for the most difficult to control weed in the field allowed
 for this use site (see crop specific restrictions in this label and all tank mix partner labels). Avoid
 tank mixtures with other herbicides that reduce Surflan GT herbicide efficacy (through
 antagonism) or tank mixtures that have application rates of Surflan GT herbicide below the label
 instructions.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to reduce the spread of weed seed or plant parts.
- Report any incidence of repeated non-performance of Surflan GT herbicide on a particular weed to your UPI representative, local retailer, or county extension agent.

Management Directions for Glyphosate Resistant Biotypes

Note: Appropriate testing is critical in order to determine if a weed is resistant to glyphosate. To determine if resistance has been confirmed to any particular weed biotype in your area, visit www.weedresistancemanagement.com or www.weedscience.org.

Since the occurrence of new glyphosate resistant weeds cannot be determined until after product use and scientific confirmation, UPI is not responsible for any losses that may result from the failure of this product to control glyphosate-resistant weed biotypes.

Follow these good agronomic practices to reduce the spread of confirmed glyphosate-resistant weed biotypes:

 If a naturally occurring resistant weed biotype is present in your field, Surflan GT herbicide should be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.

- Cultural and mechanical control practices (e.g. crop rotation or tillage) may also be used as appropriate.
- Scout treated fields after Surflan GT herbicide application and control escaping weeds, including resistant weed biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

Annual Grasses Controlled (C) or Suppressed (S)

Pre-emergent and/or Post-emergent

TYPE OF CONTROL			MAXIMUM WEED
CONTROL (C) or SUPPRESSION (S)			HEIGHT (LENGTH) FOR POST-EMERGENT CONTROL at a rate of 4
PRE- EMERGENT	POST- EMERGENT	WEED SPECIES	QTS/ACRE SURFLAN GT
С	С	Barley, little	12"
С	С	Barnyardgrass (Watergrass)	7"
С	С	Bluegrass, annual (poa)	10"
	С	Bluegrass, bulbous	6"
С	C 1,2	Brome, downy	12"
	С	Brome, Japanese	24"
	C ²	Cheat	20"
	С	Corn, volunteer	20"
С	С	Crabgrass (large, smooth)	12"
С	С	Crowfootgrass	6"
С		Cupgrass, Southwestern	
	С	Eastern mannagrass	12"
С	С	Foxtails (bottlegrass, bristlegrass, giant, green, pigeongrass, robust, yellow)	12"
	С	Goatgrass, jointed	12"
С	С	Goosegrass (silver crabgrass)	6"
С		Guineagrass (narrowleaf panicum)	
	С	Hemp sesbania	6"
	С	Itchgrass	12"
С	С	Johnsongrass (seedling only)	18"
С	С	Junglerice	7"
С		Lovegrass, Mexican	
С		Lovegrass, orcutt	
	С	Oats	18"

С	С	Oat, wild	18"
С	С	Panicum, browntop	12"
С	С	Panicum, fall (spreading panicgrass)	6"
С	С	Panicum, Texas (buffalograss, Coloradograss)	12"
	С	Red rice	4"
	C ²	Rye, volunteer/cereal	18"
	C*	Ryegrass, spp	6"
С		Ryegrass, annual (Italian)	
С	С	Sandbur, field	12"
	С	Sandbur, longspine	12"
С	С	Signalgrass	6"
С	С	Sprangletop, red	20"
	С	Stinkgrass	12"
	С	Wheat (overwintered)	12"
S	C ²	Wheat, volunteer	6"
	С	Wild proso millet	12"
С	С	Witchgrass	12"
	С	Woolly cupgrass	12"

¹ For post-emergent control of downy brome in no-till systems, use 2 quarts per acre.

Annual Broadleaf Weeds Controlled (C) or Suppressed (S) Pre-emergent and/or Post-emergent

CONTROL (C) or SUPPRESSION (S) PRE- POST-		WEED SPECIES	MAXIMUM WEED HEIGHT (LENGTH) FOR POST-EMERGENT
EMERGENT	EMERGENT	WELD SPECIES	CONTROL at a rate of 4 QTS/ACRE SURFLAN GT
	С	Ammannia, purple	12"
	С	Anoda, spurred	5"
	С	Bassia, fivehook	6"

² Post-emergent performance is better if application is made before this weed reaches the boot stage of growth.

^{*} A *glyphosate*-resistant biotype has been confirmed. For additional information, refer to the "WEED RESISTANCE MANAGEMENT" section of this label.

	С	Beggarweed, Florida	8"
С	С	Bittercress	20"
	C ₃	Buckwheat, wild	2"
	С	Burcucumber	12"
	С	Buttercup	20"
	С	Carolina geranium	4"
С	С	Carpetweed	12"
	С	Chervil	20"
С	С	Chickweed, common	18"
	С	Cocklebur	24"
	С	Copperleaf (hophornbeam, Virginia)	4"
	С	Coreopsis, plains	12"
	С	Corn speedwell	6"
С		Cudweed	
	С	Cutleaf evening primrose	3"
	С	Devilsclaw (unicorn plant)	6"
	С	Dwarfdandelion	12"
	С	Eclipta	8"
	С	False dandelion	20"
	С	Falseflax, smallseed	12"
С	С	Fiddleneck, coast	12"
	С	Field pennycress	12"
С	С	Filaree (redstem, whitestem)	6"
	С	Fleabane, annual	20"
	С	Fleabane, hairy	6"
	С	Fleabane, rough	12"
С	С	Florida pusley (Florida purslane, Mexican clover, purslane)	4"
	С	Groundcherry	6"
S	С	Groundsel, common	10"
С	С	Henbit	6"
S	C*	Horseweed	12"
	С	Jimsonweed	12"
С	С	Knotweed, prostrate	6"
	1		

	C ⁴	Kochia	12"
С	С	Lambsquarters	12"
S	С	Lettuce, prickly	6"
С	С	London rocket	24"
S		Mallow, common	
	С	Mayweed	12"
S		Milkweed, climbing	6"
S	С	Morningglory, annual	3"
	С	Mustard (blue, tansy, tumble)	18"
S		Mustard, black	
S	С	Mustard, wild	18"
S	С	Nightshade, black	6"
	С	Nightshade, hairy	6"
С	C*	Pigweeds (carelessweed, palmer, prostrate, redroot, rough, smooth, spiny, spring, tumble)	18"
S	С	Prickly sida (teaweed)	4"
С		Puncturevine	
С	С	Purslane, common	3"
S	C*	Ragweed (common, giant)	12"
С		Rockpurslane (desert, redmaids)	
	С	Shattercane	20"
С	С	Shedherd's-purse	12"
	С	Sicklepod	4"
S	С	Smartweed (annual, ladysthumb)	6"
	С	Smartweed, Pennsylvania	6"
S	С	Sowthistle, annual	6"
	С	Spanishneedles	6"
	С	Speedwell, purslane	12"
С	С	Spurge, prostrate	12"
S	С	Spurge, spotted	12"
	С	Spurry, umbrella	6"
	С	Sunflower	18"
	С	Swinecress	12"
	C 5	Thistle, Russian	12"

S	С	Velvetleaf	6"
	С	Virginia pepperweed	18"
	C*	Waterhemp	6"
С		Woodsorrel, yellow	
	С	Yellow rocket	20"

³ For post-emergent control use 2 quarts of this product per acre to control wild buckwheat in the cotyledon to 2-4 leaf stage. For better control of wild buckwheat over 2-inches in size, use sequential treatments of 2 quarts followed by 2 quarts of this product per acre.

Perennial Grasses Controlled (C) or Suppressed (S) – Post-emergent Only

CONTROL (C) or SUPPRESSION (S)			
POST- EMERGENT	WEED SPECIES		
S ⁶	Bahiagrass		
C/S	Bentgrass		
S	Bermudagrass		
C/S	Bermudagrass, water (knotgrass)		
C/S	Bluegrass, Kentucky		
C/S	Bromegrass, smooth		
S ⁶	Canarygrass, reed		
S	Cogongrass		
S ⁶	Dallisgrass		
S ⁶	Fescue (except tall)		
C/S	Fescue, tall		
S	Guineagrass		
C/S	Johnsongrass		
S	Kikuyugrass		
C/S	Muhly, wirestem		
S ⁶	Napiergrass		

⁴Do not treat Kochia in the button stage.

⁵ Post-emergent control of Russian thistle may vary based on environmental conditions and spray coverage. If possible, use a tank mixture with 2,4-D to improve control. Always follow the most restrictive label when tank mixing.

^{*} A *glyphosate*-resistant biotype has been confirmed. For additional information, refer to the "WEED RESISTANCE MANAGEMENT" section of this label.

C/S	Nutsedge (purple, yellow)		
C/S	Orchardgrass		
S ⁶	Paragrass		
S	Phragmites		
C/S	Quackgrass		
C/S	Ryegrass, perennial		
S ⁶	Timothy		
S	Torpedograss		
S ⁶	Vaseygrass		
S ⁶	Velvetgrass		
S ⁶	Wheatgrass, Western		

⁶ Apply when most plants have reached the early heading stage of growth.

Perennial Broadleaf Weeds Controlled (C) or Suppressed (S) – Post-emergent Only

CONTROL (C) or SUPPRESSION (S)	
POST- EMERGENT	WEED SPECIES
C/S	Alfalfa
S	Alligatorweed
C/S	Bindweed, field
S	Blueweed, Texas
S	Brackenfern
S ⁶	Cattail
S	Clover (red, white)
S ⁷	Dandelion
S ⁷	Dock, curly
S	Dogbane, hemp
S ⁷	Horsenettle
S	Horseradish
S ⁷	Jerusalem artichoke
S	Knapweed
S ⁷	Lespedeza

S	Milkweed, common		
s ⁷	Mullein, common		
S	Nightshade, silverleaf		
C/S	Pokeweed, common		
C/S	Redvine		
S ⁷	Smartweed, swamp		
S	Sowthistle, perennial		
S	Starthistle, yellow		
S	Thistle, Canada		
S	Trumpetcreeper		

⁶ Apply when most plants have reached the early heading stage of growth.

Directions For Use

Crop Specific Use Directions

Tree, Berry, Vine, and Other Crops (Non Bearing and Bearing)

Apply Surflan GT herbicide as a pre-emergence or post-emergent treatment to control annual grasses and broadleaf weeds listed in weeds and grasses controlled/suppressed section. Observe all precautions and restrictions in the "PRODUCT INFORMATION" section.

This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. Apply only as a strip application in established tree fruit, citrus and nut groves, orchards, berries or vineyards. Do not apply to row middles or drive rows. If weeds are under drought stress, irrigate before application. Reduced control may result if weeds have been mowed before application.

Surflan GT herbicide may also be used for site preparation before planting or transplanting these crops. Allow at least 3 days between application and transplanting.

Utilize rates at the higher end of the specified rate range for extended residual weed control. Repeat applications may be made in 2.5 month intervals up to a maximum of 16 quarts per acre per year.

Apply as a pre-emergent and post-emergent treatment in 10 to 40 gallons of water per acre.

Broadcast Application Rates for Tree, Vine, Berry, and other Crops (Bearing and Non-Bearing)

Soil Texture	Surflan GT herbicide Use	Length of Residual Control	Comments
	Rate/Acre		
	3 quarts / Acre	Up to 3 months	
All Soil Textures	4 quarts / Acre	Up to 5 months	

⁷ Apply when most plants have reached the early bud stage of growth.

5 quarts / Acre	Up to 7 months	
6 quarts / Acre	Up to 9 months	

- Minimum interval between applications is 2.5 months.
- Maximum amount of product per acre per year is 16 quarts per acre.

APPLICATION RESTRICTIONS FOR TREE, VINE, BERRY AND OTHER CROPS (BEARING AND NON-BEARING):

Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of trees, canes and vines. Avoid applications when recent pruning wounds or other mechanical injury has occurred. Contact of this product with other than matured brown bark can cause serious crop damage or destruction. Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance. For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back. Only shielded applicators capable of preventing all contact with crop may be used. See "APPLICATION TECHNIQUES AND EQUIPMENT" section of this label for additional directions and precautions.

Surflan GT herbicide is registered for use on the following crops.

BERRIES: Blackberry (All), Blueberry*, Boysenberry, Currant, Dewberry, Elderberry, Huckleberry, Gooseberry, Loganberry, Raspberry (Black, Red)

To avoid damage, herbicide spray must not be allowed to contact desirable vegetation, including green shoots, canes or foliage.

Preharvest Interval: Allow a minimum of 14 days between last application and harvest of any other berry crop.

*Do not apply Surflan GT herbicide to lowbush blueberries.

CITRUS FRUITS: Calamondin, Chironja, Citron, Citrus hybrids Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor

Preharvest Interval: Allow a minimum of 1 day between last application and harvest in citrus crops. For citron groves, apply as a directed spray only.

NOTE: in Florida and Texas Surflan GT herbicide will only burn down or partially control Bermudagrass, goatweed, and guineagrass.

POME FRUITS: Apple, Crabapple, Loquat, Mayhaw, Pear, Quince

Preharvest Interval: Allow a minimum of 1 day between last application and harvest in pome crops.

STONE FRUITS: Apricot, Cherry (Sweet, Tart), Nectarine, Peach, Plum, Prune (Fresh)

For cherries, any application equipment listed may be used in all states.

For apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states below, use any application equipment listed. In all other states, use

wiper equipment only.

For peaches grown in Alabama, Arkansas Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shield boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid application near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years. USE EXTREME CARE TO ENSURE THAT NO PART OF THE PEACH TREE IS CONTACTED WITH OVERSPRAY OR DRIFT OF THIS PRODUCT.

Preharvest Interval: Allow a minimum of 17 days between last application and harvest in stone fruit crops.

TREE NUTS: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory nut, Macadamia, Pecan, Pine nut, Pistachio, Walnut (Black, English)

Preharvest Interval: Allow at least 3 days between last application and harvest of tree nuts.

VINE CROPS: Grapes (raisin, juice, table, wine), Kiwi fruit

Do not apply this product for weed control when green shoots, canes or foliage are in the spray zone. In the northeast and Great Lakes regions, apply this product in grape vineyards prior to the end of the bloom stage in order to avoid crop injury, or apply using shielded sprayers or wiper equipment. Preharvest Interval: Allow a minimum of 14 days between last application and harvest of vine crops. Do not use selective equipment in kiwi.

OTHER CROPS: Avocado, Fig, Guava, Olive, Papaya, Pomegranate

Preharvest Intervals: Allow a minimum of 1 day between last application and harvest in papaya. Allow a minimum of 14 days between last application and harvest for any other tropical or subtropical tree fruit listed.

For olives, apply only as a directed spray.

Christmas Tree Plantations

Apply Surflan GT herbicide to control annual grasses and broadleaf weeds listed in "weeds controlled/suppressed" section. Observe all precautions and restrictions in the "PRODUCT INFORMATION" section.

Applications can be made after trees have completed at least a full growing season since planting or transplanting. Apply in the fall after the formation of final conifer resting buds. Final resting buds must be fully hardened and in the dormant stage. Applications made at any other time may result in unacceptable Christmas tree injury.

Surflan GT herbicide - Alone

Apply Surflan GT herbicide as a directed spray to the soil in established plantings of field grown Christmas tree species, including

- fir species (Abies spp.),
- pine (*Pinus* spp.),
- spruce (*Picea* spp.)

Follow all instructions provided in the "PRODUCT INFORMATION" section of this label.

Broadcast Application Rates for Christmas Tree Plantations

Length of Control	Surflan GT herbicide		Minimum Time Between Applications	Total Amount Allowed Per Year
	(qt/acre)	(fl oz/1000 sq ft)	(months)	(qt/acre)
2 - 4 months	23/3	2.0	2	10⅓
4 - 8 months	5⅓	4.0	2	10⅓

Tank Mix Combinations

Tank mix combinations of Surflan GT herbicide plus other labeled herbicides may be used as directed sprays in established Christmas tree plantings. When applied according to use directions, these tank mixes will provide control of susceptible weed species listed on the respective product labels. Refer to label of the product to be tank mixed with Surflan GT herbicide for specific use directions, precautions and limitations before use.

Precaution:

• Extreme care must be exercised to avoid contact of spray with foliage and stems of Christmas trees or severe damage or death may result.

Application Restrictions for Use in Christmas Tree Plantations

- Do not apply to Douglas-fir (*Pseudotsuga menziesii*).
- Do not apply to seedbeds or seedling transplant beds.
- Maximum amount of product per acre per year is 10 2/3 quarts.
- Maximum amount of product per acre per application is 5 1/3 quarts.
- Minimum interval between applications is 2 months.
- Pre-harvest Interval: Do not apply within 1 full year before tree harvest.

Established Trees Grown for Pulp

Surflan GT herbicide may be applied as a directed application treatment in plantations of established trees grown for pulp. Refer to the "WEEDS CONTROLLED/SUPPRESSED" section for a listing of grasses and broadleaf weeds controlled, mixing directions and Use Precautions. Optimum herbicidal activity

occurs when Surflan GT herbicide is applied directly to the soil or weed foliage to destroy existing small weeds. Remove large weeds and weed residues, prunings and trash or thoroughly mix into the soil using tillage equipment prior to product application.

[†]Established plantings are defined as trees that have been transplanted into their final growing location for a sufficient period of time to allow the soil to be firmly settled around the roots as a result of rainfall or irrigation.

Activation and Cultivation

A single 1/2 to 1 inch rainfall or sprinkler irrigation is required to activate Surflan GT herbicide and move the herbicide into the zone of weed germination. Rainfall or irrigation of 1 inch or more is needed to activate Surflan GT herbicide on fine-textured or high organic matter soils. If weeds begin to emerge, shallow cultivation to a depth of 1 to 2 inches will destroy existing weeds and place Surflan GT herbicide in the zone of weed germination.

Broadcast Application Rates for Trees Grown for Pulp

Soil Texture	Length of Control	Surflan GT herbicide(qt/ acre)	Minimum Time Between Applications (months)	Total Amount Allowed Per Year (qt/acre/)
All Soil Textures	Short Term (2 – 4 months)	2 ² / ₃	2.5 months	16
	Long Term (6 - 8 months)	5⅓	2.5 months	16
	(8 - 12 months)	8	2.5 months	16

Application Restrictions for Trees Grown for Pulp:

- Maximum amount of product per acre per year is 16 quarts.
- Maximum amount of product per acre per application is 8 quarts.
- Minimum interval between applications is 2.5 months.
- Pre-harvest Interval: Do not apply within 1 full year before tree harvest.

IMPORTANT INFORMATION READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

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