

70506-50

08/17/2009

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

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

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

AUG 17 2009

Subject: Notification(s) for Label Revisions under PRN 98-10, PRN 2007-4 and PRN 2001-5

Dear Ms. Clemmer:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notices (PRN) 98-10, 2007-4 and 2001-5 dated, July 15, 2009 for:

**EPA Registration 70506-50**

**Surflan WDG Specialty Herbicide**

The Registration Division (RD) has conducted a review of the request(s) for applicability under PRN 98-10, 2007-4 and 2001-5 and finds that the label changes requested fall within the scope of PRN-98-10, 2007-4 and PRN-2001-5. The label has been date-stamped "Notification" and will be placed in our records.


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

If you have any questions, please contact me directly at 703-305-6249 or Joyce Edwards of my staff at 703-308-8893.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Arrington".

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

	United States <b>Environmental Protection Agency</b> Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number
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**Application for Pesticide – Section I**

1. Company/Product Number 70506-50	2. EPA Product Manager J. Miller	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) United Phosphorus, Inc/Surflan WDG Specialty Herbicide	PM # 23	
5. Name and Address of Applicant (Include ZIP Code) United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406  <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: <div style="text-align: center; font-weight: bold; font-size: 1.2em;">NOTIFICATION</div> EPA Reg No. _____ Product Name _____ <span style="float: right; font-weight: bold; font-size: 1.2em;">AUG 17 2009</span>

**Section - II**


<input type="checkbox"/> Amendment – Explain below	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input checked="" type="checkbox"/> Notification – Explain below	<input type="checkbox"/> Other – Explain below

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)  
 Notification of label change per PR Notice 2007-4 and 2001-5 and company information updates. This notification is consistent with the guidance in PRN 2007-4 and 2001-5 and the requirements of EPA's regulations at 40CFR §§156.10, 156.140, 156.144, 156.146, 156.156. No other changes have been made to the labeling or the CSF for this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the sections above, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Section III**

1. Material This Product Will be Packaged in:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	*Certification must be submitted	
	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 12 lb		5. Location of label directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Label accompanying product	
6. Manner in Which Label is Affixed to Product			<input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled	<input type="checkbox"/> Other _____	

**Section IV**

1. Contact Person (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Rebecca A. Clemmer	Title Regulatory Manager	Telephone No. (Include Area Code) 610-491-2828
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law		6. Date Application Received  <div style="font-size: 1.5em; font-weight: bold;">(Stamped)</div>
2. Signature 	3. Title Regulatory Manager	
4. Typed Name Rebecca A. Clemmer	5. Date 7/15/09	



# United Phosphorus, Inc.

630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406  
(610) 491-2828 (phone)  
(610) 491-2810 (fax)

Rebecca A. Clemmer  
Regulatory Manager

July 15, 2009

Joanne Miller (PM 23)  
Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Re: Oryzalin Products - Notifications

Dear Ms. Miller:

United Phosphorus, Inc. is submitting revised labels to accomplish the following changes, all of which qualify as Notifications: add herbicide resistance category per PRN 2001-5; update container disposal wording per PRN 2007-4. In addition, some changes have been made as listed in the chart below.

Product Name	EPA Reg. No.	Notification Changes
Surflan AS herbicide	70506-43 /	Update company and emergency contact; update warranty
Surflan AS Specialty	70506-44 /	Update company and emergency contact; update warranty
XL 2G	70506-45 /	Update emergency telephone; small change to warranty
Surflan Dry Flowable	70506-46 /	Update company and emergency contact; update warranty
Surflan WDG Specialty	70506-50 /	Update company and emergency contact; update warranty
UP-Shot DF	70506-53 /	Update company and emergency contact; update warranty
XL 2GR	70506-56	Update emergency telephone. Note that no resistance category is being added to this homeowner product.



# Certification with Respect to Label Integrity

version: 9/11/02

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

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
70506-43	July 15, 2009	070506-00043.20090701.Surflan AS herbicide 2007-4.pdf
70506-44		070506-00044.20090701.Surflan AS Specialty 2007-4.pdf
70506-45		070506-00045.20090701.XL 2G 2007-4.pdf
70506-46		070506-00046.20090701.Surflan Dry Flowable 2007-4.pdf
70506-50		070506-00050.20090701.Surflan WDG 2007-4.pdf
70506-53		070506-00053.20090701.UP-Shot DF 2007-4.pdf
70506-56		070506-00056.20090701.XL 2GR 2007-4.pdf

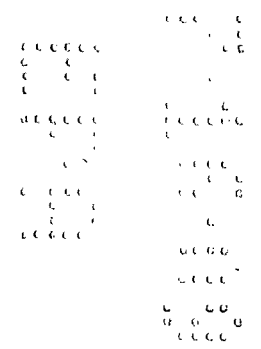
I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

R. A. Clemmer  
Signature

July 15, 2009  
Date

Rebecca A. Clemmer  
Name (typed)

Regulatory Manager  
Title



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AUG 17 2009

GROUP	3	HERBICIDE
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# Surflan® WDG Specialty Herbicide

A selective preemergence surface-applied herbicide for control of annual grasses and many broadleaf weeds in:

- Landscape ornamentals
- Container grown ornamentals
- Field grown ornamentals
- Drainage areas under greenhouse benches
- Ornamental bulbs
- Ground covers
- Christmas tree plantations
- Noncropland
- Non-bearing trees and vines
- Industrial sites
- Established warm season turf (including Bahiagrass, Bermudagrass, Buffalograss, Centipedegrass, St. Augustinegrass, Tall Fescue and Zoysiagrass)

Active Ingredient:

oryzalin: 3,5-dinitro-N <sup>4</sup> ,N <sup>4</sup> -dipropylsulfanilamide .....	85.0%
<del>Inert</del> Other Ingredients .....	15.0%
Total .....	100.0%

Contains 0.85 pounds of active ingredient per pound of product.

## Keep Out of Reach of Children

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**Notice:** Read the entire label. Use only according to label directions. **Before buying or using this product, read Conditions of Sale and Limitation of Warranty and Liability inside label booklet.**

For emergency medical assistance, ~~call the National Pesticide Information Center 1-800-858-7378~~ contact the Rocky Mountain Poison Control Center at 1-866-673-6671. 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.

EPA Reg. No. 70506-50  
EPA Est. No. \_\_\_\_\_



United Phosphorus, Inc.

~~423 Riverview Plaza~~ **630 Freedom Business Center**

~~Trenton, NJ 08611~~ **King of Prussia, PA 19406**

~~1-800-247-1557~~ **1-800-438-6071** • [www.upi-usa.com](http://www.upi-usa.com)

Net Weight \_\_\_\_\_ lb

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[Page 2 of label booklet]

**Precautionary Statements**

**Hazards to Humans and Domestic Animals**

**CAUTION**

**Causes Moderate Eye Irritation • Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.**

**Avoid contact with eyes, skin or clothing.**

**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks

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**

When handlers use closed systems, enclosed cabs, or aircraft 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.

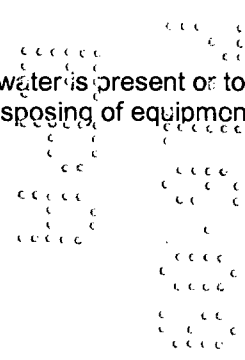
**First Aid**

**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. Call a poison control center or doctor for treatment advice.

**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.

**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.





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## 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 provided that 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.

## General Information

Surflan WDG Specialty Herbicide is a preemergence surface-applied herbicide for the control of annual grasses and many broadleaf weeds in ornamental plantings, bulbs, ground covers, established warm-season turfgrass, Christmas tree plantations, non-bearing trees and vines, non-cropland and industrial sites.

### General Use Precautions and Restrictions

Surflan WDG will not control emerged weeds. Poor weed control may result if directions are not followed. Over-application may result in crop injury or excessive soil residue.

Surflan WDG 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 colorant such as Blazon or removed by spraying surface with water or washing with an industrial cleaner immediately after application. Surflan WDG may also be applied with mulch colorants, such as Mulch Magic or Nu-Mulch.

Users who wish to use Surflan WDG on plant species not recommended on this label may determine the suitability for such uses by treating a small number of such plants at a recommended rate. Prior to treatment of larger areas, the treated plants should be observed for any sign of herbicidal injury for 30 to 60 days to determine if the treatment is non-injurious to the target plant species. The user assumes responsibility for any plant damage or other liability resulting from use of Surflan WDG on plant species not recommended on this label.

**Activation and Cultivation** Surflan WDG will remain stable on the soil surface up to 21 days following application. In the absence of timely rainfall, irrigation can be used to activate Surflan WDG. A minimum of one-half (1/2) inch of rain or its equivalent in sprinkler irrigation is necessary to activate Surflan WDG.

If weeds begin to emerge due to lack of rainfall or irrigation, shallow cultivate 1 to 2 inches deep to destroy existing weeds or remove them by hand. Shallow cultivation to a depth of 1 to 2 inches will enhance herbicidal effectiveness. If Surflan WDG is not activated by rainfall, irrigation or cultivation within 21 days of application or existing weeds have not been removed, erratic weed control may result.

Do not graze or feed forage from treated areas to livestock.

**Chemigation:** Do not apply this product through any type of irrigation system.

Do not aerially apply this product.

**Soil Preparation**

Surflan WDG will not control emerged weeds. Therefore, areas to be treated should be free of emerged weeds. Weed residues, prunings and trash should be thoroughly mixed into the soil or removed prior to treatment. In field applications, the soil should be in good tilth and free of clods at the time of application.

**Mixing Directions**

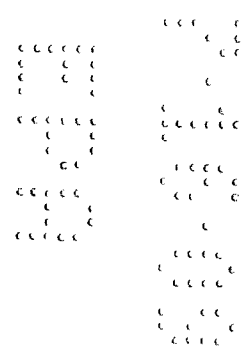
**Surflan WDG Alone**

Make sure spray tank is clean. Fill spray tank 1/4 full with clean water. Start agitation. Vigorous, continuous agitation throughout the spray tank is required with water dispersible granule (WDG) formulations. Add the correct amount of Surflan WDG to the spray tank in a controlled manner to aid in mixing and dispersion and to prevent clogging of screens and outlet ports. Maintain continuous agitation from mixing through application.

**Precaution:** Do not allow the mixture to siphon back into the water source.

**Surflan WDG Tank Mix Combinations**

Vigorous continuous agitation is required for all tank mixes of Surflan WDG. Sprayer pipe agitators generally provide the best agitation in spray tanks. To prevent foaming, keep the end of the fill pipe below the surface of the water in the spray tank during filling to prevent air from being stirred or splashed into the mixture.



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**Mixing Order:** Fill the tank 1/4 full with clean water, start agitation and add the correct amount of Surflan WDG as described above. Fill the spray tank to about 90 percent of final spray volume. Add other formulations 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 or water dispersible granule formulations.

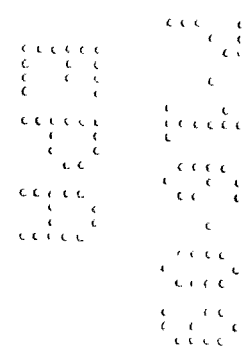
Add different formulation types in the following order: dry flowables (DF); wettable powders (WP); flowables (F), liquids (L) or aqueous suspensions (AS); solutions (S); and emulsifiable concentrates (EC). Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be completely resuspended before spraying is continued. A sprayer agitator is particularly useful for this purpose. Settled materials may be more difficult to resuspend than when originally mixed.

**Premixing:** When tank mixing, initial mixing and dispersion of certain dry flowable or wettable powder products may be improved by premixing with water (slurrying). Where recommended, follow product label instructions for each material. Adding the slurried material to the spray tank through a 20 or 35 mesh wetting screen will help assure good initial dispersion. Line screens in the tank should be no finer than 50 mesh (100 mesh is finer than 50 mesh).

### Application Methods

#### Ground Application

Apply Surflan WDG as a directed spray to the soil surface or over top of plants using a vehicle-mounted, pull-type, or backpack sprayer. Apply the appropriate rate of Surflan WDG as outlined in "Approved Uses" section of this label. In all cases, use sufficient water volume to obtain uniform coverage and deliver the desired rate of Surflan WDG to the treated area. The volume of water used is not critical, as long as the desired rate of Surflan WDG is delivered uniformly across the area treated. When calibrating, determine the volume of water delivered by the sprayer to a given area (1,000 sq ft, acre, etc.). Then mix the desired rate of Surflan WDG in the amount of water required to cover the entire area to be treated. Use only a properly calibrated, low-pressure herbicide sprayer that will apply the spray uniformly. Use herbicide tips with screens no finer than 50 mesh in nozzles and in-line strainers. As the amount of water used (spray volume) decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily to ensure proper calibration and uniform application. Maintain continuous agitation from mixing through application. Avoid spray pattern skips and overlaps that may result in incomplete coverage or over-application.



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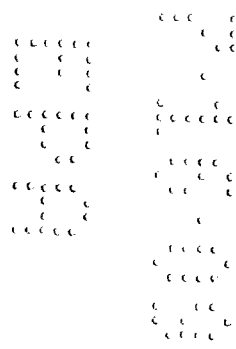
### Weeds Controlled by Surflan WDG Specialty Herbicide

#### Annual Grasses:

<u>Common Name</u>	<u>Scientific Name</u>
barley, little	<i>Hordeum pusillum</i>
barnyardgrass (watergrass)	<i>Echinochloa crus-galli</i>
bluegrass, annual	<i>Poa annua</i>
crabgrass, large	<i>Digitaria sanguinalis</i>
crabgrass, smooth	<i>Digitaria ischaemum</i>
crowfootgrass	<i>Dactyloctenium aegyptium</i>
cupgrass, southwestern	<i>Eriochloa gracilis</i>
foxtail, bristlegrass	<i>Setaria magna</i>
foxtail, giant	<i>Setaria faberi</i>
foxtail, green (pigeongrass)	<i>Setaria viridis</i>
foxtail, robust	<i>Setaria robusta</i>
foxtail, yellow	<i>Setaria glauca</i>
goosegrass (silver crabgrass)	<i>Eleusine indica</i>
Johnsongrass (seedling only)	<i>Sorghum halepense</i>
junglerice	<i>Echinochloa colonum</i>
lovegrass, Mexican	<i>Eragrostis mexicana</i>
lovegrass, orcutt	<i>Eragrostis orcuttiana</i>
oat, wild	<i>Avena fatua</i>
panicum, browntop	<i>Panicum fasciculatum</i>
panicum, fall (spreading panicgrass)	<i>Panicum dichotomiflorum</i>
panicum, Texas (buffalograss) (Coloradograss)	<i>Panicum texanum</i>
ryegrass, Italian	<i>Lolium multiflorum</i>
sandbur, field	<i>Cenchrus incertus</i>
signalgrass (Brachiaria)	<i>Brachiaria spp.</i>
sprangletop, red	<i>Leptochloa filiformis</i>
witchgrass	<i>Panicum capillare</i>

#### Broadleaf Weeds:

<u>Common Name</u>	<u>Scientific Name</u>
bittercress	<i>Cardamine oligosperma</i>
carpetweed	<i>Mollugo verticillata</i>
chickweed, common	<i>Stellaria media</i>
fiddleneck, coast	<i>Amsinckia intermedia</i>
filaree, redstem	<i>Erodium cicutarium</i>
filaree, whitestem	<i>Erodium moschatum</i>
groundsel, common	<i>Senecio vulgaris</i>
henbit	<i>Lamium amplexicaule</i>
knotweed, prostrate	<i>Polygonum aviculare</i>
lambquarters	<i>Chenopodium album</i>
pigweed, prostrate	<i>Amaranthus blitoides</i>
pigweed, redroot	<i>Amaranthus retroflexus</i>
pigweed, spring	<i>Amaranthus hybridus</i>
pigweed, tumble	<i>Amaranthus albus</i>
puncturevine	<i>Tribulus terrestris</i>
purslane, common	<i>Portulaca oleracea</i>

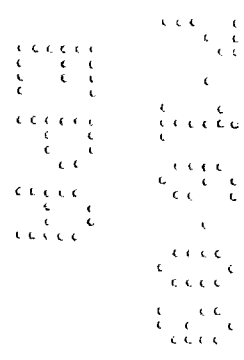


pusley, Florida  
(Florida purslane)  
(Mexican clover)  
(pusley)

*Richardia scabra*

rocket, London  
rockpurslane, desert  
shepherdspurse  
spurge, prostrate  
woodsorrel, yellow

*Sisymbrium irio*  
*Calandrinia ciliata*  
*Capsella bursa-pastoris*  
*Euphorbia humistrata*  
*Oxalis stricta*



**Weeds Suppressed by Surflan WDG Specialty Herbicide**

Control of the following weeds may be erratic, ranging from poor to excellent, depending upon soil temperature, time of germination, depth of seed in the soil, and amount and timing of soil moisture:

<u>Common Name</u>	<u>Scientific Name</u>
horseweed	<i>Conyza canadensis</i>
ladysthumb	<i>Polygonum persicaria</i>
lettuce, prickly	<i>Lactuca serriola</i>
mallow, common	<i>Malva neglecta</i>
milkweed, climbing	<i>Sarcostemma cynanchoides</i>
morningglory	<i>Ipomoea spp.</i>
mustard, black	<i>Brassica nigra</i>
mustard, wild	<i>Brassica kaber</i>
nightshade, black	<i>Solanum nigrum</i>
ragweed, common	<i>Ambrosia artemisiifolia</i>
smartweed	<i>Polygonum pensylvanicum</i>
sowthistle, annual	<i>Sonchus oleraceus</i>
spurge, spotted	<i>Euphorbia maculata</i>
teaweed (prickly sida)	<i>Sida spinosa</i>
velvetleaf	<i>Abutilon theophrasti</i>
wheat, volunteer	<i>Triticum spp.</i>

**Labeled Use Sites**

**Ornamental Plantings**

**Special Use Precautions:**

Apply only to established plantings. Established plants are defined as those that have been transplanted into their growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation.

To avoid possible injury, do not apply Surflan WDG to:

- Either nursery seedbeds or forest or Christmas tree seedling transplant beds.
- Unrooted liners or cuttings that have been planted in pots for the first time.
- Pots less than four inches wide.
- Ground covers until they are established and well rooted.
- Ornamental plantings where there is likelihood of runoff onto lawn areas.
- Areas containing dichondra or cool season turfgrass species.

Rooted liners should be removed from their original growing containers and placed in new containers at least two weeks prior to treatment or injury may occur.

On container grown ornamentals where weed seed germination continues for extended periods of time, do not make repeat applications of Surflan WDG for at least 90 days or crop injury may occur.

For soils treated with Surflan WDG during the previous season, plant only the ornamental species listed on this label or injury may occur.

**Ice Plant:** When establishing unrooted ice plant (*Mesembryanthemum crystallinum* and *Carpobrotus edulis*) on coarse soils in landscape plantings, use only the 2 quart per acre rate of Surflan WDG or crop injury may occur. After the ice plant is well established, a second application may be made.

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**Broadcast Application Rates**

Labeled Use Site	Length of Control	Surflan WDG		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
		(lb/acre)	(oz/1200 sq ft)		
Landscape Ornamentals	2 - 4 months	2.4	1	2	9.4
	3 - 6 months	3.5	1.5	4	14
	4 - 8 months	4.7	2	4	14
Field-grown and container-grown ornamentals	2 - 4 months	2.4	1	3	9.4
	3 - 6 months	3.5	1.5	3	10.6
	4 - 8 months	4.7	2	3	14

**Handheld or Backpack Sprayer Application**

Apply Surflan WDG at a rate of 1 to 2 ounces per 1200 square feet. The amount of water used to apply Surflan WDG is not critical, but should be sufficient for uniform treatment of the target area. Calibrate by determining the volume of water required to treat 1200 square feet. Use this calibration volume to determine the amount of water and Surflan WDG needed to treat the target area (see following table). **Note:** Sprayer calibration (volume of spray needed to treat 1,000 square feet) will vary with each individual operator.

Length of Control	Application Rate (oz/1200 sq ft)	Quantity of Water Needed
2 to 4 months	1	The amount required by your sprayer to cover 1200 sq ft of area.
4 to 8 months	2	

**Sample Calculation:**

Size of target area ÷ 1200 x Application rate = Amount of Surflan WDG required  
 Size of target area ÷ 1200 x Calibration volume per 1200 sq ft = Amount of water required

**Recommended Species Including Fruit Plant Nursery Liners**

Surflan WDG is recommended for use on certain container- and field-grown established ornamental plants, trees and shrubs; established ground covers; field grown fruit tree and shrub nursery liners; and in the production of ornamental bulbs (See "Ornamental Bulbs" for special use directions).

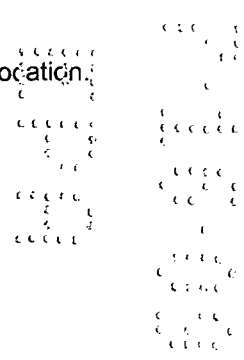
Do not apply Surflan WDG to the following plant species when container grown or field grown or injury may occur:

- Deutzia gracilis* (slender deutzia)
- Pseudotsuga menziesii* (Douglas-fir)
- Thuja occidentalis* 'Techny' (Techny arborvitae)
- Tsuga canadensis* (eastern hemlock)

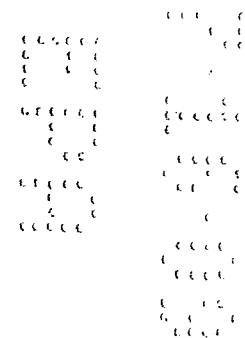
**Surflan WDG May be Used on the Following Field- and Liner†- Grown Plants and Plants in Landscape Plantings:**

†Plants transplanted for additional growth before transplanting to final growing location.

Common Name	Scientific Name
abelia, glossy	<i>Abelia grandiflora</i>
acacia, prostrate	<i>Acacia redolens</i>
agave	<i>Agave macroculmis</i>
Andromeda	<i>Pieris japonica</i>
apple	<i>Malus</i> spp.
arborvitae, American	<i>Thuja occidentalis</i>
arborvitae, Oriental	<i>Platycladus orientalis</i>
ash	<i>Fraxinus</i> spp.

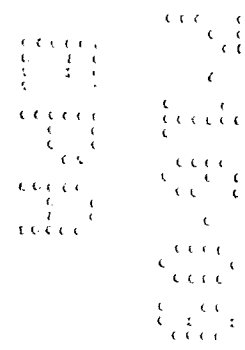


aster, stokes	<i>Stokesia laevis</i>
astilbe/false spirea	<i>Astilbe chinensis</i> and <i>A. chinensis</i> hybrids
azalea	<i>Rhododendron</i> spp.
baby's breath	<i>Gypsophila paniculata</i>
barberry, Japanese	<i>Berberis thunbergii</i>
bellflower	<i>Campanula elatines</i>
birch, river	<i>Betula nigra</i>
birch, white	<i>Betula pendula</i>
bird of paradise	<i>Strelitzia reginae</i>
blazing star	<i>Liatris spicata</i>
bleeding heart	<i>Dicentra spectabilis</i>
bottlebrush, lemon	<i>Callistemon citrinus</i>
boxwood, common	<i>Buxus sempervirens</i>
boxwood, Japanese	<i>Buxus microphylla japonica</i>
brush cherry	<i>Syzygium paniculata</i>
caldaium, fancy leafed	<i>Caladium bicolor</i>
California laurel	<i>Umbellularia californica</i>
campanula (bellflower)	<i>Campanula</i> spp.
cape marigold	<i>Dimorphotheca</i> spp.
carpet bugle	<i>Ajuga</i> spp.
cassia, feathery	<i>Cassia artemisioides</i>
cherry, Mahaleb	<i>Prunus mahaleb</i>
cherry, sweet	<i>Prunus avium</i>
chrysanthemum, florists	<i>Chrysanthemum morifolium</i>
cleysera, Japanese	<i>Cleyera japonica</i>
coneflower, purple	<i>Echinacea purpurea</i>
coreopsis	<i>Coreopsis lanceolata</i>
cotoneaster, bearberry	<i>Cotoneaster dammeri</i>
cotoneaster, brightbead	<i>Cotoneaster buxifolius</i>
cotoneaster, cranberry	<i>Cotoneaster apiculatus</i>
cotoneaster, parney	<i>Cotoneaster lacteus</i>
cotoneaster, Pyrenees	<i>Cotoneaster congestus</i>
cotoneaster, rock	<i>Cotoneaster horizontalis</i>
cotoneaster, rockspray	<i>Cotoneaster microphyllus</i>
cottonwood	<i>Populus deltoides</i>
(grown for pulp)	
coyotebush, dwarf	<i>Baccharis pilularis</i>
crape Myrtle, common	<i>Lagerstroemia indica</i>
cryptomeria, Japanese	<i>Cryptomeria japonica</i>
cypress, Arizona	<i>Cupressus arizonica (glabra)</i>
cypress, Italian	<i>Cupressus sempervirens</i>
daisy, gloriosa	<i>Rudbeckia hirta</i>
(black-eyed Susan)	
daisy, painted	<i>Chrysanthemum coccineum</i>
daisy, shasta	<i>Chrysanthemum maximum</i>
daisy, trailing African	<i>Osteospermum fruticosum</i>
daylily	<i>Hemerocallis</i> spp.
dogwood, flowering	<i>Cornus florida</i>
dogwood, kousa	<i>Cornus kousa</i>
eastercactus	<i>Rhipsalidopsis gaertneri</i>
escallonia	<i>Escallonia exoniensis</i>
eucalyptus, mealy	<i>Eucalyptus cinerea</i>
eucalyptus, narrow-leaved	<i>Eucalyptus nicholii</i>
eucalyptus, red	<i>Eucalyptus sideroxylon</i>
euonymus, evergreen	<i>Euonymus japonica</i>
euonymus, stringybark	<i>Euonymus fortunei</i>

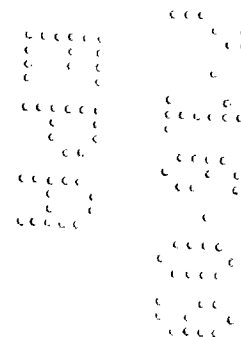




euonymus, winged	<i>Euonymus alata</i>
falsecypress, Lawson	<i>Chamaecyparis lawsoniana</i>
fatshedera	<i>Fatshedera lizei</i>
fir, alpine	<i>Abies lasiocarpa</i>
fir, balsam	<i>Abies balsamea</i>
fir, fraser	<i>Abies fraseri</i>
fir, grand	<i>Abies grandis</i>
fir, Vietch	<i>Abies veitchi</i>
fir, white	<i>Abies concolor</i>
firethorn	<i>Pyracantha, fortuneana</i>
firethorn, formosa	<i>Pyracantha skoidzumi</i>
firethorn, scarlet	<i>Pyracantha coccinea</i>
forsythia, border	<i>Forsythia intermedia</i>
gardenia	<i>Gardenia jasminoides</i>
gazania, trailing	<i>Gazania rigens leucolaena</i>
geranium (Pelargonium)	<i>Pelargonium hortorum</i>
geum	<i>Geum quellyon</i>
ginkgo	<i>Ginkgo biloba</i>
garden gladiolus	<i>Gladiolus hortulanus</i>
goldenrain tree	<i>Koelreuteria paniculata</i>
heavenly bamboo (Nandina)	<i>Nandina domestica</i>
hibiscus, Chinese	<i>Hibiscus rosa-sinesis</i>
holly, Chinese	<i>Ilex cornuta</i>
holly, English	<i>Ilex aquifolium</i>
holly, Japanese	<i>Ilex crenata</i>
honeysuckle, Japanese	<i>Lonicera japonica</i>
honeysuckle, Mexican	<i>Justicia spicigera</i>
hopseedbush, clammy	<i>Dodonaea viscosa</i>
ice plant	<i>Mesembryanthemum crystallinum</i>
(See precautions for ornamental plantings)	
ice plant, largeleaf	<i>Carpobrotus edulis</i>
(See precautions for ornamental plantings)	
impatiens (Busy lizzie)	<i>Impatiens wallerana</i>
iris, bearded	<i>Iris</i> spp.
ivy, Algerian	<i>Hedera canariensis</i>
ivy, English	<i>Hedera helix</i>
Jerseytea, redroot	<i>Ceanothus americanus</i>
juniper	<i>Juniperus</i> spp.
kumquat	<i>Fortunella</i> spp.
laurel, mountain	<i>Kalmia latifolia</i>
laurelcherry, Carolina	<i>Prunus caroliniana</i>
laurelcherry, English	<i>Prunus laurocerasus</i>
leucothoe, coast	<i>Leucothoe axillaris</i>
leucothoe, drooping	<i>Leucothoe fontanesiana</i>
lilac, common	<i>Syringa vulgaris</i>
lily, plantain	<i>Hosta</i> spp.
lilyturf, bigblue	<i>Liriope muscari</i>
lily-of-the-Nile	<i>Agapanthus africanus</i>
linden, little leaf	<i>Tilia cordata</i>
magnolia, Southern	<i>Magnolia grandiflora</i>
manzanita, Stanford	<i>Arctostaphylos stanfordiana</i>
maple	<i>Acer</i> spp.
marigold	<i>Tagetes</i> spp.
mockorange	<i>Philadelphus</i> spp.
moss, rose	<i>Portulaca grandiflora</i>
myoporum, prostrate	<i>Myoporum parvifolium</i>
myrtle, true	<i>Myrtus communis</i>



oak	<i>Quercus</i> spp.
oleander	<i>Nerium oleander</i>
orange, ornamental	<i>Citrus</i> spp.
Oregon grape	<i>Mahonia aquifolium</i>
osmanthus, holly-leaf	<i>Osmanthus heterophyllus</i>
Palo Verde, blue	<i>Cercidium floridum</i>
pansy	<i>Viola wittrockiana</i>
pear	<i>Pyrus communis</i>
pecan, ornamental	<i>Carya</i> spp.
periwinkle, bigleaf	<i>Vinca major</i>
periwinkle, dwarf	<i>Vinca minor</i>
petunia	<i>Petunia</i> spp.
photinia	<i>Photinia fraseri</i>
pine	<i>Pinus</i> spp.
pittosporum	<i>Pittosporum</i> spp.
privet, amur	<i>Ligustrum amurense</i>
privet, glossy	<i>Ligustrum lucidum</i>
privet, golden	<i>Ligustrum vicaryi</i>
privet, Japanese	<i>Ligustrum japonicum</i>
protea	<i>Protea neriifolia</i>
ranunculus, Persian	<i>Ranunculus asiaticus</i>
redbud	<i>Cercis canadensis</i>
redcedar, eastern	<i>Juniperus virginiana</i>
redcedar, western	<i>Thuja plicata</i>
redwood, coast	<i>Sequoia sempervirens</i>
raphiolepis (India hawthorn)	<i>Raphiolepis indica</i>
rhododendron	<i>Rhododendron</i> spp.
rose	<i>Rosa</i> spp.
rose-of-Sharon (Shrubalthea)	<i>Hibiscus syriacus</i>
Russian olive	<i>Elaeagnus angustifolia</i>
sage	<i>Salvia</i> spp.
shrimp plant	<i>Justicia brandegeana</i>
snapdragon	<i>Antirrhinum majus</i>
sotol, desert spoon	<i>Dasyilirion wheeleri</i>
spruce, black	<i>Picea mariana</i>
spruce, Colorado	<i>Picea pungens</i>
spruce, Englemann	<i>Picea englemanni</i>
spruce, Norway	<i>Picea abies</i>
spruce, white	<i>Picea glauca</i>
star jasmine, Chinese	<i>Trachelospermum jasminoides</i>
stonecrop	<i>Sedum brevifolium</i>
sumac, African	<i>Rhus lancea</i>
sweetgum, American	<i>Liquidambar styraciflua</i>
sweet William	<i>Dianthus barbatus</i>
tobira	<i>Pittosporum tobira</i>
trumpet vine, violet	<i>Clytostoma callistegioides</i>
viburnum, Laurustinus	<i>Viburnum tinus</i>
virbumum, Sandankwa	<i>Virbunum suspensum</i>
weigela, oldfashioned	<i>Weigela florida</i>
wintercreeper	<i>Euonymus fortunei</i>
xylosma, Japanese	<i>Xylosma congestum</i>
yarrow	<i>Achillea</i> spp.
yaupon	<i>Ilex vomitoria</i>
yew	<i>Taxus media</i>
yew, Japanese	<i>Taxus cuspidata</i>
yewpine	<i>Podocarpus macrophyllus</i>
yucca, pendulous	<i>Yucca recurvifolia</i>

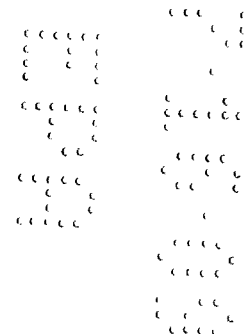


yucca, soaptree  
zinnia, common

*Yucca elata*  
*Zinnea elegans*

**Surflan WDG May be Used on the Following Container-Grown Plants:**

<b>Common Name</b>	<b>Scientific Name</b>
andromeda	<i>Pieris japonica</i>
arborvitae, American	<i>Thuja occidentalis</i>
arborvitae, Oriental	<i>Platycladus orientalis</i>
astilbe/false spirea	<i>Astilbe chinensis</i> and <i>A. chinensis</i> hybrids
barberry, Japanese	<i>Berberis thunbergii</i>
bellflower	<i>Campanula elatines</i>
blazing star	<i>Liatris spicata</i>
bleeding heart	<i>Dicentra spectabilis</i>
bottlebrush, lemon	<i>Callistemon citrinus</i>
boxwood, common	<i>Buxus sempervirens</i>
brush cherry	<i>Syzygium paniculata</i>
cleyera, Japanese	<i>Cleyera japonica</i>
cotoneaster, bearberry	<i>Cotoneaster dammeri</i>
cotoneaster, cranberry	<i>Cotoneaster apiculatus</i>
cotoneaster, parney	<i>Cotoneaster lacteus</i>
cotoneaster, rock	<i>Cotoneaster horizontalis</i>
crape Myrtle, common	<i>Lagerstroemia indica</i>
cryptomeria, Japanese	<i>Cryptomeria japonica</i>
cypress, Arizona	<i>Cupressus arizonica (glabra)</i>
cypress, Italian	<i>Cupressus sempervirens</i>
daylily	<i>Hemerocallis</i> spp.
dogwood, kousa	<i>Cornus kousa</i>
eastercactus	<i>Rhipsalidopsis gaertneri</i>
escallonia	<i>Escallonia exoniensis</i>
euonymus, evergreen	<i>Euonymus japonica</i>
euonymus, stringybark	<i>Euonymus fortunei</i>
fatshedera	<i>Fatshedera lizei</i>
firethorn	<i>Pyracantha, fortuneana</i>
firethorn, formosa	<i>Pyracantha skoidzumi</i>
firethorn, scarlet	<i>Pyracantha coccinea</i>
gardenia	<i>Gardenia jasminoides</i>
ginkgo	<i>Ginkgo biloba</i>
holly, Chinese	<i>Ilex cornuta</i>
holly, Japanese	<i>Ilex crenata</i>
Jerseytea, redroot	<i>Ceanothus americanus</i>
juniper	<i>Juniperus</i> spp.
kumquat	<i>Fortunella</i> spp.
lilac, common	<i>Syringa vulgaris</i>
lilyturf, bigblue	<i>Liriope muscari</i>
lily-of-the-Nile	<i>Agapanthus africanus</i>
linden, little leaf	<i>Tilia cordata</i>
mockorange	<i>Philadelphus</i> spp.
myrtle, true	<i>Myrtus communis</i>
oak <i>Quercus</i> spp.	
oleander	<i>Nerium oleander</i>
orange, ornamental	<i>Citrus</i> spp.
pecan, ornamental	<i>Carya</i> spp.
photinia	<i>Photinia fraseri</i>
pine	<i>Pinus</i> spp.
pittosporum	<i>Pittosporum</i> spp.



privet, amur	<i>Ligustrum amurense</i>
privet, glossy	<i>Ligustrum lucidum</i>
privet, golden	<i>Ligustrum vicaryi</i>
privet, Japanese	<i>Ligustrum japonicum</i>
redbud	<i>Cercis canadensis</i>
rhapsiolepis (India hawthorn)	<i>Rhapsiolepis indica</i>
rhododendron	<i>Rhododendron</i> spp.
Russian olive	<i>Elaeagnus angustifolia</i>
shrimp plant	<i>Justicia brandegeana</i>
spruce, Colorado	<i>Picea pungens</i>
sumac, African	<i>Rhus lancea</i>
sweetgum, American	<i>Liquidambar styraciflua</i>
trumpet vine, violet	<i>Clytostoma callistegioides</i>
viburnum, Laurustinus	<i>Viburnum tinus</i>
wintercreeper	<i>Euonymus fortunei</i>
yaupon	<i>Ilex vomitoria</i>
yucca, soaptree	<i>Yucca elata</i>

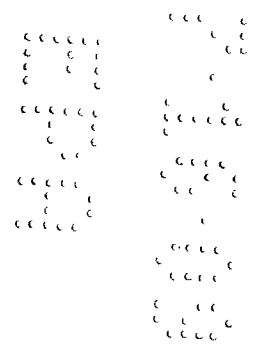
**Surflan WDG May be Used on the Following Field Grown Fruit Plant Nursery Liners†:**

almond	grapefruit	pear
apple	kiwi	pecan
apricot	lemon	pistachio
avocado	macadamia nut	plum
cherry	nectarine	pomegranate
fig	olive	prune
filbert	orange	walnut, English
grape		

**Small Fruits:**

blackberry	currant	gooseberry
blueberry	dewberry	loganberry
boysenberry	elderberry	raspberry

† Plants transplanted for additional growth before transplanting to final growing location.



**Tank Mix Combinations**

Tank mix combinations of Surflan WDG plus glyphosate, and many other labeled herbicides may be used to control undesirable vegetation in ornamental areas. Surflan WDG may also be tank mixed with Gallery\* herbicide and applied preemergence to broaden the spectrum of broadleaf weed control in ornamental areas. Applied as directed, these Surflan WDG tank mixes will provide control of susceptible weed species listed on the respective labels. Refer to tank mix product labels for specific use directions, precautions and limitations before use.

**Surflan WDG plus glyphosate:** Tank mix combinations of Surflan WDG plus glyphosate are recommended to control existing undesirable vegetation. Applied as directed, Surflan WDG plus glyphosate will provide postemergence control of susceptible weed species listed on the label for glyphosate and residual preemergence control of susceptible weed species listed on the label for Surflan WDG. Refer to the label for glyphosate for specific use directions, precautions and limitations before use.

**Precautions:**

Do not apply sprays containing glyphosate over the top of ornamental plants.

Extreme care must be exercised to prevent contact of sprays containing glyphosate with foliage and stems of turfgrasses, trees, shrubs, or other desirable vegetation since severe damage or death may result.

**Note:** If spraying with glyphosate in areas adjacent to desirable plants, use a shield to prevent spray from contacting foliage and stems of desirable plants.

**Ornamental Bulbs**

Surflan WDG may be applied for control of susceptible annual weeds in ornamental bulbs, e.g., bulbous iris, daffodil (narcissus), hyacinth and tulip. Apply Surflan WDG to the soil surface 2 to 4 weeks after planting, but prior to the emergence of annual weeds. For fall planted bulbs, apply Surflan WDG again in late winter or early spring to weed-free soil surfaces.

**Special Use Precautions:**

Do not apply to tulip plants that have emerged to a height greater than 3/4 inch.

Do not apply to gladioli corms prior to emergence or less than one inch in diameter.

**Broadcast Application Rates**

Time of Application	Soil Texture	Surflan WDG		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
		(lb/acre)	(oz/1200 sq ft)		
Fall	Coarse	0.88	0.4	3	1.75
Fall	Medium and Fine	1.75	0.8	3	2.65
Feb. - March	All Soil Textures	0.88	0.4	3	2.65

**Greenhouse Areas**

Surflan WDG may be applied to drainage areas under benches in open greenhouse-type structures. Do not apply in enclosed greenhouses or in enclosed shadehouse-type structures. Do not apply within three weeks prior to enclosure in greenhouse-type structures.

**Christmas Tree Plantations****Surflan WDG Alone**

Apply Surflan WDG as a directed spray to the soil surface or as an overtop spray to established plantings of field grown Christmas tree species, including fir (*Abies* spp.), pine (*Pinus* spp.), and spruce (*Picea* spp.). Do not apply to Douglas-fir (*Pseudotsuga menziesii*). Do not apply to seedbeds or seedling transplant beds. Apply only to established plantings. Established plants are defined as those 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 from packing and rainfall or irrigation. Follow all instructions provided in the "General Information" section of this label.

**Broadcast Application Rates**

Length of Control	Surflan WDG		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
	(lb/acre)	(oz/1200 sq ft)		
2 - 4 months	2.4	1	2	9.4
4 - 8 months	4.7	2	2	9.4

**Tank Mix Combinations**

Tank mix combinations of Surflan WDG plus other labeled herbicides may be used as directed or overtop 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 tank mix product labels for specific use directions, precautions and limitations before use.

**Surflan WDG plus glyphosate:** Apply tank mix combinations of Surflan WDG plus glyphosate only as directed sprays in Christmas tree plantings. When applied according to use directions, Surflan WDG plus glyphosate will provide postemergence control of susceptible weed species listed on the glyphosate label and residual preemergence control of susceptible weed species listed on the label for Surflan WDG. Refer to the glyphosate label for specific use directions, precautions and limitations before use.

**Precautions:**

Do not apply sprays containing glyphosate over the top of Christmas tree plantings. Extreme care must be exercised to avoid contact of spray containing glyphosate with foliage and stems of Christmas trees or severe damage or death may result.

**Noncropland Areas and Industrial Sites**

**Noncropland Areas -- Tank Mix Combinations**

Tank mix combinations of Surflan WDG plus glyphosate and many other labeled herbicides may be used to control undesirable vegetation in noncropland areas. When applied according to use directions, these tank mixes will provide control of susceptible weed species listed on the respective product labels. Refer to tank mix product labels for specific use directions, precautions and limitations before use.

Length of Control	Surflan WDG		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
	(lb/acre)	(oz/1000 sq ft)		
2 - 4 months	2.4	1	2	7
4 - 8 months	4.7	2	4	14
8 - 12 months	7.1	3	8	14

**Industrial Sites -- Tank Mix Combinations**

Tank mix combinations of Surflan WDG plus glyphosate, Spike and many other labeled herbicides may be used as overtop sprays to control existing vegetation on industrial sites such as utility substations, highway guard rails, sign posts and delineators. When applied according to use directions, these tank mixes will provide control of susceptible weed species listed on the respective product labels. Refer to tank mix product labels for specific use directions, precautions and limitation before use.

**Warm Season Turfgrasses**

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Surflan WDG may be applied as a preemergence treatment for control of annual grasses and certain broadleaf weeds in established warm season turf including bahiagrass, bermudagrass, buffalograss, centipedegrass, St. Augustinegrass and zoysiagrass or established tall fescue growing in warm season areas. Established turf is defined as a dense turf having a well-anchored root system and healthy, vigorous top growth. Surflan WDG may be tank mixed with Gallery herbicide and applied preemergence to broaden the spectrum of broadleaf weed control in warm season turf. Refer to the label for Gallery herbicide for specific use directions, precautions, and limitations before use.

Successful preemergence control of weeds listed on this label requires that Surflan WDG be applied prior to weed germination and be activated by at least one-half (1/2) inch of rainfall or irrigation within 21 days of application.

**Special Use Precautions:**

To avoid possible injury, do not apply Surflan WDG to:

- Cool season turfgrass species.
- Golf course putting greens or tees or lawns containing dichondra or cool season turfgrass species.
- Newly sprigged or sodded areas of bermudagrass, St. Augustinegrass, centipedegrass, or zoysiagrass until these turfs are well-established and have well-anchored root systems.
- Newly hydromulched areas of bermudagrass until such areas are well-established.
- Bermudagrass variety "Sun Turf" when tank mixed with atrazine.

Surflan WDG will not control emerged weeds.

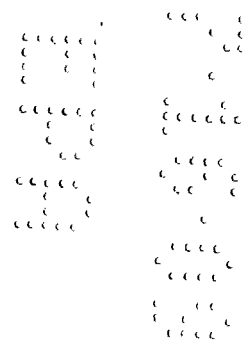
Any cultural practices that disturb the soil, such as aerification or verticutting, should be done prior to application of Surflan WDG.

Surflan WDG may injure turf that is not well-established or is stressed or weakened due to unfavorable winter climatic conditions, drought, nematodes, or other factors which damage or weaken turf root systems. Apply Surflan WDG only to healthy, well-established turf that has a well-anchored root system.

Use Surflan WDG only as a part of a total turf management program that includes good fertilization practices.

Do not apply Surflan WDG in the spring or early summer to tall fescue turfgrass reseeded the previous fall. In such cases, apply Balan\* 2.5G granular herbicide at 60 to 80 pounds per acre in early summer (Round 1) and Surflan WDG at 1.75 pounds per acre twelve weeks later (Round 2). Do not apply Surflan WDG at the single application rate (2.4 pounds per acre) to established tall fescue; in such cases, apply 1.75 pounds per acre of Surflan WDG in an initial application, followed by a second application of 1.75 pounds per acre 12 weeks later.

In bermudagrass areas that have been overseeded with winter grasses, a spring application of Surflan WDG will thin the overseeded grasses.



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**Annual Grasses Controlled by Surflan WDG Specialty Herbicide****Summer Annuals:**

<b>Common Name</b>	<b>Scientific Name</b>
barnyardgrass (watergrass)	<i>Echinochloa crus-galli</i>
crabgrass, large	<i>Digitaria sanguinalis</i>
crabgrass, smooth	<i>Digitaria ischaemum</i>
crabgrass	<i>Digitaria spp.</i>
crowfootgrass	<i>Dactyloctenium aegyptium</i>
foxtail, bristlegrass	<i>Setaria magna</i>
foxtail, giant	<i>Setaria faberi</i>
foxtail, green (pigeongrass)	<i>Setaria viridis</i>
foxtail, robust	<i>Setaria robusta</i>
foxtail, yellow	<i>Setaria glauca</i>
goosegrass (silver crabgrass)	<i>Eleusine indica</i>
Johnsongrass (seedling only)	<i>Sorghum halepense</i>
ryegrass, Italian	<i>Lolium multiflorum</i>
sandbur, field	<i>Cenchrus incertus</i>

**Winter Annuals:**

<b>Common Name</b>	<b>Scientific Name</b>
bluegrass, annual	<i>Poa annua</i>

**Annual Broadleaf Weeds Controlled by Surflan WDG Specialty Herbicide****Summer Annuals:**

<b>Common Name</b>	<b>Scientific Name</b>
carpetweed	<i>Mollugo verticillata</i>
knotweed, prostrate	<i>Polygonum aviculare</i>
purslane, common	<i>Portulaca oleracea</i>

**Winter Annuals:**

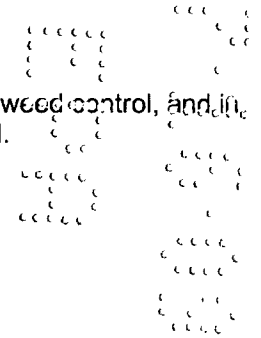
<b>Common Name</b>	<b>Scientific Name</b>
chickweed, common	<i>Stellaria media</i>
henbit	<i>Lamium amplexicaule</i>

**Broadleaf Weeds Suppressed by Surflan WDG Specialty Herbicide**

<b>Common Name</b>	<b>Scientific Name</b>
groundsel, common	<i>Senecio vulgaris</i>
spurge, prostrate	<i>Euphorbia humistrata</i>
woodsorrel, yellow	<i>Oxalis stricta</i>

**Application Rates, Frequency and Timing of Application**

Surflan WDG can be applied in the spring for summer annual grass and broadleaf weed control, and in the fall for annual bluegrass (*Poa annua*) and winter annual broadleaf weed control.





**Broadcast Application Rates (Warm Season Turfgrasses)**

Use Area	Surflan WDG		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
	(lb/acre)	(fl oz/1200 sq ft)		
All, except Florida	1.75	0.8	3	7
Florida	2.4	1	3	7
Florida	1.75	0.8	3	5.3

**1. Summer Annual Grasses and Broadleaf Weeds**

**Single Application Program:** Apply 2.4 pounds per acre of Surflan WDG per acre in late winter or early spring, prior to the onset of conditions favorable for annual weed germination.

**Split Application Program:** As an alternative to a single application program, Surflan WDG may be applied in a split application. This program is desirable when the initial application is made well in advance of weed germination and where weed control is desired for a longer period of time. Apply 1.75 pounds per acre of Surflan WDG in an initial application, followed by a second application of 1.75 pounds per acre 12 weeks later.

The second treatment of the split application may follow application of a different preemergence grass herbicide in place of the initial Surflan WDG application.

**2. Annual Bluegrass (*Poa annua*) and Winter Annual Broadleaf Weeds**

In areas of heavy annual bluegrass infestation, its elimination will result in temporary thinning of turfgrass cover. Proper fertilization, irrigation and soil incorporated reseeding should be employed to speed the restoration of desirable turfgrass cover in areas previously occupied by annual bluegrass (See section on reseeding).

Apply Surflan WDG as a preemergence treatment in late summer or early fall, prior to the expected germination period for annual bluegrass and winter annual broadleaf weeds. If annual bluegrass infestation is severe and its elimination will result in thinning of turfgrass cover, apply Surflan WDG at 1.75 pounds per acre. If thinning of turfgrass cover is not a potential problem, Surflan WDG may be applied at 2.4 pounds per acre.

**Weed Control in Florida**

In Florida, apply 1.75 pounds per acre of Surflan WDG three times per year, or every 90 to 100 days, in the fall, early spring, and early summer. Do not apply more than 1.75 pounds per acre of Surflan WDG in any single application.

**Application Equipment**

Apply Surflan WDG evenly over the turfgrass area. Avoid spray pattern skips and overlaps that may result in incomplete coverage or over-application. For best results use application equipment designed to uniformly broadcast liquid herbicides. Calibrate application equipment prior to use, according to manufacturer's directions. Check equipment frequently to make sure it is working properly and distributing spray uniformly.

**Reseeding**

Herbicides that control annual weeds may also affect establishment of desirable turfgrass seedlings. Reseeding should be delayed for at least 90-120 days following application of Surflan WDG. When reseeding, it is essential that proper cultural practices such as soil cultivation and seedbed preparation, irrigation and fertilization be followed. For satisfactory reseeding results following Surflan WDG use, the seeding rate should be increased and equipment designed to place seed in full contact with soil (such as the Rogers Aero Seeder) should be employed.

**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 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. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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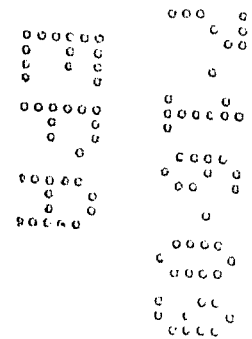
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Rev. 7/1/09



**NOTIFICATION**

**AUG 17 2009**