OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
WASHINGTON, D.C. 20460

November 6, 2025

Meshea J. Brodie
US Regulatory Team Leader
UPL NA Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Label Amendment - Registration Review Mitigation for Oryzalin
Product Name: SURFLAN 0.25 A.S.
EPA Registration Number: 70506-47
Case Number: 481591
Application Dates: August 29, 2022

Dear Meshea J. Brodie:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Oryzalin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

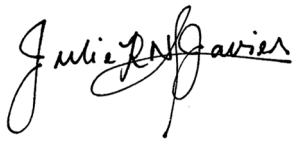
Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded 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 Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. You must submit one copy of the final printed labeling before you release the product for

shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Caleb Carr by phone at 202-566-0636, or via email at carr.caleb@epa.gov.

Sincerely,



Julie Javier, Team Leader
Risk Mitigation and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

ENCLOSURE: Stamped label

Oryzalin	GROUP	3	HERBICIDE

Surflan 0.25 A.S.

A Selective Preemergence Surface-Applied Herbicide for Use in Established Ornamentals and Southern Turfgrasses for the Control of Annual Grasses and Many Broadleaf Weeds in:

- **Container Grown Ornamental Plants**
- **Ground Covers**
- **Noncropland Areas**
- **Ornamental Trees**
- **Ornamental Plants (Including Around Highway and Industrial Sites)**
- **Ornamental Woody Shrubs**
- **Southern Turfgrasses (Including Bahiagrass, Bermudagrass, Centipedegrass, St. Augustinegrass, Tall Fescue and Zoysiagrass)**

Active Ingredient:
oryzalin: 3.5-dinitro-*N*⁴,*N*⁴-dipropylsulfanilamide 3%
Other Ingredients 97%
Total 100%
Contains 0.25 pounds active ingredient per gallon.

ACCEPTED
Nov 6, 2025
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 70506-47

Avoid Freezing--Store Above 40¤F

Keep Out of Reach of Children

CAUTION

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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For 24 hour emergency medical assistance, call Rocky Mountain Poison Poison and Drug Control: 1-866-673-6671.

For 24 hour chemical emergency: spill, leak, fire, exposure, or accident, call CHEMTREC: 1-800-424-9300.

Do Not Ship or Store with Food, Feeds, Drugs, or Clothing.

UPL NA Inc.
630 Freedom Business Center
King of Prussia, PA 19406
1-800-438-6071

EPA Reg. No. 70506-47 EPA Est. _____

Net Contents - ___

Precautionary Statements

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

CAUTION

Causes Moderate Eye Irritation ● May Cause Skin Allergies To Develop

Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:
- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- In addition, mixers and loaders must also wear a chemical-resistant apron.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:

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

Environmental Hazards

This pesticide is toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment wash waters or rinsate.

Groundwater Advisory

Oryzalin is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

NON-TARGET ORGANISM ADVISORY

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

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.

Not for use on plants grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in interior plantscapes, ornamental gardens or parks, or on golf courses or lawns and grounds.

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.

Storage and Disposal

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

Pesticide Storage: Avoid freezing. Store above 40¤F. 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 the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. 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 alter use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WEED RESISTANCE MANAGEMENT

Mode of action

Surflan 0.25 A.S. contains the active ingredient oryzalin, which controls susceptible annual weeds by disrupting plant growth processes during seed germination.
Any weed population may contain or develop plants naturally resistant to Surflan 0.25 A.S. and other Group 3 herbicides. Weed species with acquired resistance to Group 3 may eventually dominate the weed population if Group 3 herbicides are used repeatedly in the same area. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of Surflan 0.25 A.S. or other Group 3 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in an area. Whenever possible incorporate multiple weed control practices such as mechanical cultivation, and biological management practices.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and that considers tillage (or other mechanical control methods), cultural (e.g. higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological and other management practices.
- Area should be scouted before and after application to identify the weed species present and their growth stage to determine if the intended application will be effective. Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product and switch to another management strategy or herbicide with a different mode of action (MOA), if available. Treat weed escapes with an herbicide with a different MOA or use non-

chemical methods to remove escapes. To the extent possible do not allow weed escapes to produce seeds, roots, or tubers.

Contact your local extension specialist, and/or manufacturer for additional herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes. Report any incidence of non-performance of this product against a particular weed species to your retailer or UPL NA representative.

General Information

Surflan 0.25 A.S. is a preemergence surface-applied herbicide for the control of annual grasses and many broadleaf weeds.

Soil Preparation: Surflan 0.25 A.S. will not control established weeds. Therefore, areas to be treated should be free of established weeds. Weed residues, prunings and trash should be thoroughly mixed into the soil or removed prior to treatment. The soil should be in good tilth and free of clods at the time of application.

Application Restrictions:

- Keep all persons, children, and pets out of treated area until sprays have dried.
- Do not graze or feed forage from treated areas to livestock.
- Do not aerially apply this product.
- **Chemigation:** Do not apply this product through any type of irrigation system.

MANDATORY SPRAY DRIFT MANAGEMENT
Ground Boom Applications

- User must only apply with the nozzle height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a coarse or coarser droplet size according to the most current version of the American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

Boomless Ground Applications

- Applications are required to use a medium or coarser droplet size for all applications according to the most current version of the American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).
- Do not apply when wind speeds exceed 10 miles per hour at the application time.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES
THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE
An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume – increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT – Ground Boom
For ground equipment, the boom should remain level with the crop and have minimal bounce.

SHIELDED SPRAYERS
Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS
Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND
Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.
Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Ornamentals

Use Restrictions for Ornamentals

Apply only to established plantings.

Do not apply Surflan 0.25 A.S. in ornamental plantings where the likelihood of runoff onto lawn areas containing dichondra or cool-season turfgrass species exists as severe injury or death may occur. Poor weed control may result if directions are not followed. Over application may result in crop injury or excessive soil residue.

Use Precautions for Ornamentals

Plant only ornamental species listed on this label into soil treated the previous season with Surflan 0.25 A.S. or injury may occur.
Rooted liners should be established in containers two weeks prior to treatment or crop injury may occur.

Grasses Controlled by Surflan 0.25 A.S.

Common Name	Scientific Name
barley, little	*Hordeum pusillum*
barnyardgrass (Watergrass)	*Echinochloa crusgalli*
bluegrass, annual	*Poa annua*
brachiaria (signalgrass)	*Brachiaria* spp.
crabgrasses	*Digitaria* spp.
(large crabgrass)	
(smooth crabgrass)	
crowfootgrass	*Dactyloctenium aegyptium*
cupgrass, southwestern	*Eriochloa gracilis*
foxtails	*Setaria* spp.
(bottlegrass)	
(bristlegrass)	
(giant foxtail)	
(green foxtail)	
(pigeongrass)	
(robust foxtail)	
(yellow foxtail)	
goosegrass (Silver crabgrass)	*Eleusine indica*
johnsongrass (Seedling only)	*Sorghum halepense*
junglerice	*Echinochloa colonum*
lovegrass, Mexican	*Eragrostis mexicana*
lovegrass, orcutt	*Eragrostis orcuttiana*
oat, wild	*Avena fatua*
panicum, browntop	*Panicum fasciculatum*
panicum, fall (Spreading panicgrass)	*Panicum dichotomiflorum*
panicum, Texas	*Panicum texanum*
buffalograss	
coloradograss	
ryegrass, Italian	*Lolium multiflorum*
sandbur, field	*Cenchrus incertus*
sprangletop, red	*Leptochloa filiformis*
witchgrass	*Panicum capillare*

Broadleaf Weeds Controlled by Surflan 0.25 A.S.

Common Name	Scientific Name
bittercress	*Cardamine spp.*
carpetweed	*Mollugo verticillata*
chickweed, common	*Stellaria media*
fiddleneck, coast	*Amsinckia intermedia*
filaree, redstem	*Erodium cicutarium*
filaree, whitestem	*Erodium moschatum*
groundsel, common	*Senecio vulgaris*
henbit	*Lamium amplexicaule*

knotweed, prostrate	*Polygonum aviculare*
lambsquarters	*Chenopodium album*
pigweeds (carelessweed) (prostrate pigweed) (redroot) (rough pigweed) (spring pigweed) (tumble pigweed)	*Amaranthus spp.*
puncturevine	*Tribulus terrestris*
purslane, common	*Portulaca oleracea*
pusley, Florida (Florida purslane) (Mexican clover) (pusley)	*Richardia scabra*
rocket, London	*Sisymbrium irio*
rockpurslane, desert	*Calandrinia ciliata*
shepherdspurse	*Capsella bursa pastoris*
spurge, prostrate	*Euphorbia humistrata*
woodsorrel, yellow	*Oxalis stricta*

Suppression 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, amount and timing of soil moisture.

Common Name	**Common Name**
annual sowthistle	morningglory
black mustard	prickly lettuce
black nightshade	smartweed
climbing milkweed	spotted spurge
common mallow	teaweed (prickly sida)
common ragweed	velvetleaf
horseweed	volunteer wheat
ladysthumb	wild mustard

Surflan 0.25 A.S. will not control established weeds.

Mixing Directions

Start with a clean spray tank. Fill sprayer one-third (1/3) to one-half (1/2) full with clean water. Start agitation. Add correct quantity of Surflan 0.25 A.S., continue agitation and finish filling the tank. Maintain agitation from mixing through application.

If you see a buildup of material on the walls of the spray tank, wash the tank with soapy water between fillings. Rinse and continue the spraying operation. Clean the tank, lines, and screens thoroughly after use.

Application

Ground Application: Apply Surflan 0.25 A.S. as a directed spray to the soil surface or as an overtop spray. Apply Surflan 0.25 A.S. in sufficient water per acre to uniformly treat the area. Use only a properly calibrated, low-pressure herbicide sprayer that will apply the spray uniformly. Use herbicide tips and screens no finer than 50 mesh in nozzle 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 agitation from mixing through application. Avoid boom overlaps that will increase rates above those recommended.

Activation and Cultivation

Surflan 0.25 A.S. will remain stable on the soil surface up to 21 days. In the absence of timely rainfall, irrigation can be used to move Surflan 0.25 A.S. into soil surface. A one-half (1/2) inch rain or its equivalent in sprinkler irrigation is necessary to activate Surflan 0.25 A.S. If weeds begin to emerge due to lack of rainfall or irrigation, shallow cultivate (1 to 2 inches) to destroy existing weeds or remove by hand in containers and place Surflan 0.25 A.S. in the weed germination zone. Shallow cultivation (1 to 2 inches) will not reduce herbicidal effectiveness. If Surflan 0.25 A.S. is not activated by rainfall, irrigation or cultivation within 21 days of application, erratic weed control may result.

Recommended Species

Surflan 0.25 A.S. may be used on the Following Ornamental Plant Species:

Common Name	Scientific Name
abelia, glossy	*Abelia grandiflora*
apple	*Malus* spp.
arborvitae, Giant	*Thuja plicata*
arborvitae, Oriental	*Platycladus orientalis*
azalea	*Rhododendron* spp.
barberry, Japanese	*Berberis thunbergii*
begonia	*Begonia semper florans*
bird of paradise	*Strelitzia reginae*
bottlebrush, lemon	*Callistemon citrinus*
boxwood, common	*Buxus sempervirens*
boxwood, Japanese	*Buxus microphylla japonica*
brush cherry	*Syzygium paniculata*
California laurel	*Umbellularia californica*
cape marigold	*Dimorphotheca* spp.
cherry, Mahaleb	*Prunus mahaleb*
cherry, sweet	*Prunus avium*
chrysanthemum, florists	*Chrysanthemum morifolium*
cleyera, Japanese	*Cleyera japonica*
cotoneaster, bearberry	*Cotoneaster dammeri*
cotoneaster, brightbead	*Cotoneaster buxifolius*
cotoneaster, cranberry	*Cotoneaster apiculatus*
cotoneaster, Pyrenees	*Cotoneaster congestus*
cotoneaster, rock	*Cotoneaster horizontalis*
cotoneaster, rockspray	*Cotoneaster microphyllus*
coyotebush, dwarf	*Baccharis pilularis*
crape Myrtle, common	*Lagerstroemia indica*
cryptomeria, Japanese	*Cryptomeria japonica*
cypress, Italian	*Cupressus sempervirens*
daisy, trailing African	*Osteospermum fruticosum*
douglasfir	*Pseudotsuga taxifolia*
eastercactus	*Rhipsalidopsis gaertneri*
escallonia	*Escallonia exoniensis*
eucalyptus, mealy	*Eucalyptus cinerea*
eucalyptus, narrow-leaved	*Eucalyptus nicholii*
eucalyptus, red	*Eucalyptus sideroxylon*
euonymus, evergreen	*Euonymus japonica*
euonymus, stringybark	*Euonymus fortunei*
euonymus, winged	*Euonymus alata*
falsecypress, Lawson	*Chamaecyparis lawsoniana*
fatshedera	*Fatshedera lizei*
fir, alpine	*Abies lasiocarpa*
fir, balsam	*Abies balsamea*
fir, fraser	*Abies fraseri*

fir, grand	*Abies grandis*
fir, Vietch	*Abies veitchi*
fir, white	*Abies concolor*
firethorn	*Pyracantha, fortuneana*
firethorn, formosa	*Pyracantha skoidzumi*
firethorn, scarlet	*Pyracantha coccinea*
forsythia, border	*Forsythia intermedia*
gazania, trailing	*Gazania rigens leucolaena*
geranium (Pelargonium)	*Pelargonium hortorum*
ginkgo	*Ginkgo biloba*
hibiscus, Chinese	*Hibiscus rosa-sinesis*
holly, Chinese	*Ilex cornuta*
holly, English	*Ilex aquifolium*
holly, Japanese	*Ilex crenata*
honeysuckle, Japanese	*Lonicera japonica*
hopseedbush, clammy	*Dodonaea viscosa*
ice plant	*Mesembryanthemum crystallinum*
(See precautions for ornamental plantings)	
ice plant, largeleaf	*Carpobrutus edulis*
(See precautions for ornamental plantings)	
ivy, Algerian	*Hedera canariensis*
ivy, English	*Hedera helix*
jerseytea, redroot	*Ceanothus americanus*
juniper	*Juniperus* spp.
laurelcherry, Carolina	*Prunus caroliniana*
laurelcherry, English	*Prunus laurocerasus*
leucothoe, coast	*Leucothoe axillaris*
leucothoe, drooping	*Leucothoe fontanesiana*
lilac, common	*Syringa vulgaris*
lily, plantain	*Hosta* spp.
lilyturf, bigblue	*Liriope muscari*
lily-of-the-Nile	*Agapanthus africanus*
linden, little leaf	*Tilia cordata*
magnolia, Southern	*Magnolia grandiflora*
manzanita, Stanford	*Arctostaphylos stanfordiana*
maple	*Acer* spp.
marigold	*Tagetes* spp.
mockorange	*Philadelphus* spp.
moss, rose	*Portulaca grandiflora*
myoporum, prostrate	*Myoporum parvifolium*
myrtle, true	*Myrtus communis*
oak *Quercus* spp.	
oleander	*Nerium oleander*
orange, ornamental	*Citrus* spp.
oregon grape	*Mahonia aquifolium*
osmanthus, holly-leaf	*Osmanthus heterophyllus*
palo verde, blue	*Cercidium floridum*
pansy	*Viola wittrockiana*
pear	*Pyrus communis*
pecan, ornamental	*Carya* spp.
periwinkle, bigleaf	*Vinca major*
periwinkle, dwarf	*Vinca minor*
petunia	*Petunia* spp.
photinia	*Photinia fraseri*
pine	*Pinus* spp.
pittosporum	*Pittosporum* spp.
privet, amur	*Ligustrum amurense*

privet, glossy	*Ligustrum lucidum*
privet, golden	*Ligustrum vicaryi*
privet, Japanese	*Ligustrum japonicum*
protea	*Protea neriifolia*
ranunculus, Persian	*Ranunculus asiaticus*
redbud	*Cercis canadensis*
redcedar, eastern	*Juniperus virginiana*
redcedar, western	*Thuja plicata*
redwood, coast	*Sequoia sempervirens*
rhaphiolepsis (India hawthorn)	*Rhaphiolepsis indica*
rhododendron	*Rhododendron* spp.
rose	*Rosa* spp.
rose-of-Sharon (Shrubalthea)	*Hibiscus syriacus*
Russian olive	*Elaeagnus angustifolia*
sage	*Salvia* spp.
shrimp plant	*Justicia brandegeana*
snapdragon	*Antirrhinum majus*
sotol, desert spoon	*Dasylirion wheeleri*
spruce, black	*Picea mariana*
spruce, Colorado	*Picea pungens*
spruce, Englemann	*Picea englemanni*
spruce, Norway	*Picea abies*
spruce, white	*Picea glauca*
star jasmine, Chinese	*Trachelospermum jasminoides*
stonecrop	*Sedum brevifolium*
sumac, African	*Rhus lancea*
sweetgum, American	*Liquidambar styraciflua*
sweet William	*Dianthus barbatus*
tobira	*Pittosporum tobira*
trumpet vine, violet	*Clytostoma callistegioides*
viburnum, Laurustinus	*Viburnum tinus*
virbumum, Sandankwa	*Virbunum suspensum*
weigela, oldfashioned	*Weigela florida*
wintercreeper	*Euonymus fortunei*
xylosma, Japanese	*Xylosma congestum*
yarrow	*Achillea* spp.
yaupon	*Ilex vomitoria*
yew*Taxus media*	
yew, Japanese	*Taxus cuspidata*
yewpine	*Podocarpus macrophyllus*
yucca, pendulous	*Yucca recurvifolia*
yucca, soaptree	*Yucca elata*
zinnia, common	*Zinnea elegans*

Surflan 0.25 A.S. may be used on the Following Container-Grown Plant Species:

Common Name	**Scientific Name**
andromeda	*Pieris japonica*
arborvitae, American	*Thuja occidentalis*
arborvitae, Oriental	*Platycladus orientalis*
astilbe/false spirea	*Astilbe chinensis* and *A. chinensis* hybrids
barberry, Japanese	*Berberis thunbergii*
bellflower	*Campanula elatines*
blazing star	*Liatris spicata*
bleeding heart	*Dicentra spectabilis*
bottlebrush, lemon	*Callistemon citrinus*
boxwood, common	*Buxus sempervirens*

brush cherry	*Syzygium paniculata*
cleyera, Japanese	*Cleyera japonica*
cotoneaster, bearberry	*Cotoneaster dammeri*
cotoneaster, cranberry	*Cotoneaster apiculatus*
cotoneaster, parney	*Cotoneaster lacteus*
cotoneaster, rock	*Cotoneaster horizontalis*
crape Myrtle, common	*Lagerstroemia indica*
cryptomeria, Japanese	*Cryptomeria japonica*
cypress, Arizona	*Cupressus arizonica (glabra)*
cypress, Italian	*Cupressus sempervirens*
daylily	*Hemerocallis* spp.
dogwood, kousa	*Cornus kousa*
eastercactus	*Rhipsalidopsis gaertneri*
escallonia	*Escallonia exoniensis*
euonymus, evergreen	*Euonymus japonica*
euonymus, stringybark	*Euonymus fortunei*
fatshedera	*Fatshedera lizei*
firethorn	*Pyracantha, fortuneana*
firethorn, formosa	*Pyracantha skoidzumi*
firethorn, scarlet	*Pyracantha coccinea*
gardenia	*Gardenia jasminoides*
ginkgo	*Ginkgo biloba*
holly, Chinese	*Ilex cornuta*
holly, Japanese	*Ilex crenata*
jerseytea, redroot	*Ceanothus americanus*
juniper	*Juniperus* spp.
kumquat	*Fortunella* spp.
lilac, common	*Syringa vulgaris*
lilyturf, bigblue	*Liriope muscari*
lily-of-the-Nile	*Agapanthus africanus*
linden, little leaf	*Tilia cordata*
mockorange	*Philadelphus* spp.
myrtle, true	*Myrtus communis*
oak *Quercus* spp.	
oleander	*Nerium oleander*
orange, ornamental	*Citrus* spp.
pecan, ornamental	*Carya* spp.
photinia	*Photinia fraseri*
pine	*Pinus* spp.
pittosporum	*Pittosporum* spp.
privet, amur	*Ligustrum amurense*
privet, glossy	*Ligustrum lucidum*
privet, golden	*Ligustrum vicaryi*
privet, Japanese	*Ligustrum japonicum*
redbud	*Cercis canadensis*
rhaphiolepsis (India hawthorn)	*Rhaphiolepsis indica*
rhododendron	*Rhododendron* spp.
russian olive	*Elaeagnus angustifolia*
shrimp plant	*Justicia brandegeana*
spruce, Colorado	*Picea pungens*
sumac, African	*Rhus lancea*
sweetgum, American	*Liquidambar styraciflua*
trumpet vine, violet	*Clytostoma callistegioides*
viburnum, Laurustinus	*Viburnum tinus*
wintercreeper	*Euonymus fortunei*
yaupon	*Ilex vomitoria*
yucca, soaptree	*Yucca elata*

Precaution

Ice Plant: When establishing unrooted ice plant on coarse soils in landscape plantings, use only the 1.5 pint of Surflan 0.25 A.S. or crop injury may occur. After the ice plant is well established, a second application may be made.

Broadcast Application Rates

Labeled Use Site	Length of Control	Surflan 0.25 A.S. (pt/1000 sq ft)	Minimum Time Between Applications (months)	Total Amount Allowed Per Year (pt/1000 sq ft)
Landscape ornamentals	2 - 4 months	1.1 to 1.5	2	5.9
	3 - 6 months	2.2	4	8.8
	4 - 8 months	3	4	8.8
Field-grown and container-grown ornamentals	2 - 4 months	1.5	3	5.9
	3 - 6 months	2.2	3	6.6
	4 - 8 months	3	3	8.8

Southern Turfgrass Areas

Surflan 0.25 A.S. is a preemergence herbicide, which is applied to established Southern turf including bahiagrass, bermudagrass, centipedegrass, established tall fescue, St. Augustinegrass and zoysiagrass for the control of annual grasses and some broadleaf weeds. Surflan 0.25 A.S. works by controlling weeds as the seeds germinate.

Surflan 0.25 A.S. will not harm nearby established ornamental trees and shrubs. Do not apply Surflan 0.25 A.S. on golf course putting greens.

Use Restrictions for Southern Turfgrass

Use Surflan 0.25 A.S. only as a part of a total turf management program that includes good fertilization practices.

Surflan 0.25 A.S. should not be applied in the spring or summer to tall fescue turfgrass reseeded the previous fall. In bermudagrass areas that have been overseeded with winter grasses, a spring application of Surflan 0.25 A.S. will thin the overseeded grasses.

Surflan 0.25 A.S. should not be applied to newly sprigged areas of bermudagrass, St. Augustinegrass, centipedegrass or zoysiagrass until these turfs are well established.

Surflan 0.25 A.S. should not be applied to newly hydromulched areas of bermudagrass until these areas are well established.

Do not spray Surflan 0.25 A.S. in combination with atrazine on turf.

Do not apply Surflan 0.25 A.S. on golf course putting greens.

Use Precautions for Southern Turfgrass

Surflan 0.25 A.S. will not control established weeds.

Surflan 0.25 A.S. may injure turf that is under weakened conditions due to degree of establishment or winter climatic conditions. Apply Surflan 0.25 A.S. to healthy, established turf only.

Areas planted with bermudagrass variety "Sun Turf" in Northern Oklahoma have shown sensitivity to Surflan 0.25 A.S. treatments.

Grasses Controlled by Surflan 0.25 A.S.

Summer Annuals

Common Name	Scientific Name
barley, little	*Hordeum pusillum*
barnyardgrass (watergrass)	*Echinochloa crus-galli*
bluegrass, annual (poa)	*Poa annua*
brachiaria (signalgrass)	*Brachiaria* spp.
browntop panicum	*Panicum fasciculatum*
crabgrass	*Digitaria* spp.
(large crabgrass)	
(smooth crabgrass)	
crowfootgrass	*Dactyloctenium aegyptium*
cupgrass	*Eriochloa gracilis*
downy brome	*Bromus tectorum*
fall panicum	*Panicum dichotomiflorum*
(spreading panicgrass)	
foxtails	*Setaria* spp.
(bottlegrass)	
(bristlegrass)	
(giant foxtail)	
(green foxtail)	
(pigeongrass)	
(robust foxtail)	
(yellow foxtail)	
guineagrass	*Panicum maximum*
(narrowleaf panicum)	
johnsongrass (seedling only)	*Sorghum halepense*
junglerice	*Echinochloa colonum*
lovegrass, Mexican	*Eragrostis mexicana*
lovegrass, orcutt	*Eragrostis orcuttiana*
oat, wild	*Avena fatua*
ryegrass, annual (Italian)	*Lolium multiflorum*
sandbur, field	*Cenchrus incertus*
sprangletop, red	*Leptochloa filiformis*
Texas panicum	*Panicum texanum*
(buffalograss)	
(coloradograss)	
witchgrass	*Panicum capillare*

Winter Annuals

Common Name	Scientific Name
bluegrass, annual	Poa annua

Broadleaf Weeds Controlled by Surflan 0.25 A.S.

Summer Annuals

Common Name	Scientific Name
carpetweed	Mollugo verticillata
knotweed, prostrate	Polygonum aviculare
purslane, common	Portulaca oleracea

Winter Annuals

Common Name	Scientific Name
chickweed, common	Stellaria media

henbit	Lamium amplexicaule

Broadleaf Weeds Partially Controlled by Surflan 0.25 A.S.

Common Name	Scientific Name
groundsel, common	Senecio vulgaris
spurge, prostrate	Euphorbia humistrata
woodsorrel, yellow	Oxalis stricta

Surflan 0.25 A.S. will not control established weeds.

General Use Directions

Rates, Frequency and Timing of Application
Successful preemergence control of the annual grass weeds listed on this label requires proper timing of application.

Apply Surflan 0.25 A.S. prior to the germination of annual grass weeds. All summer annual grasses do not germinate at the same time. If application timing does not coincide with the normal germination period of any of the annual grass weeds listed on this label, weed control results may be erratic or poor. In the absence of timely rainfall, irrigation can be used to move Surflan 0.25 A.S. into the soil surface.
Any cultural practices that disturb the soil, such as aerification or verticutting, should be done prior to application of Surflan 0.25 A.S.

Application Rates, Number of Applications Allowed and Minimum Interval between Applications:

Warm Season Turf Areas	Surflan 0.25 A.S. (pt/1000 sq ft)	Surflan 0.25 A.S. (fl oz/1000 sq ft)	Minimum Time Between Applications (months)	Total Amount Allowed Per Year (pt/1000 sq ft)
All, except Florida	1.1 – 1.5	18 - 24	3	4.4
Florida	1.1	18	3	3.3

Application Directions
Surflan 0.25 A.S. can be applied in the spring for summer annual grass and broadleaf weed control, and in the fall for *Poa annua* and winter annual broadleaf weed control. Do not apply more than 1.1 pt (18 fl oz)/1000 sq ft per application in the state of Florida.

1. **Spring Germinating Summer Annual Grasses and Broadleaf Weeds**
   For preemergence control, apply 1.5 pints (24 ounces) Surflan 0.25 A.S. per 1000 square feet per acre in late winter or early spring prior to the onset of conditions favorable for annual weed grass germination.

   For application to smaller areas, apply the following amounts of Surflan 0.25 A.S.:

Amount Per 100 sq. ft.	Amount Per 500 sq. ft.	Amount Per 1000 sq. ft.
2 1/2 oz	12 1/2 oz	24 oz

2. **Annual Bluegrass (*Poa Annua*) and Broadleaf Winter Annuals**
   In areas of heavy infestation of annual bluegrass, its elimination will temporarily result in thin turfgrass areas. Proper fertilization, irrigation and soil incorporated reseeding will encourage existing desirable turfgrasses and newly planted seedling turfgrasses to fill in these thin areas previously occupied by annual bluegrass. For preemergence control, apply 18 ounces Surflan 0.25 A.S. per 1000 square feet in the late summer or early fall prior to the expected germination of annual bluegrass and broadleaf winter annual weeds.

For application to smaller areas, apply the following amounts of Surflan 0.25 A.S.:

Amount Per 100 sq. ft.	Amount Per 500 sq. ft.	Amount Per 1000 sq. ft.
1 3/4 oz	8 3/4 oz	18 oz

Application Equipment
Apply Surflan 0.25 A.S. evenly over the turfgrass areas without skips, misses, or overlaps. For best results use equipment designed to apply liquid herbicides and insecticides. Calibrate application equipment prior to use, according to the manufacturer's directions. Check frequently to be sure equipment is working properly and distributing spray uniformly.

Surflan 0.25 A.S. is an orange chemical. No marker dyes are needed as this orange characteristic will serve as a marker dye.

Reseeding
Chemicals that effectively control annual weeds may also affect new desirable turfgrass seedlings. Reseeding should be delayed for at least 90-120 days after applying Surflan 0.25 A.S.. When reseeding, it is essential that proper cultural practices such as soil cultivation, irrigation and fertilization be followed. For satisfactory reseeding results after using Surflan 0.25 A.S., the amount of seed used should be increased and equipment designed to place seed in contact with the soil (such as the Rogers Aero Seeder) should be employed.

Noncropland Areas

Surflan 0.25 A.S. plus Roundup and many other labeled herbicides may be used to control undesirable vegetation in noncropland areas such as roadsides, rights-of-way, etc. 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.

Broadcast Application Rates

Labeled Use Site	Length of Control	Surflan 0.25 A.S. (pt/1000 sq ft)	Minimum Time Between Applications (months)	Total Amount Allowed Per Year (pt/1000 sq ft)
Noncropland	2 - 4 months	1.5	2	4.4
	6 -8 months	3	4	8.8
	8 - 12 months	4.4	8	8.8

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 UPL NA Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of UPL NA Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold UPL NA Inc. and Seller harmless for any claims relating to such factors.

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