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AUG - 9 1981
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 62719-112



Surflan* A.S.

A preemergence surface-applied herbicide for the control of most annual grasses and certain broadleaf weeds

Active ingredient:
oryzalin: 3,5-dinitro-*N*⁴, *N*⁴ 40.4%
dipropylsulfarlamide 59.6%
Inert ingredients 59.6%
Contains four pounds of active ingredient per gallon.
See additional precautionary information and First Aid inside the label booklet.

Precautionary Statements

Hazards to Humans and Domestic Animals
Keep Out of Reach of Children
CAUTION

Causes eye irritation. Harmful if swallowed, inhaled, or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Surflan A.S. may cause skin sensitization reactions in certain individuals. Mixer/loader/applicators must wear eye protection and protective clothing such as coveralls, a long-sleeved shirt, shoes, and impermeable gloves when handling this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

First Aid

If in eyes: Flush with plenty of water. Get attention if irritation develops.
If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.
If swallowed: Do not induce vomiting. Call a physician or Poison Control Center, if available. Administer activated charcoal (8-16 heaping teaspoons) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.

Herbicide

If inhaled: Remove individual to fresh air. Get medical attention if breathing difficulty occurs. If not breathing, give artificial respiration, preferably cardiopulmonary resuscitation and get medical attention immediately.

Environmental Hazards

Do not apply directly to water or wetlands. Do not contaminate water when disposing of equipment washwaters. Cover or incorporate soils.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. See label booklet for complete Directions for Use. Read all directions carefully before applying. Shake Well Before Using.

STORAGE AND DISPOSAL

Storage: Store in original container only. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.
Pesticide Disposal: Do not contaminate water, food or feed by storage or disposal. Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.
Container Disposal: Triple rinse for equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Notes: Read the entire label. Use only according to label directions. Before buying or using this product, read "Warning Disclaimer" and "Limitation of Remedies" in the attached label booklet.

In case of an emergency endangering life or property involving this product, call collect 517-638-4400.
Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

PRECAUCION:

Precaucion al usarlo: Si usted no lee rigido, no use este producto hasta que le equista la haya sido explicada empacamento.

EPA Reg. No. 62719-112 EPA Est. 37428-GA-01
20121 PI 3720 AMP

*Trademark of DowElanco
DowElanco • Indianapolis, IN 46886, U.S.A.

Net Contents 2.5 gal



PULL HERE TO OPEN

Surflan^{*}

A.S.

A preemergence surface-applied herbicide for the control of most annual grasses and certain broadleaf weeds

Active ingredient
 metazachlor 3,5-dinitro-N,N'-dimethylsulfanilamide 40.4%
 Inert ingredients 59.6%
 Contains four pounds of active ingredient per gallon

Keep Out of Reach of Children
CAUTION

See additional precautionary information: First Aid and Directions for Use inside the label booklet
 Notice: Read the entire label. Use only as directed to

label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" in the label booklet. In case of an emergency endangering life or property involving this product, call collect 517 636 4400. Agricultural Chemical. Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-112
 EPA Est. 37429 GA-01

20121

PI 3720 AMP

*Trademark of DowElanco
 DowElanco • Indianapolis, IN 46268, U.S.A.

Herbicide

Net Contents **2.5 gal**

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If inhaled: Remove individual to fresh air. Get medical attention if breathing difficulty occurs. If not breathing, give artificial respiration, preferably cardiopulmonary resuscitation and get medical attention immediately.

Environmental Hazards

Do not apply directly to water or wetlands. Do not contaminate water when disposing of equipment washwaters. Cover or incorporate spills.

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.

Shake Well Before Using.

Storage and Disposal

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

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

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

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or incineration, or if allowed by state and local authorities, by burning. If burning, stay out of smoke.

General Information

Surflan A.S. herbicide is a pre-emergence, surface applied herbicide for the control of most turfgrasses and certain broadleaf weeds. Surflan A.S. controls susceptible annual weeds by disrupting plant growth processes during germination. Surflan A.S. may be applied in liquid sprays of water or liquid fertilizer. Surflan A.S. may be tank mixed with other herbicides for control of weeds.

vegetation or improve the spectrum of weeds controlled. Surflan A.S. alone does not control established weeds.

General Use Precautions

Do not graze or feed forage from treated fields or orchards to livestock.

Do not over-apply Surflan A.S. Over-application may result in crop injury or soil residue.

Do not plant any root crop for 12 months following a Surflan A.S. application.

Do not use Surflan A.S. on soils containing more than 5% organic matter.

Apply Surflan A.S. directly to the soil surface in orchards or vineyards.

Carefully follow label directions to avoid poor weed control or crop injury.

Chemigation: See instructions for chemigation in "Application Methods".

Soil Preparation

Optimum herbicidal activity occurs when Surflan A.S. is applied to the soil surface.

Prior to application, existing unwanted vegetation should be destroyed by tillage or use of contact or translocated herbicides.

Crop or weed residues, pruning and trash should be thoroughly mixed into the soil by tillage equipment or removed before treatment. Soil should be in good till and free of clods at the time of application.

Activation and Cultivation

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

NOTES

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Mixing Directions

Surflan A.S. - Alone

Surflan A.S. may be applied in water and most liquid fertilizer materials. Prior to mixing Surflan A.S. in liquid fertilizer, refer to "Testing for Compatibility in Liquid Fertilizers" for test procedures to determine compatibility with the fertilizer product to be used. The combination of Surflan A.S. with solution and suspension-type fertilizers provides annual weed control equal to Surflan A.S. applied in water. Individual state regulations relating to liquid fertilizer mixing, registration, labeling and application are the responsibility of the individual and/or company offering the fertilizer and chemical mixture for sale.

Start with a clean spray tank. Fill the sprayer to $1/3$ to $1/2$ of the required spray volume. Start agitation. Shake the container well and add the correct amount of Surflan A.S., continue agitation and fill spray tank to required spray volume. Maintain continuous agitation from mixing through application.

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

Surflan A.S. - Tank Mix Combinations

Surflan A.S. may be tank mixed with other products and applied with water or more liquid fertilizer materials. Prior to mixing Surflan A.S. and another product in liquid fertilizer, refer to the tank mix product manufacturer's label to determine if application in liquid fertilizer is recommended. Also refer to "Testing for Compatibility in Liquid Fertilizers" for testing procedures to determine tank mix compatibility with the liquid fertilizer product to be used. The combination of Surflan A.S. with solution and suspension-type fertilizers provides annual weed control equal to Surflan A.S. applied in water. Individual state regulations relating to liquid fertilizer mixing, registration, labeling and application are the responsibility of the individual and/or company offering the fertilizer

and chemical mixture for sale. Read and follow all label instructions for each material to be added to the spray tank.

Vigorous continuous agitation is required for all tank mixes. Sprayer pipe agitators generally provide the best agitation in spray tank. 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.

Mixing Order: Fill the spray tank to $3/4$ of the total spray volume required. Start agitation. Add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for dry flowable products.

Add different formulation types in the following order: dry flowables (DF); wettable powders (WP); Surflan A.S. and other aqueous suspensions (S), flowables (F) and liquids (L); solutions (S); and emulsifiable concentrates (EC).

Finish filling spray tank. 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 suspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled materials may be more difficult to resuspend than when originally mixed.

Pre-mixing: When tank mixing, initial mixing and dispersion of certain dry flowable or wettable powder products may be improved by pre-mixing with water (slurrying). Where recommended, follow product label instructions for each material. Adding the slurried material to the spray tank through a 20 to 35 mesh wetting screen will help assure good initial dispersion. Line screens in the tank through a 20 to 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)

Testing for Compatibility in Liquid Fertilizers

Surflan A.S. alone or in combination with other product formulations may not combine properly with some liquid fertilizer materials. Small quantities of such mixtures should always be tested before full-scale mixing. Follow the procedure that follows to determine if a compatibility agent is needed or which available agent performs best in the mixture being applied. Nine compatibility agents listed at the end of this section have been thoroughly tested. Other surfactant materials available may not be formulated for use with liquid fertilizers.

Testing Procedure

1. Add 1 pint of liquid fertilizer to 1 quart glass jar.
2. Add 1 to 4 teaspoonfuls (depending on application rate) of the products to be tank mixed in the liquid fertilizer. Add materials in the order recommended in "Mixing Directions". Mix until evenly dispersed after addition of each formulation. If dry flowable or wettable powder formulations do not disperse well, it may be necessary to slurry the materials in a small amount of water before addition to the liquid fertilizer.
3. Observe the jar for about 10 minutes. If materials rise to the surface and form a thick layer (oil curds) which will not disperse again when agitated, a compatibility agent is needed. If the mixture is easily dispersed to its original state with slight agitation, no compatibility agent is needed, however, good agitation must be provided to maintain dispersion in the spray tank from mixing through application.
4. If the need for a compatibility agent is demonstrated in step 3, it may be tested as follows: Using a clean clear plastic or glass container, start at step 1, above. Add $1/2$ teaspoonful of the compatibility agent to

the liquid fertilizer, mix well, and then repeat steps 2 and 3.

An effective compatibility agent will cause the mixture to remain uniformly mixed with little or no separation or oil rising to the surface for $1/2$ hour or longer. If slight separation occurs: 2 to 3 inversions of container should provide a uniform mixture. If only curds form which will not disperse, try adding additional compatibility agent or test the effectiveness of an alternative compatibility agent using the procedure above. A clean jar should be used for each test.

Compatibility Agents

The phosphate ester-type surfactants listed below are designed for use with liquid fertilizers and can be mixed at rates as low as $1 1/2$ to 2 pints per ton of liquid fertilizer. They usually do not work well as compatibility agents for tank mixes in plain water. Add the compatibility agent just before adding herbicides. Read and follow label directions for the compatibility agent.

1. Sponto 168D (Witco Chemicals Co., Chicago, IL)
2. Compat (Farm Chemicals, Inc., Aberdeen, NC)
Not for use in California
3. Unite (Hopkins Ag Chemical, Madison, WI)
4. T-Mutz 734-2 (Thompson-Hayward Chemical Co., Kansas City, KS)
Not for use in California
5. Rigo Compatibility Agent (Rigo Company, Buckner, KY)
Not for use in California
6. Amoco Spray Mate™ (Amoco Oil Co., Chicago, IL)
Not for use in California
7. Kem-Link (Universal Coop., Minneapolis, MN)
Not for use in California
8. Blendex™ (Helena Chemical, Cayce-West Columbia, SC)
Not for use in California
9. Spray-Aide™ (Miller Chemical and Fertilizer Corp., Hanover, PA)

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Applications Methods

Ground Broadcast Application

Apply Surflan A.S. in a total spray volume of 20 to 40 gallons per acre (broadcast basis), using any properly calibrated low pressure herbicide sprayer that will apply the spray uniformly. Use herbicide nozzle tips and in-line strainers. As the amount of spray volume per acre decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily to insure proper calibration and uniform application. Avoid boom overlaps that will increase rates above those recommended.

Band Application

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

$$\frac{\text{Band Width (inches)}}{\text{Hoe Width (inches)}} \times \frac{\text{Broadcast rate per acre}}{\text{Amount required per acre}}$$

Chemigation

Surflan A.S. may be applied through properly equipped chemigation systems for weed control in fruit and nut orchards or vineyards. Read and follow all label instructions outlined below concerning chemigation before applying Surflan A.S. by this method.

Chemigation Use Precautions: Apply this product only through solid set or hand move systems designed to distribute sprinkler irrigation beneath the tree canopy. Solid set systems utilizing tall rearers for overhead application are excluded, except for dormant season applications of Surflan A.S. Do not apply this product through any other type of irrigation system.

Do not apply Surflan Dry Flowable or Surflan 75W through any type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

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

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Sprinkler Chemigation Directions: The following directions must be followed for all recommended sprinkler irrigation systems (solid set and hand move systems):

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back-flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point that pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump

(e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Surflan A.S. should be injected continuously throughout the chemigation period. The chemigation metering pump should be checked periodically during application to insure proper operation.
9. The injection metering pump must be calibrated as specified by the manufacturer.
10. During chemigation, maintain agitation in supply tank at all times.
11. Surflan A.S. may cause some staining of plastic hoses and tanks.
12. Apply Surflan A.S. in sprinkler irrigation equal to 1/2 to 1 inch of water.

Chemigation System Calibration: Sample calculation for use of Surflan A.S. in a chemigation system:

- Assume, in this example, 35 acres are to be covered by a chemigation treatment.
- Product required, assuming 1 quart per acre is 35 quarts (8.75 gallons).
- Prepare a mixture containing 1 part water and 1 part Surflan A.S. by adding 8.75 gallons of product to the supply tank containing an equal amount of water (total volume = 17.5 gallons).
- Adjust the injection system to deliver 17.5 gallons during the time required to apply 1 inch of water to 35 acres.
- If the irrigation system requires 5 hours to apply 1 inch of water to 35 acres, the injection rate is 3.5 gallons per hour and is calculated as follows:
17.5 gallons/5 hours = 3.5 gallons/hour
[3.5 gallons = 448 fluid ounces (fl oz)]

Proper calibration requires the injection pump to be adjusted to deliver 7.47 fl oz per minute and is calculated as follows:

$$448 \text{ fl oz per hr} / 60 \text{ min per hr} = 7.47 \text{ fl oz/min}$$

Chemigation Mixing Directions: The injection mixture (slurry) with minimum volume may be prepared by adding the required amount of Surflan A.S. to an equal amount of water in the injection tank (ratio Surflan A.S. to water = 1:1). Meter the mixture into the irrigation system during the entire irrigation period. Additional dilution of Surflan A.S. may be necessary for accurate calibration of equipment designed to deliver a larger injection volume per hour. Maintain supply tank agitation throughout the irrigation period.

Undiluted Surflan A.S. should not be injected into chemigation systems.

Weeds and Grasses Controlled in Fruit and Nut Crops and Vineyards

Annual Grasses

Common Name	Scientific Name
Barley, Little	<i>Hordeum pusillum</i>
Barnyardgrass (Watergrass)	<i>Echinochloa crus-galli</i>
Bluegrass, annual (Poa)	<i>Poa annua</i>
Brachiaria (Signalgrass)	<i>Brachiaria spp.</i>
Browntop panicum	<i>Panicum fasciculatum</i>
Crabgrass (Large crabgrass) (Smooth crabgrass)	<i>Digitaria spp.</i>
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Cupgrass	<i>Eriochloa gracilis</i>
Downy brome	<i>Bromus tectorum</i>
Fall panicum (Spreading panicgrass)	<i>Panicum dichotomiflorum</i>
Foxtails (Bottlegrass) (Bristlegrass) (Giant foxtail)	<i>Setaria spp.</i>

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(Green foxtail)
(Pigeongrass)
(Robust foxtail)
(Yellow foxtail)

Gumegrass	<i>Panicum maximum</i>
Johnsongrass	<i>Sorghum halepense</i>
(Seedling only)	
Junglece	<i>Echinochloa colonum</i>
Lovegrass, Mexican	<i>Eragrostis mexicana</i>
Lovegrass, arcuifoliate	<i>Eragrostis arcuifolia</i>
Oat, wild	<i>Avena fatua</i>
Ryegrass, annual (Italian)	<i>Lolium multiflorum</i>
Sandbur, field	<i>Cenchrus incertus</i>
Sprangletop, red	<i>Leptochloa filiformis</i>
Texas panicum (Buffalograss)	<i>Panicum texanum</i>
(Colodograss)	
Witchgrass	<i>Panicum capillare</i>

Annual Broadleaf Weeds

Common Name	Scientific Name
Carpet weed	<i>Mollugo verticillata</i>
Chickweed	<i>Stellaria media</i>
Cudweed	<i>Gnaphalium chilense</i>
Fiddleneck, coast	<i>Amaranthus intermedius</i>
Florida pusley (Florida purslane)	<i>Richardia scabra</i>
(Mexican clover)	
(Pusley)	
Herb	<i>Lamium amplexicaule</i>
Knotweed, prostrate	<i>Polygonum aviculare</i>
Lambsquarters	<i>Chenopodium album</i>
Pigweeds	<i>Amaranthus</i> spp.
(Carelessweed)	
(Prostrate pigweed)	
(Redroot pigweed)	
(Rough pigweed)	
(Smooth pigweed)	
(Spiny pigweed)	
(Tumble pigweed)	
Puncturevine	<i>Tribulus terrestris</i>
Purslane, common	<i>Portulaca oleracea</i>
Rockpurslane, redmaids	<i>Calandrinia caulescens</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>

Surflan A.S. provides partial control or suppression of:

Common Name	Scientific Name
Filaree, redstem	<i>Erodium cicutarium</i>
Filaree, whitestem	<i>Erodium moschatum</i>
Groundsel, common	<i>Senecio vulgaris</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lettuce, prickly	<i>Lactuca scariola</i>
Mallow, common	<i>Malva neglecta</i>
Milkweed, climbing	<i>Sarcostemma cynanchoides</i>
Morningglory, annual	<i>Ipomoea</i> spp.
Mustard, black	<i>Brassica nigra</i>
Mustard, wild	<i>Sinapis arvensis</i>
Nightshade, black	<i>Solanum nigrum</i>
Prickly sida (tearweed)	<i>Sida spinosa</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Ragweed, giant	<i>Ambrosia trifida</i>
Rocket, London	<i>Sisymbrium irio</i>
Smartweed, annual	<i>Polygonum</i> spp.
Sowthistle, annual	<i>Sonchus oleraceus</i>
Spurge, prostrate	<i>Euphorbia humifusa</i>
Spurge, spotted	<i>Euphorbia maculata</i>
Velvetleaf	<i>Abutilon theophrasti</i>

Approved Crops

Fruit and Nut Crops and Vineyards (Nonbearing and Bearing)

Surflan A.S. - Alone
Apply Surflan A.S. to fruit and nut crops and vineyards as a preemergence treatment to control annual grasses and broadleaf weeds listed in "General Information". Surflan A.S. is approved for use on the following crops:

✓ Almond	Grapefruit	Pear
✓ Apple	Kiwi	Pecan
✓ Apricot	Lemon	Pistachio
✓ Avocado	Macadamia nut	Plum
Cherry	Nectarine	Pomegranate
Fig	Olive	Prune
Flirt	Orange	Walnut, English
Grape	Peach	

Small Fruits:
Blackberry Currant Gooseberry
Blueberry Dewberry Loganberry
Boysenberry Elderberry Raspberry
Do not apply Surflan A.S. to lowbush blueberries.

Use Directions: Existing vegetation should be destroyed by tillage or use of a contact or translocated herbicide alone or in tank mix combination with Surflan A.S. To insure tank mix compatibility of Surflan A.S. with contact or translocated herbicides, mix the products together in correct proportions in a small container of water. After mixing, let stand for 5 minutes and check for compatibility. If the combination remains mixed or can be resuspended easily, the mixture is compatible.

Application Methods: Surflan A.S. may be applied in liquid sprays of water or liquid fertilizer and by chemigation. Refer to "General Information" for mixing directions and details on different application methods and use precautions before applying.

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

Broadcast Application Rates

Soil Texture	Length of Control	Surflan A.S. (quarts/acre)
All Soil Textures	Short Term (2-4 months)	2
	Long Term (6-8 months)	4
	(8-12 months)	6

Precautions: Poor weed control may result if directions are not carefully followed. Over application may result in crop injury or excessive soil residue. Apply spray directly to the soil surface of the orchard or vineyard.

Chemigation: Surflan A.S. may be applied through properly equipped chemigation systems for weed control in fruit and nut orchards and vineyards. Refer to "Chemigation" in "General Information" for use directions. Do not apply Surflan A.S. by chemigation unless these use directions are carefully followed.

Apply Surflan A.S. by chemigation prior to weed germination or immediately after existing weeds have been controlled. Control existing unwanted vegetation by tillage or with a contact or translocated herbicide. Use broadcast application rates recommended for Surflan A.S. alone. Apply in sprinkler irrigation equal to 1/2 to 1 inch of water on medium to fine textured or high organic matter soils.

Surflan A.S. - Tank Mix Recommendations

The following products are compatible with Surflan A.S. when used in tank mix combination. Performance and risk of carryover from products used in combination with Surflan A.S. at recommended rates is the same as when each product is used separately.

Follow tank mixing instructions provided in "General Information" when mixing Surflan A.S. with other products.

Users should always consult the manufacturer's label of products to be tank mixed with Surflan A.S. for specific information on use rates, additional weeds controlled, rotational crop restrictions or risk of carryover, special tank mix instructions, additional use directions, precautions and limitations of use.

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Approved Surflan A.S. Tank Mix Combinations:

- Surflan A.S. plus Casoron
- Surflan A.S. plus Goal
- Surflan A.S. plus Goal plus Gramoxone Super
- Surflan A.S. plus Gramoxone Super
- Surflan A.S. plus Hyvar X
- Surflan A.S. plus Karmax
- Surflan A.S. plus Krover I
- Surflan A.S. plus Krover II
- Surflan A.S. plus Princept (almazine)
- Surflan A.S. plus Roundup
- Surflan A.S. plus Sinbar
- Surflan A.S. plus Solicam

Surflan A.S. - Tank Mix Reference Table:

The following table lists approved crops for Surflan A.S. and products recommended for tank mixes with Surflan A.S. (** = Approved Crop) Refer to the table to determine if the herbicides recommended for tank mixing can be applied to your crop. For use on a given crop, two asterisks must be indicated for Surflan A.S. and the tank mix product.

	Surflan A.S.	Casoron	Goal	Hyvar X	Karmax	Krover II	Gramoxone Super	Roundup	Sinbar	Solicam
Almond	**	**	**	—	—	—	**	**	—	**
Apple	**	**	—	—	**	—	**	**	**	**
Apricot	**	—	**	—	—	—	**	—	—	**
Avocado	**	—	—	—	—	—	**	**	—	—
Cherry	**	**	—	—	—	—	**	**	—	**
Fig	**	—	—	—	—	—	**	—	—	—
Filbert	**	**	—	—	—	—	**	**	—	**
Grape	**	**	**	—	**	—	**	**	—	—
Grapefruit	**	—	—	**	**	—	**	**	**	**
Kiwi	**	—	—	—	—	—	—	—	—	—
Lemon	**	—	—	**	**	—	**	**	**	**
Macadamia Nut	**	—	—	—	**	—	—	—	—	—

	Surflan A.S.	Casoron	Goal	Hyvar X	Karmax	Krover II	Gramoxone Super	Roundup	Sinbar	Solicam
Nectarine	**	**	**	—	—	—	**	—	—	**
Olive	**	—	—	—	**	—	**	—	—	—
Orange	**	—	—	**	**	—	**	**	**	**
Peach	**	**	**	—	**	—	**	—	**	**
Pear	**	**	—	—	**	—	**	**	—	**
Pecan	**	**	—	—	**	—	**	**	**	—
Pistachio	**	—	—	—	—	—	—	**	—	—
Plum	**	**	**	—	—	—	**	—	—	**
Pomegranate	**	—	—	—	—	—	—	—	—	—
Prune	**	—	**	—	—	—	**	—	—	**
Walnut, English	**	**	—	—	**	—	**	**	—	**

	Surflan A.S.	Casoron	Goal	Hyvar X	Karmax	Krover II	Gramoxone Super	Roundup	Sinbar	Solicam
Blackberry	**	**	—	—	**	—	**	—	**	—
Blueberry	**	**	—	—	**	—	**	—	**	—
Boysenberry	**	—	—	—	**	—	**	—	**	—
Currents	**	—	—	—	—	—	—	—	—	—
Dewberry	**	—	—	—	**	—	**	—	**	—
Elderberry	**	—	—	—	—	—	—	—	—	—
Gooseberry	**	—	—	—	**	—	**	—	—	—
Loganberry	**	—	—	—	**	—	**	—	**	—
Raspberry	**	**	—	—	**	—	**	—	**	—

Warranty Disclaimer

DowElanco warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below.

DOWELANCO MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of DowElanco or the seller. All such risks shall be assumed by Buyer.

Limitation of Remedies

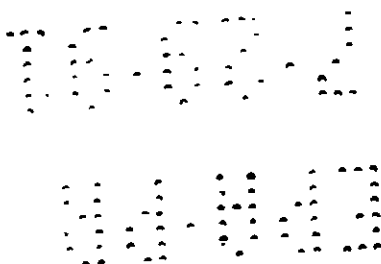
The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at DowElanco's election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

DowElanco shall not be liable for losses or damages resulting from handling or use of this product unless DowElanco is promptly notified of such loss or damage in writing. In no case shall DowElanco be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of DowElanco or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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NOTES

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Surflan For Weed Control in Recently Transplanted or Established Coffee and Papaya

Application Directions: Apply directly to the orchard floor as a preemergence treatment to established plantings of Coffee and Papaya to control annual grasses and broadleaf weeds listed on the Surflan label. Application may be made in liquid sprays of water or liquid fertilizer. Use sufficient spray volume to achieve uniform spray distribution on the soil surface. A single rainfall, sprinkler, or equivalent uniform irrigation of 1/2 to 1 inch is required to activate Surflan and move the herbicide into the weed seed germination zone. Rainfall of 1 inch or more is required to activate Surflan on fine textured or high organic matter soils. If weeds begin to emerge before activation, shallow cultivate to a depth of 1 to 2 inches to destroy emerging weeds and place Surflan in the germination zone.

Soil Preparation: Destroy existing unwanted vegetation using tillage or by applications of postemergence herbicides. Crop residues, weed residues or prunings should be thoroughly mixed into the soil using tillage equipment or removed prior to application. Soil should be in good tilth and free of clods at the time of application.

Broadcast Application Rates:

Soil Texture	Desired Length of Control	Surflan 75WSP		Surflan A.S. (quarts/A)
		(Pounds/A)	(Packets/A)	
All Soil Textures	Short Term: (2-4 months)	2.67	2.0	2.0
	Long Term: (6-8 months)	5.33	4.0	4.0
	(8-12 months)	8.0	6.0	6.0

ACCEPTED

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 62719-112

Precautions:

- Poor weed control may result if directions are not carefully followed. Over-application may result in crop injury or excessive soil residue.
- Do not apply Surflan to newly transplanted coffee or papaya plantings until the soil around plants is well settled by irrigation or rainfall and no cracks are present, otherwise crop injury may occur.
- Do not use on nursery seedbeds.
- Refer to the Surflan label for additional use directions, precautions and limitations before use.

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*Trademark of DowElanco

**Surflan 75WSP (Surflan 75W in Water Soluble Package)

Supplemental Labeling



DowElanco

Quad IV 9002 Purdue Road

P.O. Box 661428

Indianapolis, Indiana 46266-1428 USA

Surflan* A.S. (EPA Reg. No. 62719-112)
Surflan 75WSP (EPA Reg. No. 62719-106)**
Surflan Dry Flowable (EPA Reg. No. 62719-138)
(For Distribution and Use Only in the State of Hawaii)

Surflan For Weed Control in Recently Transplanted or Established Coffee and Papaya

Application Directions: Apply directly to the orchard floor as a preemergence treatment to established plantings of Coffee and Papaya to control annual grasses and broadleaf weeds listed on the Surflan label. Application may be made in liquid sprays of water or liquid fertilizer. Use sufficient spray volume to achieve uniform spray distribution on the soil surface. A single rainfall, sprinkler, or equivalent uniform irrigation of 1/2 to 1 inch is required to activate Surflan and move the herbicide into the weed seed germination zone. Rainfall of 1 inch or more is required to activate Surflan on fine textured or high organic matter soils. If weeds begin to emerge before activation, shallow cultivate to a depth of 1 to 2 inches to destroy emerging weeds and place Surflan in the germination zone.

Soil Preparation: Destroy existing unwanted vegetation using tillage or by applications of postemergence herbicides. Crop residues, weed residues or prunings should be thoroughly mixed into the soil using tillage equipment or removed prior to application. Soil should be in good tilth and free of clods at the time of application.

Broadcast Application Rates:

Soil Texture	Desired Length of Control	Surflan 75WSP		Surflan A.S. (quarts/A)	Surflan Dry Flowable (Pounds/A)
		(Pounds/A)	(Packets/A)		
All Soil Textures	Short Term: (2-4 months)	2.67	2.0	2.0	2.4
	Long Term: (6-8 months)	5.33	4.0	4.0	4.7
	(8-12 months)	8.0	6.0	6.0	7.0

Precautions:

- Poor weed control may result if directions are not carefully followed. Over application may result in crop injury or excessive soil residue.
- Do not apply Surflan to newly transplanted coffee or papaya plantings until the soil around plants is well settled by irrigation or rainfall and no cracks are present, otherwise crop injury may occur.
- Do not use on nursery seedbeds.
- Refer to the Surflan label for additional use directions, precautions and limitations before use.

*Trademark of DowElanco

**Surflan 75WSP (Surflan 75W in Water Soluble Package)

ACCEPTED
 AUG 13
 Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 62719-112