

# ELANCO

ID 5950

Herbicide

# Surflan®

75W

TM

Net Wt. 5 Pounds

A selective preemergence surface-applied herbicide for use in established ornamentals for the control of annual grasses and most broadleaf weeds in:

- Field Grown Roses
- Nursery Stock
- Ornamental Trees
- Ornamental Woody Shrubs
- Drainage Areas Under Greenhouse Benches
- Noncropland Areas
- Christmas Tree Plantations
- Forest Nursery Plantations
- Container Grown Ornamental Plants
- Ground Cover
- Ornamental Plants  
Including around Highway and Industrial Sites

**ACCEPTED**  
FEB - 3 1986  
Under Federal Insecticide, Fungicide and Rodenticide Act, registered for the pesticide registered under EPA Reg No. 1471-102

Active Ingredient  
oryzalin\* (3,5-dinitro-N,N'-dipropylsulfanilamide) 75%  
Inert Ingredients 25%  
Contains 3 3/4 pounds active ingredient per 5 pound bag  
\*Surflan®—the registered trademark for Elanco Products oryzalin

Keep Out of Reach of Children.

## CAUTION

See back panel for additional precautionary statements

EPA Reg No 1471-102

FN 0490

See Literature on Bottom of Bag for Complete Directions for Use

119\*\*\*\*/WP\*\*75/LABELS/US/F490/45

EG 3305 AMB

**Storage:** Store in original container only. In case of leak or spill, contain material and dispose as waste.

## Directions for Use

Read All Directions Carefully  
Before Applying

See Literature on Bottom of Bag for Complete Directions for Use  
It is a violation of Federal Law to use this product in a manner inconsistent with its labeling

## Precautionary Statements

### Hazards to Humans and Domestic Animals

#### CAUTION

~~Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist and contact with skin or eyes. In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation develops. Surlan 75W may cause skin sensitization reactions in certain individuals. Use protective clothing such as coveralls, a long sleeved shirt and impermeable gloves when handling this product.~~

#### Environmental Hazards

Do not apply directly to water or wetland. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or incorporate spills.

### STORAGE AND DISPOSAL

**Pesticide Disposal:** Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Completely empty bag into application equipment. Then 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.

~~The manufacturer makes no warranties, express or implied, concerning the product or its use which extend beyond the description on the label or literature published by Elanco Products Company, and all statements made concerning the product apply only when used as directed. Elanco Products Company, expressly disclaims all liability, except as implied, relating to any use of the product in combination or sequence with any other product not specifically recommended in writing by Elanco Products Company. It used in a combination or sequence, use recommended by Elanco Products Company, the liability of Elanco shall in no manner extend to any damage, loss, or injury not directly caused by the inclusion of the Elanco product in such combination or sequence use.~~

Insert 1

Elanco Products Company • A Division of Eli Lilly and Company  
Indianapolis, IN 46285, U.S.A.

**BEST AVAILABLE COPY**

See Literature on Bottom of Bag  
for Complete Directions for Use.

~~Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing dust or spray mist and contact with skin or eyes.~~

#### STATEMENTS OF PRACTICAL TREATMENT

**If swallowed:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger or, if available, by administering 1 or 2 teaspoons of syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

**If on skin:** Wash with plenty of soap and water. Get medical attention if irritation persists.

**If on eyes:** Flush eyes with plenty of water. Call a physician if irritation persists.

**If inhaled:** Remove individual to fresh air. If breathing difficulty occurs, provide cardiopulmonary resuscitation assistance and get medical attention.

119\*\*\*WP\*\*75/LAREES/US/F49c/46

INSERT 1 -       DISCLAIMER OF WARRANTIES

The manufacturer makes no warranties concerning this product or its use, which extend beyond the description on the label. All other warranties, express or implied, including but not limited to, any implied warranties of merchantability and fitness for a particular purpose, are disclaimed. All statements concerning this product apply only when used as directed.

LIMITATION OF DAMAGES

Elanco's liability, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the return of the amount of the purchase price of the SURFLAN 75W and under no circumstances shall Elanco 'e liable for special, indirect or consequential damages.

(Revised 10/11/85)

ELANCO ID 5950  
SURFLAN® 75W

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

Field Grown Roses	Christmas Tree Plantations
Nursery Stock	Forest Nursery Plantations
Ornamental Trees	Container Grown Ornamental
Ornamental Woody Shrubs	Plants
Drainage Areas Under	Ground Cover
Greenhouse Benches	Ornamental Plants
Noncropland Areas	(Including around Highway and
	Industrial Sites)

Active Ingredient:

oryzalin\* (3,5-dinitro-N<sup>4</sup>,N<sup>4</sup>-dipropylsulfanilamide).....75%

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Contains 3 3/4 pounds active ingredient per 5-pound bag.

EPA Reg. No. 1471-102 FPA Est.

FN 0490

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Elanco Products Company  
A Division of Eli Lilly and Company  
Lilly Corporate Center  
Indianapolis, Indiana 46285

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### GENERAL USE PRECAUTIONS

Apply only to established plantings. Rooted liners should be established in containers two weeks prior to treatment or crop injury may occur.

On container grown ornamentals where weed seed germination continues for extended periods of time, subsequent applications of SURFLAN should not be made any sooner than 90 days or crop injury may occur.

Do not apply SURFLAN 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.

Plant only ornamental species listed on this label into soil treated the previous season with SURFLAN or injury may occur.

### GRASSES CONTROLLED BY SURFLAN ALONE

<u>Common Name</u>	<u>Scientific Name</u>
Barley, little	<u>Hordeum pusillum</u>
Barnyardgrass (watergrass)	<u>Echinochloa crus-galli</u>
Bluegrass, annual	<u>Poa annua</u>
Brachiaria (Signalgrass)	<u>Brachiaria</u> spp.
Crabgrasses	<u>Digitaria</u> spp.
(Large crabgrass)	
(Smooth crabgrass)	
Crowfootgrass	<u>Dactyloctenium aegyptium</u>
Cupgrass, southwestern	<u>Eriochloa gracilis</u>
Foxtails	<u>Setaria</u> spp.
(Bottlegrass)	
(Bristlegrass)	
(Giant foxtail)	
(Green foxtail)	
(Pigeongrass)	
(Robust foxtail)	
(Yellow foxtail)	
Goosegrass	<u>Eleusine indica</u>
(Silver crabgrass)	
Johnsongrass	<u>Sorghum halepense</u>
(Seedling only)	
Junglerice	<u>Echinochloa colonum</u>
Lovegrass, Mexican	<u>Eragrostis mexicana</u>
Lovegrass, orcutt	<u>Eragrostis orcuttiana</u>
Oat, wild	<u>Avena fatua</u>
Panicum, browntop	<u>Panicum fasciculatum</u>
Panicum, fall	<u>Panicum dichotomiflorum</u>
(Spreading panicgrass)	
Panicum, Texas	<u>Panicum texanum</u>
(Buffalograss)	
(Coloradograss)	
Ryegrass, Italian	<u>Lolium multiflorum</u>
Sandbur, field	<u>Cenchrus incertus</u>
Sprangletop, red	<u>Leptochloa filiformis</u>
Witchgrass	<u>Panicum capillare</u>

BROADLEAF WEEDS CONTROLLED BY SURFLAN ALONE

Bittercress	<u>Cardamine spp.</u>
Carpetweed	<u>Mollugo verticillata</u>
Chickweed, common	<u>Stellaria media</u>
Fiddleneck, coast	<u>Amsinckia intermedia</u>
Filaree, redstem	<u>Erodium cicutarium</u>
Filaree, whitestem	<u>Erodium moschatum</u>
Groundsel, common	<u>Senecio vulgaris</u>
Henbit	<u>Lamium amplexicaule</u>
Knotweed, prostrate	<u>Polygonum aviculare</u>
Lambsquarters	<u>Chenopodium album</u>
Pigweeds	<u>Amaranthus spp.</u>
(Carelessweed)	
(Prostrate pigweed)	
(Redroot)	
(Rough pigweed)	
(Spring pigweed)	
(Tumble pigweed)	
Puncturevine	<u>Tribulus terrestris</u>
Purslane, common	<u>Portulaca oleracea</u>
Pusley, Florida	<u>Richardia scabra</u>
(Florida purslane)	
(Mexican clover)	
(Pusley)	
Rocket, London	<u>Sisymbrium irio</u>
Rockpurslane, desert	<u>Calandrinia ciliata</u>
Shepherdspurse	<u>Capsella bursa-pastoris</u>
Spurge, prostrate	<u>Euphorbia humistrata</u>
Woodsorrel, yellow	<u>Oxalis stricta</u>

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:

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

SURFLAN will not control established weeds.

DIRECTIONS FOR USE

SURFLAN is a preemergence, surface applied herbicide for the control of most annual grasses and certain broadleaf weeds.

## SOIL PREPARATION

SURFLAN will not control established weeds. Therefore, areas to be treated should be free of established weeds. Weed residues, prunings or 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.

## MIXING DIRECTIONS

### SURFLAN Alone in Water

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, continue agitation and finish filling the tank. Maintain agitation from mixing through application.

### SURFLAN Tank-Mix in Water

Vigorous, continuous agitation is required for all tank-mixes. Sparger pipe agitators generally provide the best agitation in spray tanks. Avoid stirring or splashing air into the mixture during filling to prevent foaming. To do this, place the end of the fill pipe below the surface of the water in the spray tank. Do not allow the mixture to siphon back into the water source.

Mixing Order: Fill the tank three-fourths (3/4) full with clean water. Start the agitation. Add dry flowables or wettable powders (WP) and agitate until the products are completely dispersed in the water. Allow additional mixing and dispersion time when using dry flowable type products. Add liquids and agitate until completely dispersed in the water. Next add any solution (S) products, mix thoroughly. Add emulsifiable concentrate (EC) products last, agitate and finish filling the tank. Maintain agitation during filling and through application. If spraying and agitation must be stopped before the tank is empty, the materials may settle to the bottom. In this case, it is important to again suspend all of the material in the bottom of the tank before continuing the spray application. A sparger agitator is particularly useful for this purpose. Sometimes it is more difficult to suspend settled material than it is to suspend it originally.

Read and carefully follow all label instructions for each material added to the tank. Premixing dry and flowable formulations with water (slurrying) and pouring the slurry through a 20 or 35 mesh wetting screen in the top of the tank will help assure good initial dispersion in the tank water. Line screens in the tank should be no finer than 50 mesh (100 mesh is finer than 50 mesh).

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 as a directed spray to the soil surface or as an overtop spray. Apply SURFLAN 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.

Aerial Application: Use standard aerial herbicide boom sprayer. Aerial spray equipment should be calibrated to apply the proper amount of SURFLAN alone or in tank-mix combinations in two (2) to 10 gallons of spray mixture per acre. Nozzle screens and in-line strainers should be no finer than 50 mesh for tank-mix combinations. SURFLAN (alone or in tank-mix combinations) mixes readily with water for these concentrate aerial sprays; however, constant vigorous agitation that sweeps the contents from the bottom of the spray tank up into the main body of the liquid is required to maintain a uniform suspension until spray tank is empty. Avoid overlap of spray patterns. Do not apply when weather conditions favor drift from target area.

Chemigation: SURFLAN may be applied for weed control through center pivot and solid set sprinkler irrigation systems. Apply at rates recommended on this label. Prepare mixture using a minimum of one (1) part water to one (1) part product. Injecting a larger volume of a more dilute slurry per hour will assure more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension. Meter slurry into irrigation water during entire period. Apply SURFLAN in a minimum of one-half (1/2) to one (1) inch of irrigation water. The following precautions and recommendations must be followed to chemigate SURFLAN.

1. Apply only through properly maintained irrigation systems having continuously moving laterals and providing uniform distribution of water. Where a system does not provide uniform water distribution such as at the extreme ends of the lateral, around supports, where treated discharge water is released from water-powered motors, or where extreme changes in elevation occur, unacceptable weed control or crop injury may occur.
2. Apply the product only through irrigation systems containing anti-siphon and check valves, to prevent water source contamination and overflow and siphoning of the slurry tank, and interlocking controls between the metering device and the water pump, to insure simultaneous shut-off.
3. Inject the product with a positive displacement pump into the main line ahead of a right angle turn, to insure adequate mixing.
4. Application of more than label recommended quantities of irrigation water per acre may result in decreased product performance by removing the pesticide from the zone of effectiveness.
5. Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution, or when lines containing the product should be dismantled and drained. Use of low trajectory angle sprinklers or drop nozzles will decrease the likelihood of drift.
6. Greater accuracy in pesticide calibration and distribution will be achieved by injecting a larger volume of more dilute slurry per hour.
7. Constant agitation should be maintained in the slurry tank during the entire period of pesticide application.

8. **Sample Calculation:** Twenty (20) acres to be covered by irrigation system.

Recommended rate of 5.33 pounds per acre times 20 acres equals 106.6 pounds of product.

Prepare an injection mixture using a minimum of one (1) part water to one (1) part product. Prepare the mixture with product and water using the entire 106.6 pounds of product in a 100 gallon nurse tank. Finish filling with water. Apply the entire 100 gallons to 20 acres.

Irrigation system requires 4 hours to apply one (1) inch of water to 20 acres.

Injection rate equals 100 gallons divided by 4 hours equals 25 gallons per hour or 53.33 fluid ounces to be injected per minute.

Calibrate injection pump to deliver the herbicide mix into the irrigation system at the rate of 53.33 fluid ounces per minute.

9. **Posting Requirements:** Areas being treated with pesticides applied through irrigation systems must be posted at the usual entrances to the area, at bulletin boards where workers assemble and where the treated area lies adjacent to roads, residential areas, or any other areas such as schools, parks or other public facilities. Posted signs must be legible from 25 feet away and be printed in English and any other appropriate language such as Spanish. Signs must be posted prior to application, during application and for at least one week after application, but may remain in place indefinitely. The sign must indicate the following:

NOTICE

Pesticides are applied in irrigation water in this field. Do not enter this field when the irrigation system is operating. Do not drink, bathe in or play in water or in furrows, puddles, ponds, canals or ditches associated with this irrigation system.

**ACTIVATION AND CULTIVATION**

SURFLAN will remain stable on the soil surface up to 21 days. In the absence of timely rainfall, irrigation can be used to move SURFLAN into soil surface. A one-half inch rain or its equivalent in sprinkler irrigation is necessary to activate SURFLAN. 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 in the weed germination zone. Shallow cultivation (1 to 2 inches) will not reduce herbicidal effectiveness. If SURFLAN is not activated by rainfall, irrigation or cultivation within 21 days of application, erratic weed control may result.

ORNAMENTAL PLANTS

SURFLAN is recommended for use on the following species:

Common Name	Scientific Name
Abelia, Glossy	<u>Abelia grandiflora</u>
Apple, Common	<u>Malus pumila</u>
Arborvitae, Giant	<u>Thuja plicata</u>
Arborvitae, Oriental*	<u>Thuja orientalis</u>
Azalea	<u>Rhododendron spp.</u> cv. "Louisa" cv. "Stewartsonianum"
Barberry, Japanese*	<u>Berberis thunbergi</u>
Begonia, Perpetual	<u>Begonia semperflorens</u>
Bird-of-Paradise	<u>Strelitzia reginae</u>
Bottlebrush, Lemon*	<u>Callistemon citrinus</u>
Boxwood, Common*	<u>Buxus sempervirens</u>
Boxwood, Japanese*	<u>Buxus microphylla</u>
Brushcherry*	<u>Eugenia paniculata</u>
Californialaurel	<u>Umbellularia californica</u>
Capejasmine	<u>Gardenia jasminoides</u>
Capemargold	<u>Cryptostemma calendula</u>
Cherry, Mahaleb	<u>Prunus mahaleb</u>
Cherry, Mazzard (Sweet)	<u>Prunus avium</u>
Chrysanthemum, Florists	<u>Chrysanthemum morifolium</u>
Cleyera, Japanese	<u>Cleyera japonica</u>
Cotoneaster*	<u>Cotoneaster lactea</u>
Cotoneaster, Bearberry*	<u>Cotoneaster dammeri</u>
Cotoneaster, Brightbead	<u>Cotoneaster glaucophylla</u>
Cotoneaster, Cranberry*	<u>Cotoneaster apiculata</u>
Cotoneaster, Pyrenees	<u>Cotoneaster congesta</u>
Cotoneaster, Rock*	<u>Cotoneaster horizontalis</u>
Cotoneaster, Rockspray	<u>Cotoneaster microphylla</u>
Coyotebush, Dwarf	<u>Baccharis pilularis</u>
Crapemyrtle, Common*	<u>Lagerstroemia indica</u>
Cryptomeria, Japanese*	<u>Cryptomeria japonica</u>
Cypress, Italian*	<u>Cupressus sempervirens</u>
Daisy, Trailing African	<u>Osteospermum fruticosum</u>
Douglasfir	<u>Pseudotsuga taxifolia</u>
Eastercactus*	<u>Schlumbergera gaertneri</u>
Escallonia*	<u>Escallonia frades</u>
Eucalyptus, Mealy Stringybark	<u>Eucalyptus cinerea</u>
Eucalyptus, Mulga Ironbark	<u>Eucalyptus sideroxylon</u>
Eucalyptus, Narrow-Leaved	<u>Eucalyptus nicholii</u>
Euonymus*	<u>Euonymus fortunei</u> var. "Vegetus"
Euonymus, Evergreen*	<u>Euonymus japonicus</u>
(Japanese Spindle Tree)	<u>Euonymus alatus</u>
Euonymus, Winged	<u>Chamaecyparis lawsoniana</u>
Falsecypress, Lawson	<u>Fatshedera lizei</u>
Fatshedera*	<u>Abies lasiocarpa</u>
Fir, Alpine	<u>Abies balsamea</u>
Fir, Balsam	<u>Abies fraseri</u>
Fir, Fraser	<u>Abies grandis</u>
Fir, Grand	<u>Abies veitchi</u>
Fir, Veitch	

<u>Common Name</u>	<u>Scientific Name</u>
Fir, White (concolor)	<u>Abies concolor</u>
Firethorn*	<u>Pyracantha fortuneana</u>
Firethorn, Formosa*	<u>Pyracantha koidzumi</u>
Firethorn, Scarlet*	<u>Pyracantha coccinea</u>
Forsythia, Border	<u>Forsythia intermedia</u>
Gazania, Treasureflower	<u>Gazania rigens</u>
Ginkgo*	<u>Ginkgo biloba</u>
Goldenrain Tree	<u>Koelreuteria paniculata</u>
Hibiscus, Chinese	<u>Hibiscus rosa-sinensis</u>
Holly, Chinese*	<u>Ilex cornuta</u>
Holly, Convexleaf Japanese*	<u>Ilex crenata</u> var. "Convexa"
Holly, English	<u>Ilex aquifolium</u>
Holly, Howard Japanese*	<u>Ilex crenata</u> var. "Howardi"
Honeysuckle, Japanese	<u>Lonicera japonica</u>
Hopseedbush, Clammy	<u>Dodonaea viscosa</u>
Ice Plant	<u>Mesembryanthemum crystallinum</u>
Ice Plant, Largeleaf	<u>Mesembryanthemum edule</u>
Ivy, Algerian	<u>Hedera canariensis</u>
Ivy, English	<u>Hedera helix</u>
Jerseytea (redroot)*	<u>Ceanothus americanus</u>
Juniper, Andorra	<u>Juniperus horizontalis</u> var. "Plaumosa"
Juniper, Chinese*	<u>Juniperus chinensis</u>
Juniper, Creeping*	<u>Juniperus horizontalis</u>
Juniper, Greek*	<u>Juniperus excelsa</u>
Juniper, Japgarden*	<u>Juniperus procumbens</u>
Juniper, Rockymountain*	<u>Juniperus scopulorum</u>
Juniper, Savin*	<u>Juniperus sabina</u>
Juniper, Shore*	<u>Juniperus conferta</u>
Juniper, Wilson Chinese*	<u>Juniperus chinensis</u> var. "Wilsonii"
Laurelcherry, Carolina	<u>Prunus caroliniana</u>
Laurelcherry, common	<u>Prunus laurocerasus</u>
Leucothoe, Coast	<u>Leucothoe axillaris</u>
Leucothoe, Drooping	<u>Leucothoe catesbaei</u>
Lilac, Common*	<u>Syringa vulgaris</u>
Lily-of-the-Nile*	<u>Agapanthus africanus</u>
Lilyturf, Bigblue*	<u>Liriope muscari</u>
Magnolia, Southern	<u>Magnolia grandiflora</u>
Manzanita, Stanford	<u>Arctostaphylos stanfordiana</u>
Maple, Bigtooth*	<u>Acer grandidentatum</u>
Marigold, French	<u>Tagetes patula</u>
Mockorange*	<u>Philadelphus</u> spp.
Mountainlaurel	<u>Kalmia latifolia</u>
Myoporum	<u>Myoporum parvifolium</u>
Myrtle*	<u>Myrtus communis</u>
Nandina*	<u>Nandina domestica</u>
Oak, Interior Live*	<u>Quercus wislizeni</u>
Oleander*	<u>Nerium oleander</u>
Oregongrape	<u>Mahonia aquifolium</u>
Osmanthus, Holly (Holly Clive)	<u>Osmanthus ilicifolius</u>
Pansy, Garden	<u>Viola tricolor</u>

<u>Common Name</u>	<u>Scientific Name</u>
Pear, Bartlett	<u>Pyrus communis</u>
Pelargonium, Sprinter Red	<u>Pelargonium hortorum</u>
Periwinkle, Bigleaf	<u>Vinca major</u>
Periwinkle, Common	<u>Vinca minor</u>
Petunia	<u>Petunia grandiflora</u>
Petunia, Red Cascade	<u>Petunia hybrida</u>
Photinia*	<u>Photinia frazerii</u>
Pieris, Japanese*	<u>Pieris japonica</u>
Pine, Austrian	<u>Pinus nigra</u>
Pine, Bishop	<u>Pinus muricata</u>
Pine, Canary*	<u>Pinus canariensis</u>
Pine, Coulter	<u>Pinus coulteri</u>
Pine, Eastern White	<u>Pinus strobus</u>
Pine, Japanese Black*	<u>Pinus thunbergii</u>
Pine, Monterey	<u>Pinus radiata</u>
Pine, Mugho*	<u>Pinus mugo</u> var. "Mughus"
Pine, Scotch (var. Spanish and Nelson)	<u>Pinus sylvestris</u>
Pine, Virginia	<u>Pinus virginiana</u>
Podocarpus, Shrubby Yew*	<u>Podocarpus macrophyllus</u>
Privet, Amur*	<u>Ligustrum amurense</u>
Privet, Glossy*	<u>Ligustrum lucidum</u>
Privet, Golden*	<u>Ligustrum vicaryi</u>
Privet, Japanese*	<u>Ligustrum japonicum</u>
Raphiolepis, India	<u>Raphiolepis indica</u>
Redcedar, Eastern	<u>Juniperus virginiana</u>
Redwood, Giant	<u>Sequoia sempervirens</u>
Rhododendron*	<u>Rhododendron</u> spp. cv. "Chionoides" cv. "Hinodegiri" cv. "PJM" cv. "Rosebud"
Rose	<u>Rosa</u> spp.
Rose, Belinda*	<u>Rosa</u> spp. var. "Belinda"
Rose, Cara-Mia	<u>Rosa</u> spp. var. "Cara-Mia"
Rose-of-Sharon (Shrubalthea)	<u>Hibiscus syriacus</u>
Shrimp Plant*	<u>Beloperone guttata</u>
Snapweed, Sultan	<u>Impatiens sultanii</u>
Spruce, Black	<u>Picea mariana</u>
Spruce, Colorado Blue*	<u>Picea pungens</u> var. "Glauca"
Spruce, Engelmann	<u>Picea engelmannii</u>
Spruce, Norway	<u>Picea abies</u>
Spruce, White	<u>Picea glauca</u>
Starjasmine, Chinese	<u>Trachelospermum jasminoides</u>
Stonecrop	<u>Sedum brevifolium</u>
Sweetgum*	<u>Liquidambar styraciflua</u>
Trumpetvine, Violet*	<u>Clytostoma callistegioides</u>
Viburnum, Laurestinus*	<u>Viburnum tinus</u>
Viburnum, Sandankwa	<u>Viburnum suspensum</u>
Weigela, Oldfashioned	<u>Weigela florida</u>
Wintercreeper, Bigleaf*	<u>Euonymus fortunei</u> var. "Emerald Cushion"
Wintercreeper, Purpleleaf	<u>Euonymus fortunei</u> var. "Coloratus"

<u>Common Name</u>	<u>Scientific Name</u>
Xylosma, Japanese	<u>Xylosma japonica</u>
Yaupon*	<u>Ilex vomitoria</u>
Yew, Japanese	<u>Taxus cuspidata</u>
Yucca, Soaptree*	<u>Yucca elata</u>
Zinnia, Common	<u>Zinnia elegans</u>

\*May be treated with SURFLAN when container grown.

Precaution

Ice Plant: When establishing unrooted Ice Plant on coarse soils in landscape plantings, use only the 2 2/3 pound rate of SURFLAN 75W or crop injury may occur. After the Ice Plant is well established, a second application may be made.

FIELD GROWN FRUIT TREE NURSERY LINERS

SURFLAN is recommended for use on the following species:

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

Small Fruits:

Blackberry	Currant	Gooseberry
Blueberry	Dewberry	Loganberry
Boysenberry	Elderberry	Raspberry

RECOMMENDATIONS-SURFLAN ALONE

SURFLAN is recommended as a broadcast or overtop spray in field grown roses, nursery stock, ornamental trees, ornamental woody shrubs, drainage under greenhouse benches, noncropland areas, Christmas tree plantings, forest nursery plantations, container grown ornamental plants, ground covers and ornamental plants.

**Broadcast Application Rates**

<u>Length of Control</u>	<u>SURFLAN 75W</u>
Short Term Control (2-4 months)	2 2/3 pounds/acre (1 oz. per 1,000 sq. ft.)
Long Term Control (6-8 months)	5 1/3 pounds/acre (2 oz. per 1,000 sq. ft.)
(8-12 months**)	8 pounds/acre (3 oz. per 1,000 sq. ft.)

\*\* Not recommended in ornamental plantings.

**RECOMMENDATIONS-TANK-MIX COMBINATIONS**

**ORNAMENTAL PLANTINGS AND NONCROPLAND AREAS**

Tank-mix combinations of SURFLAN plus Roundup®, Fusilade®, Goal® and Poast® are recommended to control undesirable vegetation in ornamental and noncropland areas. Applied as directed these SURFLAN tank-mixes will provide control of susceptible species listed on the respective labels. Read the product labels for directions, precautions and limitations prior to use.

**SURFLAN/Roundup® Tank-Mix**

Tank-mix combinations of SURFLAN/Roundup will control existing undesirable vegetation. Applied as directed, SURFLAN/Roundup will provide control of susceptible species listed on the respective labels of the two herbicides.

**Broadcast Application Rates**

SURFLAN/Roundup

SURFLAN 75W*		SURFLAN 75W*		Roundup		
Ornamental Plantings		Noncropland Areas		Ounces		
Per 1000 sq. ft.	Pounds Per Acre	Per 1000 sq. ft.	Pounds Per sq. ft.	Existing Annual and Broadleaf Weeds	Per 1000 sq. ft.	Quarts Per Acre
1 - 2	2 2/3 - 5 1/3	1 - 3	2 2/3 - 8	Less than 6" Tall	3/4	1
				More Than 6" Tall	1 1/8	1 1/2
				Existing Perennial Weeds	1 1/2 - 3 3/4	2 - 5

\* For length of control desired see SURFLAN Broadcast Application Rate table on page 12.

**Precaution**

Roundup is not recommended as an over-the-top broadcast spray in ornamentals. Extreme care must be exercised to avoid contact of spray containing Roundup with foliage of desirable turfgrasses, trees, shrubs, or other desirable vegetation since severe damage or destruction may result.

Note: If spraying areas adjacent to desirable plants with Roundup, use a shield made of cardboard, sheet metal or plywood while spraying to help prevent spray from contacting foliage of desirable plants.

**CHRISTMAS TREE PLANTINGS**

Tank-mix combinations of SURFLAN and Princep® 80W or Goal® are recommended as overtop sprays on field grown Christmas tree species. Applied as directed these SURFLAN tank-mixes will provide control of susceptible species listed on the respective labels. Read the product labels for directions, precautions and limitations prior to use.



## INDUSTRIAL SITES

Tank-mix combinations of SURFLAN plus Spike®, Casoron®, Dowpon® 74SP, Hyvar®X, Karmex® (diuron), Krovar® I & II, MSMA, Oust®, Paraquat CL, Princep® (simazine), Sencor®, and Telar®, are recommended as overtop sprays to existing vegetation in industrial areas, utility substations, highway guard rails, sign posts and delineators and other similar industrial sites.

Applied as directed these SURFLAN tank-mixes will provide control of susceptible species listed on the respective labels. Read the product labels for directions, precautions and limitations prior to use.

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## Precautionary Statements

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### Hazards to Human or Domestic Animals

#### Caution

Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing dust or spray mist and contact with skin or eyes.

### STATEMENTS OF PRACTICAL TREATMENT

If swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger or, if available, by administering 1 or 2 teaspoons of syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

If in skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

If on eyes: Flush eyes with plenty of water. Call a physician if irritation persists.

If inhaled: Remove individual to fresh air. If breathing difficulty occurs, provide cardiopulmonary resuscitation assistance and get medical attention.

### Environmental Hazards

Do not apply directly to water or wetlands. Do not contaminate water by cleaning or equipment or disposal of wastes. Cover or incorporate spills.

### Storage and Disposal

Pesticide Disposal: Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then 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.

(Spike® - tebuthiuron, Elanco)  
(Casoron® - dichlobenil, Philips-Duphar)  
(Dowpon® - dalapon, Dow Chemical Company)  
(Fusilade® - fluazifop-butyl, ICI Americas Inc.)  
(Goal® - oxyfluorfen, Rohm and Haas Company)  
(Hyvar® - bromacil, E.I. du Pont de Nemours and Company)  
(Karmex® - diuron, E.I. du Pont de Nemours and Company)  
(Krovar® - I & II - bromacil/diuron, E.I. du Pont De Nemours and Company)  
(Oust® - sulfometuron methyl, E.I. du Pont de Nemours and Company)  
(Poast® - sethoxydim, BASF Wyandotte Corporation)  
(Princep® - simazine, Ciba-Geigy)  
(Roundup® - glyphosate, Monsanto Company)  
(Sencor® - metribuzin, Bayer GmbH)  
(Telar® - chlorsulfuron, E.I. du Pont de Nemours and Company)

Elanco Products Company  
A Division of Eli Lilly and Company  
Lilly Corporate Center  
Indianapolis, Indiana 46285

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