

ELANCO



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

Active ingredient: S-metolachlor (75% wettable powder).
Surflan 75W is a pre-emergence herbicide for the control of most annual grasses and certain broadleaf weeds. It is used on corn, soybeans, sorghum, and other crops. For more information, see the label.

CAUTION: See label for complete directions and restrictions.

EPA Reg. No. 1471-96-AB



June 11, 1976

147-96

**Directions
Enclosed**

Directions for Use

CAUTIONS

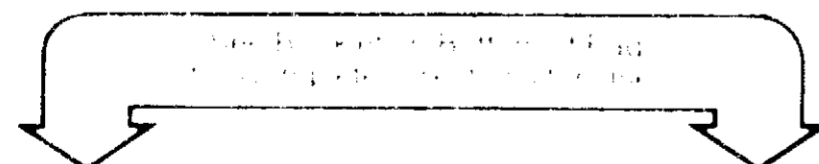
Human

May be harmful if swallowed. If swallowed, use saline catharsis and force-aid intake. If dry material or aqueous suspension gets into eyes, flush with water. Do not contaminate feed or foodstuffs.

Container Disposal Directions

Destroy empty container. Do not reuse.

Elanco Products Company · A Division of Eli Lilly and Company
Indianapolis, IN 46206, U.S.A.



ELANCO

Herbicide

Surflan®

75 W

Complete Directions for Use
Cautions and Precautions
Application Recommendations
First Max. Recommended Rate
June 11, 1976
Eli Lilly and Company
Indianapolis, Indiana 46206
U.S.A.

INDEX

	Page
Activation	10
Application Directions	9
Cultivation	10
Disposal of Containers	3
General Use Precautions	3
Soil Texture:	
Classification	9
Cotton in Texas only	15
Soybeans	10
Tank-Mix Recommendations:	
SURFLAN/Sencor™ for Soybeans	10
SURFLAN/Lorox™ for Soybeans	
SURFLAN/Dyanap® for Soybeans	13
SURFLAN/Klean-Krop® for Soybeans	13
Non-Bearing Trees and Vines in California	14
Weeds and Grasses Controlled	4

The manufacturer makes no warranties, express or implied, concerning this product or its use, which extend beyond the description on the label. The manufacturer, Elanco Products Company, and all statements made concerning this product are valid only when used as directed. Elanco Products Company expressly disclaims all warranties, express or implied, in relation to any use of the product in combination or sequential use with any other product not specifically recommended in writing by Elanco Products Company. If used in a combination or sequential 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 sequential use.

CAUTIONS

Human

Keep out of reach of children. May be harmful if swallowed. If swallowed, use saline catharsis and force fluid intake. If dry material or aqueous suspension gets into eyes, flush with water. Do not contaminate feed or foodstuffs.

Container Disposal Directions

Destroy empty bag. Do not reuse.

caution

Do not feed forage from treated fields to livestock. Poor weed control or crop injury may result if directions are not followed. Over-application may result in crop injury or soil residue. Do not plant any root crop for 12 months following a SURFLAN® application.

WEEDS AND GRASSES CONTROLLED

SURFLAN will not control established weeds

GRASSES CONTROLLED

Barnyardgrass (Watergrass)	(<i>Echinochloa</i> sp.)
Bluegrass, annual** (Poa)	(<i>Poa annua</i>)
Brachiaria (Signalgrass)	(<i>Brachiaria</i> sp.)
Browntop panicum*	(<i>Panicum fasciculatum</i>)
Crabgrasses (Large crabgrass) (Smooth crabgrass)	(<i>Digitaria</i> sp.)
Crowfootgrass	(<i>Dactyloctenium aegyptium</i>)
Cupgrass**	(<i>Eriochloa gracilis</i>)
Fall panicum (Spreading panicgrass)	(<i>Panicum dichotomiflorum</i>)
Foxtails (Bottlegrass) (Bristlegrass) (Giant foxtail) (Green foxtail) (Pigeongrass) (Robust foxtail) (Yellow foxtail)	(<i>Setaria</i> sp.)
Goosegrass (Silver crabgrass) (Silvergrass) (Wiregrass) (Yardgrass)	(<i>Elymus indica</i>)
Johnsongrass (Seeding only)	(<i>Sorghum halepense</i>)
Oat, wild**	(<i>Avena fatua</i>)

** (See Page 10 for special instructions)

Texas Panjoyn*	(<i>Panicum texanum</i>)
(Buffalograss)	
(Coloradograss)	

BROADLEAF WEEDS CONTROLLED

Carpetweed	(<i>Mollugo verticillata</i>)
Chickweed**	(<i>Stellaria media</i>)
Florida pusley (Florida purslane) (Mexican clover) (Pusley)	(<i>Richardia scabra</i>)
Lambsquarters	(<i>Chenopodium album</i>)
Pigweeds (Carelessweed) (Prostrate pigweed) (Redroot) (Rough pigweed) (Spiny pigweed)	(<i>Amaranthus</i> sp.)
Purslane, common	(<i>Portulaca oleracea</i>)
Spurge, prostrate*	(<i>Euphorbia supina</i>)

SURFLAN also provides partial control or suppression of velvetleaf, smartweed, ladythumb, spotted spurge, black nightshade, morningglory, teaweed (prickly sida) and common ragweed.

At the rates used for weed control in trees and vines in California, SURFLAN also provides partial control or suppression of rockpurslane (redmaids)

Weeds controlled in soybeans by the **SURFLAN/Sencor™** tank-mix in addition to those controlled by SURFLAN alone. (see Page 10 for special instructions)

browntop millet	(<i>Panicum fasciculatum</i>)
Jimsonweed	(<i>Datura stramonium</i>)
Prickly sida (Spiny sida) (Teaweed)	(<i>Sida spinosa</i>)

Ragweed, common	(<i>Ambrosia artemisiifolia</i>)
Redweed	(<i>Melochia</i> <i>parchorifolia</i>)
Sesbania, hemp (Coffeebean) (Indigo)	(<i>Sesbania exaltata</i>)
Sicklepod (Coffeeweed)	(<i>Cassia obtusifolia</i>)
Smartweed, annual (Pennsylvania smartweed, Smartweed)	(<i>Polygonum</i> <i>pennsylvanicum</i>)
Velvetleaf (Butterprint) (Buttonweed) (Cottonweed) (Elephant's Ear) (Indian mallow) (Piemarker)	(<i>Abutilon theophrasti</i>)

Cocklebur, morningglory and giant ragweed. Control may be erratic, ranging from poor to excellent depending upon soil temperature, time of germination, depth of seed in the soil and the amount and timing of soil moisture. (See Page 10 for special instructions)

Weeds controlled in soybeans by the **SURFLAN/Lorox™** tank-mix in addition to those controlled by SURFLAN alone. (See Page 12 for special instructions)

Canarygrass	(<i>Phalaris</i> sp.)
Chickweed, common	(<i>Stellaria media</i>)
Galinsoga	(<i>Galinsoga</i> sp.)
Goosefoot, nettlegrass	(<i>Chenopodium murale</i>)

Mustard (Black mustard) (Wild mustard)	(<i>Brassica</i> sp.)
Radish, wild	(<i>Raphanus</i> <i>rapistratum</i>)
Ragweed, Common	(<i>Ambrosia</i> <i>artemisiifolia</i>)
Smartweed, annual (Pennsylvania smartweed, Smartweed)	(<i>Polygonum</i> <i>pennsylvanicum</i>)
Velvetleaf (Butterprint) (Buttonweed) (Cottonweed) (Elephant's Ear) (Indian mallow) (Piemarker)	(<i>Abutilon theophrasti</i>)

Black nightshade, annual morningglory, cocklebur, tea weed (prickly sida), spotted spurge and sicklepod. Control may be erratic, ranging from poor to excellent depending upon soil temperature, time of germination, depth of seed in the soil and the amount and timing of soil moisture. (See Page 12 for special instructions)

Weeds controlled in soybeans by the **SURFLAN/Dyanap** tank-mix or the **SURFLAN/Klean-Krop™** tank-mix in addition to those controlled by SURFLAN alone. (See Page 13 for special instructions)

Cupgrass	(<i>Eriochloa gracilis</i>)
Jobur (Burglass)	(<i>Cenchrus incertus</i>)
Sprangletop	(<i>Leptochloa filiformis</i>)
Stinkgrass Lovegrass	(<i>Eragrostis cilianensis</i>)

(Beggar-lice)	
Bindweed, field (Creeping jenny) (Small morningglory)	(<i>Convolvulus arvensis</i>)
Chickweed	(<i>Stellaria media</i>)
Cocklebur (Clotbur)	(<i>Xanthium pennsylvanicum</i>)
Galinsoga (Quickweed)	(<i>Galinsoga</i> sp.)
Groundcherry (Clammy groundcherry)	(<i>Physalis heterophylla</i>)
Morningglory (Annual morningglory) (Common morningglory) (Ivy leaf morningglory)	(<i>Ipomoea</i> sp.)
Mustard (Black mustard) (Wild mustard)	(<i>Brassica</i> sp.)
Prickly sida (Spiny sida) (Teaweed)	(<i>Sida spinosa</i>)
Ragweed, common	(<i>Ambrosia artemisiifolia</i>)
Shepherdspurse	(<i>Capsella bursa-pastoris</i>)
Velvetleaf (Butterprint) (Buttonweed) (Cottonweed) (Elephant's Ear) (Indian mallow) (Piemaker)	(<i>Abutilon theophrasti</i>)

SURFLAN is a pre-emergence, surface-applied herbicide for the control of most annual grasses and certain broad-leaf weeds.

SOIL TEXTURE GUIDE

Refer to the following guide to determine your soil texture.

Coarse (light)** soils	Sand Loamy sand Sandy loam
Medium soils	Loam Silt loam Silty clay loam* Silt Sandy clay loam*
Fine (heavy)** soils	Clay Clay loam Silty clay loam* Silty clay Sandy clay Sandy clay loam*

*Silty clay loam and sandy clay loam soils are transitional soils and may be classified as either medium or heavy-textured soils. If silty clay loam or sandy clay loam soils are predominately sand or silt, they are usually classified as medium-textured soils; if predominately clay, they are usually classified as fine-textured soils.

**Soil classification nomenclature for light and heavy-textured soils has been changed to coarse and fine-textured soils at the direction of the Environmental Protection Agency. Throughout this label all previous references to light-textured soils has been changed to coarse-textured soils. All previous references to heavy-textured soils has been changed to fine-textured soils. These new descriptions relate more closely to the size of the soil particles in a given classification.

APPLICATION

Fill the spray tank half full of clean water and add the recommended amount of SURFLAN. Mix thoroughly and add water to fill the spray tank.

side sprayer that will spray the spray uniformly. As the amount of water used sprays is increased, the application rate should be increased. For tank application of grasses, use a backpack sprayer with a coarse nozzle and control and uniform application. Apply thoroughly before and during application. Avoid poor overlaps that will increase rates above those recommended.

ACTIVATION AND CULTIVATION

A pre-plant tank mix is necessary to activate SURFLAN when used alone or in a tank-mix combination. If weeds begin to emerge shallow cultivate (2 inches) to destroy existing weeds and place SURFLAN in zone of weed seed germination. If heavy rains pack the soil surface, rotary hoe to break the crust to aid crop emergence. Crops treated with SURFLAN can be shallowly cultivated without loss of activity.

CROP RECOMMENDATIONS

General: These recommendations are given as the broadcast (overall) rates of SURFLAN per acre. For band application, use proportionately less. SURFLAN is not recommended for use on soils containing more than 3 percent organic matter. Only one application of SURFLAN per season should be made.

Soybeans: Apply SURFLAN to the soil surface at planting or within 2 days after planting at a broadcast rate per acre of 1 pound on coarse soils, 1½ pounds on medium soils and 2 pounds on fine soils.

Soybeans - SURFLAN/Sencor™ Tank-Mix:

The SURFLAN/Sencor tank mix effectively controls all the annual grasses and broadleaf weeds listed on the SURFLAN label (See Page 4) plus many additional broad-

Sencor™ Sencor is a TM of the Parent Company of Parbentabren Bayer Laboratories, Inc.

leaf weeds. Coverage and timing of application should vary with conditions of soil and weather. SURFLAN may control weeds in a broadcast or band application depending upon soil temperature, moisture, soil depth and soil moisture and the amount and timing of soil moisture. Control may be improved with timely cultivation. Follow normal SURFLAN procedures for soil preparation. The SURFLAN/Sencor tank mix may be applied within 2 days after planting, but before crop emergence with any low-pressure herbicide sprayer equipped with herbicide tips and screens no finer than 50 mesh in nozzle and in line strainers. Do not spray over top of emerged soybeans. Seed must be planted at least 1 inch below the soil surface.

Broadcast Rates Per Acre

	SURFLAN 75 W	Sencor 50 W.P.
Medium soils	1½ pounds	¾ pound
Fine soils	1½ - 2 pounds	1 pound

Do not use the SURFLAN/Sencor tank mix on soils containing more than 3% organic matter.

Special Precaution: Poor weed control and/or crop injury may result if directions are not followed. Over application may result in crop injury and/or soil residue. Do not use treated vines for feed or forage. Do not contaminate any body of water nor apply to any area not specified on the label. Do not allow sprays to drift onto adjacent desirable plants. Do not plant any crop other than soybeans within 4 months after application.

Caution: Sencor may be harmful if swallowed or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing

if rainfall is predicted. Do not use if rain is predicted to occur within 24 hours of application. Do not use if rain is predicted to occur within 24 hours of application.

See the SURFLAN product label for more information.

Seedlings - SURFLAN/Lorox Tank Mix

The use of SURFLAN/Lorox tank mix is only with seedlings of the following weeds: Field bindweed, black nightshade, blackberry, red root, white root, yellow root, blue root, red root, and white root. Control of black nightshade, blue root, yellow root, red root, and white root is dependent on timing of application. Control of field bindweed, blackberry, red root, and white root is dependent on timing of application. Control of red root, blackberry, and blue root may be dependent on timing of application and depth of seed in the soil and soil conditions. The use of SURFLAN/Lorox tank mix is only with seedlings of the following weeds: Field bindweed, black nightshade, blackberry, red root, white root, yellow root, blue root, and white root. The SURFLAN/Lorox tank mix may be applied within 7 days after a tank mix application. Do not spray with a backpack sprayer.

Broadcast Rates Per Acre

	SURFLAN 75 W	Lorox 50 W.P.
Onion fields	2 1/2 pounds	1 to 1 1/2 pounds*
Mustard fields	2 pounds	1 pound
Field crops	1 1/2 - 2 1/2 pounds	7/8 pound

* Apply rate. The more you use the better the results. Do not use in sand or gravel.

See the SURFLAN product label for more information.

Do not use the SURFLAN/Lorox tank mix on sand or gravel.

Special Precaution: Do not use SURFLAN/Lorox tank mix on sand or gravel. Do not use SURFLAN/Lorox tank mix on sand or gravel. Do not use SURFLAN/Lorox tank mix on sand or gravel. Do not use SURFLAN/Lorox tank mix on sand or gravel. Do not use SURFLAN/Lorox tank mix on sand or gravel.

Caution: Do not use the SURFLAN/Lorox tank mix on sand or gravel. Do not use SURFLAN/Lorox tank mix on sand or gravel. Do not use SURFLAN/Lorox tank mix on sand or gravel.

Destroy empty bags for both products. Do not reuse.

Seeds - SURFLAN/Dyanap Tank Mix or SURFLAN/Klean-Krop Tank Mix

The SURFLAN/Dyanap tank mix is only with seedlings of the following weeds: Field bindweed, black nightshade, blackberry, red root, white root, yellow root, blue root, and white root. The SURFLAN/Klean-Krop tank mix is only with seedlings of the following weeds: Field bindweed, black nightshade, blackberry, red root, white root, yellow root, blue root, and white root. The SURFLAN/Dyanap tank mix may be applied within 7 days after a tank mix application. Do not spray with a backpack sprayer.

See the SURFLAN product label for more information.

no finer than 50 mesh in nozzle and in-line strainers. Do not spray over top of emerged soybeans.

Broadcast Rates Per Acre

	SURFLAN* 75 W Pounds Per Acre	Dyanap 2+1S or Klean-Krop Quarts Per Acre
Coarse soils	2 1/2 pounds	6 quarts
Medium soils	1 1/2 pounds	6 quarts
Fine soils	1 1/3 pounds	6 quarts

Do not apply the SURFLAN/Dyanap tank-mix or SURFLAN/Klean-Krop tank-mix to any soils with over 3% organic matter. Do not use on silt loam soils of extremely fine texture.

Special Precaution: Poor weed control and/or crop injury may result if directions are not followed. Over-application may result in crop injury and/or soil residue. Do not use treated vines for feed or forage.

Caution: Please read the Dyanap or Klean-Krop labels carefully for cautions, precautions and special precautions before applying these products.

Destroy empty containers for all products. Do not reuse.

TREES AND VINEYARDS—in California only:

For Non-Bearing Plantings of Vineyards, Almond, Apple, sweet Cheery, Orange, Peach, Pear, Pistachio, Plum, Prune and Walnut trees apply SURFLAN at the following broadcast rates per acre:

Short-term control (4 months)—For all soil textures, a 2 3/4 pounds to control barnyardgrass, annual bluegrass, brachiaria, crabgrasses, crowfootgrass, cupgrass, foxtails, goosegrass, seedling johnsongrass, wild oat, fall panicum, carpetweed, chickweed, Florida pusley, lambsquarters,

pigweeds and common purslane. Long-term control (to 3 months). For all soil textures, apply 5 1/2 pounds to control barnyardgrass, annual bluegrass, crabgrasses, cupgrass, wild oat, chickweed, lambsquarters, pigweeds and common purslane.

Rockpurslane (redmaid), shepherdspurse, black night shade, common ragweed, morningglory, smartweed, tea weed (prickly sida) and velvet leaf—These weeds may be partially controlled (or suppressed) depending upon soil temperature, time of germination, depth of weed seed in the soil, amount and timing of soil moisture.

Soil Preparation—Areas to be treated should be free of established weeds. Remove or thoroughly mix trash (weed residues, prunings, etc.) into the soil before applying SURFLAN. Work the soil sufficiently to be in good tilth, firm and free of clods at the time of application.

Application—Apply the spray directly to the orchard or vineyard floor. Do not allow the spray to contact the leaves, branches or trunks of trees or vines.

Precautions: Do not apply to newly transplanted fruit and nut trees or vineyards. Do not apply more than one application per growing season.

COTTON—in Texas only:

Apply SURFLAN to the soil surface at planting or within 2 days after planting at a broadcast rate of 1 1/2 pounds on medium soils and 2 pounds on fine soils.

At the recommended rates for fine-textured soils, SURFLAN will also control browntop panicum, Texas panicum and prostrate stargrass.

Precaution: Do not graze treated fields. SURFLAN is not applied at or within 2 days after planting and may and poor weed control may result.