GROUP 3 HERBICIDE

Surflan®XL 2G™

Contains or vzalin, the active ingredient in Surflan® herbicides. A selective preemergence herbicide for control of certain annual grasses and broadleaf weeds in:

- Container grown ornamentals
- Landscape ornamentals
- Nursery stock
- Ground covers
- Established flowers
- Ornamental bulbs
- Non-bearing fruit and nut trees and non-bearing vinevards
- Non-bearing berries
- Christmas tree plantations
- Non-cropland
- Established tall fescue and warm season turf (including bahiagrass, bermudagrass, buffalograss, centipedegrass, St. Augustinegrass, and zoysiagrass)

Active Ingredients:

benefin: N-butyl-N-ethyl- α , α , α -trifluoro-2,	
6-dinitro-p-toluidine	1.0%
oryzalin: 3,5-dinitro-N ⁴ ,N ⁴ -dipropylsulfanilamide	1.0%
Other Ingredients	98.0%
Total	100.0%
Contains 1 may and pative in availant may 50 may and bear	

Contains 1 pound active ingredient per 50 pound bag

KEEP OUT OF REACH OF CHILDREN CAUTION PRECAUCION

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

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 eye. 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 emergency medical assistance, call the Rocky Mountain Poison Control Center at 1-866-673-6671.

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

Notice: Read the entire label. Use only according to label directions. Before using this product, read the Conditions of Sale and Limitation of Warranty and Liability at end of label booklet. If terms are unacceptable, return at once unopened.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 70506-45 EPA Est. No. 5905-IA-01

Net Contents: 50 lbs.



United Phosphorus, Inc.

630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 1-800-438-6071 • www.upi-usa.com

Precautionary Statements Hazards to Humans and Domestic Animals CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE)

Applicators, loaders and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

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

User Safety Recommendations

Users should:

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

Environmental Hazards

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

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons or pets, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours. Exception: If the product is soil-injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: Do not enter or allow other people or pets to enter the treated area until dusts have settled. If watering-in is required after the application, except for those people involved in the watering-in, do not enter or allow other people or pets to enter the treated areas until the watering-in is complete and the surface is dry.

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal. **Pesticide Storage:** Store in original container only. In case of leak or spill, contain material 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 Disposal: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

General Information

Surflan XL 2G herbicide is a preemergence herbicide for control of certain annual grasses and broadleaf weeds in container and landscape ornamentals, nursery stock, ground covers, established tall fescue and warm season turf, established flowers, ornamental bulbs, non-bearing fruit and nut trees and non-bearing vineyards, non-bearing berries, Christmas tree plantations, non-cropland and established tall fescue and warm season turf (including bahiagrass, bermudagrass, buffalograss, centipedegrass, St. Augustinegrass, and zoysiagrass). Apply Surflan XL 2G prior to germination of target weeds or immediately after cultivation. Length of weed control will vary with rate of Surflan XL 2G applied, weed population, potting media or soil conditions, temperature, watering regime, and other factors. Following application, user should monitor and observe level of weed control over time to determine when additional applications may be needed.

General Use Precautions and Restrictions Do not aerially apply this product.

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

<u>Landscape and field grown ornamentals:</u> maximum number of applications per year is 2.

<u>Ornamental bulbs:</u> for fall application to coarse soils – maximum number of applications per year is 2.

<u>Ornamental bulbs:</u> applications February through March, all soils – maximum number of applications per year is 3.

<u>Christmas tree plantations:</u> maximum number of applications per year is 2.

Noncrop areas: maximum number of applications per year is 2. Surflan XL 2G does not control established weeds. Existing weeds should be controlled by cultivation or with postemergence herbicides. Weed residues, prunings and trash should be removed or thoroughly mixed into soil prior to treatment. Soil should be in good condition and free of clods at the time of application. When applied to turf, this product must be watered in as soon as possible after application to dissolve the granules. A single rainfall or irrigation of 1/2 inch or more is required after product application.

For other applications, a single rainfall or sprinkler irrigation of 0.5 inches or more, or flood irrigation is required to activate Surflan XL 2G. If rainfall or irrigation has not occurred within 21 days of application and tillage is possible, Surflan XL 2G may be activated using cultivation equipment capable of uniformly mixing the herbicide into the upper 1-2 inches of soil. Failure to activate Surflan XL 2G may result in erratic weed control. Do not apply when wind conditions favor drift of Surflan XL 2G granules from the target area.

Users who wish to use Surflan XL 2G on plant species not recommended on this label may determine the suitability for such uses by treating a small number of such plants at a recommended rate. Prior to treatment of larger areas, the treated plants should be observed for any sign of herbicidal injury during 30 to 60 days of normal growing conditions to determine if the treatment is non-injurious to the target plant species. The user assumes responsibility for any plant damage or other liability resulting from use of Surflan XL 2G on plant species not recommended on this label.

Application Directions

Apply Surflan XL 2G using a drop or rotary-type spreader designed to apply granular herbicides or insecticides. Calibrate application equipment prior to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or crop injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first.

Application Techniques for Applying Surflan XL 2G

- When using a drop-type spreader, a splashboard mounted under the hopper will provide more even granule distribution.
- A chain fastened to the side of the spreader and allowed to drag on the soil surface can be used to mark the edge of the treated swath and help prevent skips or overlaps.
- For treating smaller areas or rows of nursery stock or ornamental beds, a hand held or push-type rotary applicator such as a whirlybird or cyclone unit is recommended. For hand held units, walk and turn the crank at a constant rate of speed.
- A shaker-type applicator made from a small container with holes punched in the bottom is recommended for small, difficult to treat areas. Carefully measure the amount of product needed to avoid over-application.

Approved Uses

Established[†] Container Grown Ornamentals, Established Tall Fescue and Warm Season Turfgrasses, Landscape Ornamentals, Nursery Stock, Ground Covers, Flowers, Ornamental Bulbs, Non-bearing Fruit and Nut Trees and Non-bearing Vineyards, Non-bearing Berries, Christmas Tree Plantations, and Non-cropland

Surflan XL 2G is recommended as a preemergence treatment for control of certain annual grasses and broadleaf weeds in container grown ornamentals, landscape ornamentals, nursery stock, ground covers, established tall fescue, warm season turfgrasses, established flowers, ornamental bulbs, non-bearing fruit and nut trees and non-bearing vineyards, non-bearing berries, Christmas tree plantations, and non-cropland. Apply Surflan XL 2G prior to germination of target weeds, or immediately after cultivation.

[†]**Definition of established plantings:** Apply only to established plantings. Established plants are defined as those that have been transplanted into their final growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation. Do not apply to seedbeds or seedling transplant beds.

Broadcast Application Rates

	Surflan XL 2G		Minimum Time Between	Total Amount Allowed
Labeled Use Site	(lb./acre)	(lb./1,000 sq. ft.)		Per Year (lb./acre)
Landscape Ornamentals	200	4.6	2	400
Field-grown and container- grown ornamentals	300	6.9	4	600

Note: Refer to the "General Information" section of this label for general use precautions and information on application.

Special Use Precautions

To avoid possible plant injury, do not apply Surflan XL 2G to:

- plants or areas in greenhouses or other enclosed structures.
- plants that will bear fruits, berries or nuts within 12 months of application.
- nursery seedbeds or forest or Christmas tree seedling transplant beds.
- unrooted liners or cuttings that have been planted in pots for the first time.
- pots less than four inches wide.
- ground covers until they are established and well rooted.
- ornamental plantings where the likelihood of runoff onto lawn areas containing dichondra or cool season turfgrass species exists.
- Do not apply Surflan XL 2G to the following plant species or injury may occur:

Begonia spp. (begonia)

Coleus hybridus (coleus)

Deutzia gracilis (slender deutzia)

Pseudotsuga menziesii (Douglas-fir)

Thuja occidentalis 'Techny' (Techny arborvitae)

Tsuga canadensis (eastern hemlock)

Ice Plant: When establishing unrooted ice plant (*Mesembryanthemum crystallinum* and *Carpobrotus edulis*) on coarse soils, do not exceed the 200 lbs./acre rate of Surflan XL 2G or crop injury may occur. After the ice plant is well established, a second application may be made.

Unlisted plant species: Users who wish to use Surflan XL 2G on plant species not recommended on this label may determine the suitability for such uses by treating a small number of such plants at a recommended rate. Prior to treatment of larger areas, the treated plants should be observed for any sign of herbicidal injury during 30 to 60 days of normal growing conditions to determine if the treatment is non-injurious to the target plant species. The user assumes responsibility for any plant damage or other liability resulting from use of Surflan XL 2G on plant species not recommended on this label.

Weeds Controlled or Suppressed by Surflan XL 2G

Weeds controlled when Surflan XL 2G is applied at a rate of 200 to 300 pounds per acre (4.6 to 6.9 pounds per 1,000 sq. ft.).

Annual Grasses

Common Name	Scientific Name
barley, little	Hordeum pusillum
barnyardgrass	Echinochloa crus-galli
bluegrass, annual	Poa annua
crabgrass	Digitaria spp.
crowfootgrass	Dactyloctenium aegyptium
cupgrass, southwestern	Eriochloa gracilis
foxtail	Setaria spp.
goosegrass	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	Panicum dichotomiflorum
panicum, Texas	Panicum texanum
ryegrass, Italian	Lolium multiflorum
sandbur, field	Cenchrus incertus
signalgrass	Brachiaria spp.
sprangletop, red	Leptochloa filiformis
witchgrass	Panicum capillare

Broadleaf Weeds

Common Name Scientific Name

bittercress Cardamine oligosperma carpetweed Mollugo verticillata Stellaria media chickweed, common fiddleneck, coast Amsinckia intermedia filaree, redstem Erodium cicutarium filaree, whitestem Erodium moschatum groundsel, common Senecio vulgaris Lamium amplexicaule knotweed, prostrate Polygonum aviculare lambsquarters, common Chenopodium album pigweed Amaranthus spp. puncturevine Tribulus terrestris purslane, common Portulaca oleracea pusley, Florida Richardia scabra Sisymbrium irio rocket, London rockpurslane, desert Calandrinia ciliata Capsella bursa-pastoris shepherdspurse Euphorbia humistrata spurge, prostrate Oxalis stricta woodsorrel, yellow

In addition to the weeds controlled, the following weeds will be partially controlled or suppressed at 200 to 300 pounds per acre (4.6 to 6.9 pounds per 1,000 sq ft).

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

Surflan XL 2G May Be Used On The Following Established Plant Species: (Note limitations on recommended treatment methods.)

Trees

Scientific Name/ Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Abies balsamea Balsam fir	F
Abies concolor White fir	F
Abies fraseri Fraser fir	F
Abies grandis Grand fir	F
Abies lasiocarpa Alpine fir	F
Abies veitchi Veitch fir	F
Abutilon hybridum Albus flowering maple Luteus flowering maple Roseus flowering maple Tangerine flowering maple Vesuvius red flowering maple	F F F F
Acer spp. maple	F
Arecastrum romanzoffianum Queen palm	F
Betula papyrifera Paper birch	F
Betula nigra River birch	F
Betula pendula White birch	F
Bucida buceras Black olive	F

Trees (continued)

Scientific Name/ Common Name	C = Container Grown F = Field Grown
Ceratonia siliqua Carob	
Cercidium floridum Blue palo verde	F
Cercis canadensis Redbud	C,F
Chamaecyparis lawsoniana Lawson falsecypress	F
Chamaecyparis obtusa spp. Filicoides-fernspray cypress Gracilis-slender Hinoki cypress	F F
Chamaecyparis pisifera Sawara-false cypress Squarrosa-moss cypress	F F
Chamaedorea cataractarum Cat palm	F
Chamaedorea costaricana Palm	F
Chamaedorea elegans Parlor palm	F
Cornus florida Flowering dogwood	F
Crupaniopsis anacardioides Carrot wood	F
Cryptomeria japonica Japanese cryptomeria	C,F
Cupressus glabra Arizona cypress	C,F
Cupressus sempervirens Italian cypress	C,F
Elaeagnus angustifolia Russian olive	C,F
Eucalyptus cinerea Mealy eucalyptus Silver dollar eucalyptus	F F
Eucalyptus camaldulensis Red gum eucalyptus	F
Eucalyptus nicholii Narrow-leaved eucalyptus	F
Eucalyptus sideroxylon Red ironbark eucalyptus	F
Ficus benjamina Ficus	F
Fraxinus spp. Ash	F
Ginkgo biloba Maidenhair tree	C,F
Gleditsia triacanthos Honey locust	F
Heteromeles arbutiflora Toyon	F
Juniperus virginiana Eastern redcedar	F
Kalmia latifolia Mountain laurel	F
Koelreuteria paniculata goldenrain tree	F

Recommended

Treatment Method:

Trees (continued)

Trees (continued)

Scientific Name/ Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown	Scientific Name/ Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Liquidambar styraciflua		Tilia cordata	
American sweet gum Magnolia grandiflora	C,F	Littleleaf linden Thuja plicata	C,F
Southern magnolia	F	Western redcedar	F
<i>Malu</i> s spp. Crabapple	F	Ulmus parvifolia Chinese Elm	F
Morus alba White mulberry	F	<i>Umbellularia californica</i> California laurel	F
<i>Olea euripaea</i> Olive	F	<i>Washingtonia robusta</i> Mexican fan palm	F
Picea abies		Ornamental Shrubs	
Norway spruce	F	omanicital om abs	Recommended
Picea engelmanni Engelmann spruce	F		Treatment Method:
Picea glauca	F	Scientific Name/ Common Name	C = Container Grown F = Field Grown
Conica-dwarf Alberta spruce White spruce	F	Abelia grandiflora	
Picea mariana		Glossy abelia	F
Black spruce Picea pungens spp.	F	Acacia redolens Prostrate acacia	F
Glauca-Colorado blue spruce	F	Agave americana	_
Hoopsii-Hoop's blue spruce	F F	Century plant	F
Koster-Koster blue spruce Pinus spp.	Г	Agave macroculmis Agave	F
Pine Platanus occidentalis	C,F	Arctostaphylos stanfordiana Stanford manzanita	F
American sycamore	F	Astilbe chinensis	
Platanus racemosa		False spirea	C,F
California sycamore	F	Baccharis pilularis	_
Podocarpus spp. Podocarpus	F	Coyotebush Berberis thunbergii	F
Populus deltoides		Atropurea-Redleaf Japanese barberry	
Cottonwood	F	Aurea golden Japanese barberry Crimson pygmy barberry	C,F C,F
Prunus caroliniana Carolina laurelcherry	F	Bougainvillea spp.	0,1
Prunus laurocerasus	'	Barbara Karst	F
English laurelcherry	F	California Gold	F
Prunus mahaleb		Scarlet O'Hara Texas Dawn	F F
Mahaleb cherry	F	Buxus microphylla	1
Prunus yedoensis Yoshino flowering cherry	F	Japonica-Japanese boxwood Littleleaf boxwood	C,F F
Quercus spp. Oak	C,F	Buxus sempervirens	
Salix babylonica	0,1	Common boxwood	C,F
Babylon weeping willow	F	Callistemon citrinus	0.5
Corkscrew willow	F	Lemon bottlebrush Ceanothus spp.	C,F
Schinus molle	_	Wild lilac	C,F
California pepper tree Sequoiadendron giganteum	F	Chamaecyparis obtusa spp.	
Giant sequoia	F	Kosteri cypress	F
Sequoia sempervirens		Nana-dwarf Hinoki cypress Torulosa cypress	F F
Coast redwood	F	Chamaecyparis pisifera	•
Swietenia mahogani	F	Filifera-thread cypress	F
Mahogany Tabebuia caraiba	Г	Squarrosa minima-dwarf moss cypress	F
Yellow tab	F	Chrysalidocarpus lutescens Areca palm	F

Ornamental Shrubs (continued)

Ornamental Shrubs (continued)

Scientific Name/ Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown	Scientific Name/ Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Cleyera japonica		Forsythia intermedia	
Japanese cleyera	C,F	Forsythia	F
Cotoneaster adpressus Praecox-early cotoneaster	F	Gardenia jasminoides Gardenia	C,F
Cotoneaster apiculatus Cranberry cotoneaster	C,F	Genista pilosa Woadwaxen	F
Cotoneaster buxifolius	- ,.	Hibiscus rosa-sinensis	·
Brightbead cotoneaster	F	Chinese hibiscus	F
Cotoneaster congestus Pyrenees cotoneaster	F	Ross Estey hibiscus Hibiscus syriacus	F
Cotoneaster dammeri Bearberry cotoneaster	C,F	Rose of Sharon, Red Bird Rose of Sharon, Red Heart	F F
Cotoneaster himalayan	О,Г	Rose of Sharon, Woodbridge	F
Himalayan cotoneaster Cotoneaster horizontalis	F	Hypericum spp. St. Johnswort	F
Rock cotoneaster	C,F	llex aquifolium	
Cotoneaster lacteus		Balkans holly	F
Parney cotoneaster	C,F	English holly Gold coast holly	F F
Cotoneaster microphyllus Rockspray cotoneaster	F	Ilex aquipernyi San Jose holly	C,F
Cornus alba Sibirica-Siberian dogwood	F	llex cornuta	O ,1
Cornus florida	Г	Chinese holly	C,F
Flowering dogwood	F	Dwarf burford holly	C,F
Cornus kousa		Ilex crenata Convexa holly	C,F
Kousa dogwood	C,F	Compacta-dwarf Japanese holly	C,F
Cornus stolonifera Flaviramea-yellowtwig dogwood	F	Helleri-Heller's Japanese holly Japanese holly	C,F C,F
Cryptomeria japonica Japanese cryptomeria	C,F	Ilex glabra Nordica-inkberry holly	F
Cytisus praecox	_	Ilex meserveae	
Holandia-warminster broom	F	Blue girl holly	F
Cytisus scoparius Lena-Scotch broom	F	Blue boy holly Ebony magic holly	F F
Dasylirion wheeleri		llex vomitoria	·
Desert spoon sotol	F	Nana-dwarf yaupon holly	C,F
Deutzia crenata Nakiana dwarf deutzia	F	Pendula-weeping yaupon holly Yaupon holly	C,F C,F
Dodonea viscosa	'	Juniperus spp.	O ,1
Hopseed bush	F	Juniper	C,F
Escallonia exoniensis Escallonia	C,F	Justicia brandegeana Shrimp plant	C,F
Euonymus alata Winged euonymus	F	Justicia spicigera Mexican honeysuckle	F
Euonymus fortunei		Lagerstroemia indica	
Canadale gold euonymus	C,F	Crape myrtle	C,F
Emerald'n gold euonymus Stringybark euonymus	C,F C,F	Leucothoe axillaris Coast leucothoe	F
Wintercreeper	C,F	Leucothoe fontanesiana	•
Euonymus japonica	0.5	Drooping leucothoe	F
Evergreen euonymus Silver king euonymus	C,F F	Ligustrum amurense	0.5
Euonymus kiautschovica	•	Amur privet Ligustrum japonicum	C,F
Spreading euonymus	F	Japanese privet	C,F
Fatshedera lizei	C,F	Yellow tip ligustrum	C,F
Fatshedera	О, Г		

Ornamental Shrubs (continued)

Ornamental Shrubs (continued)

Ligustrum texanum Wax leaf privet Howardi privet F Howardi privet F Podocarpus macrophyllus Yewpine C,F Glossy privet C,F California privet F Potentilla fruticosa Ligustrum vicaryi Plumbago ariculata Blue cape plumbago F Podocarpus macrophyllus Yewpine C,F Potentilla fragiformis Cinquefoil F Co,F Potentilla fruticosa Cinquefoil C,F	
Wax leaf privet F Blue cape plumbago F Howardi privet F Podocarpus macrophyllus Ligustrum lucidum Yewpine C,F Glossy privet C,F Potentilla fragiformis Ligustrum ovalifolium Cinquefoil F California privet F Potentilla fruticosa	
Ligustrum lucidum Glossy privet C,F Potentilla fragiformis Cinquefoil California privet F Potentilla fruticosa F	
Ligustrum lucidumYewpineC,FGlossy privetC,FPotentilla fragiformisLigustrum ovalifoliumCinquefoilFCalifornia privetFPotentilla fruticosa	
Ligustrum ovalifolium Cinquefoil F California privet F Potentilla fruticosa	
California privet F Potentilla fruticosa	
1 Storting Hadood	
Liquistrum vicarvi Cinquefoil C.F.	
Vicary golden privet C,F Protea neriifolia	
Livistona chinensis Protea F	
Chinese fountain palm F Pyracantha coccinea	
Lonicera fragrantissima Scarlet forethorn C,F	
Winter honeysuckle F Pyracantha fortuneana	
Lalendel Monrovia pyracantha C,F	
Flowering woodbine F Monon pyracantha C,F	
Serotina woodbine F Red elf hybrid pyracantha C,F	
Lonicera sempervirens Rutgers hybrid pyracantha C,F	
Trumpet honeysuckle F Santa Cruz pyracantha C,F Wahonia aquifolium Victory pyracantha C,F	
Wallonia aquilolium	
Oregon grape F <i>Pyracantha skoidzumi</i> Formosa firethorn C.F	
Nyoporum parvirolium	
Prostrate myoporum F Rhaphiolepis indica Enchantress-Moness rhaphiolepis F	
wyrtus communis	
Springtime-Monme rhanhiolenis F	
Nandina domestica	
Compacta-dwarf fleaverily barriboo O,i	
Harbour-dwarf neavenly barriboo C,F	
Heavenly bamboo C,F Rhipsalidopsis gaetneri Nana compacta-heavenly bamboo C,F Easter cactus C,F	
Traina de l'iparta l'idalia de l'altre de l'	
Nana purpurea-heavenly bamboo C,F Rhododendron spp. Woods-dwarf heavenly bamboo C,F Azalea C,F	
Nerium oleander Rhododendron C,F Hardy red oleander C,F Rhus lancea	
Oleander C,F African sumac C,F	
Ruby lace oleander C,F Rosa rugosa	
Osmanthus heterophyllus Ramanas rose F	
Holly-leaf osmanthus F Rosmarinus officinalis	
Pachysandra terminalis Rosemary F	
Japanese spurge F Spiraea vanhouttei	
Philadelphus spp. Bridal wreath F	
Mockorange C,F Syringa vulgaris	
Phoenix roebelenii Common lilac F	
Pygmy date palm F Syzygium paniculata	
Photinia fraseri Brush cherry C,F	
Fraser's photinia C,F Taxus cuspidata	
Picea abies Japanese yew F	
Repens-spreading Norway spruce F Taxus media	
Pendula-weeping Norway spruce F Yew F	
Pieris japonica Thuja occidentalis	
Andromeda C,F American arborvitae F	
Lily-of-the-valley F Emerald arborvitae F	
Snowdrift F Globosa-globe arborvitae F	
Temple bells lily-of-the-valley F Little Giant-dwarf arborvitae F	
Valley rose lily-of-the-valley F Nigra-dark American arborvitae F	
Pittosporum spp. Pyramidalis arborvitae F	
Pittosporum C,F Rheingold arborvitae F	
Platycladus orientalis Woodwardii arborvitae F	
Oriental arborvitae C,F	

Ornamental Shrubs (continued)

Recommended

Scientific Name/ Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Thuja orientalis Aurea nana-dwarf golden arborvitae Minima glauca-dwarf arborvitae	F F
Trachelospermum jasminoides Chinese star jasmine	F
Veitchia merilli Christmas palm	F
Viburnum davidii David viburnum Viburnum japonicum	F
Viburnum Viburnum opulus sterile	F
Eastern snowball viburnum Viburnum plicatum tomentosum	F
Doublefile viburnum Viburnum x pragense Virburnum	F
Viburnum setigerum Tea viburnum	F
<i>Viburnum suspensum</i> Sandankwa viburnum	F
Viburnum tinus Compactum-spring bouquet viburnum Laurastinus viburnum	F C,F
Viburnum trilobum Compactum-dwarf cranberry bush	F
Weigela florida Java red weigela Bristol ruby weigela Minuet weigela	F F F
Xylosma congestum Xylosma	F
Yucca elata Soaptree yucca	C,F
Yucca recurvifolia Pendulous yucca	F
Ground Covers	
Scientific Name/ Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Agapanthus africanus Lily-of-the-Nile	C,F
Ajuga spp. Carpet bugle Arctotheca calendula	F
Cape weed Campanula elatines	F
Bellflower Carpobrotus edulis	C,F
Largeleaf iceplant	F

Clytostoma callistegioides

Violet trumpet vine Cortaderia selloana

Pampas grass

Ground Covers (continued)

Scientific Name/ Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Delosperma alba	
White iceplant	F
Drosanthemum floribundum Trailing rosea iceplant	F
Festuca ovina Blue fescue	F
Gazania spp. Gazania	F
Hedera canariensis Algerian ivy	F
Hedera helix English ivy	F
Hemerocallis spp. Day lily	C,F
Hosta spp.	0,1
Plantain lily	C,F
Hypericum spp. St. Johnswort	F
Lampranthus spectabilis Red trailing iceplant	F
Liriope gigantea White lily turf	F
Liriope muscari Big blue lily turf Lilac beauty lily turf Majestic lily turf Monroe white lily turf Silvery sunproof lily turf Variegated liriope lily turf	C,F C,F C,F C,F C,F C,F
Lonicera japonica Japanese honeysuckle	F
Mesembryanthemum crystallinum	ı
Ice plant Ophiopogon japonicus	F
Mondo grass	F
Osteospermum fruticosum Trailing African daisy	F
Sedum brevifolium Stonecrop	F
Trachelospermum jasminoides Chinese star jasmine	F
Vinca major Bigleaf periwinkle	F
Vinca minor Dwarf periwinkle	F
Established Flowers	

Scientific Name/ Common Name	Recommended Treatment Method: C = Container Growr F = Field Grown	
Achillea spp. Yarrow	F	
Antirrhinum majus Snapdragon	F	
Caladium bicolor Fancy-leaved caladium	F	

C,F

F

Established Flowers (continued)

Scientific Name/ Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Chrysanthemum coccineum Painted daisy	F
Chrysanthemum maximum Shasta daisy	F
Chrysanthemum morifolium Chrysanthemum	F
Coreopsis lanceolata Coreopsis	F
Dianthus barbatus Sweet william	F
Dicentra spectabilis Bleeding heart Dimorphotheca spp.	C,F
Cape marigold Echinacea purpurea	F
Purple coneflower Geum quellyon	F
Geum Gladiolus hortulanus	F
Gladiolus Gypsophila paniculata	F
Baby's breath Impatiens wallerana	F
Impatiens Iris spp.	F
Bearded iris Liatris spicata	F
Blazing star Pelargonium hortorum	C,F
Geranium Petunia spp.	F
Petunia Portulaca grandiflora	F
Rose moss Ranunculus asiaticus	F
Persian ranunculus Rosa spp.	F
Rose Rudbeckia hirta	F
Gloriosa daisy/black-eyed susan Salvia spp.	F
Sage Stokesia laevis	F
Stokes aster Strelitzia reginae	F
Bird of paradise Tagetes spp.	F
Marigold Viola wittrockiana	F
Pansy Zinnia elegans Common zinnia	F
Common zinna	1

Non-bearing Fruit and Nut Trees and Non-bearing Vinevards†

Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Almond	F
Apple	F
Apricot	F
Avocado	F
Cherry, sour	F
Cherry, sweet	F
Fig	F
Filbert	F
Grape, American	F
Grape, European	F
Grapefruit	F
Kiwi	F
Kumquat	C,F
Lemon	F
Macadamia nut	F
Nectarine	F
Olive	F
Orange	C,F
Peach	F
Pear	F
Pecan	C,F
Pistachio	F
Plum	F
Pomegranate	F
Prune	F
Walnut, black	F
Walnut, English	F
defined as plants that will not b	s and non-bearing vineyards are bear fruit for at least one year after nts that will bear fruits, berries or

nuts within 12 months of application

Non-bearing Berries^{††}

Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Blackberry	F
Blueberry	F
Boysenberry	F
Currant	F
Dewberry	F
Elderberry	F
Gooseberry	F
Loganberry	F
Raspberry	F
††Non-bearing berries are d	efined as plants that will not bear

berries for at least one year after treatment. Do not apply to plants that will bear fruits, berries or nuts within 12 months of application

Ornamental Bulbs

Special Use Precautions

Do not apply to tulip plants that have emerged to a height greater than 3/4 inch. Deep till prior to planting any crop after this use. Do not apply to gladioli prior to emergence or to plants less than one inch in diameter.

Application Rates, Frequency, and Timing of Applications

Surflan XL 2G may be applied for annual weed control in ornamental bulbs such as bulbous iris, daffodil (narcissus), hyacinth, and tulip. Apply Surflan XL 2G to the soil surface two (2) to four (4) weeks after planting and final hilling but prior to the emergence of annual weeds. Surflan XL 2G may also be applied following bulb emergence. For fall-planted bulbs, apply Surflan XL 2G again in late winter or early spring to weed-free soil surfaces.

Broadcast Application Rates

		Surflan XL 2G		Minimum Time Between	Total Amount Allowed
Time of Application	Soil Texture	(lb./ acre)	(lb./1,000 sq. ft.)	Applications (months)	Per Year (lb./acre)
Fall	Coarse	75	1.7	3	150
Fall	Medium and Fine	150	3.4	3	225
Feb March	All Soil Textures	75	1.7	3	225

Christmas Tree Plantations

Apply Surflan XL 2G to established plantings of labeled field grown Christmas tree species prior to germination of target weeds. Do not apply to Douglas fir (*Pseudotsuga menziesii*) or Eastern hemlock (*Tsuga canadensis*). Do not apply to seedbeds or seedling transplant beds. Apply only to established plantings. Established plants are defined as those that have been transplanted into their final growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation.

Broadcast Application Rates

		Surflan XL 2G		Minimum Time Between	Total Amount Allowed
	Length of Control	(lb./acre)	(lb./1,000 sq. ft.)	Applications (months)	Per Year (lb./acre)
Ì	2 - 4 months	200	4.6	2	400

Note: Refer to the "General Information" section of this label for general use precautions and information on application. Refer to "Approved Uses" section of this label for special use precautions and information weeds controlled.

Noncropland Areas: Industrial Sites, Utility Substations,

Highway Guardrails, Sign Posts, and Delineators

Surflan XL 2G is recommended as a preemergence treatment for control of certain annual grasses and broadleaf weeds on industrial sites, utility substations, highway guardrails, sign posts, and delineators. Apply Surflan XL 2G prior to germination of target weeds. Areas to be treated should be free of established weeds or existing weeds should be controlled with postemergence herbicides.

Broadcast Application Rates

	Surflan XL 2G		Minimum Time	Total Amount
Length of Control	(lb./acre)	(lb./1,000 sq. ft.)	Between Applications (months)	Allowed Per Year (lb./acre)
2 - 4 months	200	4.6	2	400

Note: Refer to the "General Information" section of this label for general use precautions and information on application. Refer to "Approved Uses" section of this label for special use precautions and information weeds controlled.

Warm Season Turfgrasses

Surflan XL 2G may be applied as a preemergence treatment for control of annual grasses and certain broadleaf weeds in established warm season turf including bahiagrass, bermudagrass, buffalograss, centipedegrass, St. Augustinegrass and zoysiagrass or established tall fescue growing in warm season areas. Established turf is defined as a dense turf having a well-anchored root system and healthy, vigorous top growth.

Successful preemergence control of weeds listed on this label requires that Surflan XL 2G be applied prior to weed germination and be activated by at least one-half (1/2) inch of rainfall or irrigation as soon as possible after application.

Special Use Precautions:

To avoid possible injury, do not apply Surflan XL 2G to:

- Cool season turfgrass species other than tall fescue.
- Lawns containing dichondra or cool season turfgrass species.
- Golf course putting greens or tees.
- Turfgrass in the spring that was planted the previous fall.
- Newly sprigged or sodded areas of bermudagrass, St. Augustinegrass, centipedegrass, zoysiagrass or tall fescue until these turfs are well established and have well anchored root systems.
- Newly hydromulched areas of bermudagrass until such areas are well established.
- This product must be watered in as soon as possible after application to dissolve the granules. A single rainfall or irrigation of 1/2 inch or more is required after product application. Watering-in must be performed by the commercial applicator or the commercial applicator must provide the following information to the resident or owner in writing:
- "This product must be watered in as soon as possible."
- "Do not enter or allow others (including children or pets) to enter the treated areas (except those involved in the watering) until the watering-in is complete and the surface is dry."

Surflan XL 2G will not control emerged weeds.

Surflan XL 2G may injure turf that is not well established or is stressed or weakened due to unfavorable winter climatic conditions, drought, nematodes, or other factors which damage or weaken turf root systems. Apply Surflan XL 2G only to healthy, well-established turf that has a well-anchored root system.

Do not apply Surflan XL 2G in the spring or early summer to tall fescue turfgrass reseeded the previous fall. In such cases, apply Balan* 2.5G granular herbicide at 60 pounds per acre in early summer (Round 1) and Surflan XL 2G at 100 pounds per acre approximately eight weeks later (Round 2).

Surflan XL 2G may thin established annual bluegrass (*Poa annua*) at rates above 100 pounds per acre.

In bermudagrass areas that have been overseeded with winter grasses, a spring application of Surflan XL 2G will thin the overseeded grasses.

Weeds Controlled or Suppressed by Surflan XL 2G Weeds controlled by Surflan XL 2G when applied at 100 to 150 lbs./acre (2.3 to 3.4 lbs./1,000 sq. ft.).

Annual Grasses

Summer Annuals:

Common Name	Scientific Name
Barnyardgrass	Echinochloa crus-galli
Crabgrass	Digitaria spp.
Crowfootgrass	Dactyloctenium aegyptium
foxtail	Setaria spp.
Goosegrass	Eleusine indica
Johnsongrass (seedling only)	Sorghum halepense
ryegrass, Italian	Lolium multiflorum
sandbur, field	Cenchrus incertus
Winter Annuals:	
Common Name	Scientific Name
bluegrass, annual	Poa annua
Broadleaf Weeds	
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

In addition to the weeds controlled, the following weeds will be partially controlled or suppressed at 100 to 150 lbs./acre (2.3 to 3.4 lbs./1,000 sq. ft.).

Common Name	Scientific Name
carrot, wild	Daucus carota
fleabane, dwarf	Conyza ramosissima
groundsel, common	Senecio vulgaris
mustard, Indian	Brassica juncea
spurge, prostrate	Euphorbia humistrata
woodsorrel, yellow	Oxalis stricta

Application Rates, Frequency and Timing of Applications

Surflan XL 2G can be applied in the spring for summer annual grass and broadleaf weed control, and in the fall for annual bluegrass (*Poa annua*) and winter annual broadleaf weed control.

Broadcast Application Rates (Warm Season Turfgrasses)

		Surflan XL 2G		Minimum Time Between	Total Amount Allowed
Use Are	ea	(lb./acre)	(lb./1,000 sq. ft.)	Applications (months)	Per Year (lb./acre)
All regio	ns	100 150	2.3 3.4	2 3	200 300

1. Summer Annual Grasses and Broadleaf Weeds

Surflan XL 2G in late winter or early spring, prior to the onset of conditions favorable for summer annual weed germination. **Split Application Program:** As an alternative to a single application program, Surflan XL 2G may be applied in a split application. This program is desirable when the initial application is made well in advance of weed germination and where weed control is desired for a longer period of time. Apply 100 pounds per acre of Surflan XL 2G in an initial application, followed by a second application of 100 pounds per acre 8 to 10 weeks

Single Application Program: Apply 150 pounds per acre of

The second treatment of the split application may follow application of a different preemergence grass herbicide in place of the initial Surflan XL 2G application.

2. Annual Bluegrass and Winter Annual Broadleaf Weeds

Apply Surflan XL 2G as a preemergence treatment in late summer or early fall, prior to the expected germination period for annual bluegrass and winter annual broadleaf weeds. Do not apply Surflan XL 2G to areas where fall overseeding will occur. If annual bluegrass infestation is severe and its elimination will result in thinning of turfgrass cover, apply Surflan XL 2G at 100 pounds per acre. If thinning of turfgrass cover is not a potential problem, Surflan XL 2G may be applied at 150 pounds per acre.

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

Application Directions

Apply Surflan XL 2G evenly over the turfgrass area. Avoid spray pattern skips and overlaps that may result in incomplete coverage or over-application. For best results use application equipment designed to uniformly broadcast granular herbicides. More uniform application may be achieved by spreading half the required amount of product over the area and then applying the remaining half in swaths at right angles to the first application. Calibrate application equipment prior to use, according to manufacturer's directions. Check equipment frequently to make sure it is working properly and distributing granules uniformly.

Reseeding

Herbicides that control annual weeds may also affect establishment of desirable turfgrass seedlings. Reseeding should be delayed for at least 6 weeks following application of Surflan XL 2G at the 100 pounds per acre rate. When using Surflan XL 2G at the 150 pounds per acre rate, reseeding should be delayed 12 to 16 weeks after application. When reseeding, it is essential that proper cultural practices such as soil cultivation and seedbed preparation, irrigation and fertilization be followed. For satisfactory reseeding results following Surflan XL 2G use,

the seeding rate should be increased and equipment designed to place seed in full contact with soil (such as the Rogers Aero Seeder) should be employed.

Spreader Settings

(A guide for calibrating spreaders to apply Surflan XL 2G in one pass over turf.)

Note: These settings are provided as *suggested* starting points in calibrating each individual spreader. Since no two spreaders are alike, these settings are intended only as a guide in beginning the calibration process.

	Estimated Spreader Setting Necessary to Apply the Specified Rate of Surflan XL 2G Per Acre In One Pass	
Spreader Type	100 lbs./ acre	150 lbs./ acre
Cyclone: Models B1, 33, 96, BSSB at 200 ft./min.	3 1/4	3 1/2
Model 100 at 200 ft./min.	3 1/4	3 1/2
Model 93 (based on tractor speed of 4 mph)	5	6 1/4
Model 99 (based on tractor speed of 4 mph)	4 3/4	5 3/4 - 6
Model BPI (based on tractor speed of 4 mph)	4 1/2	5 1/4 - 5 1/2
Gandy:		
Model 10A series, 6, 8, 10, 11, 12, 20 and 30 ft. (based on tractor speed of 5 mph)	31	37
Model 10T series, 6, 8, 10, 11, 12, 20 and 30 ft.	33	40
(based on tractor speed of 5 mph) Turf Tender, 24, 30, 42 inch (based on tractor speed of 3 mph)	25	28
600 Series, 2, 4 and 5 ft. (based on tractor speed of 3 mph)	18	22
Lely: Model W and H (based on tractor speed of 4.5 mph)	3	4
Lesco: Lesco Spreader (Note: set 3rd adjustable hole 1 notch from "open")	D 1/2	F
Scott:	11.4/0	
Rotary Model R-8 Drop Spreader	H 1/2 3 7/8	I 1/4 4 5/8
Spyker:		
Spyker	3.2	3.6
Vicon: Model 402 (with seed ring) swath width 20 ft., 5 mph speed	24	28
Warren: Model T-7II (based on ground speed of 3.0 mph)	3 1/4	4

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