NOTICE OF WEED CONTROL APPLICATION

Date of Application: February 21, 2025

Location: Pueblo Park

Reason for Application: A pre-emergent for broadleaf weeds in planter areas.

Product Manufacturer Name: Snapshot 2.5 TG

-EPA registration no. 62719-175
-Active ingredients: Trifluralin and isoxaben
-Precautionary statement: Causes moderate eye irritation. Harmful if swallowed or inhaled. Prolonged or frequently repeated skin contact may cause allergic reaction in some.

Product Manufacturer Name: Bayer Specticle Flo

-EPA registration no. 432-1608
-Active ingredients: Indaziflam
-Precautionary statement: Harmful if inhaled. May cause damage to organs (nervous system) through prolonged or repeated exposure. Do not breathe spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

***No applications within 25 feet of playgrounds**

***See attached label and SDS sheet**
***Dates are subject to change due to weather**

Specimen Label

CORTEVA™ agriscience

Snapshot®
2.5TG

SPECIALTY HERBICIDE

®™ Trademarks of Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners

A selective preemergence herbicide for control of certain broadleaf weeds and annual grasses in:

- **Landscape Ornamentals**
- **Christmas Tree Plantations**
- **Container Grown Ornamentals**
- **Field Grown Ornamentals**
- **Groundcovers/Perennials**
- **Non-Bearing Fruit and Nut Trees**
- **Non-Bearing Vineyards**
- **Non-Cropland**

Active Ingredients:	
trifluralin: α,α,α-trifluoro-2,6-dinitro-*N*, *N*-dipropyl-*p*-toluidine	2.0%
isoxaben: *N*-[3-(1-ethyl-1-methylpropyl)-5-isoxazolyl]-2,6-dimethoxybenzamide and isomers	0.5%
Other Ingredients	97.5%
Total	100.0%

Contains 1.25 lb active ingredient per 50 lb bag.

Precautionary Statements

Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-175

Keep Out of Reach of Children

CAUTION

Causes Moderate Eye Irritation • Harmful If Swallowed Or Inhaled • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reaction In Some Individuals

Avoid breathing dust or spray mist and contact with eyes or clothing. Wash thoroughly with soap and water after handling.

Personal Protective Equipment (PPE)

Applicators 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, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

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

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.
If swallowed: Call a Poison Control Center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a Poison Control Center or doctor. Do not give anything by mouth to an unconscious person.
If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a Poison Control Center or doctor for further treatment advice.

Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This pesticide is extremely toxic to freshwater marine, and estuarine fish and aquatic invertebrates including shrimp and oyster. 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 apply in a manner which will directly expose canals, lakes, streams, ponds, marshes or estuaries to aerial drift. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

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, 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 of this label about personal protective equipment (PPE), and restricted entry interval. The requirements in the 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 12 hours.

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
- Waterproof gloves
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements of 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.

For applications in landscape settings and in non-cropland sites, do not enter or allow others to enter the treated area until dusts have settled.

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Store in original container only. In case of 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.

Nonrefillable rigid containers 5 gallons or less:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix

Storage and Disposal (Cont.)

tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable nonrigid containers:
Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable rigid containers larger than 5 gal:
Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable rigid containers larger than 5 gal:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

General Information

Snapshot® 2.5 TG specialty herbicide is a preemergence product for control of certain broadleaf weeds and annual grasses in container and landscape ornamentals, nursery stock, Christmas trees, groundcovers/perennials, non-bearing fruit and nut trees, non-bearing vineyards and non-cropland areas. Apply Snapshot 2.5 TG anytime prior to germination of target weeds, or immediately after cultivation. Length of weed control will vary with rate of Snapshot 2.5 TG 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

In Arizona: The state of Arizona has not approved Snapshot 2.5 TG for use on plants grown for agricultural/commercial production; such as on Christmas tree plantations, container grown or field grown ornamentals, non-bearing fruit and nut trees and non-bearing vineyards.

Snapshot 2.5 TG controls weeds growing from seed. Snapshot 2.5 TG does not control established weeds, weeds growing from stolons, rhizomes, or root pieces. 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. A single rainfall or sprinkler irrigation of 0.5 inches or more, or flood irrigation is required to activate Snapshot 2.5 TG. Optimum weed control is obtained when Snapshot 2.5 TG is activated within 3 days of application. If rainfall or irrigation does not occur within 3 days of application and tillage is possible, Snapshot 2.5 TG may be activated using cultivation equipment capable of uniformly mixing the herbicide into the upper 1 to 2 inches of soil. Failure to activate Snapshot 2.5 TG within 3 days of application may result in erratic control of annual grasses. Do not apply when wind conditions favor drift of Snapshot 2.5 TG granules from the target area.

Repeat applications at 150 lb per acre and higher should not be made sooner than 60 days after a previous application of Snapshot 2.5 TG. Do not apply over 600 pounds per acre total of Snapshot 2.5 TG within a 12-month period.

Tolerance of Turfgrass Adjacent to Ornamental Plantings: Accidental application to turf may occur when applying Snapshot 2.5 TG to ornamental plantings. Snapshot 2.5TG is not recommended for weed control in turfgrasses, but turfgrasses are generally tolerant to small amounts of this product that fall outside of the intended area of application.

Do not aerially apply Snapshot 2.5TG.

Treatment Species Not Listed on the Label for Snapshot 2.5 TG
Users who wish to use Snapshot 2.5 TG on plant species not recommended on this label may determine the suitability for use 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 for during 30 to 60 days of normal growing conditions to determine if the treatment is safe to the target plant species. The user assumes responsibility for any plant damage or other liability resulting from use of Snapshot 2.5 TG on plant species not recommended on this label.

Application Instructions

Apply Snapshot 2.5 TG 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 Snapshot 2.5 TG

- 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.
- The weight-to-volume conversion table below provides equivalent amounts of Snapshot 2.5 TG.

Broadcast Rates

Rate	Amount/1000 sq ft		Amount/100 sq ft	
lb/Acre	(lb)	(quarts)	(lb)	(cups)
100	2.30	1.75	0.23	0.7
150	3.45	2.60	0.35	1.0
200	4.60	3.50	0.46	1.4

1 lb of Snapshot 2.5 TG = 0.75 quart = 3 cups

Spreader Settings as a Guide for Calibration
Note: These settings are provided as a suggested starting point in calibrating each individual spreader. Since no two spreaders are alike, these settings are not intended to be used as absolute recommendations by Dow AgroSciences or the spreader manufacturer.

	Settings for Warren T-7 II Spreader		
	Target Rate of Snapshot 2.5 TG		
Speed (mph)	100 lb/acre	150 lb/acre	200 lb/acre
2.0	2 1/2	3 1/4	3 3/4
2.5	3	3 1/2	4 1/4
3.0	3 1/4	4	5

Warren spreader settings are displayed in half-number increments only. The suggested settings that indicate quarter settings can be accomplished by placing the calibration arm between the half number marks on the spreader.

Weeds Controlled or Suppressed

Weeds controlled when applied at 100 lb per acre (2.3 lb per 1000 sq ft):

Common Name	Scientific Name
aster, slender	*Aster exilis*
barnyardgrass	*Echinochloa crus-galli*
bluegrass, annual	*Poa annua*
bursage, annual	*Ambrosia acanthicarpa*
celery, wild	*Apium leptophyllum*
chickweed, common	*Stellaria media*
clover, white	*Trifolium repens*
crabgrass	*Digitaria* spp.
cudweed, purple	*Gnaphalium purpureum*
cupgrass, southwestern	*Eriochloa gracilis*
fiddleneck, coast	*Amsinckia intermedia*
filaree, redstem	*Erodium cicutarium*
fleabane, blackleaved	*Conyza bonariensis*
fleabane, dwarf	*Conyza ramosissima*
foxtail, yellow	*Setaria glauca*
groundcherry, lanceleaf	*Physalis lanceifolia*
henbit	*Lamium amplexicaule*
horseweed	*Conyza canadensis*
junglerice	*Echinochloa colonum*
knotweed, prostrate	*Polygonum aviculare*
lambsquarters, common	*Chenopodium album*
mallow, little	*Malva parviflora*
mustard, Indian	*Brassica juncea*
mustard, wild	*Sinapis arvensis*
nightshade, black	*Solanum nigrum*
oat, wild	*Avena fatua*
panicum, fall	*Panicum dichotomiflorum*
pepperweed, Virginia	*Lepidium virginicum*
pigweed	*Amaranthus* spp.
pineappleweed	*Matricaria matricarioides*
plantain, slender	*Plantago elongata*
purslane, common	*Portulaca oleracea*
radish, wild	*Raphanus raphanistrum*
ragweed, common	*Ambrosia artemisiifolia*
rocket, London	*Sisymbrium irio*
rockpurslane, desert	*Calandrinia ciliata*
shepherdspurse	*Capsella bursa-pastoris*
sibara	*Sibara virginica*
smartweed, Pennsylvania	*Polygonum pensylvanicum*
sowthistle, annual	*Sonchus oleraceus*
speedwell, purslane	*Veronica peregrina*
sprangletop, Mexican	*Leptochloa univervia*
telegraphplant	*Heterotheca grandiflora*
thistle, Russian	*Salsola iberica*
witchgrass	*Panicum capillare*

Weeds controlled when applied at 150 lb per acre (3.5 lb per 1000 sq ft):

Common Name	Scientific Name
aster, heath	*Aster ericoides*
bittercress	*Cardamine oligosperma*
bittercress, hairy	*Cardamine hirsuta*
brassbuttons, southern	*Cotula australis*
carrot, wild	*Daucus carota*
chamberbitter	*Phyllanthus urinaria*
chickweed, mouseear	*Cerastium vulgatum*
dandelion	*Taraxacum officinale*
eclipta	*Eclipta prostrata*
fireweed	*Erechtites hieracifolia*
foxtail, giant	*Setaria faberi*
galinsoga, hairy	*Galinsoga ciliata*
geranium, Carolina	*Geranium carolinianum*
groundsel, common	*Senecio vulgaris*
ladysthumb	*Polygonum persicaria*
lettuce, prickly	*Lactuca serriola*
lovegrass	*Eragrostis* spp.
mallow, dwarf	*Malva rotundifolia*
marestail	*Hippuris vulgaris*
mayweed	*Anthemis cotula*

Weeds Controlled or Suppressed (Cont.)

Weeds controlled when applied at 150 lb per acre (3.5 lb per 1000 sq ft): (Cont.)

morningglory, ivyleaf	*Ipomoea hederacea*
mustard, black	*Brassica nigra*
pennywort	*Hydrocotyle* spp.
phyllanthus, long-stalk	*Phyllanthus tenellus*
plantain, bracted	*Plantago aristata*
plantain, broadleaf	*Plantago major*
plantain, buckhorn	*Plantago lanceolata*
pokeweed, common	*Phytolacca americana*
rockpurslane, redmaids	*Calandrinia ciliata var. menziesii*
ryegrass, annual	*Lolium multiflorum*
sida, prickly	*Sida spinosa*
sorrell, red	*Rumex acetosella*
speedwell, thymeleaf	*Veronica serpyllifolia*
spurge, hyssop	*Euphorbia hyssopifolia*
spurge, spotted	*Euphorbia maculata*
sweetclover, yellow	*Melilotus officinalis*
tansymustard, green	*Descurainia pinnata*
velvetleaf	*Abutilon theophrasti*
woodsorrel, yellow	*Oxalis stricta*

Weeds controlled when applied at 200 lb per acre (4.6 lb per 1000 sq ft):

Common Name	Scientific Name
barley, hare	*Hordeum leporinum*
bromegrass	*Bromus* spp.
burclover, California	*Medicago polymorpha*
cheat	*Bromus secalinus*
datura	*Datura* spp.
dogfennel	*Eupatorium capillifolium*
eveningprimrose	*Oenothera* spp.
fescue, rattail	*Vulpia myuros*
filaree, whitestem	*Erodium moschatum*
goosefoot, nettleleaf	*Chenopodium murale*
goosegrass	*Eleusine indica*
jimsonweed	*Datura stramonium*
knotweed, silversheath	*Polygonum argyrocoleon*
kochia	*Kochia scoparia*
medic, black	*Medicago lupulina*
mullein, turkey	*Eremocarpus setigerus*
nettle, burning	*Urtica urens*
nettle, stinging	*Urtica dioica*
oxtongue, bristly	*Picris echioides*
pimpernel, scarlet	*Anagallis arvensis*
sandbur, field	*Cenchrus incertus*
signalgrass	*Brachiaria* spp.
sowthistle, spiny	*Sonchus asper*
spurge, petty	*Euphorbia peplus*
spurge, prostrate	*Euphorbia humistrata*
stinkgrass	*Eragrostis cilianensis*
sunflower	*Helianthus* spp.
swinecress	*Coronopus didymus*
thistle, musk	*Carduus nutans*
willoweed, panicle	*Epilobium paniculatum*
woodsorrel, creeping	*Oxalis corniculata*

Weeds partially controlled or suppressed when applied at 200 lb per acre (4.6 lb per 1000 sq ft):

Common Name	Scientific Name
bindweed, field	*Convolvulus arvensis*
carpetweed	*Mollugo verticillata*
dock, curly	*Rumex crispus*
johnsongrass (seedling)	*Sorghum halepense*
mallow, Venice	*Hibiscus trionum*
milkweed, honeyvine	*Ampelamus albidus*
morningglory, tall	*Ipomoea purpurea*
panicum, Texas	*Panicum texanum*
pusley, Florida	*Richardia scabra*
shattercane	*Sorghum bicolor*

Uses

Ornamental Plantings

Snapshot 2.5 TG is recommended as a preemergence treatment for control of certain broadleaf weeds and annual grasses in container grown ornamentals, landscape ornamentals, field grown ornamentals, ground covers/perennials, Christmas trees, non-bearing fruit and nut crops, and non-bearing vineyards. Apply Snapshot 2.5 TG anytime prior to germination of target weeds, or immediately after cultivation.

Refer to the General Information section of this label for General Use Precautions and information on application, application rates and weeds controlled.

Special Use Precautions:
To avoid possible injury, do not apply Snapshot 2.5 TG to:

- nursery, forest, or Christmas tree: seedling beds, cutting beds, or transplant beds.
- 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.
- bedding plants or areas where bedding plants will be planted or transplanted within one year following application.
- groundcovers until they are established and well rooted.

Do not apply Snapshot 2.5 TG to newly transplanted ornamentals, nursery stock, Christmas trees, groundcovers, non-bearing fruit and nut trees and non-bearing vineyards until soil or potting media has been settled by packing and irrigation or rainfall and no cracks are present or injury may occur.

Repeat applications at 150 lb per acre and higher should not be made sooner than 60 days after a previous application of Snapshot 2.5 TG. Do not apply over 600 lb per acre total of Snapshot 2.5 TG within a 12-month period.

Where loss of stand has occurred in field grown ornamentals, use untreated soil as fill around roots when replacing plants or injury may occur.

Note: Injury on the following plant species has been observed following applications of Snapshot 2.5 TG and use is not recommended.

Common Name	Scientific Name
ballerina cranesbill	*Geranium cinereum 'Ballerina'*
bertram anderson lingwort	*Pulmonaria longifolia*
bugle	*Ajuga* spp.
cajeput tree	*Melaleuca quinquenervia*
candytuft	*Iberis* spp.
Carolina rhododendron	*Rhododendron carolinianum*
dwarf burning bush	*Euonymus alatus 'compacta'*
foxglove	*Digitalis purpurea*
green yucca	*Yucca recurvifolia*
hydrangea	*Hydrangea* spp.
luxuriant bleeding heart	*Dicentra luxuriant*
mountain sandwort	*Arenaria montana*
mustard	*Brassica* spp.
oak leaf acanthus	*Acanthus mollis*
prince of wales juniper	*Juniperus horizontalis 'Prince of Wales'*
purple coneflower	*Echinacea purpurea*
roseum elegans rhododendron	*Rhododendron catawbiense 'Roseum elegans'*
spurge	*Euphorbia* spp.
stonecrop	*Sedum* spp.
summer phlox	*Phlox paniculata*
white festival baby's breath	*Gypsophila paniculata*
wine periwinkle	*Vinca minor 'Atropurpurea'*

Snapshot 2.5 TG may be used on the following established plant species (Note: Limitations on recommended treatment methods):

Trees

Recommended Treatment Method:
C = Container Grown
F = Field Grown

Scientific Name	Common Name	
Abies balsamea	fir, balsam	C, F
Abies concolor	fir, white	F
Abutilon hybridum	albus-flowering maple	C, F
	luteus-flowering maple	C, F
	roseus-flowering maple	C, F
	tangerine-flowering maple	C, F
	vesuvius red-flowering maple	F
Acer ginnala	flame maple	F
Acer rubrum	red maple	F

Trees (Cont.)

Recommended Treatment Method:
C = Container Grown
F = Field Grown

Scientific Name	Common Name	
	red sunset maple	F
Acer saccharinum	silver maple	C, F
Alsophila australis	Australian tree fern	C, F
Areacastrum romanzoffianum	queen palm	C, F
Betula nigra	birch, river	C, F
Betula papyrifera	paper birch	F
Brachychiton populneus	bottle tree	C, F
Bucida buceras	black olive	F
Ceratonia siliqua	carob	F
Cercis canadensis	redbud	C, F
Chamaecyparis obtusa	filicoides-fernspray cypress	F
Chamaecyparis obtusa	gracilis-slender hinoki cypress	F
Chamaecyparis pisifera	sawara-false cypress	F
	squarrosa-moss cypress	F
Chamaedorea cataractarum	cat palm	F
	palm	C, F
Chamaedorea costaricana	palm	C, F
Chamaedorea elegans	parlor palm	C, F
Cornus florida	cloud nine dogwood	C, F
	dogwood, flowering	C, F
Crataegus viridis	green hawthorn	F
Cryptomeria japonica	cryptomeria, Japanese	C, F
Cupaniopsis anacardioides	carrot wood	F
Cupressocyparis x 'Emerald Isle'	emerald island leyland cypress	C, F
Cupressus arizonica	Arizona cypress	C, F
Cupressus glabra	Arizona cypress	F
Cupressus sempervirens	Italian cypress	C, F
Dicksonia antarctica	Tasmanian tree fern	C, F
Elaeagnus angustifolia	Russian olive	C, F
Elaegnus x 'Gilt edge'	gilt edge silverberry	C, F
Eucalyptus camaldulensis	red gum eucalyptus	F
Eucalyptus cinerea	eucalyptus, mealy	F
	silver dollar eucalyptus	F
Eucalyptus microtheca	coolibah tree	C, F
Eucalyptus sideroxylon	eucalyptus, red ironbark	F
Ficus benjamina	ficus	C, F
	mini ficus	C, F
Fraxinus udhei	shamel ash	C, F
Ginkgo biloba	ginkgo (maidenhair tree)	F
Gleditsia triacanthos	honey locust	F
	shademaster honey locust	F
Heteromeles arbutiflora	toyon	F
Illicium floridanum	Florida anise-tree	C, F
Juniperus virginiana	redcedar, eastern	C, F
Liquidambar styraciflua	sweetgum, American	F
Magnolia grandiflora	magnolia, southern	C, F
Morus alba	white mulberry	F
Musa aluminata	banana	C, F
Oxydendrum arboreum	sourwood	C, F
Picea abies	pendula-weeping Norway spruce	C, F
	repens-spreading Norway spruce	C, F
	spruce, Norway	C, F
Picea glauca	conica-dwarf Alberta spruce	C, F
Picea glauca conica	dwarf Alberta spruce	F
Picea pungens	dwarf globe blue spruce	C, F
	glauca-Colorado blue spruce	C, F
	hoopsii-hoop's blue spruce	C, F
	koster-koster blue spruce	F
Pinus aristata	bristlecone pine	F
Pinus canariensis	canary island pine	F
Pinus contorta	shore pine, beach pine	F
Pinus eldarica	eldarica pine	C, F
Pinus leucodermis	Bosnian pine	C, F
Pinus mugo	pumilio-shrubby swiss mountain pine	C, F
Pinus nigra	Austrian black pine	C, F

Trees (Cont.)

Scientific Name	Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
Pinus radiata	monterey pine	F
Pinus strobus	eastern white pine	C, F
Pinus strobus	white pine	C, F
Pinus sylvestris	columnar Scotch pine	C, F
	Scotch pine	C, F
Pinus thunbergiana	Japanese black pine	C, F
Platanus occidentalis	American sycamore	F
Platanus racemosa	Califorina sycamore	F
Podocarpus spp.	podocarpus	F
Populus deltoides	cottonwood	F
Prosopis chilensis	Chilean mesquite	C, F
Prunus yedoensis	yoshino flowering cherry	F
Quercus ilicifolia	bear oak	F
Quercus palustris	pin oak	F
Quercus phellos	willow oak	C, F
Quercus rubra	red oak	C, F
Quercus virginiana	live oak	C, F
Salix babylonica	babylon weeping willow	F
	corkscrew willow	F
Sequoiadendron giganteum	giant sequoia	F
Swietenia mahogani	mahogany	F
Tabebuia caraiba	yellow tab	F
Tsuga canadensis	eastern hemlock	C, F
Ulmus parvifolia	Chinese elm	F
Washingtonia robusta	Mexican fan palm	F

Shrubs

Scientific Name	Common Name	Recommended Treatment Method C = Container Grown F = Field Grown
Abelia grandiflora	edward goucher abelia	C, F
	glossy abelia	C, F
Acacia abyssinica	abyssinica acacia	C, F
Acacia redolens	acacia, prostrate	C, F
Acacia stenophylla	shoestring acacia	C, F
Acalypha wilkesiana	copper leaf	C, F
Acer ginnala	amur maple	C, F
Acer palmatum	coral bark Japanese maple	C, F
	dwarf Japanese maple	C, F
Agapanthus africanus	queen anne lily of the nile	C, F
Agave americana	century plant	F
Anisodontea hypomandarum	cape mallow	C, F
Aptenia cordifolia	red apple aptenia	C, F
Ardisia japonica	chirimen marlberry	C, F
Astible arendsii	false spiraea	C, F
Astilbe chinensis	astilbe/false spirea	C, F
Athyrium nipponimcum	Japanese painted fern	C, F
Baccharis pilularis	coyotebush	F
Berberis gladwynensii	william penn barberry	C, F
Berberis mentorensis	mentor barberry	C, F
Berberis thunbergii	aurea-golden Japanese barberry	F
	crimson pygmy barberry	C, F
	rose glow barberry	C, F
	atropurea-redleaf Japanese barberry	F
	cherry bomb barberry	C, F
Bougainvillea spp.	barbara karst	C, F
	California gold	C, F
	pink pixie	C, F
	scarlet o'hara	C, F
	temple fire	C, F
	Texas dawn	C, F
Buxus x 'Green velvet'	green velvet boxwood	C, F
Buxus microphylla japonica	boxwood, Japanese	C, F
Buxus microphylla Koreana	Korean boxwood	F
Buxus sempervirens	boxwood, common	C, F
Callistemon citrinus	bottlebrush, lemon	F
Callistemon viminalis	weeping bottlebrush	C, F

Shrubs (Cont.)

Scientific Name	Common Name	Recommended Treatment Method C = Container Grown F = Field Grown
Calluna vulgaris	spring torch Scotch heather	C, F
Camellia japonica	camellia	C, F
Caryopteris x clandonen	dark knight bluebeard	C, F
Cassia artemisioides	cassia, feathery	C, F
Ceanothus spp.	wild lilac	F
Cephalotaxus drupacae	plum yew	C, F
Cerastium tomentosum	snow-in-summer	C, F
Chamaecyparis obtusa	kosteri cypress	C, F
	nana-dwarf hinoki cypress	C, F
	torulosa cypress	C, F
Chamaecyparis pisifera	baileyi-dogwood	F
	flaviramea-dogwood	F
	squarrosa minima cypress	C, F
Chamaecyparis pisifera spp.	filifera-thread cypress	C, F
Chrysalidocarpus lutescens	areca palm	F
Clethra alnifolia	summersweet	C, F
Cleyera japonica	cleyera, Japanese	C, F
Coleonema pulchrum	pink breath of heaven	C, F
Convolvlus cneorum	bush morning glory	C, F
Cornus alba	sibirica-Siberian dogwood	C, F
Cornus stolonifera	baileyi-red-osier dogwood	F
	flaviramea-yellowtwig dogwood	F
Cotinus coggygria	royal purple smoke tree	C, F
Cotinus dammeri	coral beauty smoke tree	C, F
	eichholz smoke tree	C, F
Cotoneaster adpressus	praecox-early cotoneaster	C, F
Cotoneaster apiculatus	cotoneaster, cranberry	C, F
Cotoneaster congestus	cotoneaster, Pyrenees	C, F
Cotoneaster dammeri	cotoneaster, bearberry	C, F
Cotoneaster himalayan	Himalayan cotoneaster	C, F
Cotoneaster horizontalis	cotoneaster, rock	C, F
Cotoneaster opiculata	cotoneaster	C, F
Cycas revoluta	sago palm	C, F
Cytisus praecox	hollandia-warminster broom	C, F
Cytisus scoparius	lena-Scotch broom	C, F
Cytisus spp.	holandia-Scotch broom	F
Daphne odora	fragrant daphne	C, F
Deutzia crenata	nakiana-dwarf deutzia	C, F
Deutzia gracilis	slender gracilis	C, F
Dodonea viscosa	hopseed bush	F
Elaeagnus pungens	fruitland silver berry	C, F
Erica cinerea	purple bell heather	C, F
Erica vagans	cornish heather	C, F
Erica x darleyensa	Mediterranean pink heather	C, F
Eugenia myrtifolia	dwarf brush cherry	C, F
Euonymus x 'Aureo variegatus'	gold spot euonymus	C, F
Euonymus x 'Chollipo"	chollipo eunoymus	C, F
Euonymus fortunei	canadale gold euonymus	C, F
	emerald'n gold euonymus	F
	sunspot euonymus	C, F
Euonymus japonica	silver king euonymus	F
	variegated evergreen euonymus	C, F
Euonymus kiatschovica	spreading euonymus	C, F
Euonymus vegetus	bigleaf wintercreeper	C, F
Euryops pectinatus	dwarf euryops	C, F
Fatshedera japonica		C, F
Fatsia japonica	Japanese aralia	C, F
Felicia ameloides	blue marguerite	C, F
Forsythia intermedia	forsythia, border	C, F
Forsythia x 'Spring glory'	spring glory forsythia	C, F
Gardenia jasminoides	august beauty gardenia	C, F
	gardenia	C, F
	radican gardenia	C, F
Gaultheria shallon	salal/lemon leaf	C, F
Gelsemium sempervirens	Carolina jessamine	C, F
Genista pilosa	woadwaxen	C, F

Shrubs (Cont.)

Recommended Treatment Method
C = Container Grown
F = Field Grown

Scientific Name	Common Name	
Hibiscus rosa-sinensis	ross estey-hibiscus	C, F
Hibiscus syriacus	rose of sharon, red bird	C, F
	rose of sharon, red heart	F
	rose of sharon, woodbridge	C, F
	rose of sharon, aphrodite	
	rose of sharon, helene	
Ilex aquifolium	Balkans holly	F
	gold coast holly	F
Ilex aquipernyi	san jose holly	C, F
Ilex attenuata	savannah holly	C, F
Ilex cornuta	burford holly	C, F
	dwarf burford holly	C, F
	needle point holly	C, F
Ilex crenata	compacta-dwarf Japanese holly	C, F
Ilex crenata	convexa holly	C, F
	dwarf Chinese holly	C, F
	green luster holly	C, F
	helleri-heller's Japanese holly	C, F
	hetzii's Japanese holly	C, F
	stokesii Japanese holly	C, F
Ilex glabra	compacta-compact inkberry holly	C, F
	nordica-inkberry holly	C, F
Ilex meserveae	blue boy holly	C, F
	blue girl holly	C, F
	China boy holly	
	China girl holly	
	ebony magic holly	F
Ilex vomitoria	nana-dwarf yaupon holly	C, F
	pendula-weeping yaupon holly	C, F
	yaupon holly	C, F
Illicium annisatum	mystery gardenia	C, F
Itea ilicifolia	henry garnet holly leaf sweetspire	C, F
Ixora collinea	ixora	C, F
Juniperus chinensis	hollywood juniper	C, F
	media-old gold juniper	C, F
	pfitzer juniper	C, F
	pfitzerana glauca-blue juniper	C, F
	pfitzerana-pfitzer juniper	C, F
	sea green juniper	F
	torulosa-hollywood juniper	C, F
Juniperus conferta	emerald sea shore juniper	C, F
	shore juniper	C, F
Juniperus horizontalis	andorra juniper	C, F
	bar harbor juniper	C, F
	blue chip juniper	C, F
	blue rug juniper	C, F
	creeping juniper	C, F
	dwarf andorra juniper	C, F
	huntington blue juniper	C, F
	plumosa-andorra juniper	C, F
	wiltonii-blue carpet juniper	C, F
Juniperus procumbens	nana-dwarf Japaneses garden juniper	C, F
Juniperus prostrata	prostrata juniper	C, F
Juniperus sabina	broadmoor juniper	C, F
	foemina-hicks juniper	C, F
	savin juniper	C, F
	tamariscifolia-tam juniper	C, F
Juniperus scopulorum	emerald green juniper	F
Juniperus squamata	blue juniper	C, F
	blue star juniper	C, F
	parsonii juniper	C, F
Kalmia latifolia	laurel, mountain	C, F
Lagerstroemia indica	crepe myrtle	C, F

Shrubs (Cont.)

Recommended Treatment Method
C = Container Grown
F = Field Grown

Scientific Name	Common Name	
Lantana spp.	lantana	C, F
Lavandula angustifolia	English lavander	C, F
Lavandula latifolia	English spike lavander	C, F
Lavandula officianalis	English lavander	C, F
Leptospermum scoparium	New Zealand tea tree	C, F
Leucothoe axillaris	leucothoe, coast	C, F
Leucothoe fontanesiana	leucothoe, drooping	C, F
Ligustrum japonicum	privet, Japanese	C, F
	wax ligustrum	C, F
	yellow tip ligustrum	C, F
Ligustrum lucidum	privet, glossy	C, F
Ligustrum ovalifolium	California privet	F
Ligustrum texanum	howardi privet	C, F
	wax leaf privet	C, F
Ligustrum vicaryi	privet, golden	F
	vicary golden privet	F
Ligustrum vulgare	lodense privet	C, F
Livistona chinensis	Chinese fountain palm	F
Lonicera fragrantissima	winter honeysuckle	C, F
Lonicera periclymenum	flowering woodbine	C, F
	serotina woodbine	C, F
Lonicera sempervirens	trumpet honeysuckle	C, F
Loropetalum chinense	fringe flower	C, F
Mahonia aquifolium compacta	dwarf Oregon grape	C, F
Mahonia bealei	leather leaf mahonia	C, F
Mahonia repens	creeping mahonia	C, F
Myrica cerifera	wax myrtle	C, F
Nandina domestica	compacta-dwarf heavenly bamboo	C, F
	harbour dwarf-heavenly bamboo	C, F
	heavenly bamboo (nandina)	C, F
	nana compacta-heavenly bamboo	C, F
	nana purpurea-heavenly bamboo	C, F
	woods dwarf-heavenly bamboo	C, F
Nerium oleander	hardy red oleander	C, F
	oleander	C, F
	ruby lace oleander	C, F
Osmanthus fortunei	fortunes osmanthus	C, F
Pachysandra terminalis	Japanese spurge	C, F
Phoenix roeloelenii	pigmy date palm	C, F
Photinia fraseri	fraser's photinia	C, F
Pieris japonica	lily-of-the-valley	C, F
	mountain fire lily-of-the-valley	C, F
	snowdrift lily-of-the-valley	C, F
	temple bells lily-of-the-valley	C, F
	valley rose lily-of-the-valley	C, F
	valley valentine lily-of-the-valley	C, F
Pieris japonica x forestii	forest flame lily-of-the-valley	C, F
Pinus mugo	mugo-mugho pine	C, F
Pittosporum tobira	green pittosporum	C, F
	wheeler's dwarf pittosporum	C, F
Plumbago ariculata	blue cape plumbago	F
Plumbago capensis	plumbago	C, F
Podocarpus macrophyllus	yewpine	C, F
Polygala dalmaisiana	sweet pea shrub	C, F
Polystichum polyblepharum	tassel fern	C, F
Potentilla fragiformis	cinquefoil	F
Potentilla fruticosa	cinquefoil	C, F
	gold drop pontentilla	F
	goldfinger potentilla	C, F
	red ace potentilla	C, F
	sunset potentilla	C, F
	tangerine potentilla	C, F

Shrubs (Cont.)

Recommended Treatment Method
C = Container Grown
F = Field Grown

Scientific Name	Common Name	
Potentilla verna	spring cinquefoil	C, F
Prunus gladulosa	dwarf pink flowering almond	C, F
Pyracantha fortuneana	lolendei monrovia pyracantha	C, F
	monon pyracantha	F
	red elf hybrid pyrcantha	F
	rutgers hybrid pyracantha	C, F
	santa cruz pyracantha	C, F
	victory pyracantha	F
Rhaphiolepis indica	charisma-monruce rhaphiolepis	C, F
	enchantress-moness rhaphiolepis	F
	rhaphiolepsis (India hawthorn)	C, F
	springtime-monme rhaphiolepis	F
Rhaphiolepis ovata	roundleaf rhaphiolepis	C, F
Rhododendron calendulaceum	cannon's double azalea	C, F
	flame azalea	F
	golden flare azalea	C, F
	klondike azalea	C, F
Rhododendron campylocarpum	butterfly rhododendron	F
Rhododendron carolinianum x daurium	PJM rhododendron	C, F
Rhododendron catawbiense	catawba album rhododendron	C, F
	catawba rhododendron	C, F
	lord roberts rhododendron	C, F
	rocket rhododendron	C, F
Rhododendron caucasium x ponticum	cunningham white rhododendron	C, F
Rhododendron exbury	cannon's double azalea	C, F
	golden flare azalea	C, F
	klondike azalea	C, F
Rhododendron forrestii repens	gomer waterer rhododendron	C, F
Rhododendron forrestii x griersonianum	elizabeth rhododendron	C, F
Rhododendron griffithianum	jean marie rhododendron	C, F
Rhododendron hybrid spp.	America rhododendron	C, F
	English roseum rhododendron	F
	nova zembla rhododendron	C, F
	scintillation rhododendron	C, F
Rhododendron impeditum	rhododendron	C, F
Rhododendron indica	formosa azalea	C, F
Rhododendron indica	waucabusa azalea	C, F
Rhododendron kaempferi	blue danube azalea	C, F
Rhododendron kerume	coral bells azalea	C, F
	hino crimson azalea	C, F
	hino pink azalea	C, F
	mildred azalea	C, F
	snow azalea	C, F
Rhododendron maximum	rhodie max (rosebay)	C, F
Rhododendron mucronulatum	rhododendron	F
Rhododendron obtusum	hino-crimsom azalea	C, F
Rhododendron ponticum	chioniodes rhododendron	C, F
Rhododendron ponticum	daphinoides rhododendron	C, F
Rhododendron x 'purple gem'	purple gem rhododendron	C, F
Rhododendron racemosum	dwarf scarlet wonder rhododendron	C, F
	tribly rhododendron	C, F
	unique rhododendron	C, F
	vulcan rhododendron	C, F
Rhododendron sassthigiatim x carolinianum	ramapo rhododendron	C, F
Rhododendron satuski	gumpo pink azalea	C, F
	higasa azalea	F
	reijn azalea	C, F

Shrubs (Cont.)

Recommended Treatment Method
C = Container Grown
F = Field Grown

Scientific Name	Common Name	
Rhododendron spp. hybrids	carror azalea	C, F
	fashion azalea	C, F
	gerard christina azalea	F
	girard roberta azalea	C, F
	golden flare exbury azalea	F
	helmut vogel azalea	F
	hershey red azalea	F
	hot shot azalea	C, F
	hume azalea	F
	inga azalea	F
	irene koster azalea	C, F
	president clay azalea	C, F
	tradition azalea	C, F
Rhus lancea	sumac, African	C, F
Rosa rugosa	ramanas rose	C, F
Rosmarinus officinalis	rosemary	F
Senecio cineraria	dusty-miller/silver ragweed	C, F
Skimmia japonica	Japanese skimmia	C, F
Skimmia revesiana	reeve's skimmia	C, F
Solanum rantonetii	Paraguay nightshade	C, F
Spiraea bumalda	anthony waterer spiraea	C, F
Spiraea x cinerea 'Grefsheim'	first snow spiraea	
Spiraea japonica	dolchia spiraea	C, F
	Japanese alpine spiraea	C, F
	shirobana spiraea	C, F
Spiraea vanhouttei	bridal wreath	C, F
Syringa rothomagensis	Chinese lilac	C, F
Syringa vulgaris	lilac, common	F
Taxus cuspidata	yew, Japanese	F
Tecomaria capensis	cape honeysuckle	C, F
Ternstroemia gymnanthera	ternstroemia, Japanese	C, F
Thuja occidentalis	emerald arborvitae	C, F
	globosa-globe arborvitae	C, F
	little giant-dwarf arborvitae	C, F
	nigra-dark American arborvitae	C, F
	pyramidalis arborvitae	C, F
	rheingold arborvitae	C, F
	techny arborvitae	F
Thuja occidentalis	woodwardii arborvitae	C, F
Thuja orientalis	aureus nana-dwarf golden arborvitae	C, F
	minima glauca-dwarf arborvitae	C, F
Veitchia merrilli	Christmas palm	F
Viburnum bodnantense	pink dawn viburnum	C, F
Viburnum carlesii	Koreanspice viburnum	C, F
Viburnum davidii	david viburnum	C, F
Viburnum japonicum	viburnum	F
Viburnum judd (v. X juddii)	viburnum	C, F
Viburnum lantana	wayfaring tree	F
Viburnum opulus sterile	common snowball viburnum	F
Viburnum plicatum tomentosum	doublefile viburnum	C, F
Viburnum setigerum	tea viburnum	F
Viburnum tinus compactum	spring bouquet viburnum	F
Viburnum trilobum	cranberry bush	C, F
Viburnum trilobum compactum	dwarf cranberry bush	C, F
Viburnum x pragense	viburnum	C, F
Weigela florida	bristol ruby weigela	C, F
	java red weigela	C, F
	minuet weigela	C, F
Xylosma congestum	xylosma	F
Yucca filamentosa	yucca	C, F

Groundcovers/ Perennials

Recommended Treatment Method:
C = Container Grown
F = Field Grown

Scientific Name	Common Name	
Achillea millefolium	common yarrow	C, F
Agapanthus africanus	lily of the nile	C, F
Agapanthus "Peter Pan"		C, F
Alstroemeria aurea	Peruvian lily	C, F
Ammophila breviligulata	beechgrass	C, F
Antirrhinum majus	snapdragon	C, F
Arctotheca calendula	cape weed	F
Argyranthemum frutescens	Paris daisy	C, F
Artemisia schmidtiana	angels' hair	C, F
Asparagus retrofractus	fern	C, F
Asteriscus maritimus	gold coin daisy	C, F
Astilbe Deutschland	deutschland astilbe	C, F
Asparagus retrofractus		C, F
Asparagus variegata	tree fern	C, F
Aster novae-angliae	New England aster	C, F
Aster novi-belgii	New York aster	C, F
Begonia cordifolia	heartleaf begonia	C, F
Begonia semperflorens	white ambassador begonia	C, F
Bidens ferulifolia	peter's gold bidens	C, F
Brachycome x 'New amethyst'	swan river daisy new amethyst	C, F
Callistepeus chinensis	China aster	C, F
Carex spp.	sedge	C, F
Carpobrotus edulis	ice plant, largeleaf	F
Catharanthus roseus	Madagascar periwinkle	C, F
Cerastium tomentosum	snow in the summer	C, F
Ceratostigma plumbaginoides	dwarf plumbago	C, F
Chrysanthemum morifolium	florist's chrysanthemum	C, F
Chrysanthemum sp.	chrysanthemum species	C, F
Clematis integrifolia caerulea	blue bell clematis	C, F
Clivia miniata	kafir lily	C, F
Coreopsis verticillata	coreopsis, threadleaf	C, F
Cortaderia selloana	pampas grass	C, F
Cuphea hyssopifolia	false or Mexican heather	C, F
Cyperus albostriatus	dwarf umbrella grass	C, F
Dahlia x 'Royal dahlietta pink'	dwarf dahlia wendy pink	C, F
Delosperma alba	white iceplant	F
Descampsia caespitosa	descampsia	C, F
Dianthus gratianopolitanus	crimson treasure cheddar pink	C, F
Dietes vegeta	fortnight lily	C, F
Drosanthemum floribundum	trailing rosea iceplant	F
Drosantheumum hispidum	iceplant	C, F
Ensete ventricosum	red abyssinian banana	C, F
Equisetum scirpoides	dwarf horsetail	C, F
Erianthus ravennae	hardy pampasgrass	C, F
Erysimum "Bowles mauve"	wallflower	C, F
Euryops pectinatus	dwarf euryops	C, F
Eustoma grandiflorum	pink lisianthus	C, F
Festuca ovina glauca	blue fescue	C, F
Fuchsia x 'Santa Claus'	santa claus fuchsia	C, F
Gaillardia aristata	blanket flower	C, F
Gaillardia grandiflora	goblin blanket flower	C, F
Gaura lindheimeri	gaura	C, F
Gazania rigens leucolaena	gazania, trailing	C, F
Gazania spp.	gazania	C, F
Geranium incanum	cranesbill	C, F
Geranium subcaulescens	blackeyed magenta cranesbill	C, F
Hakonechloa macroaureola	golden hakonechloa	C, F
Hedera canariensis	ivy, Algerian	F
Hedera helix	ivy, English	C, F
Helichrysum petiolatum	white licorice plant	C, F
Hemerocallis spp.	daylily	C, F
Hesperaloe parviflora	red yucca	C, F
Heuchera americana	palace purple	C, F

Groundcovers/ Perennials (Cont.)

Recommended Treatment Method:
C = Container Grown
F = Field Grown

Scientific Name	Common Name	
Heuchera micrantha	coral bells	C, F
Hippeastrum hybrid	amaryllis	C, F
Hosta 'Francee'	francee plantain lily	C, F
Hosta lancifoila	albo-marginata hosta	C, F
Hosta 'Patriot'	patriot plantain lily	C, F
Hymenoxys acaulis	angelita daisy	C, F
Hypericum spp.	St. Johnswort	C, F
Impatiens wallerana	busy lizzie	C, F
Iris pumila	yellow dwarf bearded iris	C, F
Iris siberica	blue siberian iris	C, F
Jasminum nitidum	angelwing jasmine	C, F
Lampranthus spectabilis	trailing iceplant	F
Leptospermum scoparium	broom teatree/manuka	C, F
Liatris spicata	gay feather	C, F
Limonium perezii	statice	C, F
Liriope gigantea	white lily turf	C, F
Liriope muscari	lilac beauty lily turf	C, F
	majestic lily turf	C, F
	monroe white lily turf	C, F
	silvery sunproof lily turf	C, F
	variegated liriope lily turf	C, F
	big blue lily turf	C, F
Liriope spicata	green/creeping lily turf	C, F
Lobelia erinus	lobelia	C, F
Lobularia maritima	sweet alyssum	C, F
Lonicera japonica	honeysuckle, Japanese	F
Lysimachia punctata	dotted loosestrife	C, F
Mathiola incana	stock	C, F
Miscanthus sinensis	eulalia grass	C, F
Monarda didyma	bee balm	C, F
Moraea iridiodes	African iris	C, F
Oenothera speciosa	siskiyou evening primrose	C, F
Ophiopogon japonicus	dwarf mondo grass	C, F
	mondo grass	C, F
Osteospermum fruticosum	freeway daisy	C, F
Pachysandra terminalis	Japanese spurge	C, F
Parthenocissus quinguefolia	Virginia creeper	C, F
Pelargonium x hortorum	zonal geranium	C, F
Pelargonium peltatum	ivy geranium	C, F
Pennisetum alopecuroides	fountain grass	C, F
Pennisetum setaceum	chrimson fountaingrass	C, F
Pentas lanceolata	star cluster	C, F
Penstemon x 'Apple blossom'	apple blossom penstemon	C, F
Penstemon gentianoides	hartwig penstemon	C, F
Perovskia atriplicifolia	Russian sage	C, F
Petunia-hybrids	garden petunias	C, F
Phalaris arundinacea picta	ribbon grass	C, F
Ratibida columnifera	Mexican hat	C, F
Rudbeckia fulgida	blackeyed susan	C, F
Rudbeckia hirta	blackeyed susan	C, F
Ruellia brittoniana	dwarf katie ruellia	C, F
Salvia grahamii	graham's sage	C, F
Salvia leucantha	Mexican bush sage	C, F
Sedum x 'Autumn joy'	autumn joy stonecrop	C, F
Sedum x 'Vera jameson'	vera jameson stonecrop	C, F
Targetes patula 'Little hero'	little hero marigold	C, F
Trachelospermum asiaticum	asian jasmine	C, F
Tulbaghia violacea	society garlic	C, F
Verbena peruviana	st. paul verbena	C, F
Vinca major	periwinkle, bigleaf	C, F
Vinca minor	periwinkle, dwarf	F
Vinca spp.	periwinkle	F
Zinnia elegans	dwarf zinnia	C, F

Non-Bearing Fruit and Nut Trees Non-bearing Vineyards[1] Common Name	Recommended Treatment Method: C = Container Grown F = Field Grown
almond	F
apple	F
apricot	F
avocado	F
blackberry	F
blueberry	F
boysenberry	F
cherry, sour	F
cherry, sweet	F
currant	F
dewberry	F
elderberry	F
fig	F
filbert	F
gooseberry	F
grape, American	F
grape, European	F
grapefruit	F
kiwi	F
lemon	F
loganberry	F
macadamia nut	F
nectarine	F
olive	F
orange	F
peach	F
pear	F
pecan	F
pistachio	F
plum	F
pomegranate	F
prune	F
raspberry	F
walnut, black	F
walnut, English	F

[1]Non-bearing fruit and nut trees and non-bearing vineyards are defined as plants which will not bear fruit for at least one year after treatment.

Ornamental Bulbs

Do not use Snapshot 2.5 TG in bulb production fields. For use in landscape settings only.

Snapshot 2.5 TG may be applied for control of susceptible annual weeds in ornamental bulbs, e.g., bulbous iris, daffodil (narcissus), hyacinth and tulip. Apply Snapshot 2.5 TG to the soil surface 2 to 4 weeks after planting, but prior to the emergence of annual weeds. Snapshot 2.5 TG may also be applied following bulb emergence but prior to flowering and after flowering. For fall planted bulbs, apply Snapshot 2.5 TG again in late winter or early spring to weed-free soil surfaces.

Special Use Precautions:
Do not apply to tulip plants that have emerged to a height greater than 3/4 inch.
Do not apply to gladiolus prior to emergence or if corms are less than one inch in diameter.
Do not apply to bulbs while they are flowering.

Shadehouse Areas

Snapshot 2.5 TG may be applied in open shadehouse-type structures where the natural flow of air is unimpeded. Do not apply in enclosed greenhouses or in enclosed shadehouse-type structures. Do not apply within three weeks prior to enclosing greenhouse or poly-type structures.

Non-Cropland

Snapshot 2.5 TG is recommended as a preemergence treatment for control of certain broadleaf weeds and annual grasses on non-cropland areas such as industrial sites, utility substations, highway guardrails, sign posts, delineators, etc. Apply Snapshot 2.5 TG anytime 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.

Refer to the General Information section of this label for General Use Precautions and information on Application, Application Rates, and Weeds Controlled.

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

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

Limitation of Remedies

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

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

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

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

Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

Label Code: CD02-082-020
Replaces Label: D02-082-018

EPA accepted 03/20/02

Revisions:
1. Update trademark references to: ® ™ Trademarks of

Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners (multiple locations)

Dow AgroSciences

SAFETY DATA SHEET
DOW AGROSCIENCES LLC

Product name: SNAPSHOT™ 2.5 TG HERBICIDE

Issue Date: 05/15/2015
Print Date: 05/26/2015

DOW AGROSCIENCES LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: SNAPSHOT™ 2.5 TG HERBICIDE

Recommended use of the chemical and restrictions on use
Identified uses: End use herbicide product

COMPANY IDENTIFICATION
DOW AGROSCIENCES LLC
9330 ZIONSVILLE RD
INDIANAPOLIS IN 46268-1053
UNITED STATES

Customer Information Number: 800-992-5994
info@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-992-5994
Local Emergency Contact: 352-323-3500

2. HAZARDS IDENTIFICATION

Hazard classification
This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.
Acute toxicity - Category 3 - Inhalation
Carcinogenicity - Category 1A
Specific target organ toxicity - repeated exposure - Category 1

Label elements
Hazard pictograms

Signal word: **DANGER!**

Hazards
Toxic if inhaled.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Use personal protective equipment as required.

Response
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician.
IF exposed or concerned: Get medical advice/ attention.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Isoxaben	82558-50-7	0.5%
Trifluralin	1582-09-8	2.0%
Clays, Fuller's earth	8031-18-3	>= 78.5 - <= 86.4 %
Silica, crystalline (quartz)	14808-60-7	>= 0.9 - <= 8.7 %
Balance	Not available	>= 2.4 - <= 18.1 %

4. FIRST AID MEASURES

Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact: Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.

Unsuitable extinguishing media: no data available

Special hazards arising from the substance or mixture
Hazardous combustion products: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen fluoride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: None known.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination.

This material does not burn. Fight fire for other material that is burning. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep out of reach of children. Do not swallow. Avoid breathing dust or mist. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling. Keep container closed. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in a dry place. Store in original container. Do not store near food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Silica, crystalline (quartz)	OSHA Z-1		
	OSHA Z-3	TWA total dust	30 mg/m3 / %SiO2+2
	OSHA Z-3	TWA respirable	10 mg/m3 / %SiO2+2
	OSHA Z-3	TWA respirable	250 mppcf / %SiO2+5
	ACGIH	TWA Respirable fraction	0.025 mg/m3 , Silica

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Granules.
Color	Yellow
Odor	Aromatic
Odor Threshold	No test data available
pH	7.5 (50% dispersion)
Melting point/range	No test data available
Freezing point	Not applicable
Boiling point (760 mmHg)	Not applicable
Flash point	**closed cup** Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	No
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	Not applicable
Relative Density (water = 1)	Not applicable

Water solubility	No test data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	> 537 °C (> 999 °F)
Decomposition temperature	No test data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	no data available
Oxidizing properties	no data available
Liquid Density	Not applicable
Bulk density	0.70 g/cm3 *Loose Volumetric*
Molecular weight	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Active ingredient decomposes at elevated temperatures. Avoid direct sunlight or ultraviolet sources.

Incompatible materials: Avoid contact with: Strong oxidizers. Strong acids.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Nitrogen oxides. Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

As product:
LD50, Rat, > 2,500 mg/kg

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product:
LD50, Rabbit, > 5,000 mg/kg

Acute inhalation toxicity
As product:
LC50, Rat, male, 4 Hour, Dust, > 4.6 mg/l
As product:
LC50, Rat, female, 4 Hour, Dust, > 0.5 - < 4.6 mg/l
Excessive exposure may cause irritation to upper respiratory tract (nose and throat).
Prolonged excessive exposure may cause serious adverse effects, even death.

Skin corrosion/irritation
Prolonged contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation
Solid or dust may cause irritation due to mechanical action.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.
Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:
No relevant information found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
For the active ingredient(s):
In animals, effects have been reported on the following organs:
Kidney.
Liver.
Blood.
Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

Carcinogenicity
Crystalline silica has been shown to cause cancer in laboratory animals and humans. An increase in nonmalignant liver tumors was observed with isoxaben in one of two species tested. A low incidence of urinary tract tumors was seen in only 1 of 5 chronic studies in rats with trifluralin. Trifluralin is not anticipated to be a carcinogenic risk to man.

Teratogenicity
For the active ingredient(s): Trifluralin. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Isoxaben. Has caused birth defects in laboratory animals only at doses toxic to the mother.

Reproductive toxicity
For the active ingredient(s): Isoxaben. In animal studies, has been shown to interfere with reproduction in females.

Mutagenicity
For the active ingredient(s): Trifluralin. In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Based on information for component(s): Crystalline Silica. In vitro genetic toxicity studies were negative in some cases and positive in other cases.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Carcinogenicity

Component	**List**	**Classification**
Silica, crystalline (quartz)	IARC	Group 1: Carcinogenic to humans
	ACGIH	A2: Suspected human carcinogen

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 230 mg/l

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Acute toxicity to aquatic invertebrates
EC50, Daphnia pulex (Water flea), 48 Hour, > 1,000 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, > 1,000 mg/l

Toxicity to Above Ground Organisms
Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

oral LD50, Colinus virginianus (Bobwhite quail), > 2000mg/kg bodyweight.

Toxicity to soil-dwelling organisms
LC50, Eisenia fetida (earthworms), 14 d, survival, > 10,000 mg/kg

Persistence and degradability

Isoxaben

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. Biodegradation rate may increase in soil and/or water with acclimation.

Theoretical Oxygen Demand: 1.98 mg/mg

Chemical Oxygen Demand: 1.77 mg/g

Stability in Water (1/2-life)
Hydrolysis, half-life, > 5 d, pH 7.0

Photodegradation
Test Type: Half-life (direct photolysis)
Method: Measured
Photodegradation
Test Type: Half-life (direct photolysis)
Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 0.628 Hour
Method: Estimated.

Trifluralin

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

Chemical Oxygen Demand: 1.37 mg/mg

Stability in Water (1/2-life)
Hydrolysis, half-life, > 1 year, pH 3 - 9, Measured
Photolysis, half-life, 0.19 - 3.08 Hour, Measured

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 5.347 Hour
Method: Estimated.

Clays, Fuller's earth

Biodegradability: Biodegradation is not applicable.

Silica, crystalline (quartz)

Biodegradability: Biodegradation is not applicable.

Balance

Biodegradability: No relevant data found.

Bioaccumulative potential

Isoxaben

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.64 Measured

Trifluralin

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water(log Pow): 5.27
Bioconcentration factor (BCF): 1,060 - 6,000 Pimephales promelas (fathead minnow) Estimated.

Clays, Fuller's earth
Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Silica, crystalline (quartz)
Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Balance
Bioaccumulation: No relevant data found.

Mobility in soil

Isoxaben
Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient(Koc): 700 - 1290

Clays, Fuller's earth
No relevant data found.

Silica, crystalline (quartz)
No relevant data found.

Balance
No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.(Trifluralin)
UN number	UN 3077
Class	9
Packing group	III
Reportable Quantity	Trifluralin

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Acute Health Hazard
Chronic Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Pennsylvania (Worker and Community Right-To-KnowAct): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Components	**CASRN**
Trifluralin	1582-09-8
Silica, crystalline (quartz)	14808-60-7

Pennsylvania (Worker and Community Right-To-KnowAct): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

United States TSCA Inventory (TSCA)
This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

Federal Insecticide, Fungicide and Rodenticide Act
EPA Registration Number: 62719-175
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Causes moderate eye irritation
Harmful if swallowed or inhaled
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

16. OTHER INFORMATION

Hazard Rating System
NFPA

Health	Fire	Reactivity
2	1	0

Revision
Identification Number: 101204129 / A211 / Issue Date: 05/15/2015 / Version: 3.0
DAS Code: FN-3278
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
TWA	8-hour, time-weighted average

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW AGROSCIENCES LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is

provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

INDAZIFLAM | GROUP 29 | HERBICIDE

Spect(i)cle® FLO

HERBICIDE

Preemergence Herbicide for the Control of Grasses, Annual Sedges and Broadleaf Weeds in Warm Season Turfgrass, Landscape Ornamentals, Hedgerows, Hardscapes, and Natural Areas

DO NOT USE FOR THE MANUFACTURING OF FERTILIZER

ACTIVE INGREDIENT: Indaziflam	7.4%
OTHER INGREDIENTS:	92.6%
TOTAL:	100.0%

This product is a Suspension Concentrate containing 0.622 lb active ingredient per gallon.

Shake well before use.

EPA Reg. No. 432-1608

Net Contents

1 Gallon

86775387

86699648C 200831AV1

KEEP OUT OF REACH OF CHILDREN

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577

For PRODUCT USE Information Call 1-800-331-2867

See Back Panel for First Aid Instructions and Booklet for Complete Precautionary Statements and Directions for Use.

FIRST AID	
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in eyes:	• Hold eyes open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	

PRECAUTIONARY STATEMENTS

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, and 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.

ENGINEERING CONTROLS STATEMENTS:

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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 body thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, aquatic invertebrates, and plants. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean watermark. Do not contaminate water when disposing of equipment rinsate or washwater. This product may enter water through spray drift or runoff. Follow directions for use to avoid spray drift and runoff. A level well maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential for getting into water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.
This product may enter water through spray drift. Follow precautions for use to avoid spray drift.

Surface Water Advisory: This pesticide may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application.

Ground Water Advisory: This pesticide has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

DIRECTIONS FOR USE

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

Read entire label before using this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. 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 intervals. 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 12 hours.

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, waterproof gloves and 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. Keep unprotected persons out of the treated areas until sprays have dried.

PRODUCT INFORMATION

SPECTICLE FLO® HERBICIDE is a selective, preemergence alkylazine herbicide. SPECTICLE FLO HERBICIDE provides extended residual control of many annual grasses including crabgrass, goosegrass, and annual bluegrass, as well as annual sedges, and many broadleaf weeds. Use sites include residential, commercial, recreational, municipal, and institutional turf and ornamentals; roadsides; natural areas; non-bearing fruit and nut trees in residential plantings; sod farms; and hardscapes.

Use SPECTICLE FLO HERBICIDE on established warm season turf in areas including golf courses (roughs and fairways), sod farms, sports fields, residential and commercial lawns, parks, and cemeteries.

SPECTICLE FLO HERBICIDE controls weeds by reducing the emergence of seedlings through inhibition of cellulose biosynthesis (CB Inhibitor). Necrosis or yellowing may be observed if the herbicide is applied to herbaceous tissue such as leaves and green stems or at bud break of sensitive plants. SPECTICLE FLO HERBICIDE does not control plants emerging from tubers, rhizomes, bulbs, corms, or existing rootstocks.

SPECTICLE FLO HERBICIDE needs to be activated by rainfall or irrigation prior to weed germination for most effective preemergence control.

SPECTICLE FLO HERBICIDE is a highly active herbicide that provides effective weed control when applied to the soil around many labeled

landscape ornamentals. SPECTICLE FLO HERBICIDE may damage sensitive plants, if the product is allowed to remain in contact with foliage. Carefully apply SPECTICLE FLO HERBICIDE in strict accordance to the label.

PRODUCT USE RESTRICTIONS

- Do not exceed the maximum single application rates specified under each use.
- Do not exceed 18.5 fl oz per acre of SPECTICLE FLO HERBICIDE for all applications within a 12 month period.
- Do not contaminate water intended for irrigation and domestic use.
- Do not apply within 25 feet of ponds, lakes, rivers, streams, wetlands and habitat containing aquatic and semi-aquatic plants when SPECTICLE FLO HERBICIDE is used on sod farms, golf courses, and non-crop areas (excluding residential lawns and commercial turf).
- Do not apply SPECTICLE FLO HERBICIDE through an irrigation or chemigation system.
- Do not apply SPECTICLE FLO HERBICIDE by air.
- SPECTICLE FLO HERBICIDE is not for sale, distribution, or use in Nassau County or Suffolk County in New York State.

DEACTIVATING SPECTICLE FLO HERBICIDE

Activated charcoal has been shown to deactivate SPECTICLE FLO HERBICIDE if applied within several hours of application. Follow directions for the amount of charcoal to apply on the label of the activated charcoal.

SPRAY DRIFT MANAGEMENT

Spray equipment and weather affect spray drift. Consider all factors when making application decisions. Where states have more stringent regulations, they must be observed. Avoiding spray drift is the responsibility of the applicator. To reduce the potential for drift, the application equipment must be set to apply medium to very coarse droplets (i.e., ASAE Standard 572) with corresponding spray pressure. Use high flow rate nozzles to apply the highest practical spray volume. With most nozzle types, narrower spray angles produce larger droplets. Follow the nozzle manufacturer's directions on pressure, orientation, spray volume, etc., in order to minimize drift and optimize coverage and control.

Wind

Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and plants are growing. Do not spray near sensitive plants if wind is gusty, below 2 mph, or in excess of 10 mph and moving in the direction of adjacent areas of sensitive crops or plants. Do not apply during temperature inversions. Always make applications when there is some air movement to determine the direction and distance of possible spray drift.

Local terrain may influence wind patterns; the applicator must be familiar with local conditions and understand how they may impact spray drift. Boom or nozzle shielding can reduce the effects of wind or air currents on drift. Verify that the shields do not interfere with uniform deposition of product prior to application.

Temperature Inversion

A surface temperature inversion (i.e., increasing temperature with increasing altitude) greatly increases the potential for drift. Avoid application when conditions are favorable to inversion. Presence of ground fog is a good indicator of a surface temperature inversion.

Sensitive Areas

Sensitive areas to SPECTICLE FLO HERBICIDE are defined as bodies of water (ponds, lakes, rivers, and streams), wetlands, habitats for endangered species, and non-labeled agricultural crop areas. Applicators must take all precautions necessary to keep spray drift from reaching sensitive areas.

Spray Drift Management

Make applications at the lowest height that safely permits uniform coverage of the soil and minimizes droplet evaporation. For use on golf courses and commercial lawns, the boom height must be no higher than 1-3 feet above the ground and nozzle tips must be set to spray out

medium to very coarse spray droplets. Applications to residential lawns must be made by equipment that maintains coarse spray droplets (to reduce drift).

For use in landscape ornamentals, apply SPECTICLE FLO HERBICIDE around dormant (prior to bud break) or actively growing plants. In either case, the spray must be directed at the base of the plant or away from the plant. Do not allow SPECTICLE FLO HERBICIDE to come in contact with the foliage, as some leaf malformations or discoloration may occur. Minimize contact with above ground stems.

APPLICATION INFORMATION

Apply SPECTICLE FLO HERBICIDE with a properly calibrated sprayer according to the manufacturer's directions and check periodically to be certain that the equipment is working properly prior to each use. Uniform application is essential for satisfactory weed control. Avoid skips for the best weed control and overlapping application patterns to avoid plant injury.

Application Volume

Apply SPECTICLE FLO HERBICIDE in a minimum of 10 gallons of water per acre (1 quart of water per 1000 sq ft) and ensure adequate coverage for optimum weed control.

SOIL MOISTURE, IRRIGATION, AND RAINFALL AFTER APPLICATION

To activate SPECTICLE FLO HERBICIDE, irrigate lightly after application to move the herbicide into the soil. Rainfall within several days after application will negate the need to irrigate. Avoid application to saturated soil. Postpone application if rainfall that may cause visible run-off is anticipated.

TANK-MIX COMBINATIONS WITH SPECTICLE FLO HERBICIDE

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

MIXING AND COMPATIBILITY

Mixing Instructions

Add SPECTICLE FLO HERBICIDE to the tank and agitate before adding another product. Mix the amount of SPECTICLE FLO HERBICIDE needed for immediate application needs. Settling can occur if the spray mixture is allowed to sit over an extended period of time. SPECTICLE FLO HERBICIDE is stable in spray solution for up to 48 hours after mixing. Re-agitate the spray solution before application.

Compatibility Testing With Other Pesticides

SPECTICLE FLO HERBICIDE is compatible with many pesticides and liquid fertilizers. A compatibility test must be conducted with any potential tank-mix partner with SPECTICLE FLO HERBICIDE. Using a clear container, conduct the test as described below:

1. Fill the container three-quarters full with water.
2. Add the products to be tank-mixed in the following order: (a) wettable powders (b) dry flowable, (c) aqueous suspensions, (d) SPECTICLE FLO HERBICIDE*, (e) liquids, (f) solutions and emulsifiable liquid concentrates, (g) micronutrients and liquid fertilizers.
3. Shake or stir after each addition to mix thoroughly.
4. After adding all ingredients, let the mixture stand for 15 minutes and look for separation, large flakes, precipitates, gels, and heavy oily film or other signs of incompatibility.
5. If the compatibility test shows signs of incompatibility, do not tank-mix the product tested with SPECTICLE FLO HERBICIDE.

***Note that a labeled spray rate for SPECTICLE FLO HERBICIDE must be used in any compatibility test. Dilute from a concentrated suspension, or sample from a properly diluted spray solution.**

SPRAYER CLEANUP PROCEDURE

Spray equipment used to apply SPECTICLE FLO HERBICIDE **must be cleaned prior to use on sensitive turf and landscape ornamentals, or injury may result**. Before and after using SPECTICLE FLO HERBICIDE, triple rinse all mixing and spray equipment, including tanks, pumps, lines, filters, screens, and nozzles with a tank cleaner.

RESISTANCE MANAGEMENT

For resistance management, SPECTICLE FLO HERBICIDE contains a Group 29 herbicide (cellulose biosynthesis inhibitor). While no known resistance to SPECTICLE FLO HERBICIDE exists, any weed population may contain or develop plants naturally resistant to this product and other Group 29 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same area. Appropriate resistance management strategies should be followed.

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

- Rotate the use of SPECTICLE FLO HERBICIDE or other Group 29 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or pest control advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use, and that considers mechanical control methods, cultural (e.g., timing to favor the turf and not the weeds), biological (weed-competitive varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: 1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; 2) a spreading patch of non-controlled plants of a particular weed species; 3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method. Prevent movement of resistant weed seeds to other areas by cleaning equipment.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific weed biotypes.
- For further information or to report suspected resistance contact Bayer CropScience at 1-866-99BAYER (1-866-992-2937). You can also contact your pesticide distributor or university extension specialist to report resistance.

DIRECTIONS FOR USE OF SPECTICLE FLO HERBICIDE ON TURF

Use Restrictions for SPECTICLE FLO HERBICIDE on Turf

- Do not apply to newly seeded turf.
- Do not apply to golf course greens, tees, or collars.
- Do not apply to slopes immediately above golf course greens.
- Do not apply to weakened turf that requires significant fill-in or recovery.

USE OF SPECTICLE FLO HERBICIDE ON TURF IN COARSE AND SANDY SOILS

Soil conditions can affect the tolerance of turf to SPECTICLE FLO HERBICIDE. Coarse or sandy soils may allow for downward movement of SPECTICLE FLO HERBICIDE into the root zone and cause significant root damage and phytotoxicity. Coarse soils, for example, may include sig-

nificant quantities of sand, gravel, decomposed granite, and ground cinders. Prior to application of SPECTICLE FLO HERBICIDE in these soils, confirm texture with a soil test. Turf grown in soil exceeding 80% sand or 20% gravel may be at risk. Low rate multiple applications of SPECTICLE FLO HERBICIDE may reduce the risk on these soils. Refer to use rates for the 'Split Application Programs' section of this label.
If SPECTICLE FLO HERBICIDE is to be applied on these soils, evaluate turf tolerance in treated soils prior to a large scale application.

Use of SPECTICLE FLO HERBICIDE on Weakened or Stressed Turf

SPECTICLE FLO HERBICIDE controls weeds by inhibiting root development. Newly developing roots of desirable turf may be affected. Turf under stresses such as winterkill, spring dead spot, transitioning ryegrass, bermudagrass spring root decline, soil compaction, foliar and root diseases, nematodes, salt accumulation, shade, excessive foot or equipment traffic, newly verticut turf, and drought should be carefully evaluated before treatment. Application of SPECTICLE FLO HERBICIDE to turf in these situations may delay turf recovery.
Application of SPECTICLE FLO HERBICIDE to stressed turf may produce symptoms of injury including yellowing, purple discoloration, thinning, and necrosis. If injury occurs, promote recovery through optimizing fertility and other cultural practices.

Turf Tolerance

Turf tolerance to SPECTICLE FLO HERBICIDE is acceptable on all labelled turf types and cultivars. Due to the large number of types and cultivars, it is impossible to test every one for tolerance to SPECTICLE FLO HERBICIDE. Neither the Manufacturer nor the Seller has determined whether or not SPECTICLE FLO HERBICIDE can be used safely on turf types and cultivars not specified on this label.
Before using on turf cultivars that are not listed on this label, the applicator must confirm tolerance by testing labelled rates on a small area prior to widespread use.

Tolerant turfgrasses

- **Bermudagrass*** *(Cynodon dactylon)* (and hybrids)-Baby, Celebration, Common**, Floratex, Tifsport, Tifton 10, Tifway 419, Princess, Vamont, Riviera, Yukon
- **Zoysiagrass** *(Zoysia* spp.*)*-Cavalier, Crowne, DeAnza, El Toro, Empire, Jamar, Meyer, Palisades, Zenith, Zeon
- **Centipedegrass*** *(Eremochloa ophiuroides)*- Common, Tifblair
- **St. Augustinegrass*** *(Stenotaphrum secundatum)*-Captiva, Floratam, Floratine, Palmetto, Raleigh
- **Buffalograss** (*Buchloe dactyloides*)
- **Bahiagrass** *(Paspalum notatum)*
- **Seashore paspalum** *(Paspalum vaginatum)*

* Application of SPECTICLE FLO HERBICIDE may temporarily inhibit the rooting of turfgrass stolons.
** Common or off-type Bermudagrass may show increased sensitivity to SPECTICLE FLO HERBICIDE compared to hybrids.

SPECTICLE FLO HERBICIDE may cause unacceptable injury to some turfgrasses. **Do not** use on the following turfgrasses or mixtures containing any of these grasses, unless thinning or removal is desired. For use on grasses in natural areas, see Natural Areas section on this label.

- **Creeping bentgrass** *(Agrostis palustris)*
- **Colonial bentgrass** *(Agrostis capillaris)*
- **Annual bluegrass** *(Poa annua)*
- **Roughstalk bluegrass** *(Poa trivialis)*
- **Fine fescue** *(Festuca rubra)*
- **Turf type tall fescue** *(Festuca arundinaceae)*
- **Kikuyugrass** *(Pennisetum clandestinum)*
- **Perennial ryegrass** *(Lolium perenne)*
- **Annual ryegrass** *(Lolium multiflorum)*
- **Kentucky bluegrass** *(Poa pratensis)*
- **Bermudagrass** *(Cynodon dactylon)* - Ormond

Maximum Single Application Rates for SPECTICLE FLO HERBICIDE on Warm Season Grasses

Turf Type	Application Rate Fluid Ounces of Product per Acre
Bermudagrass	10
Zoysiagrass	10
Buffalograss	10
Bahiagrass	10
St. Augustinegrass	6
Centipedegrass	6
Seashore Paspalum	8

Precautions for Use of SPECTICLE FLO HERBICIDE Near Sensitive Grasses

SPECTICLE FLO HERBICIDE applied uphill to sensitive grasses (such as overseeded ryegrass, roughstalk bluegrass (*Poa trivialis*), and bentgrass) can move and cause injury and stand reduction to adjacent sensitive grasses. Allow turf to dry before allowing foot traffic or equipment through treated areas near sensitive grasses. For Lawn Care applications, SPECTICLE FLO HERBICIDE may be applied where labeled warm season grasses are adjacent to sensitive grasses such as tall fescue, Kentucky bluegrass, and perennial ryegrass. The applicator, however, must take care not to apply SPECTICLE FLO HERBICIDE directly to sensitive grasses.

If SPECTICLE FLO HERBICIDE contacts sensitive grasses, refer to the "DEACTIVATING SPECTICLE FLO HERBICIDE" section of this label.

USE RATES, TIMINGS, AND MAXIMUM SEASONAL RATE FOR SPECTICLE FLO HERBICIDE ON TURF

Apply SPECTICLE FLO HERBICIDE in a single or split application program. The maximum single application rate of SPECTICLE FLO HERBICIDE is 10 fl oz per acre. The total amount of SPECTICLE FLO HERBICIDE applied in a 12-month period must not exceed 18.5 fl oz per acre.

SINGLE APPLICATION PROGRAM

Use higher rates within the rate range when the site has historically higher weed pressure or when longer residual control is desired. Use lower to medium rates on medium and coarse-textured soils, and higher rates on fine-textured soils.

Use Rates for Single Application of SPECTICLE FLO HERBICIDE

Target Weed		Rate Range (fl oz per acre) for SPECTICLE FLO (single application)
Crabgrass	Broadleaf weeds	6-10
Goosegrass	Annual sedge and annual kyllinga	
Annual bluegrass		

SPLIT APPLICATION PROGRAMS

Split applications of SPECTICLE FLO HERBICIDE can be made in a use season to extend the length of control of specific weeds, to control weeds germinating over an extended period, or to control other weeds emerging during the same or overlapping period.

Use Rates for Split Applications of SPECTICLE FLO HERBICIDE

Target Weed	Rate Range (fl oz per acre) for SPECTICLE FLO HERBICIDE (initial application)	Rate Range (fl oz per acre) for SPECTICLE FLO HERBICIDE (follow-up application within 45-90 days)
Crabgrass	3 - 9	3 - 9
Goosegrass		
Annual bluegrass		3 - 9
Broadleaf weeds	6 - 9	3 - 9
Annual sedge and annual kyllinga		6 - 9

For extended residual control, use split applications.

Use Rates for Three Split Applications of SPECTICLE FLO HERBICIDE

Target Weed	Rate Range (fl oz per acre) for SPECTICLE FLO HERBICIDE (initial application)	Rate Range (fl oz per acre) for SPECTICLE FLO HERBICIDE (follow-up application within 30-45 days)	Rate Range (fl oz per acre) for SPECTICLE FLO HERBICIDE (follow-up application within 30-45 days)
Crabgrass	3 - 4.5	3 - 4.5	3 - 4.5
Goosegrass			
Annual Bluegrass			
Broadleaf weeds			

GOOSEGRASS CONTROL

SPECTICLE FLO HERBICIDE provides preemergence control of goosegrass emerging from seed. SPECTICLE FLO HERBICIDE does not control perennial goosegrass or goosegrass emerging from existing crowns. If goosegrass is evident at the time of application, use a labeled postemergence herbicide for control of existing plants.

ANNUAL BLUEGRASS CONTROL

Make preemergence applications of SPECTICLE FLO HERBICIDE between August and November depending on annual bluegrass germination in each geographical zone. The optimum timing is dependent on peak annual bluegrass germination and local conditions in a particular year.

BROADLEAF WEED CONTROL

SPECTICLE FLO HERBICIDE provides preemergence control of many broadleaf weeds. Control is affected by the size of the seed and the depth of the seed within the soil profile. Large seeded broadleaf weeds or weeds germinating deeper in the soil profile may not be effectively controlled by SPECTICLE FLO HERBICIDE.

ANNUAL SEDGES AND ANNUAL KYLLINGA CONTROL

SPECTICLE FLO HERBICIDE provides preemergence control of sedges and kylingas emerging from seed. SPECTICLE FLO HERBICIDE does not control established perennial sedges and kyllinga, or sedges emerging from tubers (nutlets) including yellow or purple nutsedge.

Dormant, Non-Overseeded Turf

Tank-mix combinations of SPECTICLE FLO HERBICIDE with a non-selective herbicide will control existing weeds in dormant warm season grasses such as bermudagrass and zoysiagrass.

SPECTICLE FLO HERBICIDE may be used in combination with RONSTAR® FLO HERBICIDE, REVOLVER HERBICIDE, CELSIUS® WG HERBICIDE or TRIBUTE TOTAL to provide broad-spectrum residual weed control. Follow use restrictions on all labels.

Non-Dormant, Non-Overseeded Turf

SPECTICLE FLO HERBICIDE cannot be used on warm season turf overseeded with cool season grasses. Tank-mix combinations of SPECTICLE FLO HERBICIDE with a selective postemergence herbicide such as REVOLVER HERBICIDE, CELSIUS WG HERBICIDE, or TRIBUTE TOTAL provide pre and postemergence control of weeds in non-overseeded, warm season turf common to both products. Follow use restrictions on all labels.

Weeds Controlled or Suppressed by SPECTICLE FLO HERBICIDE[2]			
Broadleaf Weeds			
American black nightshade	*Solanum americanum*	Dodder*	*Cuscuta* spp.
American burnweed (Fireweed)	*Erechtites hieraciifolia*	Dogfennel	*Eupatorium capillifolium*
Beggarticks	*Bidens alba*	Eclipta	*Eclipta alba*
Bittercress	*Cardamine* spp.	Evening primrose, Common	*Oenothera biennis*
Black medic[1]	*Medicago lupulina*	Evening primrose, Cutleaf	*Oenothera laciniata*
Buckwheat, Wild	*Polygonum convolvulus*	False chamomile[1]	*Matricaria maritima*
California burclover	*Medicago polymorpha*	Filaree, Redstem	*Erodium cicutarium*
Canada thistle, Common	*Circium arvense*	Florida pusley	*Richardia scabra*
Chamberbitter	*Phyllanthus urinaria*	Galinsoga	*Galinsoga parviflora*
Chickweed, Common	*Stellaria media*	Garden spurge	*Chamaesyce hirta*
Chickweed, Mouse-ear	*Cerastium vulgatum*	Groundsel, Common	*Senecio vulgaris*
Clover, White	*Trifolium repens*	Hairy fleabane	*Erigeron bonariensis*
Corn speedwell	*Veronica arvensis*	Hairy nightshade	*Solanum sarrachoides*
Cudweed, Linear-leaf/Purple	*Gnaphalium purpureum*	Henbit	*Lamium amplexicaule*
Cupid's shaving brush	*Emilia fosbergii*	Kochia	*Kochia scoparia*
Curly dock	*Rumex crispus*	Lambsquarters, Common	*Chenopodium album*
Dandelion, Cat's Ear	*Hypochoeris radicata*	Lawn burweed	*Soliva sessilis*
Dandelion, Common	*Taraxacum officinale*	Little mallow	*Malva parviflora*

continued

Weeds Controlled or Suppressed by SPECTICLE FLO HERBICIDE[2] *(continued)*			
Broadleaf Weeds			
London rocket[1]	*Sisymbrium irio*	Redmaids	*Calandrinia ciliata*
Longstalked phyllanthus	*Phyllanthus tenellus*	Sesbania, Hemp[1]	*Sesbania exaltata*
Mustard, Black[1]	*Brassica nigra*	Shepherd's-purse	*Capsella bursa-pastoris*
Mustard, Short-pod	*Hirschfeldia incana*	Sida, Prickly/Teaweed[1]	*Sida spinosa*
Mustard, Wild	*Sinapis arvensis*	Southern brassbuttons[1]	*Cotula australis*
Parthenium	*Parthenium hysterophorus*	Sowthistle, Annual	*Sonchus oleraceus*
Pigweed, Prostrate	*Amaranthus blitoides*	Spurge, Spotted	*Euphorbia maculata*
Pigweed, Redroot	*Amaranthus retroflexus*	Stinkwort	*Dittrichia graveolens*
Pink purslane	*Claytonia sibirica*	Sunflower[1], Common	*Helianthus annuus*
Plantain, Buckhorn	*Plantago lanceolata*	Swinecress	*Coronopus didymus*
Plantain, Paleseed	*Plantago virginica*	Tassel flower	*Emilia sonchifolia*
Poinsettia, Wild	*Euphorbia cyathophora*	Tropic ageratum	*Ageratum conyzoides*
Prostrate knotweed	*Polygonum aviculare*	Velvetleaf[1]	*Abutilon theophrasti*
Prostrate spurge	*Euphorbia maculata*	Vetch, Purple	*Vicia benghalensis*
Puncturevine	*Tribulus terrestris*	Wild carrot[1]	*Daucus carota*
Purslane, Common	*Portulaca oleracea*	Willowherb	*Epilobium brachycarpum*
Ragweed, Common[1]	*Ambrosia artimisiifolia*	Woodsorrel, Yellow[1]	*Oxalis stricta*
GRASSES, MONOCOTS, AND SEDGES			
Annual bluegrass	*Poa annua*	Foxtail brome	*Bromus rubens*
Annual kyllinga[3]	*Cyperus sesquiflorus*	Foxtail, Giant	*Setaria faberi*
Barnyardgrass, Common	*Echinochloa crus-galli*	Foxtail, Green	*Setaria viridis*
Cheatgrass	*Bromus secalinus*	Foxtail, Yellow	*Pennisetum glaucum*
Crabgrass, Blanket	*Digitaria serotina*	Goosegrass	*Eleusine indica*
Crabgrass, Henry	*Digitaria ciliaris*	Guineagrass	*Panicum maximum*
Crabgrass, Large/Hairy	*Digitaria sanguinalis*	Kyllinga, Fragrant/Annual[3]	*Kyllinga odorata*
Crabgrass, Smooth	*Digitaria ischaemum*	Little barley	*Hordium pusillum*
Doveweed	*Murdannia nudiflora*	Mouse barley	*Hordeum murinum*
Fall panicum	*Panicum dichotomiflorum*	Red brome	*Bromus rubens*

continued

Weeds Controlled or Suppressed by SPECTICLE FLO HERBICIDE[2] *(continued)*			
GRASSES, MONOCOTS, AND SEDGES			
Rice flatsedge[3]	*Cyperus iria*	Sedge, Annual[3]	*Cyperus compressus*
Ryegrass, Italian	*Lolium multiflorum*	Sedge, Globe[3]	*Cyperus croceus*
Ryegrass, Perennial	*Lolium perenne*	Tufted lovegrass	*Eragrostis pectinacea*
Sandbur	*Cenchrus longispinus*		

*Not for use in California

[1] Weeds suppressed by SPECTICLE FLO HERBICIDE

[2] Use higher labeled rates if weed pressure is historically high or longer residual control is desired (See Use Rates in the SPECTICLE FLO HERBICIDE chart). The rate used must not exceed the tolerance for an individual turf type. Weed control can also be achieved with multiple applications of SPECTICLE FLO HERBICIDE. Do not exceed a total of 18.5 fl oz per acre per year with split applications.

[3] SPECTICLE FLO HERBICIDE only controls sedges and annual kyllinga emerging from seed. It does not control perennial sedge emerging from nutlets or perennial forms of kyllinga.

Seeding, Overseeding, Re-Seeding, Sprigging and Sodding

SPECTICLE FLO HERBICIDE can inhibit root development, as well as the emergence of seed. Roots of newly emerged seedlings may be damaged. Establishment of sod may be affected if SPECTICLE FLO HERBICIDE is applied to sod that is not well established. Timing of seeding, re-seeding, overseeding, sprigging, and sodding turf relative to an application of SPECTICLE FLO HERBICIDE needs to be considered.

Seeding, overseeding, re-seeding, sprigging, and sodding intervals are affected by the rate of SPECTICLE FLO HERBICIDE applied, rainfall, and soil texture in a given year. Applications made sooner than the suggested intervals may decrease the establishment of the new seedlings and reduce turf coverage.

PLANTING METHOD	MINIMUM INTERVAL BEFORE APPLICATION	MINIMUM INTERVAL AFTER APPLICATION	MINIMUM INTERVAL AFTER APPLICATION
		3 - 6 FL OZ/A	> 6 - 10 FL OZ/A
Seeding	12 months	10 months	12 months
Sprigging	12 months	10 months	12 months
Sodding	4 months	6 months	8 months

APPLICATIONS ON SOD FARMS

SPECTICLE FLO HERBICIDE may be applied to turf on Bermudagrass, zoysiagrass, and bahiagrass sod farms. During new sod establishment, SPECTICLE FLO HERBICIDE may be applied when coverage from ribbons is 80% or greater.

Do not apply SPECTICLE FLO HERBICIDE to centipedegrass, seashore paspalum, or St. Augustinegrass sod.

SPECTICLE FLO HERBICIDE may be applied to sod up to 4 months prior to harvest.

LANDSCAPE ORNAMENTALS

SPECTICLE FLO HERBICIDE may be applied for preemergence weed control in landscape ornamentals, and hedgerows. Apply SPECTICLE FLO HERBICIDE as a directed spray, prior to weed seed germination to the soil surface around dormant or actively growing landscape ornamentals as listed in the table below. Apply SPECTICLE FLO HERBICIDE to established landscape ornamentals.

USE RESTRICTIONS

- Do not exceed the maximum single application rates specified for each landscape ornamental use.
- Do not allow spray to contact foliage of desirable plant(s). SPECTICLE FLO HERBICIDE may cause localized injury to the foliage, especially young leaf tissue. If the spray contacts the foliage, wash off immediately. See specific label instructions for over-the-top applications.
- Do not use SPECTICLE FLO HERBICIDE on or around annuals not listed as tolerant on this label.
- Do not use SPECTICLE FLO HERBICIDE around bearing fruit and nut trees. SPECTICLE FLO HERBICIDE may be used around non-bearing fruit and nut trees. Non-bearing trees are defined as trees that will not bear fruit until at least 1 year after treatment.
- Do not use SPECTICLE FLO HERBICIDE around non-bearing fruit and nut trees unless they are at least 1 year old (citrus), 5 years old (grape vines) and 3 years old (all others).
- Do not use SPECTICLE FLO HERBICIDE within the dripline of bearing fruit and nut trees.
- Do not cultivate or disturb the soil surface after application of SPECTICLE FLO HERBICIDE as this may reduce weed control.
- If transplanting mature plants listed as tolerant on this label into soil treated with SPECTICLE FLO HERBICIDE within the preceding 12 months, replace existing soil around roots to minimize effects on plant establishment.
- Do not use SPECTICLE FLO HERBICIDE on seedbeds, or rooted cuttings.
- Do not apply SPECTICLE FLO HERBICIDE to landscapes ornamentals growing in containers smaller than 15 gallons.
- Do not apply SPECTICLE FLO HERBICIDE over-the-top to landscape ornamentals. For Natural Areas, see label instructions for over-the-top applications.
- Do not mix with products containing chlorine bleach.
- Do not apply to landscape beds uphill from ryegrass, fescue, bentgrass, or mixed lawns where these grasses are desirable.

USE PRECAUTIONS

- Avoid applying SPECTICLE FLO HERBICIDE to heavily mulched landscape beds, as reduced weed control may occur. For best results remove existing mulch and replace mulch after an application of SPECTICLE FLO HERBICIDE.
- Application of SPECTICLE FLO HERBICIDE to budded grafts or graft unions may cause plant injury or plant death.

USE OF SPECTICLE FLO HERBICIDE ON LANDSCAPE ORNAMENTALS IN COARSE AND SANDY SOILS

Soil conditions can affect the tolerance of landscape ornamentals to SPECTICLE FLO HERBICIDE. Excessively coarse or sandy soils may allow for downward movement of SPECTICLE FLO HERBICIDE into the root zone and cause significant root damage and phytotoxicity. Coarse soils, may include significant quantities of sand, gravel, decomposed granite, and ground cinders. Prior to application of SPECTICLE FLO HERBICIDE on these soils, confirm soil texture with a soil test. Landscape ornamentals grown in soil exceeding 90% sand or 20% gravel may be at risk. If SPECTICLE FLO HERBICIDE is to be applied in these soils, evaluate tolerance of a few plants of each landscape ornamental in SPECTICLE FLO HERBICIDE treated soil for 1-2 months prior to a large scale application.

SYMPTOMS OF SPECTICLE FLO HERBICIDE INJURY ON LANDSCAPE ORNAMENTALS

SPECTICLE FLO HERBICIDE may injure sensitive landscape ornamentals by damaging roots or leaves. Plant foliage damaged by root absorption will appear stunted, deformed, and may not recover. If SPECTICLE FLO HERBICIDE is allowed to contact leaves, leaf symptoms including leaf spot, leaf discoloration, and leaf curl may appear. Symptoms appear within several days after application. Leaves formed after appearance of symptoms may recover.

LANDSCAPE ORNAMENTAL USES

SPECTICLE FLO HERBICIDE may be used in residential, commercial, as well as federal, state and local plantings of landscape ornamentals and hedgerows for preemergence weed control. Apply SPECTICLE FLO HERBICIDE as a directed spray around established (rooted) plants and not to newly rooted cuttings or seedlings. To avoid root damage, apply SPECTICLE FLO HERBICIDE around transplants when the soil has firmly settled around the root area. Irrigation or rainfall will help to settle the soil and seal surface cracks. Make applications prior to mulching for best weed control. If SPECTICLE FLO HERBICIDE contacts foliage, wash off immediately to avoid damage. Herbaceous annuals and perennials are sensitive to SPECTICLE FLO HERBICIDE.

Use of SPECTICLE FLO HERBICIDE near Sensitive Grasses

CAUTION: SPECTICLE FLO HERBICIDE applied uphill to sensitive grasses can move, under certain circumstances, to sensitive grasses and cause injury and stand reduction.

AMOUNT TO USE: Apply SPECTICLE FLO HERBICIDE as a broadcast, directed spray at 6-12 fl oz/acre around landscape ornamentals. When applying SPECTICLE FLO HERBICIDE with a backpack sprayer, follow all above restrictions.

A subsequent application of SPECTICLE FLO HERBICIDE can be made within 90 days after the initial application to extend weed control provided that the total SPECTICLE FLO HERBICIDE applied does not exceed 18.5 fl oz per acre in a 12 month period.

COMBINATIONS OF SPECTICLE FLO HERBICIDE WITH NON-SELECTIVE HERBICIDES AROUND LANDSCAPE ORNAMENTALS

Remove existing weed growth before application of SPECTICLE FLO HERBICIDE or use a postemergence herbicide labeled for control. SPECTICLE FLO HERBICIDE may be used in combination with a non-selective herbicide. Avoid contact of spray containing a non-selective herbicide with foliage, stems, green bark, or bare roots of turfgrasses, trees, shrubs, or other desirable vegetation. If spraying areas adjacent to desirable plants with a non-selective herbicide, use a shield while spraying to help prevent spray from contacting foliage of desirable plants.

When tank-mixing with other products, it is the responsibility of the end-user/applicator to ensure that the tank-mix partner is registered in the state where the application is being made.

IMPORTANT: Direct application of SPECTICLE FLO HERBICIDE to the soil surface. Avoid direct spray contact on plant surfaces, foliage, and green bark. Avoid application under environmental conditions that favor drift to non-targeted areas. Deep cultivation reduces the effectiveness of SPECTICLE FLO HERBICIDE.

BACKPACK AND HANDHELD SPRAYER MIXING: SPECTICLE FLO HERBICIDE can be applied using backpack or handheld sprayers. For backpack or handheld spray applications, mix 1 teaspoon of SPECTICLE FLO HERBICIDE per gallon of water. Agitate the mixture to ensure good suspension. If adding glyphosate, mix SPECTICLE FLO HERBICIDE in first. Recommended spray volume is 40 - 100 gallons per acre or approximately 1 - 2.3 gallons per 1000 sq ft.

LANDSCAPE ORNAMENTALS AND THEIR CULTIVARS TOLERANT TO SPECTICLE FLO HERBICIDE

Tolerant landscape ornamentals and their cultivars are listed in the following table. Apply as a directed spray around tolerant landscape ornamentals. If a desired plant to be treated is not listed on this label, treat several plants at the maximum use rate and evaluate 1 - 2 months later for acceptable tolerance. The user assumes responsibility for application to plants not listed on this label. Do not treat annuals that are not listed on this label.

Common Name	Scientific Name	Cultivar
Abelia	*Abelia x grandiflora*	Kaleidoscope
Acacia, Prostrate	*Acacia redolens*	Desert Carpet
Anise, Yellow	*Illicium parviflorum*	
Apple	*Malus domestica*	Beverly Hills, Ellsa, Golden Dorsett, Harelred, Honey Crisp, Mahaleb, Red Delicious, Winesap
Apricot	*Prunus armeniaca*	Tropic Gold
Arborvitae	*Thuja occidentalis*	Emerald, Green Giant, Green Flag, Nigra, Techny, Yellow Ribbon
Ash, (Southern) Green	*Fraxinus pennsylvanica*	Georgia Gem
Asparagus fern	*Asparagus plumosus*	
Aspen, Quaking	*Populus tremuloides*	
Azalea	*Rhododendron* spp.	Delaware Valley White, Fashion, Florida Flame, Girard's Rose, Haps Pink, High Tide, Judge Solomon, Karen, Nova Zembla, Macarantha, Hino Crimson, Mother's Day, Pink Gumpo, Red Ruffle, VF 14, White Gumpo
Azalea	*Rhododendron yakushimanum x smirnowii*	Crete
Azalea, Cat album	*Rhododendron chionoides*	
Azalea, Encore	*Rhododendron* spp.	Autumn Debutante
Bamboo, Golden	*Phyllostachys aurea*	
Beech, American	*Fagus grandifolia*	
Birch, River	*Betula nigra*	Heritage
Birch, White	*Betula platyphylla*	Spire
Bird of Paradise	*Strelitizia reginae*	
Bird of Paradise, White	*Strelitizia nicolai*	
Black tupelo (Black gum)	*Nyssa sylvatica*	Wild Fire
Bluebird	*Caryopteris x clandonensis*	Dark Knight
Bluestem, Big	*Andropogon gerardii*	
Bluestem, Little	*Andropogon scoparius*	
Boxwood	*Buxus microphylla*	Baby Gem, Chicagoland Green, Dwarf, Green Beauty
Boxwood	*Buxus isinica var. insularis*	Wintergreen
Boxwood, Common/English	*Buxus sempervirens*	Green Gem, Green Mountain, Suffructicosa, Winter Gem
Boxwood, Japanese	*Buxus microphylla var. japonica*	Dwarf, Chicagoland
Bradford Pear	*Pyrus calleryana*	Chanticlear

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Common Name	Scientific Name	Cultivar
Buckeye, Ohio	*Aesculus glabra*	
Burning bush (Euonymus)	*Euonymus altus*	Compacta
Butterfly bush	*Buddleia davidii*	Nanho Blue
Buttonwood	*Conocarpus erectus*	
Camellia, Japanese	*Camellia japonica*	Margaret Heathcliff Pink
Camellia, Little leaf	*Camellia sasanqua*	Cleopatra Pink, Shi Shi Gashira
Cassia (Golden senna)	*Senna surattensis*	
Catalpa, Southern	*Catalpa bignoniaceae*	
Cedar, Atlantic white	*Chamaecyparis thyoides*	
Cedar, Eastern red	*Juniperus virginiana*	Burkii, Idylllwild
Cedar, Japanese	*Cryptomeria japonica*	Black Dragon, Burkii, Globosa, Yoshino
Cherry, American plum	*Prunus americana*	
Cherry	*Prunus serrulata*	Kwanzan
Cherry, Purple leaf sand	*Prunus cistena*	
Cherry, Sargent	*Prunus sargentii*	Spring Wonder
Cherry, Yoshino	*Prunus x yedoensis*	Yoshino
Cherry Laurel (Skip laurel)	*Prunus laurocerasis*	Otto Luyken, Schipkaensis
Chokeberry	*Aronia prunifolia*	Viking
Cottonwood, Eastern	*Populus deltoides*	Siouxland
Crabapple	*Malus sylvestris*	Harvest Gold, Snowdrift, Snow Spring, Spring Snow
Crape myrtle	*Laegerstroemia indica*	Burgundy Cotton, Pocomoke Pink, Sarah's Favorite, Siren Red
Crape myrtle	*Lagerstroemia indica x fauriei*	Miami, Muskogee, Tuscarora
Cryptomeria	*Cryptomeria japonica*	Black Dragon, Yoshino
Cypress, Bald	*Taxodium distichum*	Shawnee Brave
Cypress, False	*Chamaecyparis* spp.	Gold Mops, Gold Thread
Cypress, Japanese (Hinoki cypress)	*Chamaecyparis obtusa*	Filicoides
Cypress, Leyland	*Cupressus x leylandii*	
Cypress, Mediterranean	*Cupressus sempervirens*	
Cypress, Pond	*Taxodium distichum var. imbricatum*	
Daphne	*Daphne caucasica*	Summer Ice
Dawn Redwood	*Metasequoia glyptostroboides*	

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Common Name	Scientific Name	Cultivar
Dogwood, Flowering	*Cornus florida*	
Dogwood, Kousa	*Cornus kousa*	
Dogwood, Redosier (Red bark)	*Cornus sericea*	Yellow Twig
Dogwood, Tatarian	*Cornus alba*	
Elm, American	*Ulmus americana*	
Elm, Chinese (Bosque)	*Ulmus parvifolia*	Drake
Eucalyptus	*Eucalyptus globulus*	Baby Tears
Feather reed grass	*Calamagrostis x acutiflora*	Overdam, Karl Foerster
Fir, Frasier	*Abies fraseri*	
Florida Leucothe (Pipestem)	*Leucothoe populifolia*	
Forsythia (Golden bells)	*Forsythia x intermedia*	Lynwood (Lynwood Gold)
Fragrant tea olive	*Osmanthus fragrans*	
Gardenia	*Gardenia radicans*	
Gardenia	*Gardenia jasminoides*	Frostproof, Mystery
Gaura	*Gaura lindheimeri*	Pink Fountain
Ginkgo	*Ginkgo biloba*	
Gold-dust plant	*Aucuba japonica*	Gold Dust
Green ash	*Fraxinus pennsylvanica*	Georgia Gem
Gumbo-limbo (Copperwood)	*Bursera simaruba*	
Hardy Kiwi	*Actinidia arguta*	Anna
Hawthorn, One seeded	*Crataegus monogyna*	Winter King
Hemlock, Eastern	*Tsuga canadensis*	
Hibiscus, Chinese	*Hibiscus rosa-sinensis*	President Red, San Diego Red
Holly, American	*Ilex opaca*	
Holly, Chinese	*Ilex cornuta*	Burfordii Nana, Carissa, Dwarf Burford, Needlepoint
Holly, Dragon lady	*Ilex x aquipernyi*	Dragon Lady
Holly, Dwarf yaupon	*Ilex vomitoria*	Compacta , Schillings, Stoke's Dwarf
Holly, Foster	*Ilex x attenuata*	East Palatka, Fosteri
Holly, Inkberry/Gallberry	*Ilex glabra*	Compacta, Densa, Shamrock
Holly, Japanese	*Ilex crenata*	Green Luster, Sky Pencil, Soft Touch
Holly, Meservae	*Ilex meserveae*	Blue Maid, Blue Princess
Holly, Nellie R. Stevens	*Ilex aquifolium x Ilex cornuta*	Nellie R. Stevens

continued

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Common Name	Scientific Name	Cultivar
Holly, Winterberry	*Ilex verticillata*	Jim Dandy, Red Sprite
Honeylocust	*Gleditsia triacanthos*	Sunburst, Sunshine
Hornbeam, European	*Carpinus betulus*	Frans Fontaine
Hornbeam, Hop	*Ostrya virginiana*	Carolina
Indian Hawthorn	*Rhaphiolepsis indica*	Dwarf Pink, Minor, Pink Lady
Japanese cleyera	*Ternstromia gymnanthera*	
Jasmine, Asiatic/Yellow star	*Trachelospermum asiaticum*	Minima
Jasmine, Winter	*Jasminum nudiflorum*	
Juniper, Chinese	*Juniperus chinensis*	Gold Tip, Grey Owl, Sea Green, Spartan
Juniper, Common	*Juniperus communis*	
Juniper, Creeping	*Juniperus horizontalis*	Bar Harbor, Blue Rug
Juniper, Flaky	*Juniperus squamata*	Blue Star
Juniper, Parson's	*Juniperus davurica*	Expansa, Parsonii
Juniper, Shore	*Juniperus conferta*	Blue Pacific
Juniper (Red Cedar)	*Juniperus virginiana*	Brodie, Burkii
Lantana	*Lantana camara*	Landmark Sunrise Rose
Larch, Common	*Larix decidua*	
Laurustinus	*Viburnum tinus*	
Lilac	*Syringa x 'Penda'*	Bloomerang
Lilac, Common	*Syringa vulgaris*	
Liriope (Lilyturf)	*Liriope muscari*	Aztec Grass, Big Blue, Evergreen Giant, Silvery Sunproof
London plane tree	*Plantanus x acerifolia*	Exclamation
Loropetalum	*Loropetalum chinensis*	Burgundy, Emerald Snow, Plum Purple, Rubra, Ruby
Maiden Grass (Eulaliagrass)	*Miscanthus sinensis*	Gracillimus, Zebrinus, Little Zebra
Magnolia, Jane	*Magnolia liliflora x M. stellata*	
Magnolia, Southern	*Magnolia grandiflora*	Bracken's Brown Beauty
Mahogony, West Indies/American	*Swietenia mahagoni*	
Maple, Autumn blaze	*Acer x freemanii*	Jeffersred
Maple, Japanese	*Acer palmatum*	Bloodgood, Weeping Red Dragon
Maple, Red	*Acer rubrum*	Autumn Blaze, Autumn Radiance, Frank's Red, October Glory, Red Sunset
Mondograss	*Ophiopogon japonicus*	

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Common Name	Scientific Name	Cultivar
Muhly Grass	*Muhlenbergia capillaris*	
Nandina	*Nandina domestica*	Firepower
Oak, Northern pin	*Quercus ellipsoidal*	
Oak, Northern red	*Quercus rubra*	
Oak, Nuttal	*Quercus nuttallii*	
Oak, Pin	*Quercus palustris*	
Oak, Prairie stature	*Quercus x bimundorum*	Midwest
Oak, Shumard	*Quercus shumardii*	
Oak, Southern live	*Quercus virginiana*	Cathedral
Oak, White	*Quercus alba*	Swamp White
Ohio buckeye	*Aesculus glabra*	
Orchid Tree, Hong Kong	*Bauhinia blakeana*	
Palm, Bamboo/Reed	*Chamaedorea seifrizzi*	
Palm, Cat	*Chamaedorea cataractarum*	
Palm, Chinese Fan	*Livistona chinensis*	
Palm, Christmas	*Adonidia merrillii*	
Palm, Areca	*Dypsis lutescens*	
Palm, Coconut	*Cocos nucifera*	
Palm, European (Mediterranean) fan	*Chamaerops humilis*	
Palm, Foxtail	*Wodyetia bifurcata*	
Palm, Majesty	*Ravenea rivularis*	
Palm, Pygmy date	*Phoenix roebelenii*	
Palm, Queen	*Syagrus romanzoffiana*	
Palm, Roebelenii	*Phoenix roebelenii*	
Palm, Royal	*Roistonea regia*	
Palm, Triangle	*Dypsis decaryi*	
Palm, King Sago	*Cycas revoluta*	
Pear, Callery	*Pyrus calleryana*	Bradford Pear, Chanticleer
Pieris (Lily-of-the-Valley shrub, Japanese andromeda)	*Pieris japonica*	Mountain Fire, Red Mill, Shojo
Pine, Black	*Pinus nigra*	
Pine, Eastern white	*Pinus strobus*	

continued

continued

Common Name	Scientific Name	Cultivar
Pine, Scots	*Pinus sylvestris*	
Pittosporum (Japanese Pittosporum)	*Pittosporum tobira*	Variegata
Pistache, Texas	*Pistacia texana*	
Plum, American	*Prunus americana*	
Plum, Crimson pointe	*Prunus x cerasifera*	
Podocarpus (Buddhist pine)	*Podocarpus macrophyllus*	
Prairie Cordgrass	*Spartina pectinata*	
Privet	*Ligustrum ovafolium*	
Privet, Vicary	*Ligustrum x vicary*	
Redbud, Eastern	*Cercis canadensis*	MN Strain
Rhododendron	*Rhododendron* spp.	
Rose	*Rosa* spp.	Caramba , Double Knock Out®, Flower Carpet Amber, Home Run, Knock Out®, Louis Phillipe, Pink Knock Out®, Radrazz
Rose	*Rosa odorata*	Belinda's Dream, Blue Girl, Double Delight, John F. Kennedy, Mister Lincoln
Rose	*Rosa wichurana*	Dr. Huey
Rose, Virginia	*Rosa virginiana*	
Rose mallow	*Hibiscus moscheutos*	
Rose of Sharon	*Hibiscus syriacus*	Pink Heart, Boule de Feu
Russian sage	*Perovskia atriplicifolia*	
Seagrape	*Coccoloba uvifera*	
Skip laurel	*Prunus laurocerasis*	
Snowberry, Common	*Symphoricarpos albus*	
Spicebush	*Lindera benzoin*	
Spirea (dormant only)	*Spiraea japonica*	Lemon Princess, Little Princess, Norman, Shirobana
Spruce, Blackhills (White spruce)	*Picea glauca*	Densata
Spruce, Colorado Blue (Blue spruce)	*Picea pungens*	
Spruce, Norway	*Picea abies*	
Sweetgum	*Liquidambar styraciflua*	Happidaze
Tamarisk	*Tamarix ramosissima*	Pink Cascade
Taxus (English/Common yew)	*Taxus baccata*	
Taxus (Japanese Yew)	*Taxus cuspidata*	Capitada

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continued

Common Name	Scientific Name	Cultivar
Thin-fruit sedge	*Carex flaccosperma*	
Viburnum, Burkwood	*Viburnum x burkwoodii*	
Viburnum (Wayfaring Tree)	*Viburnum lantana*	Mohican
Viburnum, Popcorn (Japanese snowball)	*Viburnum plicatum*	Popcorn, St. Keverne
Waxflower	*Chamelaucium* spp.	
Wax myrtle, Southern (w/ woody growth)	*Myrica cerifera*	
Willow, Variegated	*Salix integra*	Hakuro Nishiki
Yellow Indian grass	*Sorghastrum nutans*	

Do not use SPECTICLE FLO HERBICIDE on any of these plants.

Common Name	Scientific Name
Blue fescue grass	*Festuca glauca*
Croton	*Codiaeum variegatum*
Fountain grass	*Pennisetum alopecuroides*
Fountain grass, Purple	*Pennisetum setaceum*
Hydrangea	*Hydrangea macrophylla*
Sweet Viburnum	*Viburnum odoratissimum*
Viburnum	*Viburnum suspensum*

NATURAL AREAS

Use SPECTICLE FLO HERBICIDE to control weeds in managed natural areas on golf courses. These areas can be adjacent to fairways, tees, greens, and in steep areas that are difficult to manage with a traditional program or where low maintenance is desired. Plants in these areas include those indigenous to a geographic area as well as other plants introduced due to their potential for low maintenance or for aesthetic considerations. Use of SPECTICLE FLO HERBICIDE in natural areas allows the user to manage undesirable weeds and prevent germination of invasive plants.

Apply SPECTICLE FLO HERBICIDE as a directed spray around tolerant landscape ornamentals listed on this label to control annual grasses and broadleaf weeds prior to germination. In situations where vegetation is too thick for a directed spray application, over-the-top application is necessary. For over-the-top applications, all plants must be established for at least one growing season before an application of SPECTICLE FLO HERBICIDE. If a desired plant to be treated is not listed on this label, treat several plants at the maximum use rate and evaluate 1 - 2 months later for acceptable tolerance to over-the-top applications.

Germination of wildflower seed will be sensitive to SPECTICLE FLO HERBICIDE. Seed these into treated areas no sooner than 12 months after an application of SPECTICLE FLO HERBICIDE. Do not make an over-the-top application to wildflowers.

For control of undesirable grasses and broadleaf weeds present in areas to be treated, use a postemergence spot application of Acclaim Extra, or Celsius according to their labels.

AMOUNT TO USE: Apply SPECTICLE FLO HERBICIDE as a broadcast directed spray at 9 - 12 fl oz/A around landscape ornamentals. Apply 6 - 9 fl oz/A as an over-the-top application. Recommended spray volume is 40 - 80 gallons per acre or approximately 1 - 2 gallons per 1000 sq ft. Activate SPECTICLE FLO HERBICIDE by watering in with light irrigation or rainfall.

NON-SELECTIVE USES

NON-CROP AREAS

SPECTICLE FLO HERBICIDE may be used to maintain bare ground in non-crop areas. These include paths, parking lots, curbs, sidewalks, driveways, around buildings, gravel areas, loading ramps, educational facilities, storage yards, vacant lots, fence rows, parks, and hardscapes. All weeds and debris must be removed from these areas to be treated for optimum control. Adequate irrigation or rainfall after application of SPECTICLE FLO HERBICIDE will provide maximum weed control.

Use of SPECTICLE FLO HERBICIDE near Sensitive Grasses

SPECTICLE FLO HERBICIDE applied uphill to sensitive grasses can move, under certain circumstances, to sensitive grasses and cause injury and stand reduction.

AMOUNT OF USE: Apply 9 - 18.5 fl oz of SPECTICLE FLO HERBICIDE per acre. Use a minimum spray volume of 10 gallons per acre. If weeds are present at the time of application, tank-mix a postemergence herbicide such as glyphosate or glufosinate ammonium with SPECTICLE FLO HERBICIDE. Observe all use restrictions on this label and on the label of the tank-mix partner.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store in original container and keep tightly closed when not in use. Store in a cool, dry place. Avoid cross-contamination with other pesticides.

PESTICIDE DISPOSAL

Pesticides wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency or Hazardous Waste representative at the nearest EPA regional office for guidance in proper disposal methods.

CONTAINER HANDLING

Rigid Non-refillable Containers that are too large to shake (i.e., with capacities greater than 5 gallons or 50 lbs)

Non-refillable container. Do not reuse or refill this container. Refer to Bottom Discharge IBC or Top Discharge IBC, Drums, Kegs information as follows.

Bottom Discharge IBC (e.g. – Schuetz Caged IBC or Snyder Square Stackable)

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

continued

STORAGE AND DISPOSAL *(continued)*

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration.

Top Discharge IBC, Drums, Kegs (e.g.– Snyder 120 Next Gen, Bonar B120, Drums, Kegs)

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration.

Rigid Non-Refillable containers with capacities smaller or equal to 5 gallons

PLASTIC CONTAINERS:

Non-refillable container. Do not reuse or refill this container. Tripled rinse container (or equivalent) promptly after emptying.

LIQUID Dillutable formulations:

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, plant injury, other property damage, as well as other unintended consequences may result because of factors beyond the control of Bayer CropScience LP. Those factors include, but are not limited to, weather conditions, presence of other materials or the manner of use or application. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Bayer CropScience LP is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT BAYER CROPSCIENCE LP'S ELECTION, THE REPLACEMENT OF PRODUCT.

Produced for:
Bayer Environmental Science
A Division of Bayer CropScience LP
5000 CentreGreen Way, Suite 400
Cary, NC 27513

Bayer

INDAZIFLAM | GROUP 29 | HERBICIDE

Spect(i)cle® FLO HERBICIDE

Preemergence Herbicide for the Control of Grasses, Annual Sedges and Broadleaf Weeds in Warm Season Turfgrass, Landscape Ornamentals, Hedgerows, Hardscapes, and Natural Areas
DO NOT USE FOR THE MANUFACTURING OF FERTILIZER

ACTIVE INGREDIENT: Indaziflam	7.4%
OTHER INGREDIENTS:	92.6%
TOTAL:	100.0%

This product is a Suspension Concentrate containing 0.622 lb active ingredient per gallon. **Shake well before use.**
EPA Reg. No. 432-1608

KEEP OUT OF REACH OF CHILDREN

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577
For PRODUCT USE Information Call 1-800-331-2867

See Panel for First Aid Instructions and Booklet for Complete Precautionary Statements and Directions for Use.

FIRST AID

If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in eyes:	• Hold eyes open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

Net Contents
1 Gallon
86775387
86699648C 200831AV1

Bayer

(01)00785740640876

PULL HERE TO OPEN

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	SPECTICLE® FLO HERBICIDE
Product code (UVP)	80193424, 85850822
SDS Number	102000025126
EPA Registration No.	432-1608

Relevant identified uses of the substance or mixture and uses advised against

Use	Herbicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer Environmental Science 2 T.W. Alexander Drive Research Triangle PK, NC 27709 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Acute toxicity(Inhalation): Category 4
Specific target organ toxicity - repeated exposure: Category 2

Labelling in accordance with regulation HCS 29CFR §1910.1200

Signal word: Warning

Hazard statements
Harmful if inhaled.
May cause damage to organs (Nervous system) through prolonged or repeated exposure.

Precautionary statements

Do not breathe spray.
Do not breathe mist.
Use only outdoors or in a well-ventilated area.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)
No health hazards not otherwise classified.
No physical hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Indaziflam	950782-86-2	7.4
1,2-Propanediol	57-55-6	8.36

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Eye contact 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 physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms No symptoms known or expected.

Indication of any immediate medical attention and special treatment needed

Treatment Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Water spray, Foam, Carbon dioxide (CO2), Dry chemical
Unsuitable	None known.
Special hazards arising from the substance or mixture	Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for firefighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Protect from freezing.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Indaziflam	950782-86-2	0.56 mg/m3 (TWA)		OES BCS*
1,2-Propanediol (Aerosol.)	57-55-6	10 mg/m3 (TWA)	2010	WEEL

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection Chemical resistant nitrile rubber gloves

Eye protection Tightly fitting safety goggles

Skin and body protection Wear long-sleeved shirt and long pants and shoes plus socks.

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to beige
Physical State	Liquid
Odor	characteristic
Odour Threshold	No data available
pH	5.0 - 8.0 at 10 % (23 °C) (deionized water)
Vapor Pressure	No data available
Vapor Density (Air = 1)	No data available
Density	1.01 g/cm³ at 20 °C
Evaporation rate	No data available
Boiling Point	No data available
Melting / Freezing Point	No data available
Water solubility	soluble
Minimum Ignition Energy	Not applicable
Decomposition temperature	No data available
Partition coefficient: n-octanol/water	No data available
Viscosity	300 - 900 cps at 25 °C
Flash point	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	No data available
Chemical stability	Stable under recommended storage conditions.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	freezing
Incompatible materials	No data available
Hazardous decomposition products	Thermal decomposition can lead to release of: Hydrogen cyanide (hydrocyanic acid) Hydrogen fluoride Carbon monoxide Nitrogen oxides (NOx)

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Inhalation, Eye contact, Skin contact
Immediate Effects	
Eye	May cause mild irritation to eyes.
Skin	May cause mild irritation to the skin.

Information on toxicological effects

Acute oral toxicity	LD50 (female Rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (male/female combined Rat) > 2.09 mg/l Exposure time: 4 h Determined in the form of liquid aerosol.
Acute dermal toxicity	LD50 (male/female combined Rat) > 5,000 mg/kg
Skin irritation	slight irritation (Rabbit)
Eye irritation	Minimally irritating. (Rabbit)
Sensitisation	Non-sensitizing. (Guinea pig)

Assessment STOT Specific target organ toxicity – repeated exposure

Indaziflam caused neurobehavioral effects and/or neuropathological changes in subchronic studies in rats and dogs.

Assessment mutagenicity

Indaziflam was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Indaziflam was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Indaziflam was not a primary reproductive toxicant in a two-generation study in rats.

Assessment developmental toxicity

Indaziflam did not cause developmental toxicity in rats and rabbits.

Further information

Only acute toxicity studies have been performed on the formulated product.
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 0.572 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient indaziflam.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) > 9.88 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient indaziflam.
Toxicity to aquatic plants	IC50 (Raphidocelis subcapitata (freshwater green alga)) 0.134 mg/l Growth rate; Exposure time: 96 h The value mentioned relates to the active ingredient indaziflam.
Biodegradability	Indaziflam: Not rapidly biodegradable
Koc	Indaziflam: Koc: 496
Bioaccumulation	Indaziflam: Bioconcentration factor (BCF) 66 Does not bioaccumulate.
Mobility in soil	Indaziflam: Moderately mobile in soils
Environmental precautions	Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not allow to get into surface water, drains and ground water. Do not apply when weather conditions favor runoff or drift. Drift or runoff from treated areas may adversely affect non-target plants. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.
Contaminated packaging	Do not re-use empty containers. Triple rinse containers. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke. Follow advice on product label and/or leaflet.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR	Not dangerous goods / not hazardous material

IMDG

UN number	**3082**
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (INDAZIFLAM SOLUTION)

IATA

UN number	**3082**
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (INDAZIFLAM SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification:	COMPOUNDS, TREE OR WEEDKILLING, N.O.I., other than poison; HAVING A DENSITY OF GREATER THAN 20 LBS. PER CUBIC FOOT

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-1608
US Federal Regulations
TSCA list
1,2-Propanediol 57-55-6
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.
SARA Title III - Section 302 - Notification and Information
None.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.
US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

1,2-Propanediol	57-55-6	MN, RI

Canadian Regulations
Canadian Domestic Substance List
None.

Environmental
CERCLA
None.
Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified

NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1 Flammability - 1 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Section 11: Toxicological Information.

Revision Date: 10/02/2017