



## **NOTICE OF WEED CONTROL APPLICATION**

**Date of Application:** March 5, 2024

**Location:** Trails Pool

**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.

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

**\*See attached label and SDS sheet**

**\*Dates are subject to change due to weather**

# Specimen Label



# Snapshot<sup>®</sup> 2.5TG

## SPECIALTY HERBICIDE

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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: $\alpha, \alpha, \alpha$ -trifluoro-2,6-dinitro- <i>N</i> , <i>N</i> -dipropyl- <i>p</i> -toluidine.....	2.0%
isoxaben: <i>N</i> -[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 lb/Acre	Amount/1000 sq ft		Amount/100 sq ft	
	(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.

Speed (mph)	Settings for Warren T-7 II Spreader		
	Target Rate of Snapshot 2.5 TG		
	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	<i>Aster exilis</i>
barnyardgrass	<i>Echinochloa crus-galli</i>
bluegrass, annual	<i>Poa annua</i>
bursage, annual	<i>Ambrosia acanthicarpa</i>
celery, wild	<i>Apium leptophyllum</i>
chickweed, common	<i>Stellaria media</i>
clover, white	<i>Trifolium repens</i>
crabgrass	<i>Digitaria</i> spp.
cutweed, purple	<i>Gnaphalium purpureum</i>
cupgrass, southwestern	<i>Eriochloa gracilis</i>
fiddleneck, coast	<i>Amsinckia intermedia</i>
filaree, redstem	<i>Erodium cicutarium</i>
fleabane, blackleaved	<i>Conyza bonariensis</i>
fleabane, dwarf	<i>Conyza ramosissima</i>
foxtail, yellow	<i>Setaria glauca</i>
groundcherry, lanceleaf	<i>Physalis lanceifolia</i>
henbit	<i>Lamium amplexicaule</i>
horseweed	<i>Conyza canadensis</i>
jungerice	<i>Echinochloa colonum</i>
knotweed, prostrate	<i>Polygonum aviculare</i>
lambquarters, common	<i>Chenopodium album</i>
mallow, little	<i>Malva parviflora</i>
mustard, Indian	<i>Brassica juncea</i>
mustard, wild	<i>Sinapis arvensis</i>
nightshade, black	<i>Solanum nigrum</i>
oat, wild	<i>Avena fatua</i>
panicum, fall	<i>Panicum dichotomiflorum</i>
pepperweed, Virginia	<i>Lepidium virginicum</i>
pigweed	<i>Amaranthus</i> spp.
pineappleweed	<i>Matricaria matricarioides</i>
plantain, slender	<i>Plantago elongata</i>
purslane, common	<i>Portulaca oleracea</i>
radish, wild	<i>Raphanus raphanistrum</i>
ragweed, common	<i>Ambrosia artemisiifolia</i>
rocket, London	<i>Sisymbrium irio</i>
rockpurslane, desert	<i>Calandrinia ciliata</i>
shepherdspurse	<i>Capsella bursa-pastoris</i>
sibara	<i>Sibara virginica</i>
smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
sowthistle, annual	<i>Sonchus oleraceus</i>
speedwell, purslane	<i>Veronica peregrina</i>
sprangletop, Mexican	<i>Leptochloa univervia</i>
telegraphplant	<i>Heterotheca grandiflora</i>
thistle, Russian	<i>Salsola iberica</i>
witchgrass	<i>Panicum capillare</i>

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

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

## Weeds Controlled or Suppressed (Cont.)

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

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

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

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

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	<i>Convolvulus arvensis</i>
carpetweed	<i>Mollugo verticillata</i>
dock, curly	<i>Rumex crispus</i>
johnsongrass (seedling)	<i>Sorghum halepense</i>
mallow, Venice	<i>Hibiscus trionum</i>
milkweed, honeyvine	<i>Ampelamus albidus</i>
morningglory, tall	<i>Ipomoea purpurea</i>
panicum, Texas	<i>Panicum texanum</i>
pusley, Florida	<i>Richardia scabra</i>
shattercane	<i>Sorghum bicolor</i>

## 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	<i>Geranium cinereum</i> 'Ballerina'
bertram anderson lingwort	<i>Pulmonaria longifolia</i>
bugle	<i>Ajuga</i> spp.
cajeput tree	<i>Melaleuca quinquenervia</i>
candytuft	<i>Iberis</i> spp.
Carolina rhododendron	<i>Rhododendron carolinianum</i>
dwarf burning bush	<i>Euonymus alatus</i> 'compacta'
foxglove	<i>Digitalis purpurea</i>
green yucca	<i>Yucca recurvifolia</i>
hydrangea	<i>Hydrangea</i> spp.
luxuriant bleeding heart	<i>Dicentra luxuriant</i>
mountain sandwort	<i>Arenaria montana</i>
mustard	<i>Brassica</i> spp.
oak leaf acanthus	<i>Acanthus mollis</i>
prince of wales juniper	<i>Juniperus horizontalis</i> 'Prince of Wales'
purple coneflower	<i>Echinacea purpurea</i>
roseum elegans rhododendron	<i>Rhododendron catawbiense</i> 'Roseum elegans'
spurge	<i>Euphorbia</i> spp.
stonecrop	<i>Sedum</i> spp.
summer phlox	<i>Phlox paniculata</i>
white festival baby's breath	<i>Gypsophila paniculata</i>
wine periwinkle	<i>Vinca minor</i> '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
<i>Abies balsamea</i>	fir, balsam C, F
<i>Abies concolor</i>	fir, white F
<i>Abutilon hybridum</i>	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
<i>Acer ginnmala</i>	flame maple F
<i>Acer rubrum</i>	red maple F

## Trees (Cont.)

## Recommended Treatment Method:

C = Container Grown

F = Field Grown

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

**Trees (Cont.)**

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

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

**Shrubs**

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

Scientific Name	Common Name	
<i>Abelia grandiflora</i>	edward goucher abelia	C, F
	glossy abelia	C, F
<i>Acacia abyssinica</i>	abyssinica acacia	C, F
<i>Acacia redolens</i>	acacia, prostrate	C, F
<i>Acacia stenophylla</i>	shoestring acacia	C, F
<i>Acalypha wilkesiana</i>	copper leaf	C, F
<i>Acer ginnala</i>	amur maple	C, F
<i>Acer palmatum</i>	coral bark Japanese maple	C, F
	dwarf Japanese maple	C, F
<i>Agapanthus africanus</i>	queen anne lily of the Nile	C, F
<i>Agave americana</i>	century plant	F
<i>Anisodontea hypomandarum</i>	cape mallow	C, F
<i>Aptenia cordifolia</i>	red apple aptenia	C, F
<i>Ardisia japonica</i>	chirimen marlberry	C, F
<i>Astilbe arendsii</i>	false spiraea	C, F
<i>Astilbe chinensis</i>	astilbe/false spirea	C, F
<i>Athyrium nipponicum</i>	Japanese painted fern	C, F
<i>Baccharis pilularis</i>	coyotebush	F
<i>Berberis gladywomensii</i>	william penn barberry	C, F
<i>Berberis mentorensis</i>	mentor barberry	C, F
<i>Berberis thunbergii</i>	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
<i>Bougainvillea</i> 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
<i>Buxus x 'Green velvet'</i>	green velvet boxwood	C, F
<i>Buxus microphylla japonica</i>	boxwood, Japanese	C, F
<i>Buxus microphylla Koreana</i>	Korean boxwood	F
<i>Buxus sempervirens</i>	boxwood, common	C, F
<i>Callistemon citrinus</i>	bottlebrush, lemon	F
<i>Callistemon viminalis</i>	weeping bottlebrush	C, F

**Shrubs (Cont.)**

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

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

Shrubs (Cont.)		Recommended Treatment Method C = Container Grown F = Field Grown	Shrubs (Cont.)		Recommended Treatment Method C = Container Grown F = Field Grown
Scientific Name	Common Name		Scientific Name	Common Name	
<i>Hibiscus rosa-sinensis</i>	ross estey-hibiscus	C, F	<i>Lantana</i> spp.	lantana	C, F
<i>Hibiscus syriacus</i>	rose of sharon, red bird	C, F	<i>Lavandula angustifolia</i>	English lavender	C, F
	rose of sharon, red heart	F	<i>Lavandula latifolia</i>	English spike lavender	C, F
	rose of sharon, woodbridge	C, F	<i>Lavandula officianalis</i>	English lavender	C, F
	rose of sharon, aphrodite		<i>Leptospermum scoparium</i>	New Zealand tea tree	C, F
	rose of sharon, helene		<i>Leucothoe axillaris</i>	leucothoe, coast	C, F
<i>Ilex aquifolium</i>	Balkans holly	F	<i>Leucothoe fontanesiana</i>	leucothoe, drooping	C, F
	gold coast holly	F	<i>Ligustrum japonicum</i>	privet, Japanese	C, F
<i>Ilex aquipernyi</i>	san jose holly	C, F		wax ligustrum	C, F
<i>Ilex attenuata</i>	savannah holly	C, F		yellow tip ligustrum	C, F
<i>Ilex cornuta</i>	burford holly	C, F	<i>Ligustrum lucidum</i>	privet, glossy	C, F
	dwarf burford holly	C, F	<i>Ligustrum ovalifolium</i>	California privet	F
	needle point holly	C, F	<i>Ligustrum texanum</i>	howardi privet	C, F
<i>Ilex crenata</i>	compacta-dwarf	C, F		wax leaf privet	C, F
	Japanese holly		<i>Ligustrum vicaryi</i>	privet, golden	F
<i>Ilex crenata</i>	convexa holly	C, F		vicary golden privet	F
	dwarf Chinese holly	C, F	<i>Ligustrum vulgare</i>	lodense privet	C, F
	green luster holly	C, F	<i>Livistona chinensis</i>	Chinese fountain palm	F
	helleri-heller's Japanese holly	C, F	<i>Lonicera fragrantissima</i>	winter honeysuckle	C, F
	hetzii's Japanese holly	C, F	<i>Lonicera periclymenum</i>	flowering woodbine	C, F
	stokesii Japanese holly	C, F		serotina woodbine	C, F
<i>Ilex glabra</i>	compacta-compact	C, F	<i>Lonicera sempervirens</i>	trumpet honeysuckle	C, F
	inkberry holly		<i>Loropetalum chinense</i>	fringe flower	C, F
	nordica-inkberry holly	C, F	<i>Mahonia aquifolium compacta</i>	dwarf Oregon grape	C, F
<i>Ilex meserveae</i>	blue boy holly	C, F	<i>Mahonia bealei</i>	leather leaf mahonia	C, F
	blue girl holly	C, F	<i>Mahonia repens</i>	creeping mahonia	C, F
	China boy holly		<i>Myrica cerifera</i>	wax myrtle	C, F
	China girl holly		<i>Nandina domestica</i>	compacta-dwarf heavenly	C, F
	ebony magic holly	F		bamboo	
<i>Ilex vomitoria</i>	nana-dwarf yaupon holly	C, F		harbour dwarf-heavenly	C, F
	pendula-weeping	C, F		bamboo	
	yaupon holly			heavenly bamboo (nandina)	C, F
	yaupon holly	C, F		nana compacta-heavenly	C, F
<i>Illicium annisatum</i>	mystery gardenia	C, F		bamboo	
<i>Itea ilicifolia</i>	henry garnet holly leaf	C, F		nana purpurea-heavenly	C, F
	sweetspire			bamboo	
<i>Ixora collinea</i>	ixora	C, F		woods dwarf-heavenly	C, F
<i>Juniperus chinensis</i>	hollywood juniper	C, F	<i>Nerium oleander</i>	hardy red oleander	C, F
	media-old gold juniper	C, F		oleander	C, F
	pfitzer juniper	C, F		ruby lace oleander	C, F
	pfizerana glauca-blue juniper	C, F	<i>Osmanthus fortunei</i>	fortunes osmanthus	C, F
	pfizerana-pfizer juniper	C, F	<i>Pachysandra terminalis</i>	Japanese spurge	C, F
	sea green juniper	F	<i>Phoenix roeloenii</i>	pigmy date palm	C, F
	torulosa-hollywood juniper	C, F	<i>Photinia fraseri</i>	fraser's photinia	C, F
<i>Juniperus conferta</i>	emerald sea shore juniper	C, F	<i>Pieris japonica</i>	lily-of-the-valley	C, F
	shore juniper	C, F		mountain fire lily-of-the-valley	C, F
<i>Juniperus horizontalis</i>	andorra juniper	C, F		snowdrift lily-of-the-valley	C, F
	bar harbor juniper	C, F		temple bells lily-of-the-valley	C, F
	blue chip juniper	C, F		valley rose lily-of-the-valley	C, F
	blue rug juniper	C, F		valley valentine lily-of-the-	C, F
	creeping juniper	C, F		valley	
	dwarf andorra juniper	C, F	<i>Pieris japonica x forestii</i>	forest flame lily-of-the-valley	C, F
	huntington blue juniper	C, F	<i>Pinus mugo</i>	mugo-mugho pine	C, F
	plumosa-andorra juniper	C, F	<i>Pittosporum tobira</i>	green pittosporum	C, F
	wiltonii-blue carpet juniper	C, F		wheeler's dwarf pittosporum	C, F
<i>Juniperus procumbens</i>	nana-dwarf Japanese	C, F		blue cape plumbago	F
	garden juniper		<i>Plumbago ariculata</i>	plumbago	C, F
<i>Juniperus prostrata</i>	prostrata juniper	C, F	<i>Plumbago capensis</i>	yewpine	C, F
<i>Juniperus sabina</i>	broadmoor juniper	C, F	<i>Podocarpus macrophyllus</i>	sweet pea shrub	C, F
	foemina-hicks juniper	C, F	<i>Polygala dalmaisiana</i>	tassel fern	C, F
	savin juniper	C, F	<i>Polystichum polyblepharum</i>	cinquefoil	F
	tamariscifolia-tam juniper	C, F	<i>Potentilla fragiformis</i>	cinquefoil	C, F
<i>Juniperus scopulorum</i>	emerald green juniper	F	<i>Potentilla fruticosa</i>	gold drop pontentilla	F
<i>Juniperus squamata</i>	blue juniper	C, F		goldfinger potentilla	C, F
	blue star juniper	C, F		red ace potentilla	C, F
	parsonii juniper	C, F		sunset potentilla	C, F
<i>Kalmia latifolia</i>	laurel, mountain	C, F		tangerine potentilla	C, F
<i>Lagerstroemia indica</i>	crepe myrtle	C, F			

**Shrubs (Cont.)**

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

Scientific Name	Common Name	
<i>Potentilla verna</i>	spring cinquefoil	C, F
<i>Prunus glandulosa</i>	dwarf pink flowering almond	C, F
<i>Pyracantha fortuneana</i>	lolendei monrovia pyracantha	C, F
	monon pyracantha	F
	red elf hybrid pyracantha	F
	rutgers hybrid pyracantha	C, F
	santa cruz pyracantha	C, F
	victory pyracantha	F
<i>Raphiolepis indica</i>	charisma-monruce raphiolepis	C, F
	enchantress-moness raphiolepis	F
	raphiolepis (India hawthorn)	C, F
	springtime-monme raphiolepis	F
<i>Raphiolepis ovata</i>	roundleaf raphiolepis	C, F
<i>Rhododendron calendulaceum</i>	cannon's double azalea	C, F
	flame azalea	F
	golden flare azalea	C, F
	klondike azalea	C, F
<i>Rhododendron campylocarpum</i>	butterfly rhododendron	F
<i>Rhododendron carolinianum x daurium</i>	PJM rhododendron	C, F
<i>Rhododendron catawbiense</i>	catawba album rhododendron	C, F
	catawba rhododendron	C, F
	lord roberts rhododendron	C, F
	rocket rhododendron	C, F
<i>Rhododendron caucasicum x ponticum</i>	cunningham white rhododendron	C, F
<i>Rhododendron exbury</i>	cannon's double azalea	C, F
	golden flare azalea	C, F
	klondike azalea	C, F
<i>Rhododendron forrestii repens</i>	gomer waterer rhododendron	C, F
<i>Rhododendron forrestii x griersonianum</i>	elizabeth rhododendron	C, F
<i>Rhododendron griffithianum</i>	jean marie rhododendron	C, F
<i>Rhododendron hybrid spp.</i>	America rhododendron	C, F
	English roseum rhododendron	F
	nova zembla rhododendron	C, F
	scintillation rhododendron	C, F
<i>Rhododendron impeditum</i>	rhododendron	C, F
<i>Rhododendron indica</i>	formosa azalea	C, F
<i>Rhododendron indica</i>	waucubusa azalea	C, F
<i>Rhododendron kaempferi</i>	blue danube azalea	C, F
<i>Rhododendron kerume</i>	coral bells azalea	C, F
	hino crimson azalea	C, F
	hino pink azalea	C, F
	mildred azalea	C, F
	snow azalea	C, F
<i>Rhododendron maximum</i>	rhodie max (rosebay)	C, F
<i>Rhododendron mucronulatum</i>	rhododendron	F
<i>Rhododendron obtusum</i>	hino-crimson azalea	C, F
<i>Rhododendron ponticum</i>	chioniodes rhododendron	C, F
<i>Rhododendron ponticum</i>	daphnioides rhododendron	C, F
<i>Rhododendron x 'purple gem'</i>	purple gem rhododendron	C, F
<i>Rhododendron racemosum</i>	dwarf scarlet wonder rhododendron	C, F
	tribly rhododendron	C, F
	unique rhododendron	C, F
	vulcan rhododendron	C, F
<i>Rhododendron sassthigiatim x carolinianum</i>	ramapo rhododendron	C, F
<i>Rhododendron satuski</i>	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	
<i>Rhododendron spp. hybrids</i>	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
<i>Rhus lancea</i>	sumac, African	C, F
<i>Rosa rugosa</i>	ramanas rose	C, F
<i>Rosmarinus officinalis</i>	rosemary	F
<i>Senecio cineraria</i>	dusty-miller/silver ragweed	C, F
<i>Skimmia japonica</i>	Japanese skimmia	C, F
<i>Skimmia revesiana</i>	reeve's skimmia	C, F
<i>Solanum rantonetii</i>	Paraguay nightshade	C, F
<i>Spiraea bumalda</i>	anthony waterer spiraea	C, F
<i>Spiraea x cinerea 'Grefsheim'</i>	first snow spiraea	
<i>Spiraea japonica</i>	dolchia spiraea	C, F
	Japanese alpine spiraea	C, F
	shirobana spiraea	C, F
<i>Spiraea vanhouttei</i>	bridal wreath	C, F
<i>Syringa rothomagensis</i>	Chinese lilac	C, F
<i>Syringa vulgaris</i>	lilac, common	F
<i>Taxus cuspidata</i>	yew, Japanese	F
<i>Tecomaria capensis</i>	cape honeysuckle	C, F
<i>Ternstroemia gymnanthera</i>	ternstroemia, Japanese	C, F
<i>Thuja occidentalis</i>	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
<i>Thuja occidentalis</i>	woodwardii arborvitae	C, F
<i>Thuja orientalis</i>	aureus nana-dwarf golden arborvitae	C, F
	minima glauca-dwarf arborvitae	C, F
<i>Veitchia merrilli</i>	Christmas palm	F
<i>Viburnum bodnantense</i>	pink dawn viburnum	C, F
<i>Viburnum carlesii</i>	Koreanspice viburnum	C, F
<i>Viburnum davidii</i>	david viburnum	C, F
<i>Viburnum japonicum</i>	viburnum	F
<i>Viburnum judd (v. X juddii)</i>	viburnum	C, F
<i>Viburnum lantana</i>	wayfaring tree	F
<i>Viburnum opulus sterile</i>	common snowball viburnum	F
<i>Viburnum plicatum tomentosum</i>	doublefile viburnum	C, F
<i>Viburnum setigerum</i>	tea viburnum	F
<i>Viburnum tinus compactum</i>	spring bouquet viburnum	F
<i>Viburnum trilobum</i>	cranberry bush	C, F
<i>Viburnum trilobum compactum</i>	dwarf cranberry bush	C, F
<i>Viburnum x pragense</i>	viburnum	C, F
<i>Weigela florida</i>	bristol ruby weigela	C, F
	java red weigela	C, F
	minuet weigela	C, F
<i>Xylosma congestum</i>	xylosma	F
<i>Yucca filamentosa</i>	yucca	C, F



**Groundcovers/  
Perennials**

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

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

**Groundcovers/  
Perennials (Cont.)**

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

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



# 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.

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### 1. IDENTIFICATION

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**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](mailto:info@dow.com)

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** 800-992-5994

**Local Emergency Contact:** 352-323-3500

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### 2. HAZARDS IDENTIFICATION

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**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

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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This product is a mixture.

<b>Component</b>	<b>CASRN</b>	<b>Concentration</b>
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 %

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## 4. FIRST AID MEASURES

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### 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.

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## 5. FIREFIGHTING MEASURES

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**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.

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## 6. ACCIDENTAL RELEASE MEASURES

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**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.

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## 7. HANDLING AND STORAGE

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**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.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 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/m <sup>3</sup> / %SiO <sub>2</sub> +2
	OSHA Z-3	TWA respirable	10 mg/m <sup>3</sup> / %SiO <sub>2</sub> +2
	OSHA Z-3	TWA respirable	250 mppcf / %SiO <sub>2</sub> +5
	ACGIH	TWA Respirable fraction	0.025 mg/m <sup>3</sup> , Silica fraction

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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### 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	<b>closed cup</b> 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

<b>Water solubility</b>	No test data available
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Auto-ignition temperature</b>	> 537 °C (> 999 °F)
<b>Decomposition temperature</b>	No test data available
<b>Dynamic Viscosity</b>	Not applicable
<b>Kinematic Viscosity</b>	Not applicable
<b>Explosive properties</b>	no data available
<b>Oxidizing properties</b>	no data available
<b>Liquid Density</b>	Not applicable
<b>Bulk density</b>	0.70 g/cm <sup>3</sup> <i>Loose Volumetric</i>
<b>Molecular weight</b>	No test data available

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

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## 10. STABILITY AND REACTIVITY

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**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.

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## 11. TOXICOLOGICAL INFORMATION

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*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****Silica, crystalline (quartz)****List**

IARC

ACGIH

**Classification**

Group 1: Carcinogenic to humans

A2: Suspected human carcinogen

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**12. ECOLOGICAL INFORMATION**

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*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.

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### 13. DISPOSAL CONSIDERATIONS

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**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.

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### 14. TRANSPORT INFORMATION

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**DOT**

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

**Classification for SEA transport (IMO-IMDG):**

**Transport in bulk  
according to Annex I or II  
of MARPOL 73/78 and the  
IBC or IGC Code**

Not regulated for transport  
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.

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**15. REGULATORY INFORMATION**

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**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-Know Act): 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.

<b>Components</b>	<b>CASRN</b>
Trifluralin	1582-09-8
Silica, crystalline (quartz)	14808-60-7

**Pennsylvania (Worker and Community Right-To-Know Act): 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.

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**16. OTHER INFORMATION**

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**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.