# NOTICE OF LANDSCAPE APPLICATION

**Date of Application:** May 4, 2026
May 5, 2026 Scheduled as an alternate day in the event of inclement weather.

**Location:** Gardens Park-All turf areas west of the community center.

**Reason for Application:** Pre-emergent treatment of the turf for khaki weed.

**Product Manufacturer Name:** Corteva Agriscience Gallery SC Specialty Herbicide

-EPA registration no. 62719-658

-Active ingredient: Isobaxen:N-[3-(1-ethyl-1-methylpropyl)-5-isoxazolyl]-2,6- dimethoxybenzamide and isomers.

**Precautionary statement:** Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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

# Specimen Label

CORTEVA™ agriscience

# Gallery® SC

## SPECIALTY HERBICIDE

™®Trademarks of Corteva Agriscience and its affiliated companies

**A preemergence herbicide for control of certain broadleaf weeds in:**

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

| Group | 21 | HERBICIDE |
|---|---|---|

Active Ingredient:
isoxaben: N-[3-(1-ethyl-1-methylpropyl)-5-isoxazolyl]-2,6-dimethoxybenzamide and isomers ..... 45.45%
Other Ingredients ..... 54.55%
Total ..... 100%

Contains 4.16 lb active ingredient per gallon.

## Precautionary Statements

### Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-658

## Keep Out of Reach of Children

# CAUTION

**Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some Individuals**

### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves

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

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift may result in reduced germination or emergence of non-target plants adjacent to treated area. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

**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.

**Surface Water Advisory**: This pesticide may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soil 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. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of isoxaben from runoff water and sediment.

## 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 on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 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
- Chemical resistant gloves made of any waterproof material
- 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.

**Entry Restrictions for Non-WPS Uses:** When this product is applied to turf and ornamental plantings in landscape settings and non-cropland areas, do not allow entry into treated areas until sprays have dried unless wearing coveralls, waterproof gloves, and shoes plus socks.

## Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.
**Pesticide Storage:** Store in original container. Do not store in direct sunlight. Do not store at temperatures above 120°F. In case of leak or spill, contain material and dispose as waste.
**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Nonrefillable rigid containers 5 gal or less:**
**Container Handling:** Nonrefillable container. Do not reuse or refill this container. 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.
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 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.

## Storage and Disposal (Cont.)

**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. 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.
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.

## Product Information

Gallery® SC specialty herbicide is a preemergence product for control of certain broadleaf weeds in established turfgrass, landscape ornamentals, container grown ornamentals, field grown ornamentals, groundcovers/perennials, ornamental bulbs, non-bearing fruit and nut trees and non-bearing vineyards, Christmas tree/conifer plantations and non-cropland areas for example, airports, dry non-irrigation ditchbanks, and dry storm water retention areas, utility rights-of-way, industrial sites, military sites, parking lots, roadsides, storage areas, vacant lots and other non-crop residential areas.

It is permissible to treat non-irrigation ditch banksand transitional areas between upland and lowland sites only when dry. Do not apply directly to water. Note: Consult with local water control authorities before applying this product around public water. Permits may be required.

Apply Gallery SC in late summer to early fall, in early spring, or any time prior to germination of target weeds, or immediately after cultivation. Gallery SC also demonstrates limited early post-emergent control of hairy bittercress (*Cardamine hirsuta*), and several brassica species such as wild mustard (*Sinapsis arvensis*), black mustard (*Brassica nigra*), wild radish (*Raphanus raphanistrum*) and annual bastardcabbage (*Rapistrum rugosum*).

## Use Precautions

Gallery SC controls weeds germinating from seed. Gallery SC does not control established weeds other than the limited exceptions noted in previous paragraph (hairy bittercress and some brassica species), or 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 the soil prior to application. Soil in non-turfgrass areas should be in good condition and free of clods at the time of application. Gallery SC is stable on the soil surface for up to 21 days, but must be incorporated by moisture to be effective. A single rainfall or sprinkler irrigation of 0.5 inches or more, or flood irrigation after application, is necessary to activate Gallery SC. If Gallery SC is not activated by rainfall or irrigation within 21 days after application, erratic weed control may result. In non-turfgrass areas, if weeds emerge due to lack of rainfall or irrigation, shallow cultivation to a depth of 1 to 2 inches will incorporate the herbicide and destroy existing weeds.

**Treatment of Turfgrass or Ornamental Species Not Listed on the Label**
Although this label contains a large number of ornamental species, it is not possible to include all of the ornamental plants that may be encountered in nursery or landscape settings. Users who wish to use Gallery SC on a plant species not listed on this label may determine the suitability for such use by treating a small area or small number of plants at a specified rate. Prior to treatment of larger areas, the treated area/plants should be observed for any sign of herbicidal injury during 30 to 60 days of typical growing conditions. The user assumes the responsibility for any plant damage or other liability resulting from use of Gallery SC on species not listed on this label.

## Use Restrictions

**Chemigation:** Do not apply Gallery SC through any type of irrigation system.

Not for sale, distribution or use in New York State.

Do not apply by air.

Do not apply Gallery SC to turfgrass grown for seed.

## Weed Resistance Management:

Isoxaben, the active ingredient in this product, is a Group 21 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 21 herbicides. Such resistant weed plants may not be effectively managed using Group 21 herbicides but may be effectively managed utilizing another herbicide alone or in mixtures from a different Group and/or by using cultural or mechanical practices. However, an herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides. Consult your local company representative, state cooperative extension service, professional consultants or other qualified authorities to determine appropriate actions for treating specific resistant weeds or to report herbicide failures.

**Best Management Practices**:

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance. It is recommended to scout for weeds before Gallery SC application for identification and growth stage, and after application to facilitate the early identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to implement measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in retarding the spread of resistant weed seed.

**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 or grower.
To reduce the potential for drift, the application equipment must be set to apply medium to course 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 non-target 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 areas. Local terrain may influence wind patterns; the applicator must be familiar with local conditions and understand how they may impact spray drift.

**Sensitive Areas**: Sensitive areas to this product are defined as bodies of water (ponds, lakes, rivers, streams, and ditches), wetlands, habitats of endangered species, and non-labeled agricultural crop areas. Applicators must take all precautions necessary to keep spray drift from reaching those areas.

**Temperature Inversion**: A surface temperature inversion (i.e., increasing temperature with increasing altitude) greatly increases the potential for drift. Presence of ground fog is a good indicator of a surface temperature inversion. 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.

**Boom Height**: Set the boom and make applications at the lowest height that safely permits uniform coverage of the soil and minimizes droplet evaporation. 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.

## Application Directions

Apply Gallery SC with a properly calibrated low pressure herbicide sprayer that provides uniform spray distribution. Nozzle screens should be no finer than 50 mesh (50 mesh is finer than 16 mesh). In-line screens and strainers should be no finer than 16 mesh. Apply Gallery SC in 10 gallons or more of water carrier per acre. As the spray volume decreases, the importance of accurate calibration and uniform application increases. Take precautions to avoid spray drift when applying Gallery SC. Drift may result in reduced germination or emergence of non-target plants adjacent to the treated area. Maintain agitation from mixing through application. Avoid boom overlaps that will increase rates above those specified. Calibrate application equipment prior to use according to manufacturer's directions. Check calibration frequently to be sure equipment is working properly and distributing spray uniformly.

## Mixing Directions

**Gallery SC - Alone**

Check to be sure spray equipment is clean and not contaminated with other herbicides. Using clean water, fill the tank to 1/2 of the final volume required and start agitation. Add the required quantity of Gallery SC to the spray tank, continue agitation and complete filling the tank. Maintain agitation during filling and throughout application. Sparger pipe agitation generally provides the best agitation.

If spraying and agitation is stopped, Gallery SC may settle to the bottom of the spray tank. If settling occurs, material must be re-suspended before continuing spray application. Clean the spray tank, lines and screens thoroughly after use.

**Application Rate Conversion Table for Gallery SC**

| lb ai/A | fl oz per acre | fl oz per 1000 sq ft | mls per 1000 sq ft |
|---|---|---|---|
| 0.50 | 16 | 0.3 | 10 |
| 0.75 | 23 | 0.5 | 16 |
| 1.00 | 31 | 0.7 | 21 |

Do not repeat applications of 31 fl oz per acre Gallery SC sooner than 60 days after a previous application of Gallery SC. Do not apply more than a total of 124 fl oz/A of Gallery SC per acre within a 12-month period.

**Gallery SC - Tank Mix**

Gallery SC may be applied in tank mix combination with labeled rates of other products provided (1) the tank mix product is labeled for the crop, timing and method of application for the use site to be treated; (2) tank mixing with Gallery SC is not prohibited by the label of the tank mix product; and (3) the tank mix combination is compatible as determined by a "jar test" described in the Tank Mix Compatibility Testing section below.

Fill the spray tank to 1/4 to 3/4 of the final volume required. Start Agitation. Add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

Add different formulation types in the following order:
(1) Water dispersible granules
(2) Wettable powders
(3) Aqueous suspensions (such as Gallery SC)

Maintain agitation and fill spray tank to 3/4 of total spray volume. Then add:
(4) Emulsifiable concentrates and water-based solutions
(5) Spray adjuvants, surfactants and oils
(6) Foliar fertilizers

Agitate continuously until each product is completely dispersed in water, and add water to the final volume. Maintain agitation during filling and through application. If a buildup of materials is observed on the walls of the spray tank, wash the tank with soapy water between fillings, rinse and then continue the spraying operation. Follow label directions for each material added to the tank. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Premixing:** Dry and flowable formulations may be premixed with water (slurried) and added to the spray tank through a 20 to 35 mesh screen. This procedure assures good initial dispersion of these formulation types.

**Tank Mix Compatibility Testing:** A jar test is recommended prior to tank mixing to ensure compatibility of Gallery SC and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

## Weeds Controlled or Suppressed

**Weeds controlled when applied at 16 fl oz per acre (0.3 fl oz or 10 mls per 1000 sq ft):**

| Common Name | Scientific Name |
|---|---|
| aster, slender | *Symphyotrichum divaricatum* |
| bursage, annual | *Ambrosia acanthicarpa* |
| burweed, lawn | *Soliva sessilis* |
| celery, wild | *Cyclospermum leptophyllum* |
| chickweed, common | *Stellaria media* |
| clover, white | *Trifolium repens* |
| cudweed, purple | *Gnaphalium purpureum* |
| fiddleneck, coast | *Amsinckia menziesii* var. *intermedia* |
| filaree, redstem | *Erodium cicutarium* |
| fleabane, blackleaved | *Conyza bonariensis* |
| fleabane, dwarf | *Conyza ramosissima* |
| groundcherry, lanceleaf | *Physalis angulata* |
| Henbit | *Lamium amplexicaule* |
| knotweed, prostrate | *Polygonum aviculare* |
| lambsquarters, common | *Chenopodium album* |
| mallow, little | *Malva parviflora* |
| mustard, Indian | *Brassica juncea* |
| mustard, wild | *Sinapis arvensis* |
| nightshade, black | *Solanum nigrum* |
| pepperweed, Virginia | *Lepidium virginicum* |
| pigweed | *Amaranthus* spp. |
| pineappleweed | *Matricaria discoidea* |
| plantain, slender | *Plantago heterophylla* |
| purslane, common | *Portulaca oleracea* |
| radish, wild | *Raphanus raphanistrum* |
| ragweed, common | *Ambrosia artemisiifolia* |
| rocket, London | *Sisymbrium irio* |
| shepherd's-purse | *Capsella bursa-pastoris* |
| sibara | *Sibara virginica* |
| smartweed, Pennsylvania | *Polygonum pensylvanicum* |
| sowthistle, annual | *Sonchus oleraceus* |
| speedwell, purslane | *Veronica peregrina* |
| telegraphplant | *Heterotheca grandiflora* |
| thistle, Russian | *Salsola tragus* |

**Weeds controlled when applied at 23 fl oz per acre (0.5 fl oz or 16 mls per 1000 sq ft):**

| Common Name | Scientific Name |
|---|---|
| aster, heath | *Symphyotrichum ericoides* |
| bittercress, little | *Cardamine oligosperma* |
| bittercress, hairy | *Cardamine hirsuta* |
| brassbuttons, southern | *Cotula australis* |
| carrot, wild | *Daucus carota* |
| chamber-bitter | *Phyllanthus urinaria* |
| chickweed, mouseear | *Cerastium fontanum* ssp. *vulgare* |
| dandelion | *Taraxacum officinale* |
| eclipta | *Eclipta prostrata* |
| galinsoga, hairy | *Galinsoga quadriradiata* |
| geranium, Carolina | *Geranium carolinianum* |
| horseweed (or marestail) | *Conyza canadensis* |
| ladysthumb | *Polygonum persicaria* |
| lespedeza, Japanese | *Lespedeza striata* |
| lettuce, prickly | *Lactuca serriola* |
| mallow, common | *Malva neglecta* |
| mayweed, chamomile | *Anthemis cotula* |
| morningglory, ivyleaf | *Ipomoea hederacea* |
| mustard, black | *Brassica nigra* |
| pennywort | *Hydrocotyle* spp. |
| plantain, bracted | *Plantago aristata* |
| plantain, broadleaf | *Plantago major* |
| plantain, buckhorn | *Plantago lanceolata* |
| pokeweed, common | *Phytolacca americana* |
| rockpurslane, redmaids | *Calandrinia ciliata* |
| sida, prickly | *Sida spinosa* |
| sorrell, red | *Rumex acetosella* |
| speedwell, thymeleaf | *Veronica serpyllifolia* |
| spurge, hyssop | *Chamaesyce hyssopifolia* |
| spurge, spotted | *Chamaesyce maculata* |
| sweetclover, yellow | *Melilotus officinalis* |
| tansymustard, green | *Descurainia pinnata ssp. brachycarpa* |
| woodsorrel, yellow | *Oxalis stricta* |

## Weeds Controlled or Suppressed (Cont.)

**Weeds controlled when applied at 31 fl oz per acre (0.7 fl oz or 21 mls per 1000 sq ft):**

| Common Name | Scientific Name |
|---|---|
| burclover, California | *Medicago polymorpha* |
| dogfennel | *Eupatorium capillifolium* |
| eveningprimrose | *Oenothera* spp. |
| fescue, rattail | *Vulpia myuros* |
| filaree, whitestem | *Erodium moschatum* |
| goosefoot, nettleleaf | *Chenopodium murale* |
| groundsel, common | *Senecio vulgaris* |
| jimsonweed | *Datura stramonium* |
| knotweed, silversheath | *Polygonum argyrocoleon* |
| kochia | *Kochia scoparia* |
| medic, black | *Medicago lupulina* |
| mullein, turkey | *Croton setigerus* |
| nettle, burning | *Urtica urens* |
| oxtongue, bristly | *Picris echioides* |
| parthenium weed | *Parthenium hysterophorus* |
| pimpernel, scarlet | *Anagallis arvensis* |
| sowthistle, spiny | *Sonchus asper* |
| spurge, petty | *Euphorbia peplus* |
| spurge, prostrate | *Chamaesyce humistrata* |
| sunflower | *Helianthus* spp. |
| swinecress | *Coronopus didymus* |
| thistle, musk | *Carduus nutans* |
| willoweed, panicle | *Epilobium brachycarpum* |
| woodsorrel, creeping | *Oxalis corniculata* |

**Weeds partially controlled or suppressed when applied at 31 fl oz per acre (0.7 fl oz or 21 mls per 1000 sq ft):**

| Common Name | Scientific Name |
|---|---|
| bindweed, field | *Convolvulus arvensis* |
| carpetweed | *Mollugo verticillata* |
| dock, curly | *Rumex crispus* |
| mallow, Venice | *Hibiscus trionum* |
| milkweed, honeyvine | *Cynanchum laeve* |
| morningglory, tall | *Ipomoea purpurea* |
| pusley, Florida | *Richardia scabra* |

## Uses

## Established Turfgrass

Use Gallery SC as a preemergence treatment for control of certain broadleaf weeds in established cool season and warm season turfgrass.

Apply Gallery SC any time prior to germination of target weeds.

Do not repeat applications of 31 fl oz per acre Gallery SC sooner than 60 days after a previous application of Gallery SC. Do not apply more than a total of 124 fl oz/A of Gallery SC per acre within a 12-month period.

**Note:** Refer to the Product Information section of this label for use precautions and restrictions and information on mixing and application, application rates, and weeds controlled prior to using this product.

**Tank Mixing**

Gallery SC may be tank mixed with Dimension® herbicide and applied as a preemergence treatment to broaden the spectrum of annual grass and broadleaf weed control. Gallery SC may also be applied as a separate treatment to supplement the effectiveness of Team® 2G herbicide in cool and warm season turfgrass. Gallery SC may be tank mixed with post emergence broadleaf herbicides registered for use on established turfgrass to control existing broadleaf weeds to provide residual preemergence broadleaf weed control. Applied as directed, Gallery SC in tank mix with other products registered for use on turfgrass will provide control of susceptible weed species listed on the respective labels. When using Gallery SC in tank mix combinations with other products, read and follow all applicable use directions, precautions, and limitations on the respective product labels. Refer to tank mix instructions for Gallery SC in the Mixing Directions section. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture

**Specific Use Restrictions:**

Apply Gallery SC to newly seeded turfgrass (including overseeded turfgrass) **only** after seedlings are established (three leaf stage and tillering) and well rooted. Do not overseed established turfgrass sooner than 60 days following an application of Gallery SC.

- Do not apply Gallery SC to golf course putting greens.
- Do not apply Gallery SC to dichondra.
- Do not apply Gallery SC to turfgrass grown for seed.

**Use Gallery SC on the following turfgrass species:**

| Common Name | Scientific Name |
|---|---|
| **Established Cool Season Turfgrass** | |
| bentgrass, creeping | *Agrostis stolonifera* |
| bentgrass, colonial | *Agrostis tenuis* |
| bluegrass, Kentucky | *Poa pratensis* |
| fescue, chewing | *Festuca rubra var. commutata* |
| fescue, creeping red | *Festuca rubra* |
| fescue, sheeps | *Festuca ovina* |
| fescue, tall | *Festuca arundinaceae* |
| ryegrass, perennial | *Lolium perenne* |
| **Established Warm Season Turfgrass[1]** | |
| bahiagrass | *Paspalum notatum* |
| bermudagrass | *Cynodon dactylon* |
| buffalograss | *Buchloe dactyloides* |
| centipedegrass | *Eremochloa ophiuroides* |
| fescue, tall (growing in warm season areas) | *Festuca arundinaceae* |
| Seashore paspalum | *Paspalum vaginatum* |
| St. Augustinegrass | *Stenotaphrum secundatum* |
| zoysiagrass | *Zoysia japonica* |
| zoysiagrass | *Zoysia tenuifolia* |

[1]**Sprigged Warm Season Turfgrass:** Use Gallery SC post-sprigging as a preemergence treatment for control of certain broadleaf weeds in warm season turfgrass. Apply any time after sprigging in the following turfgrass species: bermudagrass, bahiagrass, St. Augustinegrass, centipedegrass and buffalograss. Do not apply more than 23 fl oz of Gallery SC per acre during the establishment phase for newly sprigged warm season turfgrass. Do not apply Gallery SC to varieties of dwarf-type bermudagrass or to any turfgrass species being sprigged on golf course tees or greens.

## Ornamental Plantings, Non-Bearing Fruit and Nut Trees and Non-Bearing Vineyards

Use Gallery SC as a preemergence treatment for control of certain broadleaf weeds in landscape ornamentals, container grown ornamentals, field grown ornamentals, groundcovers/perennials, non-bearing fruit and nut trees and non-bearing vineyards.

Apply Gallery SC any time prior to germination of target weeds or immediately after cultivation.

For non-Bearing Fruit and Nut Trees and Non-Bearing Vineyards, make a single application prior to germination of target weeds or immediately after cultivation. Application is to be made in a minimum of 10 gal/A. Do not exceed 1.0 lb ai/A/yr.

Non-bearing means trees or vines where nuts and/or fruit are not harvested for food within one year of treatment.

**Note:** Refer to the Product Information section of this label for use precautions and restrictions and information on mixing and application, application rates, and weeds controlled prior to using this product.

**Tank Mixing**

Gallery SC may be tank mixed with Accord XRT II or other postemergence herbicides registered for control of existing unwanted vegetation in labeled use sites and recommended crops to provide residual preemergence broadleaf weed control. Gallery SC may also be tank mixed with Dimension and applied preemergence to provide broad spectrum control of annual grasses and broadleaf weeds in ornamental areas and non-bearing fruit and nut trees and non-bearing vineyards and other use sites where both products are labeled. Applied as directed, tank mixes of Gallery SC will provide control of susceptible weed species listed on the respective labels. When using Gallery SC in tank mix combination with other products, read and follow all applicable use directions, precautions, tolerant species listings and limitations on the respective product labels. Refer to tank mix instructions for Gallery SC in the Mixing Directions section. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Note:** Do not apply sprays containing Accord XRT II, glyphosate or other non-selective herbicides over the top of ornamental plants. Extreme care must be exercised to prevent contact of sprays containing glyphosate with foliage or stems of turfgrass, trees, shrubs, or other desirable vegetation since severe damage or death may result. If spraying glyphosate in areas adjacent to desirable plants, use a shield to prevent spray from contacting foliage or stems of desirable plants.

**Specific Use Precautions:**
Injury may be incurred if Gallery SC is applied in the following manner. Grower assumes all risk if Gallery SC is applied to:

- Nursery, forest, or Christmas tree seedling beds, cutting beds, or transplant beds
- Unrooted liners or cuttings that have been planted in pots for the first time
- Pots less than six inches wide
- Groundcovers until they are established and well rooted
- Bedding plants or areas where bedding plants will be planted or transplanted within one year after application

Applications of Gallery SC over the top of plants with newly forming buds may cause injury. Possible plant injury may be avoided by application as a directed spray to the soil surface beneath ornamental plants.

When planting into a site treated with Gallery SC in the past 8 months, use untreated soil as fill around roots when replacing plants or injury may occur.

**Specific Use Restrictions:**
Do not apply Gallery SC to newly transplanted ornamentals, nursery stock, groundcovers, non-bearing fruit and nut trees, non-bearing vineyards or ornamental bulbs, until soil or potting media has been settled by packing and irrigation or rainfall and no cracks are present or plant injury may occur.

**Note:** Injury to certain ornamental plants has been observed following application of Gallery SC. To avoid plant injury, do not use Gallery SC for weed control in the following ornamental plant species:

| Scientific Name | Common Name |
|---|---|
| *Ajuga* spp. | bugleweed or ajuga |
| *Brassica* spp. | mustard |
| *Echinacea purpurea* | purple coneflower |
| *Euonymus alatus* '*Compacta*' | dwarf burning bush |
| *Euphorbia* spp. | spurge |
| *Hydrangea* spp. (those cultivars not listed as tolerant on this label) | hydrangea |
| *Iberis* spp. | candytuft |
| *Juniperus horizontalis* '*Prince of Wales*' | Prince of Wales juniper |
| *Melaleuca quinquenervia* | cajeput tree |
| *Rhododendron caroliniaum* | Carolina rhododendron |
| *Rhododendron catawbiense* '*Roseum elegans*' | roseum elegans rhododendron |
| *Sedum* spp. (those cultivars not listed as tolerant on this label) | stonecrop |
| *Yucca recurvifolia* | green yucca |

**Gallery SC may be used in the culture of the following established plant species:** (**Note:** Limitations on treatment methods)

## Trees

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Abies balsamea* | balsam fir | C, F |
| *Abies concolor* | white or concolor fir | 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 |
| | red sunset maple | F |
| *Acer saccharinum* | silver maple | C, F |
| *Acoelorrhaphe whrightii* | Everglades palm | C, F |
| *Albizia julibrissin* | silk tree | C, F |
| *Alsophila australis* | Australian tree fern | C, F |
| *Archontophoenix cunninghamiana* | king palm | C, F |
| *Areacastrum romanzoffianum* | queen palm | C, F |
| *Araucaria heterophylla* | Norfolk island pine | C, F |
| *Bauhinia galpinii* | red bauhinia | C, F |
| *Betula nigra* | river birch | C, F |
| *Betula papyrifera* | paper birch | F |
| *Betula pendula* | European white birch | C, F |
| *Brachychiton populneus* | bottle tree | C, F |
| *Bucida buceras* | black olive | F |
| *Butia capitata* | Blue pindo palm | C, F |
| *Ceratonia siliqua* | carob | F |
| *Cercis canadensis* | redbud | C, F |
| *Chamaecyparis obtusa* | filicoides-fernspray cypress | F |
| | 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 |
| *Chamaerops humilis* | Mediterranean fan palm | C, F |
| *Chitalpa tashkentensis* | Pink dawn chitalpa tree | C, F |
| *Cornus florida* | cloud nine dogwood | C, F |
| | flowering dogwood | C, F |
| *Cornus kousa* | kousa dogwood | C, F |
| *Crataegus viridis* | green hawthorn | F |
| *Cryptomeria japonica* | Japanese cryptomeria | C, F |
| *Cupaniopsis anacardioides* | carrot wood | F |
| *Cupressus arizonicus* or *glabra* | Arizona cypress | F |
| *Cupressus ariz 'Blue Pyramid'* | blue pyramid cypress | C, F |
| *Cupressocyparis leylandii 'Emerald Isle'* | emerald isle leyland cypress | C, F |
| *Cupressocyparis leylandii 'Naylor's Blue'* | Naylor's blue leyland cypress | C, F |
| *Cupressus sempervirens* | Italian cypress | C, F |
| *Cupressus sempervirens 'Glauca'* | glauca Italian cypress | C, F |
| *Cycas revoluta* | sago palm | C, F |
| *Elaeagnus angustifolia* | Russian olive | C, F |
| *Elaeagnus x ebbengei 'Gilt edge'* | gilt edge elaegnus | C, F |
| *Eucalyptus camaldulensis* | red gum eucalyptus | F |

## Trees (Cont.)

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Eucalyptus cinerea* | mealy eucalyptus | F |
| | silver dollar eucalyptus | F |
| *Eucalyptus microtheca* | coolibah tree | C, F |
| *Eucalyptus sideroxylon* | red ironbark eucalyptus | F |
| *Fagus sylvatica* | European beech | C, F |
| *Ficus benjamina* | ficus | C, F |
| | mini ficus | C, F |
| *Fraxinus udhei* | shamel ash | C, F |
| *Ginkgo biloba* | ginkgo (maidenhair tree) | F |
| *Gleditsia triacanthos var. inermis* | thornless honeylocust | F |
| *Gleditsia triacanthos var. inermis* | shademaster honeylocust | F |
| *Heteromeles arbutiflora* | toyon | F |
| *Illicium floridanum* | Florida anise-tree | C, F |
| *Juniperus virginiana* | eastern redcedar | C, F |
| *Leptospermum scoparium* | New Zealand tea tree | C, F |
| | ruby glow New Zealand tea tree | F |
| *Liquidambar styraciflua* | American sweetgum | F |
| *Magnolia grandiflora* | D. D. Blanchard magnolia | C, F |
| | southern magnolia | C, F |
| *Magnolia soulangeana* | saucer magnolia | C, F |
| *Magnolia stellata* | royal star magnolia | C, F |
| *Malus sargentii* | crabapple non-bearing | 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 |
| | Norway spruce | C, F |
| *Picea glauca* | white spruce | C, F |
| *Picea glauca 'Conica'* | dwarf alberta spruce | F |
| *Picea pungens* | Colorado spruce | C, F |
| *Picea pungens 'Glauca'* | Colorado blue spruce | C, F |
| *Picea pungens 'Hoopsia'* | hoopsi blue spruce | C, F |
| *Picea pungens '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 var. pumilio* | pumilio mugo pine | C, F |
| *Pinus nigra* | Austrian black pine | C, F |
| *Pinus ponderosa* | Ponderosa pine | C, F |
| *Pinus radiata* | monterey pine | F |
| *Pinus strobus* | eastern white pine | C, F |
| | white pine | C, F |
| *Pinus sylvestris* | columnar Scotch pine | C, F |
| | Scotch pine | C, F |
| *Pinus thunbergii* | Japanese black pine | C, F |
| *Platanus occidentalis* | American sycamore | F |
| *Platanus racemosa* | California sycamore | F |
| *Podocarpus* spp. | podocarpus | F |
| *Podocarpus henkelii* | long leafed yellowwood | C, F |
| *Populus deltoides* | cottonwood | F |
| *Prosopis chilensis* | Chilean mesquite | C, F |
| *Prunus yedoensis* | voshino flowering cherry | C, F |
| *Prunus caroliniana* | Carolina laurel cherry | C, F |
| | bright 'n tight Carolina laurel cherry | C, F |
| *Prunus laurocerasus* | English laurel | C, F |
| *Quercus ilicifolia* | bear oak | F |
| *Quercus laurefolia* | laurel oak | C, F |
| *Quercus palustris* | pin oak | F |
| *Quercus phellos* | willow oak | C, F |
| *Quercus rubra* | red oak | C, F |
| *Quercus shumardii* | shumard oak | C, F |
| *Quercus virginiana* | live oak | C, F |
| *Ravenea rivularis* | majesty palm | C, F |
| *Salix babylonica* | Babylon weeping willow | F |
| *Salix matsudana 'Torulosa'* | corkscrew willow | F |
| *Sequoiadendron giganteum* | giant sequoia | F |
| *Sequoia sempervirens* | coast redwood | C, F |
| *Swietenia mahogani* | mahogany | F |
| *Syagrus romanzoffianum* | queen palm | C, F |
| *Tabebuia caraiba* | yellow tab | F |
| *Taxodium distichum* | bald cypress | C, F |
| *Trachycarpus fortunei* | windmill palm | C, F |

## Trees (Cont.)

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Tsuga canadensis* | eastern hemlock | C, F |
| *Ulmus parvifolia* | Chinese elm | F |
| *Washingtonia robusta* | California fan palm | C, F |
| *Washingtonia robusta* | Mexican fan palm | F |
| *Zamia furfuracea* | cardboard palm | C, F |

[1]C=container grown, F=field grown

## Shrubs

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Abelia x grandiflora* | Edward goucher abelia | C, F |
| | glossy abelia | C, F |
| | sunrise variegated abelia | C, F |
| *Acacia abyssinica* | abyssinica acacia | C, F |
| *Acacia redolens* | prostrate acacia | 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 |
| *Acer palmatum* | dwarf Japanese maple | C, F |
| *Amelanchier alnifolia* | Saskatoon serviceberry | C, F |
| *Andromeda polifolia* | bog rosemary | C, F |
| *Anisodontea hypomandarum* | cape mallow | C, F |
| *Arctostaphlos uva-ursi* | bearberry | C, F |
| *Ardisia japonica* | chirimen marlberry | C, F |
| *Armeria maritima 'Bloodstone'* | bloodstone sea thrift | C, F |
| *Artemesia lactiflora* | white mugwort | C, F |
| *Athyrium nipponimcum* | Japanese painted fern | C, F |
| *Aucuba japonica 'Goldstrike'* | Japanese laurel | |
| *Baccharis pilularis* | coyotebush | F |
| *Berberis x gladwynensii* | William Penn barberry | C, F |
| *Berberis mentorensis* | mentor barberry | C, F |
| *Berberis thunbergii 'Aurea'* | golden Japanese barberry | F |
| *Berberis thunbergii var. atropurpurea 'Crimson Pygmy'* | crimson pygmy barberry | C, F |
| *Berberis thunbergii var. atropurpurea 'Rose Glow'* | rose glow red barberry | C, F |
| *Berberis thunbergii var. atropurpurea* | redleaf Japanese barberry | F |
| *Berberis thunbergii var. atropurpurea 'Cherry Bomb'* | 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 |
| *Bougainvillea 'Purple Queen'* | purple queen bougainvillea | C, F |
| *Bougainvillea 'Rosenka'* | rosenka bougainvillea | C, F |
| *Buxus microphylla var. japonica 'Green Beauty'* | green beauty boxwood | C, F |
| *Buxus microphylla var. japonica* | Japanese littleleaf boxwood | F |
| *Buxus microphylla var. Koreana* | Korean boxwood | F |
| *Buxus sempervirens* | common boxwood | C, F |
| *Buxus x 'Green velvet'* | green velvet boxwood | C, F |
| *Callistemon citrinus* | lemon bottlebrush | F |
| *Callistomen citrinus 'Little John'* | little John lemon bottlebrush | C, F |
| *Callistemon viminalis* | weeping bottlebrush | C, F |
| *Calluna vulgaris* | spring torch Scotch heather | C, F |
| *Camellia japonica* | camellia | C, F |
| *Caryopteris clandonensis* | blue mist bluebeard | C, F |
| *Caryopteris x clandonen 'Blk night'* | dark knight bluebeard | C, F |
| *Cassia artemisioides* | feathery cassia | C, F |
| *Cassis, eremophila* | senna | C, F |
| *Ceanothus* spp. | wild lilac | F |
| *Cephalotaxus harringtonia var. drupacae* | Japanese plum yew | C, F |
| *Cerastium tomentosum* | snow-in-summer | C, F |
| *Ceratostigma plumbaginoides* | dwarf plumbago | C, F |
| *Ceratosigma willmottianum* | Chinese plumbago | C, F |
| *Chaenomeles japonica* | orange flowering quince | 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 |
| | sawara-false cypress | F |
| | squarrosa minima cypress | C, F |
| | filifera-thread cypress | C, F |
| *Chrysalidocarpus lutescens* | areca palm | F |
| *Clethra alnifolia* | summersweet | C, F |
| *Cleyera japonica* | Japanese cleyera | C, F |
| *Colonema pulchrum* | pink breath of heaven | C, F |
| *Convolvus cneorum* | bush morning glory | C, F |
| *Convolvulus mauritanicus* | ground morningglory | C, F |

## Shrubs (Cont.)

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Cornus alba* | sibirica-Siberian dogwood | C, F |
| *Cornus sericea* | baileyi redosier dogwood | F |
| | flaviramea yellowtwig dogwood | F |
| *Corylus americanus 'Contorta'* | Harry Lauder's walking stick | C, F |
| *Cotinus coggygria* | royal purple smoke tree | C, F |
| *Cotinus coggygria obovatus* | Grace 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* | cranberry cotoneaster | C, F |
| *Cotoneaster congestus* | Pyrenees cotoneaster | C, F |
| *Cotoneaster dammeri* | bearberry cotoneaster | C, F |
| *Cotoneaster himalayan* | Himalayan cotoneaster | C, F |
| *Cotoneaster horizontalis* | rock cotoneaster | C, F |
| *Cycas revoluta* | sago palm | C, F |
| *Cyrtomium fortunei* | holly fern | C, F |
| *Cytisus praecox* | hollandia-warminster broom | C, F |
| *Cytisus scoparius* | lena-Scotch broom | C, F |
| *Cytisus spp.* | holandia-Scotch broom | F |
| | allgold warminster broom | C, F |
| | lilac time broom | C, F |
| *Dalea greggii* | trailing indigo bush | C, F |
| *Daphne cneorum* | rose daphne | C, 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 |
| *Enkianthus companulatus* | red-veined enkianthus | C, 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 |
| *Escallonia* spp. | escallonia | C, F |
| *Escallonia x exoniensis* | Fradesi pink princess escallonia | C, F |
| *Eugenia myritifolia* | teenie genie brushcherry | C, F |
| *Eugenia myrtifolia 'Globulus'* | dwarf brush cherry | C, F |
| *Euonymus fortunei* | canadale gold euonymus | C, F |
| | Emerald gaiety wintercreeper | C, F |
| | emerald 'n gold euonymus | F |
| | sunspot euonymus | C, F |
| *Euonymus japonicus* | silver king euonymus | F |
| | chollipo euonymus | C, F |
| | gold spot euonymus | C, F |
| | silver princess euonymus | C, F |
| | variegated evergreen euonymus | C, F |
| *Euonymus kiatschovicus* | spreading euonymus | C, F |
| *Euonymus kiatschovicus 'Manhattan'* | Manhattan euonymus | C, F |
| *Euonymus vegetus* | bigleaf wintercreeper | C, F |
| *Fatsia japonica* | Japanese aralia | C, F |
| *Felicia amelloides* | blue marguerite | C, F |
| *Forsythia x intermedia* | border forsythia | C, F |
| *Forsythia ovate x F. europae* | meadowlark forsythia | C, F |
| *Forsythia x 'Spring glory'* | spring glory forsythia | C, F |
| *Fuchsia x "Santa Claus'* | Santa Claus fuchsia | C, F |
| *Gardenia jasminoides* | August beauty gardenia | C, F |
| | dwarf gardenia | C, F |
| | miniature gardenia | C, F |
| | radican gardenia | C, F |
| *Gaultheria procumbens* | wintergreen | C, F |
| *Gaultheria shallon* | salal/lemon leaf | C, F |
| *Gelsemium sempervirens* | Carolina jessamine | C, F |
| *Genista pilosa* | woadwaxen | C, F |
| *Hamamelis virginiana* | common witch hazel | C, F |
| *Hardenbergia violacea* | lilac vine | C, F |
| *Hebe buxifolia* | boxleaf hebe | C, F |
| *Hibiscus rosa-sinensis* | ross estey-hibiscus | C, F |
| *Hibiscus syriacus* | red bird rose of sharon | C, F |
| | red heart rose of sharon | F |
| | woodbridge rose of sharon | C, F |
| *Hydrangea quercifolia* | 'Alice' oakleaf hydrangea | C, F |
| *Ilex aquifolium* | Balkans English holly | F |
| | gold coast English holly | F |
| *Ilex x aquipernyi* | San Jose holly | C, F |
| *Ilex x attenuata* | foster holly | C, F |
| | Savannah holly | C, F |
| *Ilex cassine* | cassine holly | C, F |

## Shrubs (Cont.)

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Ilex cornuta* | burford holly | C, F |
| | dwarf burford holly | C, F |
| | needlepoint holly | C, F |
| | carissa holly | C, F |
| | Chinese holly | C, F |
| *Ilex crenata* | compacta-dwarf Japanese holly | C, F |
| | 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 |
| | Sky pencil | C, F |
| *Ilex crenata 'Steeds'* | steeds Japanese holly | C, F |
| | stokesii Japanese holly | C, F |
| *Ilex glabra* | compacta-compact inkberry holly | C, F |
| *Ilex glabra* | nordica-inkberry holly | C, F |
| *Ilex x meserveae* | blue boy holly | C, F |
| | blue girl holly | C, F |
| | Blue prince or princess holly | C, F |
| | China boy holly | C, F |
| | China girl holly | C, F |
| | ebony magic holly | F |
| *Ilex x 'Nellie Stevens'* | Nellie R. Stevens holly | C, F |
| *Ilex opaca* | American holly | C, 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 virginica* | Henry's garnet sweetspire | C, F |
| *Ixora collinea* | ixora | C, F |
| *Juniperus chinensis 'Gold Coast'* | gold coast juniper | 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 davurica* | parsonii 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 Japanese 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 |
| | wichita blue juniper | C, F |
| *Juniperus squamata* | blue juniper | C, F |
| | blue star juniper | C, F |
| | parsonii juniper | C, F |
| *Juniperus virginiana* | grey owl juniper | C, F |
| *Kalmia latifolia* | mountain laurel | C, F |
| *Lagerstroemia indica* | crape myrtle | C, F |
| *Leucophyllum frutescens* | Texas sage | C, F |
| *Leucophyllum laevigatum* | chihuahan sage | C, F |
| *Leucothoe axillaris* | coast leucothoe | C, F |
| *Leucothoe fontanesiana* | drooping leucothoe | C, F |
| *Ligustrum japonicum* | Japanese privet | C, F |
| | wax privet | C, F |
| | yellow tip privet | C, F |
| *Ligustrum lucidum* | glossy privet | C, F |
| *Ligustrum ovalifolium* | California privet | F |
| *Ligustrum texanum* | Howard privet | C, F |
| | wax leaf privet | C, F |
| *Ligustrum x vicaryi* | golden vicary privet | F |
| *Ligustrum vulgare 'Lodense'* | lodense common privet | C, F |
| *Livistona chinensis* | Chinese fountain palm | F |

## Shrubs (Cont.)

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Lonicera fragrantissima* | winter honeysuckle | C, F |
| *Lonicera periclymenum* | flowering woodbine | C, F |
| | serotina woodbine | C, F |
| *Lonicera sempervirens* | trumpet honeysuckle | C, F |
| *Lorpetalum chinense* | sizzling pink fringe flower | C, F |
| *Loropetalum chinense var. rubrum 'Razzlebern'* | razzleberri fringe flower | C, F |
| *Mahonia aquifolium 'Compactum'* | dwarf Oregon hollygrape mahonia | C, F |
| *Mahonia bealei* | leather leaf mahonia | C, F |
| *Mahonia repens* | creeping mahonia | C, F |
| *Mandevilla splendens 'Red Riding Hood'* | red riding hood mandevilla | F |
| *Metrosideros collina* | springfire lehua | C, F |
| *Michelia figo* | banana shrub | C, F |
| *Myrica cerifera* | southern waxmyrtle | C, F |
| *Myrica pennsylvanica* | bayberry | C, F |
| *Myoporum parvifolium* | putah creek | 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 x fortunei* | fortune's osmanthus | C, F |
| *Osmathus fragrans* | sweet olive osmanthus | C, F |
| *Pennisetum setaceum 'Rubrum'* | purple fountain grass | C, F |
| *Phoenix roebelenii* | pigmy date palm | C, F |
| *Photinia x fraseri* | fraser photinia | C, F |
| *Physocarpus opulifolius* | dwarf ninebark | 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 x 'Forest Flame'* | forest flame lily-of-the-valley | C, F |
| *Pinus mugo var. mugo* | mugo pine | C, F |
| *Pittosporum tenufolia 'Golf Ball'* | golf ball pittosporum | 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 fructicosa* | sweet pea shrub | C, F |
| *Polystichum polyblepharum* | tassel fern | C, F |
| *Potentilla fragiformis* | cinquefoil | F |
| *Potentilla fruticosa* | cinquefoil | C, F |
| | floppy disc cinquefoil | C, F |
| | gold drop pontentilla | F |
| | goldfinger potentilla | C, F |
| | red ace potentilla | C, F |
| | sunset potentilla | C, F |
| | tangerine potentilla | C, F |
| *Potentilla spp.* | cinquefoil | |
| *Potentilla verna* | spring cinquefoil | C, F |
| *Prunus glandulosa* | dwarf flowering almond | C, F |
| *Prunus laurocerasus 'Otto luykens'* | otto luykens English laurel | C, F |
| *Prunus x yedoensis* | Yoshino cherry | C, F |
| *Psidium cattleianum* | strawberry guava | C, F |
| *Pyracantha coccinea 'Lalandei'* | lalandei firethorn | 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 |
| | Snow Indian hawthorne | C, F |
| | springtime-Monme rhaphiolepis | F |
| *Rhaphiolepsis indica 'Ballerina'* | ballerina Indian hawthorn | C, 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 |

## Shrubs (Cont.)

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *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 impeditum* | rhododendron | C, F |
| *Rhododendron indicum* | Brilliant azalea | C, F |
| | formosa azalea | C, F |
| | Mrs. G.G. Gerbing azalea | C, F |
| | pride of Mobile azalea | C, F |
| | 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* | Coral bells azalea | C, F |
| | hino crimsom azalea | C, F |
| *Rhododendron ponticum* | chioniodes rhododendron | C, F |
| | daphinoides 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 |
| *Rhododendron simsii* | Red ruffle azalea | C, F |
| *Rhododendron spp. hybrids* | American rhododendron | C, F |
| *Rhododendron spp. hybrids* | carror azalea | C, F |
| | fashion azalea | C, F |
| | English roseaum rhododendron | 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 |
| | Girard's crimson azalea | C, F |
| | H. H Hume azalea | C, F |
| | Inga azalea | F |
| | Irene Koster azalea | C, F |
| | midnight flare azalea | C, F |
| | nova zembla rhododendron | C, F |
| | Nuccio's wild cherry azalea | C, F |
| | President Clay azalea | C, F |
| | scintillation rhododendron | C, F |
| | traditional azalea | C, F |
| *Rhus lancea* | African sumac | C, F |
| *Rhus typhina* | staghorn sumac | C, F |
| *Rosa x 'Flower carpet'* | red groundcover rose | C, F |
| *Rosa rugosa* | ramanas rose | C, F |
| *Rosmarinus officinalis* | rosemary | F |
| *Senecio cineraria* | dusty miller | |
| *Skimmia japonica* | Japanese skimmia | C, F |
| *Skimmia revesiana* | reeve's skimmia | C, F |
| *Solanum rantonetii 'Royal purple'* | Paraguay nightshade | C, F |
| *Spiraea x bumalda 'Anthony Waterer'* | Anthony Waterer spiraea | C, F |
| *Spiraea x cinerea 'Grefsheim'* | first snow spiraea | C, F |
| *Spiraea japonica* | dolchia spiraea | C, F |
| | gold mound | C, F |
| | Japanese alpine spiraea | C, F |
| | magic carpet spiraea | C, F |
| | neon flash spiraea | C, F |
| | shirobana spiraea | C, F |
| *Spiraea nipponica* | Snowmound Nippon spirea | C, F |

## Shrubs (Cont.)

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Spiraea x vanhouttei* | vanhoutte spirea | C, F |
| *Streptosolen jamesonii* | marmalade bush | C, F |
| *Syringa rothomagenesis* | Chinese lilac | C, F |
| *Syringa vulgaris* | common lilac | F |
| *Taxus cuspidata* | Japanese yew | F |
| *Tecomaria capensis* | cape honeysuckle | C, F |
| *Ternstroemia gymnanthera* | Japanese ternstroemia | C, F |
| *Teucrium fruticans* | bush germander | C, F |
| *Thevetia nerifolia* | yellow oleander | C, F |
| *Thuja occidentalis* | emerald arborvitae | C, F |
| | George Peabody 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 |
| | woodwardii arborvitae | C, F |
| *Thuja orientalis* | aureus nana-dwarf golden arborvitae | C, F |
| | minima glauca-dwarf arborvitae | C, F |
| *Tibouchina urvilleana* | princes flower | C, F |
| *Vaccinium ovatum* | Thunderbird evergreen huckleberry | C, F |
| *Veitchia merrilli* | Christmas palm | F |
| *Viburnum bodnantense* | pink dawn viburnum | C, F |
| *Viburnum carlesii* | Koreanspice vibunum | C, F |
| *Viburnum davidii* | David viburnum | C, F |
| *Viburnum japonicum* | Japanese viburnum | F |
| *Viburnum judd (V. x juddii)* | judd viburnum | C, F |
| *Viburnum lantana* | wayfaringtree viburnum | F |
| *Viburnum macrocephalum* | Chinese snowball viburnum | C, F |
| *Viburnum opulus sterile* | common snowball viburnum | F |
| *Viburnum plicatum var. tomentosum* | doublefile viburnum | C, F |
| *Viburnum setigerum* | tea viburnum | F |
| *Viburnum tinus 'Compactum'* | spring bouquet viburnum | C, F |
| *Viburnum trilobum* | Am. cranberrybush viburnum | C, F |
| *Viburnum trilobum 'Compactum'* | dwarf Am. cranberrybush viburnum | C, F |
| *Viburnum x pragense* | Prague viburnum | C, F |
| *Weigela florida* | bristol Ruby weigela | C, F |
| | java red weigela | C, F |
| | minuet weigela | C, F |
| | variegata | C, F |
| *Xylosma congestum* | xylosma | F |
| *Xylosma senticosa* | shiny xylosma | F |
| *Yucca filamentosa* | Adam's needle yucca | C, F |

[1]C=container grown, F=field grown

## Groundcovers/Perennials

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Achillea* spp. | yarrow | C, F |
| *Achillea filipendulina* | moonshine-fern/leaf yarrow | C, F |
| *Achillea millefolium* | common yarrow | C, F |
| *Achillea millefolium 'Paprika'* | paprika yarrow | C, F |
| *Achillea tomentosa* | wooly yarrow | C, F |
| *Agapanthus africanus* | lilly of the nile | C, F |
| | queen anne lily of the nile | C, F |
| *Agapanthus 'Peter pan'* | lily of the nile | C, F |
| *Agave americana* | century plant, American aloe | F |
| *Agave attenuate x Agave ocahui* | blue glow agave | C, F |
| *Agave bovicornuta* | cow horn agave | C, F |
| *Agave gypsophila* | gypsum century plant | C, F |
| *Agave vilmoriniana* | Tentacles agave | C, F |
| *Ammophila breviligulata* | beechgrass | C, F |
| *Aptenia cordifolia* | red apple aptenia | C, F |
| *Aquilegia x 'Dragon fly'* | columbine | C, F |
| *Arctotheca calendula* | cape weed | F |
| *Argyranthemum frutescens "Butterfly'* | butterfly argyranthemum | C, F |
| *Asparagus densiflorus 'Myers'* | pony tail fern | C, F |
| *Asparagus retrofractus* | | C, F |
| *Asparagus varieegata* | tree fern | C, F |
| *Asparagus var. 'Meegers'* | | C, F |
| *Aspidistra elatior* | cast iron plant | C, F |
| *Aster novae-angliae* | New England aster | C, F |
| *Aster novi-belgii* | New York aster | C, F |
| *Aster novi-belgii 'Persian rose'* | Persian rose dwarf aster | C, F |
| *Begonia sepmerflorens 'Amb white'* | white ambassador begonia | C, F |
| *Bergenia cordifolia* | heartleaf bergenia | C, F |
| *Bidens ferulifolia 'Peters gold'* | Peter's gold bidens | C, F |
| *Brachycome x 'New amethyst'* | swan river daisy new amethyst | C, F |

## Groundcovers/Perennials (Cont.)

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Callistepheus chinensis* | China aster | C, F |
| *Carex albula* | frosty curls sedge | C, F |
| *Carex* spp. | variegated carex | C, F |
| *Carpobrotus edulis* | largeleaf ice plant | F |
| *Catharanthus roseus* | Madagascar periwinkle | C, F |
| *Chasmanthium latifloium* | northern sea oats | C, F |
| *Chrysanthemum maximum* | shasta daisy | C, F |
| *Chrysanthemum* spp. | chrysanthemum species | C, F |
| *Cistus purpureus* | Brilliancy sunset orchid rockrose | C, F |
| *Clivia miniata 'French hybrid'* | kafir lily | C, F |
| *Cordyline indiyisa* | blue dracaena | C, F |
| *Coreopsis verticillata* | threadleaf coreopsis | C, F |
| *Coreopsis verticillata 'Moonbeam'* | moonbeam coreopsis | C, F |
| *Cortaderia selloana* | pampas grass | C, F |
| *Crasulla argentea compacta* | crosby compact jade | C, F |
| *Cuphea hyssopifolia* | false or Mexican heather | C, F |
| *Cyperus albostriatus* | dwarf umbrella grass | C, F |
| *Dahlia hybrid Dwarf* | dwarf dahlia | C, F |
| *Dahlia x 'Royal Dahlietta pink'* | dwarf dahlia wendy pink | C, F |
| *Delosperma alba* | white iceplant | F |
| *Delosperma cooperi* | ice plant | C, F |
| *Delosperma nubigenum* | hardy ice plant | C, F |
| *Descampsia caespitosa* | descampsia | C, F |
| *Dianthus gratianopolitanus 'Firewitch'* | firewitch cheddar pink | C, F |
| *Dianthus gratianopolitanus 'Treasure'* | crimson treasure cheddar pink | C, F |
| *Dianthus plumaris* | cottage pink | C, F |
| *Dietes vegeta* | fortnight lily | C, F |
| *Drosanthemum floribundum* | trailing rosea iceplant | F |
| *Drosantheumum hispidum* | iceplant | C, F |
| *Dryopteris erythrosora* | autumn fern | C, F |
| *Dryopteris ludoviciana* | southern shield wood fern | C, F |
| *Dryopteris marginalis* | marginal wood fern | C, F |
| *Dryopteris x australis* | dixie wood fern | C, F |
| *Dymondia margaritae* | diamond marguerite | C, F |
| *Echeveria x black prince* | "black prince' hens & chicks | C, F |
| *Echeveria deranosa* | 'deranosa' hens & chicks | C, F |
| *Echeveria gibbiflora x E. elegans* | Echeveria 'perle von Nurnberg' | C, F |
| *Echeveria nodulosa* | Mexican hens & chicks | C, F |
| *Echeveria subrigida* | red edge echeveria | C, F |
| *Echinocactus grusonii* | golden barrel cactus | C, F |
| *Ensete ventricosum* | absynnian banana | C, F |
| *Equisetum scirpoides* | dwarf horsetail | C, F |
| *Erianthus ravennae* | hardy pampasgrass | C, F |
| *Erigeron speciosum 'Darkest of all'* | darkest of all fleabane | C, F |
| *Euryops pectinatus 'Munchkin'* | dwarf euryops | C, F |
| *Eustoma grandiflorum 'Pink'* | pink lisianthus | C, F |
| *Evolvulus nuttallianus* | blue daze | C, F |
| *Fatshedra japonica* | Japanese aralia | C, F |
| *Festuca ovina glauca* | blue fescue | C, F |
| *Gaillardia x grandifloria* | blanket flower | C, F |
| *Gaillardia x grandiflora 'Goblin'* | goblin blanket flower | F |
| *Gazania* spp. | gazania | C, F |
| *Gazania rigens leucolaena* | gazania, trailing | C,F |
| *Geranium cinerium "Ballerina'* | ballerina cranesbill | C, F |
| *Geranium sanquineum 'Bloody cran'* | bloody cranesbill | C, F |
| *Geranium subcaulescens* | black eyed magenta cranesbill | C, F |
| *Geum spp* | avens | C, F |
| *Geum quellyon* | geum | C, F |
| *Gypsophila paniculata* | baby's breath | C, F |
| *Hakonechloa macroaureola* | golden hakonechloa | C, F |
| *Hedera canariensis* | Algerian ivy | F |
| *Hedera helix* | English ivy | C, F |
| *Helichrysum petiolare 'White licorice'* | white licorice helichrysum | C, F |
| *Heliotropium fragrans* | common heliotrope | C, F |
| *Hemerocallis* spp. | daylily | C, F |
| *Hesperaloe parvifolia* | red yucca | C, F |
| *Heuchera x 'Bressingham'* | bressingham coral bells | C, F |
| *Heuchera micrantha* | coral bells | C, F |
| *Hosta 'Francee'* | francee plantain lily | C, F |
| *Hosta fortunei* | plantain lily | C, F |
| *Hosta lancifoila* | albo-marginata hosta | C, F |
| | narrow leafed plantain lily | C |
| *Hosta x 'Patriot'* | patriot plantain lily | C, F |
| *Hosta plantaginea x H. sieboldiana* | Royal standard hosta | C, F |
| *Houttuynia cordata 'Chameleon'* | chameleon houttuynia | C, F |
| *Hymenoxys acaulis* | angelita daisy | C, F |
| *Hypericum* spp. | St. Johnswort | C,,F |
| *Impatiens walleryana 'Lipstick'* | lipstick impatiens | C, F |

## Groundcovers/Perennials (Cont.)

| Scientific Name | Common Name | Treatment Method[1] |
|---|---|---|
| *Imperata cylindrical 'Rubra'* | Japanese blood grass | C, F |
| *Ipomea acuminata 'Blue dawn'* | blue dawn morning glory | C, F |
| *Iris pumila 'Yellow'* | yellow dwarf bearded iris | C, F |
| *Iris siberica* | iris | C, F |
| *Jasminum nitidum* | angelwing jasmine | C, F |
| *Jasminum polyanthum* | pink jasmine | C, F |
| *Kniphofia uvaria 'Flamenco'* | flamenco red hot poker | C, F |
| *Lampranthus spectabilis* | trailing iceplant | F |
| *Leptospermum chinensis* | nanum ruru pink leptospermum | C, F |
| *Leptospermum scoparium* | broom teatree/manuka | C, F |
| *Liatris spicata 'Floristan Violet'* | floristan violet gay feather | C, F |
| *Limonium latifolium* | sea lavender | C, F |
| *Limonium perezii* | statice | C, F |
| *Liriope gigantea* | white lily turf | C, F |
| | giant 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 |
| | silver dragon lily turf | C, F |
| *Lonicera japonica* | Japanese honeysuckle | F |
| *Lysimachia mummularia* | moneywort | C, F |
| *Lysimachia punctata* | dotted loosestrife | C, F |
| *Matteuccia struthiopteris* | ostrich fern | C, F |
| *Matthiola incana 'Harmony'* | stock | C, F |
| *Miscanthus sinensis* | eulalia grass | C, F |
| *Miscanthus sinensis 'Gracillimus'* | maiden grass | C, F |
| *Moraea iridioides* | African iris | C, F |
| *Oenothera missouriensis* | ozark sundrops | C, F |
| *Oenothera speciosa "Siskiyou pink'* | siskiyou evening primrose | C, F |
| *Onoclea sensibilis* | sensitive fern | C, F |
| *Ophiopogon japonicus* | dwarf mondo grass | C, F |
| | mondo grass | C, F |
| *Origanum libanoticum* | oregano | C, F |
| *Osmunda cinnamomea* | cinnamon fern | C, F |
| *Osmunda regalis* | royal fern | C, F |
| *Osteospermum fruticosum* | trailing African daisy | F |
| *Pachysandra terminalis* | Japanese spurge | C, F |
| *Pachysandra terminalis 'Green sheen'* | green sheen Japanese spurge | C, F |
| *Pachyveria haagii* | Pachyveria | 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 |
| *Penstemon x 'Apple blossom'* | apple blossom penstemon | C, F |
| *Pentas lanceolata* | star clusters | C, F |
| *Perovskia atriplicifolia* | Russian sage | C, F |
| *Petunia-hybrids* | garden petunias | C, F |
| *Phalaris arundinacea picta* | ribbon grass | C, F |
| *Phlox subulata* | moss pink | C, F |
| *Phormium tenax 'Jack Spratt'* | Jack Spratt New Zealand flax | C, F |
| *Polystichum acrostichoides* | Christmas fern | C, F |
| *Polystichum polyblepharum* | tassel fern | C, F |
| *Ratbida columnifera* | Mexican hat | C, F |
| *Rudbeckia fulgida* | blackeyed susan | C, F |
| *Ruscus hypophyllum* | butcher's broom (Israeli ruscus) | C, F |
| *Salvia daghestanica* | platinum sage | C, F |
| *Salvia grahamii* | graham's sage | C, F |
| *Sasa pygmaea* | dwarf bamboo | C, F |
| *Schizachyrium scoparium* | little bluestem | C, F |
| *Scutellaria resinosa* | skull cap | C, F |
| *Sedum x 'Autumn joy'* | autumn joy stonecrop | C, F |
| *Sedum x 'Vera Jameson'* | Vera Jameson stonecrop | C, F |
| *Sedum clavatum* | Tiscalatengo gorge sedum | C, F |
| *Sedum nussbaumerianum* | Coppertone stonecrop | C, F |
| *Senecio kleinia* | Kleinia talinoides | C, F |
| *Tagetes patula 'Little Hero'* | little hero marigold | C, F |
| *Trachelospermum asiaticum* | Asian jasmine | C, F |
| *Tulbaghia violacea* | society garlic | C, F |
| *Verbena rigida* | veined verbena | C, F |
| *Vinca major* | bigleaf periwinkle | C, F |
| *Vinca minor* | dwarf periwinkle | F |
| *Vinca* spp. | periwinkle | F |

[1]C=container grown, F=field grown

## Field-Grown Non-Bearing Trees and Vines[1]

**Common Name**

almond
apple
apricot
avocado
blackberry
black walnut
blueberry
boysenberry
cherry, sour
cherry, sweet
currant
dewberry
elderberry
English walnut
fig
filbert
gooseberry
grape, American
grape, European
grapefruit
kiwi
lemon
loganberry
macadamia nut
nectarine
olive
orange
peach
pear
pecan
pistachio
plum
pomegranate
prune
raspberry

[1]Apply only to listed field grown crops. Do not apply to container grown crops. Non-bearing fruit and nut trees and non-bearing vineyards are defined as plants that will not bear fruit for at least one year after treatment.

## Ornamental Bulbs

Gallery SC may be applied for control of susceptible annual weeds in ornamental bulbs such as bulbous iris, daffodil (narcissus), gladiolus, hyacinth, lilies, and tulip except as noted below. Apply Gallery SC to the soil surface 2 to 4 weeks after planting but prior to the emergence of annual weeds. Gallery SC may also be applied following bulb emergence but prior to bud set, or after flowering. For fall planted bulbs, apply Gallery SC in late winter or early spring to weed-free soil surfaces. For bulbs, make a single application within 30 days following planting and prior to bulb emergence. Do not exceed the 16 fl. oz of Gallery SC (0.5 lb. ai) per acre rate. Do not exceed 3 applications per year or a maximum yearly of 48 oz/A (1.56 lb ai/A).

**Specific Use Restrictions:**

- Do not use Gallery SC for weed control in ornamental bulbs grown for commercial bulb production.
- Gallery SC is not for application to:
  - Tulip plants that have emerged to a height greater than 3/4 inch.
  - Gladiolus prior to emergence or if corms are less than one inch in diameter.
  - Bulbs while they are flowering.

## Shadehouse Areas

Gallery SC 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 greenhouses or poly-type structures.

## Christmas Tree and Conifer Plantations

**Gallery SC - Alone**

Apply Gallery SC as a directed spray to the soil surface or as an over the top spray to established plantings of field grown Christmas tree and conifer species listed in this label. Follow all instructions provided in the Product Information section of this label. Do not apply more than 31 fl oz/acre of Gallery SC in a single application. Do not repeat applications sooner than 60 days after a previous application of Gallery SC. Do not apply more than a total of 124 fl oz/A of Gallery SC per acre within a 12-month period.

**Specific Use Restrictions:**

Injury may be incurred if Gallery SC is applied in the following manner. Grower assumes all risk if Gallery SC is applied to seedbeds or seedling transplant beds. For optimum plant tolerance, apply only to established plantings. Established plants are defined as those that have been transplanted into their final growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation.

**Gallery SC - Tank Mix**

Tank mix combinations of Gallery SC plus other labeled herbicides may be used in established Christmas tree plantings. When applied according to use directions, these tank mixes will provide control of susceptible weed species listed on the respective product labels. Refer to tank mix product labels for specific use directions, precautions and limitations before use. Refer to tank mix instructions for Gallery SC in the Mixing Directions section. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Gallery SC plus Accord XRT II or other glyphosate formulations registered for this use site:** Apply tank mix combinations of Gallery SC plus glyphosate as directed soil sprays only in Christmas tree plantings. When applied as directed, Gallery SC plus glyphosate will provide postemergence control of susceptible weed species listed on the label for glyphosate and residual preemergence control of susceptible weed species listed on the label for Gallery SC. Refer to the label for glyphosate for specific use directions, precautions and limitations before use. Refer to tank mix instructions for Gallery SC in the Mixing Directions section.

**Specific Use Precautions for glyphosate tank mixes:**

- Extreme care must be exercised to prevent contact of sprays containing glyphosate with foliage or stems of Christmas trees or other desirable plants or severe plant damage or death may result.
- Do not apply sprays containing glyphosate over the top of Christmas tree plantings.

## Non-Cropland Areas

Use Gallery SC as a preemergence herbicide for control of listed broadleaf weeds in non-cropland areas such as airports, communication transmission lines, dry barrow ditches, dry non-irrigation ditchbanks, and dry storm water retention areas, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, military sites, mining and drilling areas, oil and gas pads, parking lots, petroleum tank farms, oil and gas pipelines, railroads, roadsides, storage areas, substations, vacant lots and other non-crop residential areas where maintenance of bare ground is desired.

It is permissible to treat non-irrigation ditch banks and transitional areas between upland and lowland sites only when dry. Do not apply directly to water. Note: Consult with local water control authorities before applying this product around public water. Permits may be required

Apply Gallery SC any time 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 Product Information section prior to using this product on non-cropland areas.

**Tank Mixing**

Gallery SC is compatible and can be tank mixed with other herbicides registered for use on non-cropland areas such as Dimension, Accord XRT II and Milestone. Applied as directed, tank mixes containing Gallery SC will provide control of susceptible weed species listed on the respective labels. All directions, precautions and limitations on the respective product labels apply to the tank mix use. Refer to tank mix instructions for Gallery SC in the Mixing Directions section.

## 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. To the extent permitted by law, otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

## Warranty Disclaimer

Corteva Agriscience 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. To the extent permitted by law, Corteva Agriscience 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. Crop 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 temperatures, 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 Corteva Agriscience or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

## Limitation of Remedies

To the extent permitted by law, 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 Corteva Agriscience's 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.

To the extent permitted by law, Corteva Agriscience shall not be liable for losses or damages resulting from handling or use of this product unless Corteva Agriscience is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Corteva Agriscience 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 Corteva Agriscience 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**
**Corteva Agriscience LLC**
**9330 Zionsville Road**
**Indianapolis, IN 46268**

Label Code: CD02-918-021
Replaced Label: CD02-918-020

EPA accepted: 05/08/17

## Revisions:

1 Trademark statement: Updated to " ™®Trademarks of Corteva Agriscience and its affiliated companies
- Produced For: Updated company name to "Corteva Agriscience LLC
- Terms and Conditions for Use: Updated
- Throughout label: Updated references to "Dow AgroSciences" to either "company" or "Corteva Agriscience"

# SAFETY DATA SHEET

# GALLERY™ SC

| Version | Revision Date: | SDS Number: | Date of last issue: - |
|---|---|---|---|
| 1.0 | 01/13/2022 | 800080005721 | Date of first issue: 01/13/2022 |

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

## SECTION 1. IDENTIFICATION

Product name : GALLERY™ SC

**Manufacturer or supplier's details**

**COMPANY IDENTIFICATION**

**Manufacturer/importer** : CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS, IN, 46268-1053
UNITED STATES

**Customer Information Number** : 800-992-5994

**E-mail address** : customerinformation@corteva.com

**Emergency telephone** : INFOTRAC (CONTRACT 84224).

800-992-5994 or 317-337-6009

**Recommended use of the chemical and restrictions on use**

Recommended use : End use herbicide product

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Not a hazardous substance or mixture.

**GHS label elements**

Not a hazardous substance or mixture.

**Other hazards**

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Components**

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|---|---|
| isoxaben (ISO) | 82558-50-7 | 45.45 |

| | | |
|---|---|---|
| Propylene glycol | 57-55-6 | >= 3 - < 10 |
| ethanol | 64-17-5 | >= 0.1 - < 0.3 |
| Balance | Not Assigned | > 40 |

Actual concentration is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

| | | |
|---|---|---|
| If inhaled | : | 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. |
| In case of 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. |
| In case of 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. |
| If swallowed | : | No emergency medical treatment necessary. |
| Most important symptoms and effects, both acute and delayed | : | None known. |
| Protection of first-aiders | : | If potential for exposure exists refer to Section 8 for specific personal protective equipment. |
| Notes to physician | : | No specific antidote.<br>Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.<br>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. |

## SECTION 5. FIRE-FIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Water spray<br>Alcohol-resistant foam |
| Unsuitable extinguishing media | : | None known. |
| Specific hazards during fire fighting | : | Exposure to combustion products may be a hazard to health.<br>Do not allow run-off from firefighting to enter drains or water courses. |
| Hazardous combustion products | : | During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.<br><br>Combustion products may include and are not limited to:<br>Nitrogen oxides (NOx)<br>Carbon oxides |
| Specific extinguishing methods | : | Remove undamaged containers from fire area if it is safe to do so. |

| | | |
|---|---|---|
| | | Evacuate area.<br>Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers. |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for fire-fighters | : | Wear self-contained breathing apparatus for firefighting if necessary.<br>Use personal protective equipment. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. |
| Environmental precautions | : | If the product contaminates rivers and lakes or drains inform respective authorities.<br>Discharge into the environment must be avoided.<br>Prevent further leakage or spillage if safe to do so.<br>Prevent spreading over a wide area (e.g., by containment or oil barriers).<br>Retain and dispose of contaminated wash water.<br>Local authorities should be advised if significant spillages cannot be contained.<br>Prevent from entering into soil, ditches, sewers, underwater.<br>See Section 12, Ecological Information. |
| Methods and materials for containment and cleaning up | : | Clean up remaining materials from spill with suitable absorbant.<br>Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.<br>For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped,<br>Recovered material should be stored in a vented container.<br>The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container.<br>Keep in suitable, closed containers for disposal.<br>Wipe up with absorbent material (e.g. cloth, fleece).<br>Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).<br>See Section 13, Disposal Considerations, for additional information. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on safe handling | : | Do not breathe vapors/dust.<br>Handle in accordance with good industrial hygiene and safety |

practice.
Smoking, eating and drinking should be prohibited in the application area.
Take care to prevent spills, waste and minimize release to the environment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage : Store in a closed container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in properly labeled containers.
Store in accordance with the particular national regulations.

Materials to avoid : Strong oxidizing agents

Packaging material : Unsuitable material: None known.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| Propylene glycol | 57-55-6 | TWA | 10 mg/m3 | US WEEL |
| ethanol | 64-17-5 | STEL | 1,000 ppm | ACGIH |
| | | TWA | 1,000 ppm<br>1,900 mg/m3 | OSHA Z-1 |

**Engineering measures** : Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

**Personal protective equipment**

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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

Hand protection

Remarks : 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.

Eye protection : Use safety glasses (with side shields).

Skin and body protection : Wear clean, body-covering clothing.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | Liquid. |
| Color | : | white |
| Odor | : | Odorless |
| Odor Threshold | : | No data available |
| pH | : | 7.7 |
| Melting point/range | : | Not applicable |
| Freezing point | | No data available |
| Boiling point/boiling range | : | > 212 °F / > 100 °C |
| Flash point | : | > 212 °F / > 100 °C<br>Method: closed cup |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Vapor pressure | : | No data available |
| Relative vapor density | : | No data available |
| Relative density | : | 1.09 (68 °F / 20 °C) |
| Density | : | 1.1148 g/cm3 (68 °F / 20 °C)<br>Method: Digital density meter |
| Solubility(ies) | | |
| Water solubility | : | No data available |
| Autoignition temperature | : | > 752 °F / > 400 °C |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |

| | | |
|---|---|---|
| Explosive properties | : | No |
| Oxidizing properties | : | No significant increase (>5C) in temperature. |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | Not classified as a reactivity hazard. |
| Chemical stability | : | No decomposition if stored and applied as directed.<br>Stable under normal conditions. |
| Possibility of hazardous reactions | : | Stable under recommended storage conditions.<br>No hazards to be specially mentioned.<br>None known. |
| Conditions to avoid | : | None known. |
| Incompatible materials | : | None. |
| Hazardous decomposition products | : | Decomposition products depend upon temperature, air supply and the presence of other materials.<br>Decomposition products can include and are not limited to:<br>Nitrogen oxides (NOx)<br>Carbon oxides |

## SECTION 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, male and female): > 5,000 mg/kg<br>Method: OECD Test Guideline 401<br>Symptoms: No deaths occurred at this concentration. |
| Acute inhalation toxicity | : | LC50 (Rat, male and female): > 5.71 mg/l<br>Test atmosphere: dust/mist<br>Symptoms: No deaths occurred at this concentration.<br>Assessment: The substance or mixture has no acute inhalation toxicity |
| Acute dermal toxicity | : | LD50 (Rat): > 5,000 mg/kg<br>Method: OECD Test Guideline 402<br>Symptoms: No deaths occurred at this concentration. |

**Components:**

**isoxaben (ISO):**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, male and female): > 5,000 mg/kg |
| Acute inhalation toxicity | : | Remarks: Prolonged excessive exposure to dust may cause adverse effects.<br>Based on the available data, narcotic effects were not observed.<br>Based on the available data, respiratory irritation was not ob- |

served.

LC50 (Rat, male and female): > 2.93 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Symptoms: No deaths occurred at this concentration.
Remarks: Maximum attainable concentration.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

**Propylene glycol:**

Acute oral toxicity : LD50 (Rat): > 20,000 mg/kg

Acute inhalation toxicity : LC50 (Rabbit): 317.042 mg/l
Exposure time: 2 h
Test atmosphere: dust/mist
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Mist may cause irritation of upper respiratory tract (nose and throat).

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

**ethanol:**

Acute oral toxicity : LD50 (Rat): > 7,000 mg/kg

LDLo (human): 1,400 mg/kg

Acute inhalation toxicity : LC50 (Rat): 124.7 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): > 15,800 mg/kg

**Skin corrosion/irritation**

**Product:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

**Components:**

**Propylene glycol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No skin irritation |

**ethanol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No skin irritation |

**Serious eye damage/eye irritation**

**Product:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No eye irritation |
| Method | : | OECD Test Guideline 405 |

**Components:**

**Propylene glycol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No eye irritation |

**ethanol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | Eye irritation |

**Respiratory or skin sensitization**

**Product:**

| | | |
|---|---|---|
| Remarks | : | Did not demonstrate the potential for contact allergy in mice. |

**Components:**

**isoxaben (ISO):**

| | | |
|---|---|---|
| Remarks | : | Did not cause allergic skin reactions when tested in guinea pigs. |
| Remarks | : | For respiratory sensitization:<br>No relevant data found. |

**Propylene glycol:**

| | | |
|---|---|---|
| Species | : | human |
| Assessment | : | Does not cause skin sensitization. |

**ethanol:**

| | | |
|---|---|---|
| Species | : | Guinea pig |
| Assessment | : | Does not cause skin sensitization. |

**Germ cell mutagenicity**

**Components:**

**isoxaben (ISO):**

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were predominantly negative.

**Propylene glycol:**

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

**ethanol:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

**Carcinogenicity**

**Components:**

**isoxaben (ISO):**

Carcinogenicity - Assessment : An increase in nonmalignant liver tumors was observed with isoxaben in one of two species tested.

**Propylene glycol:**

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

**ethanol:**

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects., Ethanol when not consumed in an alcoholic beverage is not classifiable as a human carcinogen., Epidemiology studies provide evidence that drinking of alcoholic beverages (containing ethanol) is associated with cancer, and IARC has classified alcoholic beverages as carcinogenic to humans.

**IARC** Group 1: Carcinogenic to humans
ethanol 64-17-5

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

**Components:**

**isoxaben (ISO):**

Reproductive toxicity - Assessment : In animal studies, has been shown to interfere with reproduction in females., Effects have been seen only at doses that produced significant toxicity to the parent animals.
Has caused birth defects in laboratory animals only at doses

toxic to the mother.

**Propylene glycol:**

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction., In animal studies, did not interfere with fertility.
Did not cause birth defects or any other fetal effects in laboratory animals.

**ethanol:**

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.
Has caused birth defects in lab animals at high doses.

**STOT-single exposure**

**Product:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Components:**

**isoxaben (ISO):**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Propylene glycol:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**ethanol:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**STOT-repeated exposure**

**Product:**

Assessment : Evaluation of available data suggests that this material is not an STOT-RE toxicant.

**Repeated dose toxicity**

**Components:**

**isoxaben (ISO):**

Remarks : In animals, effects have been reported on the following organs:
Liver.
Kidney.

**Propylene glycol:**

Remarks : In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

**Aspiration toxicity**

**Product:**

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

**Components:**

**isoxaben (ISO):**

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

**Propylene glycol:**

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

**ethanol:**

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

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**

Toxicity to fish :

Remarks: Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

LC50 (Oncorhynchus mykiss (rainbow trout)): > 200 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 544 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Lemna minor (duckweed)): 0.044 mg/l
End point: Biomass
Exposure time: 14 d
Test Type: static test

ErC50 (Chlorella vulgaris (Fresh water algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

| | | |
|---|---|---|
| Toxicity to soil dwelling organisms | : | LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg<br>Exposure time: 14 d<br>End point: mortality |
| Toxicity to terrestrial organisms | : | contact LD50 (Apis mellifera (bees)): > 100 micrograms/bee<br>Exposure time: 48 h<br><br>oral LD50 (Apis mellifera (bees)): > 100 micrograms/bee<br>Exposure time: 48 h |

**Ecotoxicology Assessment**

| | | |
|---|---|---|
| Acute aquatic toxicity | : | Very toxic to aquatic life. |

**Components:**

**isoxaben (ISO):**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).<br><br>LC50 (Oncorhynchus mykiss (rainbow trout)): 1.2 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Method: OECD Test Guideline 203 or Equivalent<br>Remarks: The LC50 value is above the water solubility.<br><br>LC50 (Cyprinodon variegatus (sheepshead minnow)): > 0.87 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Method: OECD Test Guideline 203 or Equivalent<br>Remarks: The LC50 value is above the water solubility. |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 1.3 mg/l<br>Exposure time: 48 h<br>Test Type: static test<br>Method: OECD Test Guideline 202 or Equivalent |
| Toxicity to algae/aquatic plants | : | EbC50 (Lemna minor (duckweed)): 0.011 mg/l<br>End point: Biomass<br>Exposure time: 7 d<br>Test Type: static test<br>Method: OECD Test Guideline 201 or Equivalent<br><br>ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.2 mg/l<br>End point: Growth rate inhibition<br>Exposure time: 72 h<br>Test Type: static test<br><br>ErC50 (Skeletonema costatum (marine diatom)): > 0.49 mg/l<br>Exposure time: 72 h<br>Test Type: static test |

| | | |
|---|---|---|
| M-Factor (Acute aquatic toxicity) | : | 10 |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Pimephales promelas (fathead minnow)): 0.4 mg/l<br>End point: growth<br>Exposure time: 33 d<br>Test Type: semi-static test<br><br>LOEC (Pimephales promelas (fathead minnow)): > 0.40 mg/l<br>End point: growth<br>Exposure time: 33 d<br>Test Type: semi-static test<br><br>MATC (Maximum Acceptable Toxicant Level) (Pimephales promelas (fathead minnow)): > 0.40 mg/l<br>End point: growth<br>Exposure time: 33 d<br>Test Type: semi-static test |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 0.69 mg/l<br>End point: growth<br>Exposure time: 21 d<br>Test Type: static test<br>Method: OECD Test Guideline 211 or Equivalent<br><br>LOEC (Daphnia magna (Water flea)): 1.01 mg/l<br>End point: growth<br>Exposure time: 21 d<br>Test Type: static test<br>Method: OECD Test Guideline 211 or Equivalent<br><br>MATC (Maximum Acceptable Toxicant Level) (Daphnia magna (Water flea)): 0.85 mg/l<br>End point: growth<br>Exposure time: 21 d<br>Test Type: static test<br>Method: OECD Test Guideline 211 or Equivalent<br><br>NOEC (saltwater mysid Mysidopsis bahia): 0.841 mg/l<br>Exposure time: 28 d<br>Test Type: flow-through test<br><br>LOEC (saltwater mysid Mysidopsis bahia): > 0.841 mg/l<br>Exposure time: 28 d<br>Test Type: flow-through test<br><br>NOEC (Midge (Chironomus riparius)): 32 mg/l<br>End point: mortality<br>Exposure time: 28 d<br>Test Type: static test<br>Method: OECD Test Guideline 211 or Equivalent<br><br>LOEC (Midge (Chironomus riparius)): 64 mg/l<br>End point: mortality<br>Exposure time: 28 d |

Test Type: static test
Method: OECD Test Guideline 211 or Equivalent

MATC (Maximum Acceptable Toxicant Level) (Midge (Chironomus riparius)): 48 mg/l
End point: mortality
Exposure time: 28 d
Test Type: static test
Method: OECD Test Guideline 211 or Equivalent

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
End point: Respiration rates.
Exposure time: 3 h
Test Type: Respiration inhibition

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 14 d

Toxicity to terrestrial organisms : Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg)., Material is moderately toxic to birds on a dietary basis (LC50 between 501 and 1000 ppm).

oral LD50 (Colinus virginianus (Bobwhite quail)): > 2000 mg/kg bodyweight.
Exposure time: 14 d

LC50 (Colinus virginianus (Bobwhite quail)): > 937 mg/kg diet.
Exposure time: 8 d

oral LD50 (Apis mellifera (bees)): > 100 micrograms/bee

contact LD50 (Apis mellifera (bees)): > 100 micrograms/bee
Exposure time: 48 h

**Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

**Propylene glycol:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 19,000 mg/l

End point: Growth rate inhibition
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l
End point: number of offspring
Exposure time: 7 d
Test Type: semi-static test

Toxicity to microorganisms : NOEC (Pseudomonas putida): > 20,000 mg/l
Exposure time: 18 h

**ethanol:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 11,200 - 13,000 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: Method Not Specified.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5,414 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : EbC50 (Skeletonema costatum (marine diatom)): 10,943 - 11,619 mg/l
End point: Biomass
Exposure time: 5 d
Method: OECD Test Guideline 201 or Equivalent

**Persistence and degradability**

**Components:**

**isoxaben (ISO):**

Biodegradability : Result: Not biodegradable.
Remarks: 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.

Chemical Oxygen Demand (COD) : 1.77 mg/g

ThOD : 1.98 kg/kg

Stability in water : Test Type: Hydrolysis
Degradation half life (half-life): > 5 d pH: 7.0

Photodegradation : Test Type: Half-life (direct photolysis)
Method: Measured

Test Type: Half-life (direct photolysis)

Test Type: Half-life (indirect photolysis)

Sensitizer: OH radicals
Concentration: 1,500,000 1/cm3
Rate constant: 2.045E-10 cm3/s
Method: Estimated.

**Propylene glycol:**

Biodegradability : aerobic
Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

Biodegradation: 96 %
Exposure time: 64 d
Method: OECD Test Guideline 306 or Equivalent
Remarks: 10-day Window: Not applicable

Biochemical Oxygen Demand (BOD) : 69.000 %
Incubation time: 5 d

70.000 %
Incubation time: 10 d

86.000 %
Incubation time: 20 d

Chemical Oxygen Demand (COD) : 1.53 kg/kg

ThOD : 1.68 kg/kg

Photodegradation : Rate constant: 1.28E-11 cm3/s
Method: Estimated.

**ethanol:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 70 %
Exposure time: 5 d
Method: OECD Test Guideline 301D or Equivalent
Remarks: 10-day Window: Pass

ThOD : 2.08 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Rate constant: 3.58E-12 cm3/s
Method: Estimated.

**Bioaccumulative potential**

**Components:**

**isoxaben (ISO):**

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

**Propylene glycol:**

Bioaccumulation : Bioconcentration factor (BCF): 0.09
Method: Estimated.

Partition coefficient: n-octanol/water : log Pow: -1.07
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**ethanol:**

Partition coefficient: n-octanol/water : log Pow: -0.31
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Balance:**

Partition coefficient: n-octanol/water : Remarks: No relevant data found.

**Mobility in soil**

**Components:**

**isoxaben (ISO):**

Distribution among environmental compartments : Koc: 700 - 1290
Remarks: Potential for mobility in soil is low (Koc between 500 and 2000).

Stability in soil : Test Type: aerobic degradation
Dissipation time: 0.358 - 0.883 yr
Test Type: Photolysis
Dissipation time: 248 d

**Propylene glycol:**

Distribution among environmental compartments : Koc: < 1
Method: Estimated.
Remarks: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Potential for mobility in soil is very high (Koc between 0 and 50).

**ethanol:**

Distribution among environmental compartments : Koc: 1.0
Method: Estimated.
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

**Balance:**

Distribution among environmental compartments : Remarks: No relevant data found.

**Other adverse effects**

**Components:**

**isoxaben (ISO):**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Propylene glycol:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**ethanol:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Balance:**

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : 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.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

**UNRTDG**

| | | |
|---|---|---|
| UN number | : | UN 3082 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isoxaben) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | UN 3082 |
| Proper shipping name | : | Environmentally hazardous substance, liquid, n.o.s. (Isoxaben) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | Miscellaneous |
| Packing instruction (cargo aircraft) | : | 964 |
| Packing instruction (passenger aircraft) | : | 964 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | UN 3082 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isoxaben) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |
| EmS Code | : | F-A, S-F |
| Marine pollutant | : | yes |
| Remarks | : | Stowage category A |

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

Not applicable for product as supplied.

**Domestic regulation**

**49 CFR**

Not regulated as a dangerous good

**Further information**

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 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.

**US State Regulations**

**Pennsylvania Right To Know**

| | |
|---|---|
| Propylene glycol | 57-55-6 |

**California Prop. 65**

WARNING: This product can expose you to chemicals including ethanol, sulphuric acid, which is/are known to the State of California to cause cancer, and
ethanol, toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

**The ingredients of this product are reported in the following inventories:**

TSCA : Product contains substance(s) not listed on TSCA inventory.

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**Federal Insecticide, Fungicide and Rodenticide Act**

EPA Registration Number : 62719-658

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

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

## SECTION 16. OTHER INFORMATION

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.

**Full text of other abbreviations**

| | | |
|---|---|---|
| ACGIH | : | USA. ACGIH Threshold Limit Values (TLV) |
| OSHA Z-1 | : | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| US WEEL | : | USA. Workplace Environmental Exposure Levels (WEEL) |
| ACGIH / STEL | : | Short-term exposure limit |
| OSHA Z-1 / TWA | : | 8-hour time weighted average |
| US WEEL / TWA | : | 8-hr TWA |

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 01/13/2022

Product code: EAF-496

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

# SAFETY DATA SHEET

# GALLERY™ SC

| Version | Revision Date: | SDS Number: | Date of last issue: - |
|---|---|---|---|
| 1.0 | 01/13/2022 | 800080005721 | Date of first issue: 01/13/2022 |

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

## SECTION 1. IDENTIFICATION

Product name : GALLERY™ SC

**Manufacturer or supplier's details**

**COMPANY IDENTIFICATION**

**Manufacturer/importer** : CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS, IN, 46268-1053
UNITED STATES

**Customer Information Number** : 800-992-5994

**E-mail address** : customerinformation@corteva.com

**Emergency telephone** : INFOTRAC (CONTRACT 84224).

800-992-5994 or 317-337-6009

**Recommended use of the chemical and restrictions on use**

Recommended use : End use herbicide product

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Not a hazardous substance or mixture.

**GHS label elements**

Not a hazardous substance or mixture.

**Other hazards**

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Components**

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|---|---|
| isoxaben (ISO) | 82558-50-7 | 45.45 |

| | | |
|---|---|---|
| Propylene glycol | 57-55-6 | >= 3 - < 10 |
| ethanol | 64-17-5 | >= 0.1 - < 0.3 |
| Balance | Not Assigned | > 40 |

Actual concentration is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

| | | |
|---|---|---|
| If inhaled | : | 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. |
| In case of 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. |
| In case of 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. |
| If swallowed | : | No emergency medical treatment necessary. |
| Most important symptoms and effects, both acute and delayed | : | None known. |
| Protection of first-aiders | : | If potential for exposure exists refer to Section 8 for specific personal protective equipment. |
| Notes to physician | : | No specific antidote.<br>Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.<br>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. |

## SECTION 5. FIRE-FIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Water spray<br>Alcohol-resistant foam |
| Unsuitable extinguishing media | : | None known. |
| Specific hazards during fire fighting | : | Exposure to combustion products may be a hazard to health.<br>Do not allow run-off from firefighting to enter drains or water courses. |
| Hazardous combustion products | : | During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.<br><br>Combustion products may include and are not limited to:<br>Nitrogen oxides (NOx)<br>Carbon oxides |
| Specific extinguishing methods | : | Remove undamaged containers from fire area if it is safe to do so. |

| | | |
|---|---|---|
| | | Evacuate area.<br>Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers. |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for fire-fighters | : | Wear self-contained breathing apparatus for firefighting if necessary.<br>Use personal protective equipment. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. |
| Environmental precautions | : | If the product contaminates rivers and lakes or drains inform respective authorities.<br>Discharge into the environment must be avoided.<br>Prevent further leakage or spillage if safe to do so.<br>Prevent spreading over a wide area (e.g., by containment or oil barriers).<br>Retain and dispose of contaminated wash water.<br>Local authorities should be advised if significant spillages cannot be contained.<br>Prevent from entering into soil, ditches, sewers, underwater.<br>See Section 12, Ecological Information. |
| Methods and materials for containment and cleaning up | : | Clean up remaining materials from spill with suitable absorbant.<br>Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.<br>For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped,<br>Recovered material should be stored in a vented container.<br>The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container.<br>Keep in suitable, closed containers for disposal.<br>Wipe up with absorbent material (e.g. cloth, fleece).<br>Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).<br>See Section 13, Disposal Considerations, for additional information. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on safe handling | : | Do not breathe vapors/dust.<br>Handle in accordance with good industrial hygiene and safety |

practice.
Smoking, eating and drinking should be prohibited in the application area.
Take care to prevent spills, waste and minimize release to the environment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage : Store in a closed container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in properly labeled containers.
Store in accordance with the particular national regulations.

Materials to avoid : Strong oxidizing agents

Packaging material : Unsuitable material: None known.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| Propylene glycol | 57-55-6 | TWA | 10 mg/m3 | US WEEL |
| ethanol | 64-17-5 | STEL | 1,000 ppm | ACGIH |
| | | TWA | 1,000 ppm<br>1,900 mg/m3 | OSHA Z-1 |

**Engineering measures** : Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

**Personal protective equipment**

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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

Hand protection

Remarks : 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.

Eye protection : Use safety glasses (with side shields).

Skin and body protection : Wear clean, body-covering clothing.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | Liquid. |
| Color | : | white |
| Odor | : | Odorless |
| Odor Threshold | : | No data available |
| pH | : | 7.7 |
| Melting point/range | : | Not applicable |
| Freezing point | | No data available |
| Boiling point/boiling range | : | > 212 °F / > 100 °C |
| Flash point | : | > 212 °F / > 100 °C<br>Method: closed cup |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Vapor pressure | : | No data available |
| Relative vapor density | : | No data available |
| Relative density | : | 1.09 (68 °F / 20 °C) |
| Density | : | 1.1148 g/cm3 (68 °F / 20 °C)<br>Method: Digital density meter |
| Solubility(ies) | | |
| Water solubility | : | No data available |
| Autoignition temperature | : | > 752 °F / > 400 °C |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |

| | | |
|---|---|---|
| Explosive properties | : | No |
| Oxidizing properties | : | No significant increase (>5C) in temperature. |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | Not classified as a reactivity hazard. |
| Chemical stability | : | No decomposition if stored and applied as directed.<br>Stable under normal conditions. |
| Possibility of hazardous reactions | : | Stable under recommended storage conditions.<br>No hazards to be specially mentioned.<br>None known. |
| Conditions to avoid | : | None known. |
| Incompatible materials | : | None. |
| Hazardous decomposition products | : | Decomposition products depend upon temperature, air supply and the presence of other materials.<br>Decomposition products can include and are not limited to:<br>Nitrogen oxides (NOx)<br>Carbon oxides |

## SECTION 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, male and female): > 5,000 mg/kg<br>Method: OECD Test Guideline 401<br>Symptoms: No deaths occurred at this concentration. |
| Acute inhalation toxicity | : | LC50 (Rat, male and female): > 5.71 mg/l<br>Test atmosphere: dust/mist<br>Symptoms: No deaths occurred at this concentration.<br>Assessment: The substance or mixture has no acute inhalation toxicity |
| Acute dermal toxicity | : | LD50 (Rat): > 5,000 mg/kg<br>Method: OECD Test Guideline 402<br>Symptoms: No deaths occurred at this concentration. |

**Components:**

**isoxaben (ISO):**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, male and female): > 5,000 mg/kg |
| Acute inhalation toxicity | : | Remarks: Prolonged excessive exposure to dust may cause adverse effects.<br>Based on the available data, narcotic effects were not observed.<br>Based on the available data, respiratory irritation was not ob- |

served.

LC50 (Rat, male and female): > 2.93 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Symptoms: No deaths occurred at this concentration.
Remarks: Maximum attainable concentration.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

**Propylene glycol:**

Acute oral toxicity : LD50 (Rat): > 20,000 mg/kg

Acute inhalation toxicity : LC50 (Rabbit): 317.042 mg/l
Exposure time: 2 h
Test atmosphere: dust/mist
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Mist may cause irritation of upper respiratory tract (nose and throat).

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

**ethanol:**

Acute oral toxicity : LD50 (Rat): > 7,000 mg/kg

LDLo (human): 1,400 mg/kg

Acute inhalation toxicity : LC50 (Rat): 124.7 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): > 15,800 mg/kg

**Skin corrosion/irritation**

**Product:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

**Components:**

**Propylene glycol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No skin irritation |

**ethanol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No skin irritation |

**Serious eye damage/eye irritation**

**Product:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No eye irritation |
| Method | : | OECD Test Guideline 405 |

**Components:**

**Propylene glycol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No eye irritation |

**ethanol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | Eye irritation |

**Respiratory or skin sensitization**

**Product:**

| | | |
|---|---|---|
| Remarks | : | Did not demonstrate the potential for contact allergy in mice. |

**Components:**

**isoxaben (ISO):**

| | | |
|---|---|---|
| Remarks | : | Did not cause allergic skin reactions when tested in guinea pigs. |
| Remarks | : | For respiratory sensitization:<br>No relevant data found. |

**Propylene glycol:**

| | | |
|---|---|---|
| Species | : | human |
| Assessment | : | Does not cause skin sensitization. |

**ethanol:**

| | | |
|---|---|---|
| Species | : | Guinea pig |
| Assessment | : | Does not cause skin sensitization. |

**Germ cell mutagenicity**

**Components:**

**isoxaben (ISO):**

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were predominantly negative.

**Propylene glycol:**

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

**ethanol:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

**Carcinogenicity**

**Components:**

**isoxaben (ISO):**

Carcinogenicity - Assessment : An increase in nonmalignant liver tumors was observed with isoxaben in one of two species tested.

**Propylene glycol:**

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

**ethanol:**

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects., Ethanol when not consumed in an alcoholic beverage is not classifiable as a human carcinogen., Epidemiology studies provide evidence that drinking of alcoholic beverages (containing ethanol) is associated with cancer, and IARC has classified alcoholic beverages as carcinogenic to humans.

**IARC** Group 1: Carcinogenic to humans
ethanol 64-17-5

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

**Components:**

**isoxaben (ISO):**

Reproductive toxicity - Assessment : In animal studies, has been shown to interfere with reproduction in females., Effects have been seen only at doses that produced significant toxicity to the parent animals.
Has caused birth defects in laboratory animals only at doses

toxic to the mother.

**Propylene glycol:**

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction., In animal studies, did not interfere with fertility.
Did not cause birth defects or any other fetal effects in laboratory animals.

**ethanol:**

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.
Has caused birth defects in lab animals at high doses.

**STOT-single exposure**

**Product:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Components:**

**isoxaben (ISO):**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Propylene glycol:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**ethanol:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**STOT-repeated exposure**

**Product:**

Assessment : Evaluation of available data suggests that this material is not an STOT-RE toxicant.

**Repeated dose toxicity**

**Components:**

**isoxaben (ISO):**

Remarks : In animals, effects have been reported on the following organs:
Liver.
Kidney.

**Propylene glycol:**

Remarks : In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

**Aspiration toxicity**

**Product:**

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

**Components:**

**isoxaben (ISO):**

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

**Propylene glycol:**

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

**ethanol:**

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

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**

Toxicity to fish :

Remarks: Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

LC50 (Oncorhynchus mykiss (rainbow trout)): > 200 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 544 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Lemna minor (duckweed)): 0.044 mg/l
End point: Biomass
Exposure time: 14 d
Test Type: static test

ErC50 (Chlorella vulgaris (Fresh water algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

| | | |
|---|---|---|
| Toxicity to soil dwelling organisms | : | LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg<br>Exposure time: 14 d<br>End point: mortality |
| Toxicity to terrestrial organisms | : | contact LD50 (Apis mellifera (bees)): > 100 micrograms/bee<br>Exposure time: 48 h<br><br>oral LD50 (Apis mellifera (bees)): > 100 micrograms/bee<br>Exposure time: 48 h |

**Ecotoxicology Assessment**

| | | |
|---|---|---|
| Acute aquatic toxicity | : | Very toxic to aquatic life. |

**Components:**

**isoxaben (ISO):**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).<br><br>LC50 (Oncorhynchus mykiss (rainbow trout)): 1.2 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Method: OECD Test Guideline 203 or Equivalent<br>Remarks: The LC50 value is above the water solubility.<br><br>LC50 (Cyprinodon variegatus (sheepshead minnow)): > 0.87 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Method: OECD Test Guideline 203 or Equivalent<br>Remarks: The LC50 value is above the water solubility. |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 1.3 mg/l<br>Exposure time: 48 h<br>Test Type: static test<br>Method: OECD Test Guideline 202 or Equivalent |
| Toxicity to algae/aquatic plants | : | EbC50 (Lemna minor (duckweed)): 0.011 mg/l<br>End point: Biomass<br>Exposure time: 7 d<br>Test Type: static test<br>Method: OECD Test Guideline 201 or Equivalent<br><br>ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.2 mg/l<br>End point: Growth rate inhibition<br>Exposure time: 72 h<br>Test Type: static test<br><br>ErC50 (Skeletonema costatum (marine diatom)): > 0.49 mg/l<br>Exposure time: 72 h<br>Test Type: static test |

| | | |
|---|---|---|
| M-Factor (Acute aquatic toxicity) | : | 10 |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Pimephales promelas (fathead minnow)): 0.4 mg/l<br>End point: growth<br>Exposure time: 33 d<br>Test Type: semi-static test<br><br>LOEC (Pimephales promelas (fathead minnow)): > 0.40 mg/l<br>End point: growth<br>Exposure time: 33 d<br>Test Type: semi-static test<br><br>MATC (Maximum Acceptable Toxicant Level) (Pimephales promelas (fathead minnow)): > 0.40 mg/l<br>End point: growth<br>Exposure time: 33 d<br>Test Type: semi-static test |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 0.69 mg/l<br>End point: growth<br>Exposure time: 21 d<br>Test Type: static test<br>Method: OECD Test Guideline 211 or Equivalent<br><br>LOEC (Daphnia magna (Water flea)): 1.01 mg/l<br>End point: growth<br>Exposure time: 21 d<br>Test Type: static test<br>Method: OECD Test Guideline 211 or Equivalent<br><br>MATC (Maximum Acceptable Toxicant Level) (Daphnia magna (Water flea)): 0.85 mg/l<br>End point: growth<br>Exposure time: 21 d<br>Test Type: static test<br>Method: OECD Test Guideline 211 or Equivalent<br><br>NOEC (saltwater mysid Mysidopsis bahia): 0.841 mg/l<br>Exposure time: 28 d<br>Test Type: flow-through test<br><br>LOEC (saltwater mysid Mysidopsis bahia): > 0.841 mg/l<br>Exposure time: 28 d<br>Test Type: flow-through test<br><br>NOEC (Midge (Chironomus riparius)): 32 mg/l<br>End point: mortality<br>Exposure time: 28 d<br>Test Type: static test<br>Method: OECD Test Guideline 211 or Equivalent<br><br>LOEC (Midge (Chironomus riparius)): 64 mg/l<br>End point: mortality<br>Exposure time: 28 d |

Test Type: static test
Method: OECD Test Guideline 211 or Equivalent

MATC (Maximum Acceptable Toxicant Level) (Midge (Chironomus riparius)): 48 mg/l
End point: mortality
Exposure time: 28 d
Test Type: static test
Method: OECD Test Guideline 211 or Equivalent

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
End point: Respiration rates.
Exposure time: 3 h
Test Type: Respiration inhibition

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 14 d

Toxicity to terrestrial organisms : Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg)., Material is moderately toxic to birds on a dietary basis (LC50 between 501 and 1000 ppm).

oral LD50 (Colinus virginianus (Bobwhite quail)): > 2000 mg/kg bodyweight.
Exposure time: 14 d

LC50 (Colinus virginianus (Bobwhite quail)): > 937 mg/kg diet.
Exposure time: 8 d

oral LD50 (Apis mellifera (bees)): > 100 micrograms/bee

contact LD50 (Apis mellifera (bees)): > 100 micrograms/bee
Exposure time: 48 h

**Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

**Propylene glycol:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 19,000 mg/l

End point: Growth rate inhibition
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l
End point: number of offspring
Exposure time: 7 d
Test Type: semi-static test

Toxicity to microorganisms : NOEC (Pseudomonas putida): > 20,000 mg/l
Exposure time: 18 h

**ethanol:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 11,200 - 13,000 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: Method Not Specified.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5,414 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : EbC50 (Skeletonema costatum (marine diatom)): 10,943 - 11,619 mg/l
End point: Biomass
Exposure time: 5 d
Method: OECD Test Guideline 201 or Equivalent

**Persistence and degradability**

**Components:**

**isoxaben (ISO):**

Biodegradability : Result: Not biodegradable.
Remarks: 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.

Chemical Oxygen Demand (COD) : 1.77 mg/g

ThOD : 1.98 kg/kg

Stability in water : Test Type: Hydrolysis
Degradation half life (half-life): > 5 d pH: 7.0

Photodegradation : Test Type: Half-life (direct photolysis)
Method: Measured

Test Type: Half-life (direct photolysis)

Test Type: Half-life (indirect photolysis)

Sensitizer: OH radicals
Concentration: 1,500,000 1/cm3
Rate constant: 2.045E-10 cm3/s
Method: Estimated.

**Propylene glycol:**

Biodegradability : aerobic
Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

Biodegradation: 96 %
Exposure time: 64 d
Method: OECD Test Guideline 306 or Equivalent
Remarks: 10-day Window: Not applicable

Biochemical Oxygen Demand (BOD) : 69.000 %
Incubation time: 5 d

70.000 %
Incubation time: 10 d

86.000 %
Incubation time: 20 d

Chemical Oxygen Demand (COD) : 1.53 kg/kg

ThOD : 1.68 kg/kg

Photodegradation : Rate constant: 1.28E-11 cm3/s
Method: Estimated.

**ethanol:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 70 %
Exposure time: 5 d
Method: OECD Test Guideline 301D or Equivalent
Remarks: 10-day Window: Pass

ThOD : 2.08 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Rate constant: 3.58E-12 cm3/s
Method: Estimated.

**Bioaccumulative potential**

**Components:**

**isoxaben (ISO):**

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

**Propylene glycol:**

Bioaccumulation : Bioconcentration factor (BCF): 0.09
Method: Estimated.

Partition coefficient: n-octanol/water : log Pow: -1.07
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**ethanol:**

Partition coefficient: n-octanol/water : log Pow: -0.31
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Balance:**

Partition coefficient: n-octanol/water : Remarks: No relevant data found.

**Mobility in soil**

**Components:**

**isoxaben (ISO):**

Distribution among environmental compartments : Koc: 700 - 1290
Remarks: Potential for mobility in soil is low (Koc between 500 and 2000).

Stability in soil : Test Type: aerobic degradation
Dissipation time: 0.358 - 0.883 yr
Test Type: Photolysis
Dissipation time: 248 d

**Propylene glycol:**

Distribution among environmental compartments : Koc: < 1
Method: Estimated.
Remarks: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Potential for mobility in soil is very high (Koc between 0 and 50).

**ethanol:**

Distribution among environmental compartments : Koc: 1.0
Method: Estimated.
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

**Balance:**

Distribution among environmental compartments : Remarks: No relevant data found.

**Other adverse effects**

**Components:**

**isoxaben (ISO):**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Propylene glycol:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**ethanol:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Balance:**

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : 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.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

**UNRTDG**

| | | |
|---|---|---|
| UN number | : | UN 3082 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Isoxaben) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | UN 3082 |
| Proper shipping name | : | Environmentally hazardous substance, liquid, n.o.s.<br>(Isoxaben) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | Miscellaneous |
| Packing instruction (cargo aircraft) | : | 964 |
| Packing instruction (passenger aircraft) | : | 964 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | UN 3082 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Isoxaben) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |
| EmS Code | : | F-A, S-F |
| Marine pollutant | : | yes |
| Remarks | : | Stowage category A |

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

Not applicable for product as supplied.

**Domestic regulation**

**49 CFR**

Not regulated as a dangerous good

**Further information**

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 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.

**US State Regulations**

**Pennsylvania Right To Know**

| | |
|---|---|
| Propylene glycol | 57-55-6 |

**California Prop. 65**

WARNING: This product can expose you to chemicals including ethanol, sulphuric acid, which is/are known to the State of California to cause cancer, and
ethanol, toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

**The ingredients of this product are reported in the following inventories:**

TSCA : Product contains substance(s) not listed on TSCA inventory.

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**Federal Insecticide, Fungicide and Rodenticide Act**

EPA Registration Number : 62719-658

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

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

## SECTION 16. OTHER INFORMATION

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.

**Full text of other abbreviations**

| | | |
|---|---|---|
| ACGIH | : | USA. ACGIH Threshold Limit Values (TLV) |
| OSHA Z-1 | : | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| US WEEL | : | USA. Workplace Environmental Exposure Levels (WEEL) |
| ACGIH / STEL | : | Short-term exposure limit |
| OSHA Z-1 / TWA | : | 8-hour time weighted average |
| US WEEL / TWA | : | 8-hr TWA |

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 01/13/2022

Product code: EAF-496

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN