



## NOTICE OF WEED CONTROL APPLICATION

**Date of Application:** February 10-14, 2025

**Location:** Maule/Hualapai Paseo and Park

**Reason for Application:** Target weed control in the planters, rock and DG areas, tree wells, and cracks of sidewalks and parking lots.

**Product Manufacturer Name:** Round Up Quick Pro Herbicide.

-EPA registration no. 524-535

-Active ingredients: glyphosate-ammonium, diquat dibromide

-Precautionary statement: Harmful if swallowed or inhaled. Causes moderate eye irritation.

**Product Manufacturer Name:** Bayer Specticle Flo

-EPA registration no. 432-1608

-Active ingredients: Indaziflam

-Precautionary statement: Harmful if inhaled. May cause damage to organs (nervous system) through prolonged or repeated exposure. Do not breathe spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

**\*Attached is the Label and SDS sheet**

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

## ATTENTION:

This specimen label is provided for general information only.

- This pesticide product may not yet be available or approved for sale or use in your area.
- It is your responsibility to follow all Federal, state and local laws and regulations regarding the use of pesticides.
- Before using any pesticide, be sure the intended use is approved in your state or locality.
- Your state or locality may require additional precautions and instructions for use of this product that are not included here.
- Monsanto does not guarantee the completeness or accuracy of this specimen label. The information found in this label may differ from the information found on the product label. You must have the EPA approved labeling with you at the time of use and must read and follow all label directions.
- You should not base any use of a similar product on the precautions, instructions for use or other information you find here.
- Always follow the precautions and instructions for use on the label of the pesticide you are using.

98005J6-17



Roundup QuikPRO herbicide is a fast-acting, non-selective professional herbicide for use in non-crop areas and industrial sites.

## Complete Directions for Use

AVOID CONTACT OF THIS HERBICIDE WITH FOLIAGE, STEMS, EXPOSED NON-WOODY ROOTS, OR DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

EPA Reg. No. 524-535

2011-1

Read the entire label before using this product.

Use only according to label instructions.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

## 1.0 INGREDIENTS

ACTIVE INGREDIENTS:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its ammonium salt	73.3%
Diquat dibromide [6,7-dihydrodipyrdo (1,2-a:2',1'-c) pyrazinedium dibromide]	2.9%
OTHER INGREDIENTS:	23.8%
	100.0%

\*Equivalent to 66.6% of the acid, glyphosate

1.0 pound contains 0.73 pound of the ammonium salt of glyphosate and 0.03 pound of the dibromide salt of diquat.

This product is protected by U.S. Patent No. 7,008,904. Other patents pending. No license granted under any patent to use this product other than in accordance with this label. No license granted under any non-U.S. patent(s).

## 2.0 IMPORTANT PHONE NUMBERS

FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE, 1-800-332-3111.

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT, (314)-694-4000.

## 3.0 PRECAUTIONARY STATEMENTS

### 3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

## CAUTION!

HARMFUL IF SWALLOWED.  
HARMFUL IF INHALED.  
CAUSES MODERATE EYE IRRITATION.

Avoid breathing dust or spray mist.  
Avoid contact with eyes or clothing.  
Remove contaminated clothing and wash clothing before reuse.  
Wash thoroughly with soap and water after handling.

### FIRST AID

<b>IF SWALLOWED</b>	<ul style="list-style-type: none"><li>• Call a physician or Poison Control Center for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a Poison Control Center or physician.</li><li>• Do not give anything by mouth to an unconscious person.</li><li>• <b>Quick treatment is essential to counteract poisoning and should be initiated before signs and symptoms of injury appear.</b></li></ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a Poison Control Center or physician for further treatment advice.</li></ul>
<b>IF IN EYES</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a Poison Control Center or physician for treatment advice.</li></ul>
<ul style="list-style-type: none"><li>• Have the product container or label with you when calling a poison control center or physician, or going for treatment.</li><li>• You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.</li><li>• This product is identified as Roundup QuikPRO™ herbicide, EPA Registration No. 524-535.</li></ul>	

**DOMESTIC ANIMALS:** Keep livestock and pets out of treated areas. Do not graze livestock on treated areas. This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, protective footwear plus socks, and protective eyewear. Discard clothing and other materials that have been heavily contaminated with this product's concentrate. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### User Safety Recommendations

Users should:

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

## 3.2 Environmental Hazards

This product is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

## 3.3 Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

### DIRECTIONS FOR USE

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

Entry Restrictions: Keep all unprotected persons out of operating areas or vicinity where there may be drift. Keep people and pets off treated areas until spray solution has dried.

## 4.0 STORAGE AND DISPOSAL

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

**PESTICIDE STORAGE:** Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

**PESTICIDE DISPOSAL:** To avoid wastes, use all material in this container, including rinsate, by application in accordance with label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable Federal, State and local procedures.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. When completely empty, offer for recycling if available, or dispose of bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## 5.0 PRODUCT INFORMATION

**Product Description:** This product is a postemergent, systemic herbicide with no residual soil activity. It is non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. This product is formulated as a water-soluble granule containing surfactant and no additional surfactant is needed. Apply through most standard sprayers after dissolution and thorough mixing with water according to label instructions.

**Time to Symptoms:** This product moves through the plant from the point of foliage contact and into the root system. Visible effects on most annual weeds occur within 1 day, and on most perennial weeds in 2 days. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a quick yellowing of the foliage which advances to complete browning of above-ground growth and deterioration of underground plant parts.

**Mode of Action:** One of the active ingredients in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids. A second active rapidly disrupts cell integrity of photosynthetically active tissues in the contacted foliage.

**Cultural Considerations:** Reduced control may result when application is made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the specified stage for treatment.

**Rainfastness:** Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate weed control.

**Spray Coverage:** Uniform and complete spray coverage will provide best results. Do not spray weed foliage to the point of runoff.

**No Soil Activity:** Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Plants growing from unattached underground rhizomes or root stocks of perennials that have not yet emerged at the time of application will not be affected by the herbicide and will continue to grow.

**Annual Maximum Use Rate:** The maximum allowed application rates apply to this product combined with the use of any and all other herbicides containing the active ingredient glyphosate, whether applied separately or as tank mixtures. If more than one glyphosate-containing product is applied to the same site within the same year, you must ensure that the total use of glyphosate (pounds acid equivalent) does not exceed the maximum allowed. For non-crop uses, the combined total of all treatments must not exceed 12.25 pounds of this product (8 pounds of glyphosate acid) per acre per year.

### ATTENTION

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, EXPOSED NON-WOODY ROOTS, OR DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to desirable plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

**NOTE:** Use of this product in any manner not consistent with this label may result in injury to persons, animals or desirable plants, or other unintended consequences. Keep container closed to prevent spills and contamination.

## 6.0 MIXING

Mix only the amount of solution to be used during a 1-day period. Reduced visual activity but not efficacy will result from the use of leftover solution.

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

**NOTE:** REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL SEDIMENT IS USED AS A CARRIER. DO NOT MIX THIS PRODUCT WITH WATER FROM PONDS AND DITCHES THAT IS VISIBLY MUDDY OR MURKY.

Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate-by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

### 6.1 Tank-Mixing

This product does not provide residual weed control. This product may be tank-mixed with other herbicides to provide residual weed control, a broader weed control spectrum or an alternate mode of action. Read and follow all individual product labels, supplemental labeling and Fact Sheets for all products in the tank mixture and observe all precautions and limitations on the label, including application timing restrictions, soil restrictions and use according to the most restrictive precautionary statements for each product in the tank mixture. Always predetermine the compatibility of all tank-mix products together in the carrier by mixing small proportional quantities in advance.

Buyer and all users are responsible for any and all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified on this label. Mixing this product with herbicides or other materials not specified on this label may result in reduced performance.

### 6.2 Procedure for Preparing Spray Solution

Use the following procedure to mix this product in water alone or when preparing tank mixtures with other labeled products.

1. Place a 20- to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. Add Roundup QuikPRO herbicide using a circular motion while pouring.
4. If second product is a wettable powder, first make a slurry with the water carrier, then add the slurry SLOWLY through the screen into the tank. Continue agitation.
5. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
6. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
7. Continue filling the spray tank with water and add water soluble liquids near the end of the filling process.

When tank mixing this product with other products, maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Use a screen size in nozzle or line strainers no finer than 50-mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

## 6.3 Mixing for Hand-Held Sprayers

Prepare the desired volume of spray solution by adding the amount of this product as shown in the following table to a clean, empty sprayer. Add the appropriate amount of water and stir or agitate to ensure dissolution of this product. For best results when using backpack sprayers, mix the labeled amount of this product with the specified volume of water in a larger container. Fill sprayer with the mixed solution.

### Spray Solution

Desired Volume	Amount of Roundup QuikPRO herbicide			
	Annuals	Perennials	Brush	Low-Volume Directed
1 Gal	1.2 oz	1.5 oz	1.5 oz	4.0 oz to 8.0 oz
3 Gal	3.6 oz	4.5 oz	4.5 oz	12.0 oz to 1.5 lb
10 Gal	12.0 oz	15.0 oz	15.0 oz	2.5 lb to 5.0 lb

## 6.4 Colorants or Dyes

Colorants or marking dyes may be added to this product; however, they can reduce product performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's directions. Certain blue dyes are not stable in the spray solution in the presence of this product. A jar test to determine if the desired blue dye is stable is recommended. If stability is a problem consider switching to an alternate color dye.

## 6.5 Drift Control Additives

Drift control additives may be used with all equipment types. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

## 7.0 APPLICATION EQUIPMENT AND TECHNIQUES

### SPRAY DRIFT MANAGEMENT

**AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS.**

Avoiding spray drift at the application site is the responsibility of the applicator and grower. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

**Do not apply this product by air.**

Do not apply this product through any type of irrigation system.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to desirable plants or other areas on which treatment was not intended.

**APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.**

## 7.1 Ground Broadcast Equipment

Use the labeled rates of this product in 10 to 80 gallons of water per acre as a broadcast spray unless otherwise specified on this label or in separate supplemental labeling or Fact Sheets published for this product. As the density of weeds increases, increase the spray volume within the labeled range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat-fan nozzles. Check for even distribution of spray droplets.

## 7.2 Backpack or Hand-Held Equipment

Apply to foliage of vegetation to be controlled on a spray-to-wet basis; do not spray to the point of runoff. For best results, ensure that spray coverage is uniform and complete. Use coarse sprays only.

For control of weeds listed in the Annual Weeds section of the WEEDS CONTROLLED section, apply 1.2 ounces of this product per 1 gallon of spray solution. See table in Mixing for Hand-Held Sprayers section for larger mixing volumes.

For best results, use 1.5 ounces of this product per 1 gallon of spray solution on harder-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle. See table in Mixing for Hand-Held Sprayers section for larger mixing volumes.

For low-volume directed spray applications, use 4.0 to 8.0 ounces of this product per 1 gallon of spray solution for control or partial control of brush weeds. See table in Mixing for Hand-Held Sprayers section for larger mixing volumes. Ensure spray coverage is uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the plant is important for best results. To ensure adequate spray coverage, spray both sides of brush and tree seedlings when foliage is thick and dense, or where there are multiple sprouts.

## 7.3 CDA Equipment

The rate of this product applied per acre by controlled droplet application (CDA) equipment must not be less than the amount stated in this label when applied by conventional broadcast equipment. For vehicle mounted CDA equipment, apply 3 to 15 gallons of water per acre.

For hand-held CDA units, apply a solution of 1.5 to 2.0 pounds of this product in one gallon of water at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mile per hour.

CDA equipment produces a spray pattern which is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction is likely to result.

## 8.0 SITE AND USE INSTRUCTIONS

Unless otherwise specified, applications may be made to control any weeds listed in the annual, perennial and brush weeds and tree seedlings tables.

## 8.1 Non-crop Areas and Industrial Sites

Use in non-crop areas only: airports, apartment complexes, commercial sites, Conservation Reserve Program (CRP), ditch banks, driveways, dry ditches, dry canals, fencerows, golf courses, industrial sites, landscape areas, lumberyards, manufacturing sites, municipal sites, natural areas, office complexes, ornamental landscapes, parks, parking areas, recreational areas, residential areas, rights-of-way, roadsides, schools, sports complexes, storage areas, warehouse areas, and wildlife management areas.

This product is not for use on crops, timber, other plants being grown for sale, other commercial use, or for commercial seed production. This product is not for research purposes.

**Weed Control, Trim-and-Edge and Bare Ground**

Use this product in non-crop areas. Apply with any application equipment described in this label. This product may be used to trim-and-edge around objects in non-crop sites, for spot treatment of unwanted vegetation, and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects. This product is not for use on plants grown for sale or other commercial use, or for commercial seed production.

Repeated applications of this product may be used as weeds emerge to maintain bare ground.

When a tank mixture with a generic active ingredient, such as 2,4-D or pendimethalin is described in this label, the user is responsible for ensuring that the specific application being made is included on the label of the specific product being used in the tank mixture.

This product may be tank-mixed with the following products. Refer to these products' labels for approved non-crop sites and application rates.

BANVEL	PENDULUM 3.3 EC
BARRICADE 65WG	PENDULUM WDG
CERTAINTY®	RONSTAR 50 WP
DIMENSION 4 EC	SURFLAN
ENDURANCE	2,4-D
PENDIMETHALIN	

When applied as a tank mixture for bare ground, Roundup QuikPRO herbicide provides control of the emerged annual weeds and control or partial control of emerged perennial weeds.

### Dormant Turfgrass

Use this product to control or suppress many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass turf. Treat only when turf is dormant and prior to spring greenup. This product is not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

Apply 5 to 16 ounces of this product per acre. Apply the labeled rates in 10 to 80 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

Treatments in excess of 9 ounces per acre may result in injury or delayed greenup in highly maintained areas, golf courses and lawns.

### Turfgrass Renovation (Except for Commercial Sod Farms)

This product controls most existing vegetation prior to renovating turfgrass areas. This product is not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. Do not use this product for renovation of bermudagrass or kikuyugrass sods. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques such as vertical mowing, coring or slicing for 7 days after application to allow translocation into underground plant parts.

Desirable turfgrasses may be planted following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass.

Do not feed or graze treated turfgrass or feed treated thatch to livestock.

## 8.2 Parks, Recreational and Residential Areas

This product may be used in parks, recreational and residential areas. Apply this product with any application equipment described in this label. Use this product to trim-and-edge around trees, fences, paths, around buildings, sidewalks, and other objects in these areas. This product may be used for spot treatment of unwanted vegetation or to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

All of the instructions in the Non-Crop Areas and Industrial Sites section apply to park and recreational areas. This product is not for use around plants being grown for sale or other commercial use.

## 9.0 WEEDS CONTROLLED

Always use the higher rate of this product per acre within the range when weed growth is heavy or dense or weeds are growing in an undisturbed (non-cultivated) area.

Reduced results may occur when treating weeds heavily covered with dust. For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

Refer to the following label sections for rates to control annual and perennial weeds. For difficult to control perennial weeds and where plants are growing under stressed conditions, or where infestations are dense, this product may be used at up to 12.25 pounds per acre for enhanced results.

### 9.1 Annual Weeds

Use 2.25 to 4.5 pounds per acre of this product as a broadcast spray to control annual weeds. When using rates less than 4.5 pounds per acre, the level of fast-burn symptomology may be reduced.

For spray-to-wet applications, apply 1.2 ounces of this product per 1 gallon of spray solution.

#### WEED SPECIES

Anoda, spurred	Field pennycress*
Barley*	Filaree
Barnyardgrass*	Fleabane, annual*
Bassia, fivehook	Fleabane, hairy
Bittercress*	( <i>Conyza bonariensis</i> )*
Black nightshade*	Fleabane, rough*
Bluegrass, annual*	Florida pusley
Bluegrass, bulbous*	Foxtail*
Brome, downy*	Goatgrass, jointed*
Brome, Japanese*	Goosegrass
Browntop panicum*	Grain sorghum (milo)*
Buttercup*	Groundsel, common*
Carolina foxtail*	Hemp sesbania
Carolina geranium	Henbit
Castor bean	Horseweed/Marestail
Cheatgrass*	( <i>Conyza canadensis</i> )
Cheeseweed	Itchgrass*
( <i>Malva parviflora</i> )	Johnsongrass, seedling
Chervil*	Junglerice
Chickweed*	Knotweed
Cocklebur*	Kochia
Copperleaf, hophornbeam	Lambsquarters*
Corn*	Little barley*
Corn speedwell*	London rocket*
Crabgrass*	Mayweed
Dwarf dandelion*	Medusahead*
Eastern manna grass*	Morningglory ( <i>Ipomoea spp.</i> )
Eclipta*	Mustard, blue*
Fall panicum*	Mustard, tansy*
Falsedandelion*	Mustard, tumble*
Falseflax, smallseed*	Mustard, wild*
Fiddleneck	Oats

Pigweed*	Speedwell, purslane*
Plains/tickseed coreopsis*	Sprangletop*
Prickly lettuce*	Spurge, annual
Purslane, common	Spurge, prostrate*
Ragweed, common*	Spurge, spotted*
Ragweed, giant	Spurry, umbrella*
Red rice	Starthistle, yellow
Russian thistle	Stinkgrass*
Rye*	Sunflower*
Ryegrass*	Teaweed/Prickly sida
Sandbur, field*	Texas panicum*
Shattercane*	Velvetleaf
Shepherd's-purse*	Virginia copperleaf
Sicklepod	Virginia pepperweed*
Signalgrass, broadleaf*	Wheat*
Smartweed, ladythumb*	Wild oats*
Smartweed, Pennsylvania*	Witchgrass*
Sowthistle, annual	Woolly cupgrass*
Spanishneedles	Yellow rocket

\*When using field broadcast equipment (boom sprayers using flat-fan nozzles) these species will be controlled or partially controlled. Applications must be made using 10 to 80 gallons of carrier volume per acre. Use nozzles that ensure thorough coverage of foliage and treat when weeds are in an early growth stage.

### 9.2 Perennial Weeds

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). For non-flowering plants, best results are obtained when the plants reach a mature stage of growth. In many situations, treatments are required prior to these growth stages. Under these conditions, use the higher application rate within the range.

Use 4.5 to 9.0 pounds per acre of this product as a broadcast spray to control perennial weeds. When using rates less than 9.0 pounds per acre, the level of fast-burn symptomology may be reduced.

For spray-to-wet applications, apply 1.5 ounces of this product per 1 gallon of spray solution. Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment.

When using hand-held equipment for low-volume directed spot treatments, apply 4.0 to 8.0 ounces of this product per 1 gallon of spray solution.

Allow 7 or more days after application before tillage.

#### WEED SPECIES

Alfalfa*	Johnsongrass
Alligatorweed*	Kikuyugrass*
Anise (fennel)	Knapweed
Bahiagrass	Lantana
Beachgrass, European	Lespedeza
( <i>Ammophila arenaria</i> )	Milkweed, common
Bentgrass*	Muhly, wirestem
Bermudagrass*	Mullein, common
Bermudagrass, water	Napiergrass
(knotgrass)	Nightshade, silverleaf
Bindweed, field	Nutsedge, purple, yellow
Bluegrass, Kentucky	Orchardgrass
Blueweed, Texas	Pampasgrass
Bromegrass, smooth	Paragrass
Bursage, woolly-leaf	Pepperweed, perennial
Canarygrass, reed	Phragmites*
Cattail	Poison hemlock
Clover, red, white*	Quackgrass
Cogongrass	Redvine*
Dallisgrass	Reed, giant
Dandelion	Ryegrass, perennial
Dock, curly	Spurge, leafy*
Dogbane, hemp	Thistle, artichoke
Fescue	Thistle, Canada
Fescue, tall	Timothy
German ivy	Torpedograss*
Guineagrass	Trumpet creeper*
Horseneettle	Vaseygrass
Horseradish	Velvetgrass
Iceland	Wheatgrass, western
Jerusalem artichoke	

\*Partial Control

### 9.3 Brush Weeds and Tree Seedlings

Best results are obtained when brushweeds are treated when they are in the seedling stage of growth. In many situations, retreatment is required on larger plants. Under these conditions, use the higher application rate within the range.

Use 9.0 pounds per acre of this product as a broadcast spray to control brush weeds.

For spray-to-wet applications, apply 1.5 ounces of this product per 1 gallon of spray solution. Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment.

When using hand-held equipment for low-volume directed spot treatments, apply 4.0 to 8.0 ounces of this product per 1 gallon of spray solution.

Allow 7 or more days after application before tillage.

**WEED SPECIES**

Alder	Oak, southern red
Ash*	Oak, white*
Beech*	Peppertree,
Birch	Brazilian
Blackberry	(Florida holly)*
Blackgum	Pine
Cherry; bitter,	Poison ivy*
black, pin	Poison oak*
Dogwood*	Poplar, yellow*
Elderberry	Redbud, eastern
Elm*	Rose, multiflora
Honeysuckle	Saltcedar*
Locust, black*	Sumac; laurel, poison,
Maple, red	smooth, sugarbush,
Maple, sugar	winged*
Oak, black*	Sweetgum
Oak, northern pin	Vine maple*
Oak, post	Virginia creeper
Oak, red	Waxmyrtle, southern*
Oak, scrub*	

\*Partial Control

EPA Reg. No. 524-535

In case of an emergency involving this product,  
Call Collect, day or night, (314) 694-4000.

Packed for:  
MONSANTO COMPANY  
800 N. LINDBERGH BLVD.  
ST. LOUIS, MISSOURI, 63167 U.S.A.  
© 2011  
120810



## 10.0 LIMIT OF WARRANTY AND LIABILITY

Monsanto Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

To the extent consistent with applicable law, buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company to the extent consistent with applicable law, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Certainty, Roundup QuikPRO, and Monsanto and Vine Design are trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

Product of Brazil, formulated in the U.S. with U.S. Ingredients.

# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

1/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

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

#### Product identifier

Trade name	ROUNDUP QUIKPRO™ HERBICIDE
Product code (UVP)	86809095
SDS Number	102000037606
EPA Registration No.	524-535

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

Use	Herbicide
Restrictions on use	See product label for restrictions.

#### Information on supplier

Supplier	Bayer Environmental Science A division of Bayer CropScience LP 5000 Centregreen Way, Suite 400 Cary, NC 27513 USA
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Responsible Department	Email: SDSINFO.BCS-NA@bayer.com
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#### Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
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Product Information Telephone Number	1-800-331-2867
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### SECTION 2: HAZARDS IDENTIFICATION

#### Classification in accordance with regulation HCS 29CFR §1910.1200

Specific target organ toxicity - repeated exposure: Category 2

#### Labelling in accordance with regulation HCS 29CFR §1910.1200



**Signal word:** Warning

#### Hazard statements

May cause damage to organs (Eyes, Kidney) through prolonged or repeated exposure.

# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

2/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

### Precautionary statements

Do not breathe dust.  
Get medical advice/ attention if you feel unwell.  
Dispose of contents/container in accordance with local regulation.

### Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.  
No health hazards not otherwise classified.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Ammonium salt of glyphosate	114370-14-8	73.3
Diquat dibromide	85-00-7	2.9
Polyether modified trisiloxane	134180-76-0	14.1

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Inhalation</b>	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.
<b>Eye contact</b>	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

### Most important symptoms and effects, both acute and delayed

**Symptoms** To date no symptoms are known.

### Indication of any immediate medical attention and special treatment needed

**Risks** This product is not a cholinesterase inhibitor.

**Treatment** Treatment with atropine and oximes is not indicated. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.



# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

3/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

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### SECTION 5: FIREFIGHTING MEASURES

#### Extinguishing media

**Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable** High volume water jet

**Special hazards arising from the substance or mixture** In the event of fire the following may be released: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Oxides of phosphorus

#### Advice for firefighters

**Special protective equipment for firefighters** In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use.

**Further information** Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

**Flash point** Not applicable

**Auto-ignition temperature** No data available

**Lower explosion limit** Not applicable

**Upper explosion limit** Not applicable

**Explosivity** Not explosive

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

**Precautions** Use personal protective equipment. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.

#### Methods and materials for containment and cleaning up

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

4/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

**Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

### SECTION 7: HANDLING AND STORAGE

#### Precautions for safe handling

**Advice on safe handling** Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.  
Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt).

#### Conditions for safe storage, including any incompatibilities

**Requirements for storage areas and containers** Store in original container. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in a place accessible by authorized persons only. Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode. Protect from freezing. Partial crystallization may occur on prolonged storage below the minimum storage temperature. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Diquat dibromide (Inhalable fraction.)	85-00-7	0.5 mg/m <sup>3</sup> (TWA)	03 2014	ACGIH
Diquat dibromide (Respirable fraction.)	85-00-7	0.1 mg/m <sup>3</sup> (TWA)	03 2014	ACGIH
Diquat dibromide	85-00-7	0.5 mg/m <sup>3</sup> (REL)	2010	NIOSH
Diquat dibromide	85-00-7	0.5 mg/m <sup>3</sup> (TWA)	06 2008	TN OEL
Diquat dibromide	85-00-7	0.5 mg/m <sup>3</sup> (TWA PEL)	08 2010	US CA OEL

# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

5/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

(Total dust.)				
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### Exposure controls

#### Personal protective equipment

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

#### Respiratory protection

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

#### Hand protection

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.  
Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)  
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

#### Eye protection

Use tightly sealed goggles and face protection.

#### Skin and body protection

Wear long-sleeved shirt and long pants and shoes plus socks.

#### General protective measures

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

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Form	small rod
Colour	light yellow to brown
Odour	slight
Odour Threshold	No data available
pH	3.7 (10 g/l)
Melting point/range	No data available
Boiling Point	No data available
Flash point	Not applicable
Flammability	No data available

# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

6/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

<b>Auto-ignition temperature</b>	No data available
<b>Minimum ignition energy</b>	Not applicable
<b>Self-accelarating decomposition temperature (SADT)</b>	No data available
<b>Upper explosion limit</b>	Not applicable
<b>Lower explosion limit</b>	Not applicable
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	No data available
<b>Bulk density</b>	0.68 g/ml (bulk density tapped)
<b>Water solubility</b>	soluble
<b>Partition coefficient: n-octanol/water</b>	Glyphosate: log Pow: -2.9 Diquat dibromide: log Pow: -4.6
<b>Viscosity, dynamic</b>	No data available
<b>Viscosity, kinematic</b>	No data available
<b>Oxidizing properties</b>	No oxidizing properties
<b>Explosivity</b>	Not explosive
<b>Other information</b>	Further safety related physical-chemical data are not known.

### SECTION 10: STABILITY AND REACTIVITY

#### Reactivity

<b>Thermal decomposition</b>	Stable under normal conditions.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

7/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<b>Incompatible materials</b>	Galvanised steel, Unlined mild steel
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

### SECTION 11: TOXICOLOGICAL INFORMATION

<b>Exposure routes</b>	Skin contact, Eye contact, Inhalation
<b>Immediate Effects</b>	
<b>Eye</b>	May cause mild irritation to eyes.
<b>Skin</b>	Not expected to produce significant adverse effects when recommended use instructions are followed.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Harmful if inhaled.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	LD50 (Rat) 4,443 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (Rat) > 0.99 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Highest attainable concentration.
<b>Acute dermal toxicity</b>	LD50 (Rat) > 5,000 mg/kg
<b>Skin corrosion/irritation</b>	Slight irritant effect - does not require labelling. (Rabbit)
<b>Serious eye damage/eye irritation</b>	Moderate eye irritation. (Rabbit)
<b>Respiratory or skin sensitisation</b>	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

#### Assessment STOT Specific target organ toxicity – single exposure

Glyphosate: Based on available data, the classification criteria are not met.  
Diquat dibromide: May cause respiratory irritation.

#### Assessment STOT Specific target organ toxicity – repeated exposure

Glyphosate did not cause specific target organ toxicity in experimental animal studies.  
Diquat dibromide caused specific target organ toxicity in experimental animal studies in the following organ(s): Eyes, Kidney. Diquat dibromide caused Cataract in animal studies.

#### Assessment mutagenicity

Glyphosate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Diquat dibromide was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

#### Assessment carcinogenicity

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

# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

8/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

Important comment to IARC Listing:., Our expert opinion is that classification as a carcinogen is not warranted.

Diquat dibromide was not carcinogenic in lifetime feeding studies in rats and mice.

### ACGIH

Diquat dibromide 85-00-7 Group A4

### NTP

None.

### IARC

Ammonium salt of glyphosate 114370-14-8 Overall evaluation: 2A

### OSHA

None.

### Assessment toxicity to reproduction

Glyphosate did not cause reproductive toxicity in a two-generation study in rats.

Diquat dibromide did not cause reproductive toxicity in a two-generation study in rats.

### Assessment developmental toxicity

Glyphosate did not cause developmental toxicity in rats and rabbits.

Diquat dibromide caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Diquat dibromide are related to maternal toxicity.

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)) 5.4 mg/l  
static test; Exposure time: 96 h  
Test conducted with a similar formulation.

LC50 (Lepomis macrochirus (Bluegill sunfish)) 12.1 - 21.5 mg/l  
static test; Exposure time: 72 h  
The value mentioned relates to the active ingredient diquat dibromide.

LC50 (Oncorhynchus mykiss (rainbow trout)) 14.8 mg/l  
static test; Exposure time: 96 h  
The value mentioned relates to the active ingredient diquat dibromide.

### Chronic toxicity to fish

Oncorhynchus mykiss (rainbow trout)  
flow-through test  
NOEC:  $\geq$  9.63 mg/l  
The value mentioned relates to the active ingredient glyphosate.

### Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 11 mg/l static test; Exposure time: 48 h  
Test conducted with a similar formulation.

EC50 (Daphnia magna (Water flea)) 0.77 - 1.19 mg/l static test;  
Exposure time: 48 h

# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

9/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

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	The value mentioned relates to the active ingredient diquat dibromide.
<b>Chronic toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)): 12.5 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient glyphosate.
<b>Toxicity to aquatic plants</b>	EbC50 (Raphidocelis subcapitata (freshwater green alga)) 72.9 mg/l static test; Exposure time: 72 h The value mentioned relates to the active ingredient glyphosate. NOEC (Raphidocelis subcapitata (freshwater green alga)) 26.4 mg/l static test; Exposure time: 72 h The value mentioned relates to the active ingredient glyphosate. EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.0094 mg/l static test; Exposure time: 96 h The value mentioned relates to the active ingredient diquat dibromide.
<b>Biodegradability</b>	Glyphosate: Not rapidly biodegradable Diquat dibromide: Not rapidly biodegradable
<b>Koc</b>	Diquat dibromide: Koc: 2184750
<b>Bioaccumulation</b>	Glyphosate: Bioconcentration factor (BCF) < 1 Does not bioaccumulate. Diquat dibromide: Bioconcentration factor (BCF) 1 Does not bioaccumulate.
<b>Mobility in soil</b>	Glyphosate: Slightly mobile in soils Diquat dibromide: Immobile in soil
<b>Results of PBT and vPvB assessment</b>	
<b>PBT and vPvB assessment</b>	Glyphosate: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Diquat dibromide: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
<b>Additional ecological information</b>	No further ecological information is available.
<b>Environmental precautions</b>	Apply this product as specified on the label. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Retain and dispose of contaminated wash water.

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# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

10/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

### SECTION 13: DISPOSAL CONSIDERATIONS

#### Waste treatment methods

<b>Product</b>	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Do not contaminate water, food, or feed by disposal. Follow all local/regional/national/international regulations.
<b>Contaminated packaging</b>	Follow advice on product label and/or leaflet. Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.
<b>RCRA Information</b>	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

### SECTION 14: TRANSPORT INFORMATION

#### 49CFR

UN number	3077
Class	9
Packaging group	III
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (DIQUAT DIBROMIDE)
RQ	Reportable Quantity is reached with 34,482 lb of product.

#### IMDG

UN number	3077
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIQUAT DIBROMIDE)

#### IATA

UN number	3077
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.



# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

11/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

(DIQUAT DIBROMIDE )

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

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

### SECTION 15: REGULATORY INFORMATION

**EPA Registration No.** 524-535

#### US Federal Regulations

##### TSCA list

Polyether modified trisiloxane 134180-76-0

#### US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No export notification needs to be made.

#### SARA Title III - Section 302 - Notification and Information

Not applicable.

#### SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

#### US States Regulatory Reporting

##### CA Prop65

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

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

#### US State Right-To-Know Ingredients

Diquat dibromide	85-00-7	CA, CT, IL, NJ, RI
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#### Environmental

##### CERCLA

Yes

Diquat dibromide	85-00-7
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Listed

#### Clean Water Section 307(a)(1)

None.

#### Safe Drinking Water Act Maximum Contaminant Levels

Yes

Diquat dibromide	85-00-7
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#### EPA/FIFRA Information:

# SAFETY DATA SHEET



## ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA  
102000037606

12/12  
Revision Date: 10/01/2020  
Print Date: 10/02/2020

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 required on the pesticide label:

**Signal word:** Caution!

**Hazard statements:** Harmful if swallowed.  
Harmful if inhaled.  
Causes moderate eye irritation.

### SECTION 16: OTHER INFORMATION

#### Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

#### NFPA 704 (National Fire Protection Association):

Health - 2      Flammability - 1      Instability - 2      Others -

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

Health - 2      Flammability - 1      Physical Hazard - 2      PPE -

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

**Reason for Revision:** New Safety Data Sheet.

**Revision Date:** 10/01/2020

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

INDAZIFLAM GROUP 29 HERBICIDE



**Spect*(i)*cle**<sup>®</sup>  
**FLO**

## HERBICIDE

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

**DO NOT USE FOR THE MANUFACTURING OF FERTILIZER**

**ACTIVE INGREDIENT:** Indaziflam..... 7.4%

**OTHER INGREDIENTS:** ..... 92.6%

**TOTAL:** ..... 100.0%

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

Shake well before use.

EPA Reg. No. 432-1608

**Net Contents**  
**1 Gallon**

**86775387**

86699648C 200831AV1

**KEEP OUT OF REACH  
OF CHILDREN**

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

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

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

## FIRST AID

<b>If swallowed:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"><li>• Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>Have the product container or label with you when calling a poison control center or doctor or going for treatment.</b>	

## PRECAUTIONARY STATEMENTS

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water.

Keep and wash PPE separately from other laundry.

### ENGINEERING CONTROLS STATEMENTS:

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

### User Safety Recommendations

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

### ENVIRONMENTAL HAZARDS

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

This product may enter water through spray drift. Follow precautions for use to avoid spray drift.

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

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

## **DIRECTIONS FOR USE**

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

**Read entire label before using this product.**

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

### **AGRICULTURAL USE REQUIREMENTS**

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls, waterproof gloves and shoes plus socks.

### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of the treated areas until sprays have dried.

### **PRODUCT INFORMATION**

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

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

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

SPECTICLE FLO HERBICIDE needs to be activated by rainfall or irrigation prior to weed germination for most effective preemergence control. SPECTICLE FLO HERBICIDE is a highly active herbicide that provides effective weed control when applied to the soil around many labeled

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

## **PRODUCT USE RESTRICTIONS**

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

## **DEACTIVATING SPECTICLE FLO HERBICIDE**

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

## **SPRAY DRIFT MANAGEMENT**

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

### **Wind**

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

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

### **Temperature Inversion**

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

### **Sensitive Areas**

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

### **Spray Drift Management**

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

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

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

### **APPLICATION INFORMATION**

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

#### **Application Volume**

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

### **SOIL MOISTURE, IRRIGATION, AND RAINFALL AFTER APPLICATION**

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

### **TANK-MIX COMBINATIONS WITH SPECTICLE FLO HERBICIDE**

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

### **MIXING AND COMPATIBILITY**

#### **Mixing Instructions**

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

#### **Compatibility Testing With Other Pesticides**

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

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

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

## SPRAYER CLEANUP PROCEDURE

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

## RESISTANCE MANAGEMENT

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

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

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

## DIRECTIONS FOR USE OF SPECTICLE FLO HERBICIDE ON TURF

### Use Restrictions for SPECTICLE FLO HERBICIDE on Turf

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

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

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



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

If SPECTICLE FLO HERBICIDE is to be applied on these soils, evaluate turf tolerance in treated soils prior to a large scale application.

#### **Use of SPECTICLE FLO HERBICIDE on Weakened or Stressed Turf**

SPECTICLE FLO HERBICIDE controls weeds by inhibiting root development. Newly developing roots of desirable turf may be affected. Turf under stresses such as winterkill, spring dead spot, transitioning ryegrass, bermudagrass spring root decline, soil compaction, foliar and root diseases, nematodes, salt accumulation, shade, excessive foot or equipment traffic, newly verticut turf, and drought should be carefully evaluated before treatment. Application of SPECTICLE FLO HERBICIDE to turf in these situations may delay turf recovery.

Application of SPECTICLE FLO HERBICIDE to stressed turf may produce symptoms of injury including yellowing, purple discoloration, thinning, and necrosis. If injury occurs, promote recovery through optimizing fertility and other cultural practices.

#### **Turf Tolerance**

Turf tolerance to SPECTICLE FLO HERBICIDE is acceptable on all labelled turf types and cultivars. Due to the large number of types and cultivars, it is impossible to test every one for tolerance to SPECTICLE FLO HERBICIDE. Neither the Manufacturer nor the Seller has determined whether or not SPECTICLE FLO HERBICIDE can be used safely on turf types and cultivars not specified on this label.

Before using on turf cultivars that are not listed on this label, the applicator must confirm tolerance by testing labelled rates on a small area prior to widespread use.

#### **Tolerant turfgrasses**

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

\* Application of SPECTICLE FLO HERBICIDE may temporarily inhibit the rooting of turfgrass stolons.

\*\* Common or off-type Bermudagrass may show increased sensitivity to SPECTICLE FLO HERBICIDE compared to hybrids.

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

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

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

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

### Precautions for Use of SPECTICLE FLO HERBICIDE Near Sensitive Grasses

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

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

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

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

### SINGLE APPLICATION PROGRAM

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

### Use Rates for Single Application of SPECTICLE FLO HERBICIDE

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

### SPLIT APPLICATION PROGRAMS

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

## Use Rates for Split Applications of SPECTICLE FLO HERBICIDE

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

For extended residual control, use split applications.

## Use Rates for Three Split Applications of SPECTICLE FLO HERBICIDE

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

### GOOSEGRASS CONTROL

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

### ANNUAL BLUEGRASS CONTROL

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

### BROADLEAF WEED CONTROL

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

## ANNUAL SEDGES AND ANNUAL KYLLINGA CONTROL

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

### Dormant, Non-Overseeded Turf

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

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

### Non-Dormant, Non-Overseeded Turf

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

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

continued

**Weeds Controlled or Suppressed by SPECTICLE FLO HERBICIDE<sup>2</sup> (continued)**
**Broadleaf Weeds**

London rocket <sup>1</sup>	<i>Sisymbrium irio</i>	Redmaids	<i>Calandrinia ciliata</i>
Longstalked phyllanthus	<i>Phyllanthus tenellus</i>	Sesbania, Hemp <sup>1</sup>	<i>Sesbania exaltata</i>
Mustard, Black <sup>1</sup>	<i>Brassica nigra</i>	Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Mustard, Short-pod	<i>Hirschfeldia incana</i>	Sida, Prickly/Teaweed <sup>1</sup>	<i>Sida spinosa</i>
Mustard, Wild	<i>Sinapis arvensis</i>	Southern brassbuttons <sup>1</sup>	<i>Cotula australis</i>
Parthenium	<i>Parthenium hysterophorus</i>	Sowthistle, Annual	<i>Sonchus oleraceus</i>
Pigweed, Prostrate	<i>Amaranthus blitoides</i>	Spurge, Spotted	<i>Euphorbia maculata</i>
Pigweed, Redroot	<i>Amaranthus retroflexus</i>	Stinkwort	<i>Dittrichia graveolens</i>
Pink purslane	<i>Claytonia sibirica</i>	Sunflower <sup>1</sup> , Common	<i>Helianthus annuus</i>
Plantain, Buckhorn	<i>Plantago lanceolata</i>	Swinecress	<i>Coronopus didymus</i>
Plantain, Paleseed	<i>Plantago virginica</i>	Tassel flower	<i>Emilia sonchifolia</i>
Poinsettia, Wild	<i>Euphorbia cyathophora</i>	Tropic ageratum	<i>Ageratum conyzoides</i>
Prostrate knotweed	<i>Polygonum aviculare</i>	Velvetleaf <sup>1</sup>	<i>Abutilon theophrasti</i>
Prostrate spurge	<i>Euphorbia maculata</i>	Vetch, Purple	<i>Vicia benghalensis</i>
Puncturevine	<i>Tribulus terrestris</i>	Wild carrot <sup>1</sup>	<i>Daucus carota</i>
Purslane, Common	<i>Portulaca oleracea</i>	Willowherb	<i>Epilobium brachycarpum</i>
Ragweed, Common <sup>1</sup>	<i>Ambrosia artemisiifolia</i>	Woodsorrel, Yellow <sup>1</sup>	<i>Oxalis stricta</i>

**GRASSES, MONOCOTS, AND SEDGES**

Annual bluegrass	<i>Poa annua</i>	Foxtail brome	<i>Bromus rubens</i>
Annual kyllinga <sup>3</sup>	<i>Cyperus sesquiflorus</i>	Foxtail, Giant	<i>Setaria faberi</i>
Barnyardgrass, Common	<i>Echinochloa crus-galli</i>	Foxtail, Green	<i>Setaria viridis</i>
Cheatgrass	<i>Bromus secalinus</i>	Foxtail, Yellow	<i>Pennisetum glaucum</i>
Crabgrass, Blanket	<i>Digitaria serotina</i>	Goosegrass	<i>Eleusine indica</i>
Crabgrass, Henry	<i>Digitaria ciliaris</i>	Guineagrass	<i>Panicum maximum</i>
Crabgrass, Large/Hairy	<i>Digitaria sanguinalis</i>	Kyllinga, Fragrant/Annual <sup>3</sup>	<i>Kyllinga odorata</i>
Crabgrass, Smooth	<i>Digitaria ischaemum</i>	Little barley	<i>Hordium pusillum</i>
Doveweed	<i>Murdannia nudiflora</i>	Mouse barley	<i>Hordeum murinum</i>
Fall panicum	<i>Panicum dichotomiflorum</i>	Red brome	<i>Bromus rubens</i>

*continued*

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

\*Not for use in California

<sup>1</sup> Weeds suppressed by SPECTICLE FLO HERBICIDE

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

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

### **Seeding, Overseeding, Re-Seeding, Sprigging and Sodding**

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

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

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

## **APPLICATIONS ON SOD FARMS**

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

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

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

## **LANDSCAPE ORNAMENTALS**

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

### **USE RESTRICTIONS**

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

### **USE PRECAUTIONS**

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

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

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

## **SYMPTOMS OF SPECTICLE FLO HERBICIDE INJURY ON LANDSCAPE ORNAMENTALS**

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

## **LANDSCAPE ORNAMENTAL USES**

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

### **Use of SPECTICLE FLO HERBICIDE near Sensitive Grasses**

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

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

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

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

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

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

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

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

## **LANDSCAPE ORNAMENTALS AND THEIR CULTIVARS TOLERANT TO SPECTICLE FLO HERBICIDE**

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



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

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

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

continued

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

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

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

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continued

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

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

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

### NATURAL AREAS

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

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

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

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

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

## **NON-SELECTIVE USES**

### **NON-CROP AREAS**

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

### **Use of SPECTICLE FLO HERBICIDE near Sensitive Grasses**

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

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

## **STORAGE AND DISPOSAL**

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

### **PESTICIDE STORAGE**

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

### **PESTICIDE DISPOSAL**

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

### **CONTAINER HANDLING**

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

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

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

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

*continued*



## **STORAGE AND DISPOSAL** *(continued)*

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

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

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

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

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

#### **PLASTIC CONTAINERS:**

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

#### ***Liquid Dillutable formulations:***

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

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

## IMPORTANT: READ BEFORE USE

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

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

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

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

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

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

The Bayer logo, consisting of the word "Bayer" in a bold, sans-serif font.



# Spect(i)cle<sup>®</sup>

## FLO HERBICIDE

INDAZIFLAM GROUP 29 HERBICIDE

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

**DO NOT USE FOR THE MANUFACTURING OF FERTILIZER**

**ACTIVE INGREDIENT:** Indaziflam ..... 7.4%

**OTHER INGREDIENTS:** ..... 92.6%

**TOTAL:** ..... 100.0%

This product is a Suspension Concentrate containing 0.622 lb active ingredient per gallon. **Shake well before use.**

**EPA Reg. No. 432-1608**

**KEEP OUT OF REACH OF CHILDREN**

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

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

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

### FIRST AID

<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

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

**Net Contents**  
**1 Gallon**

**86775387**

**86699648C 200831AV1**

**Bayer**



PULL HERE TO OPEN

# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
102000025126

1/10  
Revision Date: 10/02/2017  
Print Date: 08/09/2019

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

#### Product identifier

**Trade name** SPECTICLE® FLO HERBICIDE

**Product code (UVP)** 80193424, 85850822

**SDS Number** 102000025126

**EPA Registration No.** 432-1608

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

**Use** Herbicide

**Restrictions on use** See product label for restrictions.

#### Information on supplier

**Supplier** Bayer Environmental Science  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
USA

**Responsible Department** Email: SDSINFO.BCS-NA@bayer.com

**Emergency telephone no.**

**Emergency Telephone Number (24hr/ 7 days)** 1-800-334-7577

**Product Information Telephone Number** 1-800-331-2867

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification in accordance with regulation HCS 29CFR §1910.1200

Acute toxicity(Inhalation): Category 4

Specific target organ toxicity - repeated exposure: Category 2

#### Labelling in accordance with regulation HCS 29CFR §1910.1200



**Signal word:** Warning

#### Hazard statements

Harmful if inhaled.

May cause damage to organs (Nervous system) through prolonged or repeated exposure.

#### Precautionary statements

# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
102000025126

2/10  
Revision Date: 10/02/2017  
Print Date: 08/09/2019

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

### Hazards Not Otherwise Classified (HNOC)

No health hazards not otherwise classified.  
No physical hazards not otherwise classified.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Inhalation</b>	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
<b>Skin contact</b>	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
<b>Eye contact</b>	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	No symptoms known or expected.
<b>Indication of any immediate medical attention and special treatment needed</b>	

<b>Treatment</b>	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.
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# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
102000025126

3/10  
Revision Date: 10/02/2017  
Print Date: 08/09/2019

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### SECTION 5: FIREFIGHTING MEASURES

#### Extinguishing media

**Suitable** Water spray, Foam, Carbon dioxide (CO<sub>2</sub>), Dry chemical  
**Unsuitable** None known.

**Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire.

#### Advice for firefighters

**Special protective equipment for firefighters** Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**Further information** Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

**Flash point** No data available

**Auto-ignition temperature** No data available

**Lower explosion limit** No data available

**Upper explosion limit** No data available

**Explosivity** Not applicable

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

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

#### Methods and materials for containment and cleaning up

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

**Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
102000025126

4/10  
Revision Date: 10/02/2017  
Print Date: 08/09/2019

### SECTION 7: HANDLING AND STORAGE

#### Precautions for safe handling

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

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

#### Conditions for safe storage, including any incompatibilities

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

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Indaziflam	950782-86-2	0.56 mg/m <sup>3</sup> (TWA)		OES BCS*
1,2-Propanediol (Aerosol.)	57-55-6	10 mg/m <sup>3</sup> (TWA)	2010	WEEL

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

#### Exposure controls

##### Personal protective equipment

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

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

**Hand protection** Chemical resistant nitrile rubber gloves

**Eye protection** Tightly fitting safety goggles

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

# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
102000025126

5/10  
Revision Date: 10/02/2017  
Print Date: 08/09/2019

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

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	white to beige
<b>Physical State</b>	Liquid
<b>Odor</b>	characteristic
<b>Odour Threshold</b>	No data available
<b>pH</b>	5.0 - 8.0 at 10 % (23 °C) (deionized water)
<b>Vapor Pressure</b>	No data available
<b>Vapor Density (Air = 1)</b>	No data available
<b>Density</b>	1.01 g/cm <sup>3</sup> at 20 °C
<b>Evaporation rate</b>	No data available
<b>Boiling Point</b>	No data available
<b>Melting / Freezing Point</b>	No data available
<b>Water solubility</b>	soluble
<b>Minimum Ignition Energy</b>	Not applicable
<b>Decomposition temperature</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Viscosity</b>	300 - 900 cps at 25 °C
<b>Flash point</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Explosivity</b>	Not applicable

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### SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	
<b>Thermal decomposition</b>	No data available
<b>Chemical stability</b>	Stable under recommended storage conditions.



# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
102000025126

6/10  
Revision Date: 10/02/2017  
Print Date: 08/09/2019

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

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### SECTION 11: TOXICOLOGICAL INFORMATION

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

#### Information on toxicological effects

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

#### Assessment STOT Specific target organ toxicity – repeated exposure

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

#### Assessment mutagenicity

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

#### Assessment carcinogenicity

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

#### ACGIH

None.

#### NTP

None.

# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
102000025126

7/10  
Revision Date: 10/02/2017  
Print Date: 08/09/2019

### IARC

None.

### OSHA

None.

### Assessment toxicity to reproduction

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

### Assessment developmental toxicity

Indaziflam did not cause developmental toxicity in rats and rabbits.

### Further information

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

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## SECTION 12: ECOLOGICAL INFORMATION

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

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# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
102000025126

8/10  
Revision Date: 10/02/2017  
Print Date: 08/09/2019

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### SECTION 13: DISPOSAL CONSIDERATIONS

#### Waste treatment methods

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

---

### SECTION 14: TRANSPORT INFORMATION

<b>49CFR</b>	Not dangerous goods / not hazardous material
<b>IMDG</b>	
UN number	<b>3082</b>
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (INDAZIFLAM SOLUTION)
<b>IATA</b>	
UN number	<b>3082</b>
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (INDAZIFLAM SOLUTION )

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

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

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# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
102000025126

9/10  
Revision Date: 10/02/2017  
Print Date: 08/09/2019

### SECTION 15: REGULATORY INFORMATION

**EPA Registration No.** 432-1608

**US Federal Regulations**

**TSCA list**

1,2-Propanediol 57-55-6

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

None.

**US States Regulatory Reporting**

**CA Prop65**

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

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

**US State Right-To-Know Ingredients**

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

**Canadian Regulations**

**Canadian Domestic Substance List**

None.

**Environmental**

**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

### SECTION 16: OTHER INFORMATION

**Abbreviations and acronyms**

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

# SAFETY DATA SHEET



## SPECTICLE® FLO HERBICIDE

Version 2.1 / USA  
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NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

### NFPA 704 (National Fire Protection Association):

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

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

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

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

**Reason for Revision:** Section 11: Toxicological Information.

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