

DITHIOPYR GROUP 3 HERBICIDE



# RightLine® DITHIOPYR 2 EW

## SPECIALTY HERBICIDE

Provides control of listed annual grasses and broadleaf weeds in: Established lawns; Commercial sod farms; Ornamental and sports turf (including but not limited to sport fields, golf course fairways, roughs, tee boxes, unimproved turfgrass areas); Container grown ornamentals; Field-grown ornamentals; Landscape ornamentals; Non-cropland such as: airports, barrow ditches, cemeteries, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, hard-surface cracks, industrial sites, military lands, mining and drilling areas, non-irrigation ditch banks, gas and oil pads, parking lots, petroleum tank yards, pipelines, pump stations, railroads, roadsides, debris retention areas, service roads, solar fields, storage areas or yards, substations, vacant lots and other non-crop residential and commercial areas; Natural areas (open space) such as: restoration sites, campgrounds, parks, prairie management, trails and trailheads, recreation areas, wildlife openings and wildlife habitat and management areas; Christmas tree farms.

In New York State, this product may be used by commercial applicators only, at no more than 2 pints (0.5 lb active ingredient) per acre per year. In Nassau and Suffolk counties of New York, do not exceed 1 pint per acre per year of this product (equivalent to 0.25 lb of active ingredient per acre).

### ACTIVE INGREDIENT:

Dithiopyr: 3,5 - pyridinedicarbothioic acid,  
2-(difluoromethyl) - 4-(2-methylpropyl)  
-6-(trifluoromethyl)-, S, S-dimethyl ester..... 23.39%

**OTHER INGREDIENTS:**.....76.61%

**TOTAL:**.....100.00%

This product contains 240 grams per liter or 2 lb active ingredient per U.S. gallon.

**KEEP OUT OF REACH  
OF CHILDREN  
CAUTION**

See inside label booklet for additional  
Precautionary Statements, and  
Directions for Use including  
Storage and Disposal instructions.

**Manufactured for:**  
RightLine, LLC  
950 Falcon Drive  
Malden, MO 63863

EPA Reg. No.: 93051-10  
EPA Est. No.: 102434-GA-1 (AC),  
89332-GA-001 (MA),  
86869-NC-001 (SM)  
(Letter(s) in the lot number correspond  
to letter(s) following the EPA Est No.)  
**Net Contents: 2.5 GAL**

#### FIRST AID

**IF SWALLOWED:**

- Immediately call a poison control center or doctor.
- **DO NOT** induce vomiting unless told to do so by a poison control center or doctor.
- **DO NOT** give any liquid to the person.
- **DO NOT** give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:**

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

**IF IN EYES:**

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

#### HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For information on this pesticide product (including general health concerns or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, Monday through Friday, 8:00 AM to 12 PM Pacific Standard Time. In the event of a medical emergency, call your poison control center at 1-800-222-1222.

**NOTE TO PHYSICIAN:** Inducing vomiting may cause aspiration pneumonia.

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

#### Personal Protective Equipment (PPE)

**Mixers, loaders, applicators, and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate or butyl rubber  $\geq 14$  mils
- Shoes plus socks

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

#### Engineering Controls

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.607(d-e)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**User Safety Recommendations**

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### Environmental Hazards

This product is toxic to fish and highly toxic to other aquatic organisms including oysters and shrimp. Use with care when applying to turf areas adjacent to any body of water. Drift and runoff from treated turf may be hazardous to aquatic organisms in water adjacent to treated areas. **DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwater or rinseate.

**NON-TARGET ORGANISM ADVISORY:** This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

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

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

## DIRECTIONS FOR USE

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

Read all Directions for Use carefully before applying.

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

### Agricultural Use Requirements

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

For early entry into 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, wear:

- Coveralls
- Chemical-resistant gloves made of barrier laminate or butyl rubber  $\geq$ 14 mils
- 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 treated area until sprays have dried.

## **WEED RESISTANCE MANAGEMENT**

For resistance management, RightLine DITHIOPYR 2 EW is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to RightLine DITHIOPYR 2 EW and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field.

Appropriate resistance management strategies should be followed.

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

- Rotate the use of RightLine DITHIOPYR 2 EW or other Group 3 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- 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 certified crop 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 crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or 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 such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- 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 crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact RightLine, LLC retailer or representative.

Report any incidence of non-performance of this product against a particular weed species to your RightLine, LLC retailer or representative. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

### **Best Management Practices**

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

## PRODUCT INFORMATION

RightLine DITHIOPYR 2 EW provides control of crabgrass and other annual grasses and broadleaf weeds in established lawns, commercial sod farms, ornamental and sports turf (including but not limited to sport fields, golf course fairways, roughs, tee boxes, unimproved turfgrass areas), container-grown ornamentals, field-grown ornamentals, landscape ornamentals, non-cropland (see list above), natural areas and Christmas trees.

This product will not control established weeds, except for crabgrass in early stages of growth. For optimum control, applications of this product should be made preemergence (prior to germination of target weeds).

This product is most effective when activated by 1/2 inch or more of rainfall or irrigation. To optimize control, ensure that activation has occurred prior to germination of most grass and broadleaf weeds.

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to select the nozzle and pressure that deliver a medium or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

#### Boomless Ground Applications:

- Applicators are required to select the nozzle and pressure that deliver a medium or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

### SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.  
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

### TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

## WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### Boomless Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### Handheld Technology Applications:

- Take precautions to minimize spray drift.

## Mixing Directions

### RightLine DITHIOPYR 2 EW Alone with Water as the Carrier

Fill a previously cleaned spray tank with water to about three-fourths of the desired volume. Add the specified amount of RightLine DITHIOPYR 2 EW to the tank. Complete the filling process while maintaining agitation. Remove the hose from the mixing tank immediately after filling to avoid siphoning back into the water source.

### RightLine DITHIOPYR 2 EW Alone with Liquid Fertilizer as the Carrier

Determine the compatibility of RightLine DITHIOPYR 2 EW with the desired liquid fertilizer by mixing small proportional quantities in advance. See the Physical Compatibility Test section of this label. Then follow the mixing procedure listed below for tank mixtures.

## Tank Mixtures

RightLine DITHIOPYR 2 EW may be applied in tank mix combination with labeled rates of liquid fertilizers or other herbicides, containing active ingredients such as but not limited to isoxaben or glyphosate, provided (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; and (2) tank mixing is not prohibited by the label of the tank mix product. Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels. When tank mixing, use the most restrictive label limitations for each of the products being used in the tank mix.

When tank mixing RightLine DITHIOPYR 2 EW with other materials, a compatibility test (jar test) using relative proportions of the tank mix ingredients should be conducted prior to mixing ingredients in the spray tank. See the Physical Compatibility Test Mixing Instructions section of this label.

**Mixing Order for Tank Mixes:** Place a 20 to 35 mesh screen or wetting basket over the filling port. Fill the spray tank 1/2 full with the appropriate carrier. Start agitation. Slowly add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product.

1. Compatibility agent (if needed)
2. Wettable powder or water dispersible granules (if used)
3. Suspension concentrates
4. RightLine DITHIOPYR 2 EW and liquid (emulsifiable concentrate or liquid concentrate) pesticide (if used)
5. Water soluble liquid products
6. Surfactants, marker dyes or drift control additives

Maintain an air buffer between the hose and the solution in the tank to avoid siphoning back into the carrier source. Maintain continuous agitation during mixing and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed.

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

**Physical Compatibility Test**

Before mixing this product with liquid fertilizers and/or other pesticides, test compatibility by mixing all the components in a small jar in proportionate quantities:

**Compatibility Test Mixing Instructions**

Pesticide Formulation	If	Amount of Pesticide added to Spray Carrier (assuming volume is 25 gpa) Add:
	Rate per Acre is:	Level Teaspoons per Pint Jar of Carrier Solution
Dry	1lb	1 1/2
Liquid	1qt	1

**This compatibility test is designed for 25 gallons of spray solution per acre (gpa).**

The table above gives general guidelines for use rate ratios of pesticides to be tank mixed with this product. Determine the amount of pesticide to tank mix by referring to the pesticide label(s). Then, calculate the amount of pesticide to add to the jar based on use rate ratios in table. For a use rate of 1 lb per acre of dry pesticide, add 1 1/2 teaspoons to the jar. For a use rate of 1 quart per acre of liquid pesticide, add 1 teaspoon to the jar. RightLine DITHIOPYR 2 EW should be added based on use rate ratios for liquid pesticides (for a use rate of 1 quart per acre, add 1 teaspoon to the jar). For changes in spray volume or herbicide rate, make appropriate changes in the ingredients for the test. Shake well after mixing.

If pesticide mix does not form crystals, flakes, sludge, gels, oily films or layers, then the components are compatible. Incompatibility in any of the above-described forms will usually occur within 5 minutes after mixing. If components are incompatible, a compatibility agent should be used. Repeat the above compatibility test with a suitable compatibility agent (1/2 teaspoon per pint jar is equivalent to 2 pints per 100 gallons of spray solution).

**DO NOT** use mixtures that show incompatible signs such as formation of crystals, flakes, sludge, gels, oil films or layers.

**Grass and Broadleaf Weeds Controlled by RightLine DITHIOPYR 2 EW**

Used as directed, RightLine DITHIOPYR 2 EW controls annual grass and broadleaf weeds listed in the table below if applied preemergence. This product will not control emerged broadleaf weeds or grasses (except for crabgrass in early stages of growth).

Common Name Grasses	Scientific Name
barley	<i>Hordeum</i> spp.
barnyardgrass	<i>Echinochloa crus-galli</i>
bluegrass, annual	<i>Poa annua</i>
brome	<i>Bromus</i> spp.
crabgrass, large	<i>Digitaria sanguinalis</i>
crabgrass, smooth	<i>Digitaria ischaemum</i>
crabgrass, southern	<i>Digitaria ciliaris</i>
crowfootgrass	<i>Dactyloctenium aegyptium</i>
dallisgrass (seedling )	<i>Paspalum dilatatum</i>

<b>Common Name Grasses</b>	<b>Scientific Name</b>
foxtail, giant	<i>Setaria faberi</i>
foxtail, green	<i>Setaria verdi</i>
foxtail, yellow	<i>Setaria pumilla</i>
goosegrass	<i>Eleusine indica</i>
kikuyugrass	<i>Pennisetum clandestinum</i>
Mary's grass (Japanese stiltgrass)	<i>Microstegium vimineum (Trin.) A. Camus var. imberbe</i>
oats, wild	<i>Avena fatua</i>
ryegrass (annual & perennial)	<i>Lolium spp.</i>
sandbur	<i>Cenchrus spp.</i>
smutgrass	<i>Sporobolus indicus</i>
southwestern cupgrass	<i>Eriochla gracilis</i>

<b>Broadleaf Weeds</b>	
bittercress	<i>Cardamine spp.</i>
carpetweed	<i>Mollugo verticillata</i>
chickweed	<i>Stellaria spp.</i>
dandelion, common	<i>Taraxacum officinale</i>
geranium Carolina	<i>Geranium carolinianum</i>
henbit	<i>Lamium spp.</i>
knotweed, prostrate	<i>Polygonum aviculare</i>
lespedeza, common	<i>Lespedeza striata</i>
marestail	<i>Conyza canadensis</i>
medic, black	<i>Medicago lupulina</i>
mulberry weed	<i>Fatoua villosa</i>
mustard	<i>Brassica spp.</i>
oxalis, buttercup	<i>Oxalis pes-caprae</i>
parsley - piert	<i>Alchemilla arvensis</i>
pigweed, redroot	<i>Amaranthus retroflexus</i>
pineappleweed	<i>Matricaria matricarioides</i>
purslane, common	<i>Portulaca oleracea</i>
rocket, London	<i>Sisymbrium irio</i>

<b>Broadleaf Weeds</b>	
shepherdspurse	<i>Capsella bursa-pastoris</i>
sowthistle	<i>Sonchus oleraceus</i>
speedwell, corn	<i>Veronica arvensis</i>
spurge, garden	<i>Euphorbia hirta</i>
spurge, prostrate	<i>Euphorbia humistrata</i>
spurge, spotted	<i>Euphorbia maculata</i>
willowherb	<i>Epilobium</i> spp.
woodsorrel, creeping	<i>Oxalis corniculata</i>
woodsorrel, yellow	<i>Oxalis stricta</i>

## USES

### Use Directions For Turf Grass

Use RightLine DITHIOPYR 2 EW on seeded, sodded, or sprigged lawns, ornamental turfgrass and unimproved turfgrass that are well established. Newly established turf must have developed a good root system and a uniform stand, and have received at least two mowings following seeding or sprigging before making the first application of this product. Note precautions below for sodding. Use of this product on turf that is not well-established, or has been weakened by weather, pest, disease, chemical, mechanical or other related stress, may result in turf injury.

### Use Precautions:

- RightLine DITHIOPYR 2 EW will prevent the germination of annual bluegrass. RightLine DITHIOPYR 2 EW will not affect established annual bluegrass. If maintenance of annual bluegrass is desired, using this product during the time of annual bluegrass germination is not recommended. In the states of AZ, CA, NV, OR, WA, NM, ID, MT and UT, RightLine DITHIOPYR 2 EW may contribute to the thinning or stand reduction in established stands of annual bluegrass.
- To avoid turfgrass injury, **DO NOT** apply to newly set sod until the sod has rooted and exposed edges have filled in.
- For best results, cultural practices that disturb the soil, such as verticutting and core-, spike-, or hydro- aeration, should be done before applying this product.

### Use Restrictions:

- **DO NOT** apply this product by air.
- **DO NOT** apply this product to golf course putting greens.
- **DO NOT** harvest sod until 3 months or longer after application.
- **DO NOT** apply this product until the turfgrass has recovered from cultural practices such as verticutting or core-, spike-, or hydro-aeration.
- **DO NOT** use clippings from treated turf for mulching around vegetables or fruit trees.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply more than 2 pints of RightLine DITHIOPYR 2 EW (0.5 lb ai dithiopyr) per acre (0.73 fl oz per 1000 sq ft) per application.
- **DO NOT** apply more than 6 pints of RightLine DITHIOPYR 2 EW (1.5 lbs ai dithiopyr) per acre per year (2.2 fl oz per 1000 sq ft).
- In New York State, **DO NOT** apply more than 2 pints of RightLine DITHIOPYR 2 EW (0.5 lb ai dithiopyr) per acre per year. In Nassau and Suffolk counties of New York, **DO NOT** exceed 1 pint per year of this product (equivalent to 0.25 lb of ai per acre).

### Reseeding, Overseeding, or Sprigging

Reseeding, overseeding or sprigging of treated areas within 3 months after a single application of this product, or within 4 months after a sequential application program totaling more than 2 pints (0.5 lb ai dithiopyr) per acre (0.73 oz per 1000 sq ft), may inhibit the establishment of desirable turfgrasses. However, overseeding of bermudagrass with perennial ryegrass 8 weeks after an application or as early as 6 weeks after application if slight injury to perennial ryegrass can be tolerated is a recommended exception.

When reseeding or overseeding, proper cultural practices such as soil cultivation, irrigation and fertilization should be followed. For best results, use mechanical or power seeding equipment (slit seeders) designed to give good seed to soil contact.

### Tolerant Turfgrass

**RightLine DITHIOPYR 2 EW should only be applied to the following turfgrass species which are tolerant to this product.**

#### Established Cool Season Turfgrasses

Common Name	Scientific Name
bentgrass, creeping <sup>†</sup>	<i>Agrostis palustris</i>
bluegrass, Kentucky	<i>Poa pratensis</i>
fescue, fine <sup>††</sup>	<i>Festuca rubra</i>
fescue, tall	<i>Lolium arundinaceum</i>
ryegrass, perennial	<i>Lolium perenne</i>

#### Established Warm Season Turfgrasses

Common Name	Scientific Name
bahiagrass	<i>Paspalum notatum</i>
bermudagrass <sup>†††</sup>	<i>Cynodon dactylon</i>
buffalograss <sup>††††</sup>	<i>Buchloe dactyloides</i>
carpetgrass	<i>Axonopus affinis</i>
centipedegrass	<i>Eremochloa ophiuroides</i>
kikuyugrass	<i>Pennisetum clandestinum</i>
seashore paspalum	<i>Paspalum vaginatum</i>
St. Augustinegrass	<i>Stenotaphrum secundatum</i>
zoysiagrass	<i>Zoysia japonica</i>

<sup>†</sup> **DO NOT** use this product on certain varieties of creeping bentgrass, such as cohansey, carmen, seaside, and Washington as undesirable turfgrass injury may result. Not all varieties of creeping bentgrass have been tested.

**DO NOT** apply this product to colonial bentgrass (*Agrostis tenuis*) varieties.

<sup>††</sup> **DO NOT** use this product on certain varieties of fine fescue as undesirable turf injury may result. The following fine fescue varieties have been found to be sensitive to this product: Atlanta, banner, beauty, bilgart, CF-2, enjoy, HF-93, highlight, ivalo, Jamestown, koket, majenta, Mary, pennlawn, Tamara, Tatjana, waldorf, and waldina. Not all varieties of fine fescue have been tested.

<sup>†††</sup> **DO NOT** use this product on Tifgreen (328) hybrid bermudagrass as undesirable turfgrass injury may result. Other common and hybrid bermudagrass varieties are tolerant.

<sup>††††</sup> **DO NOT** use this product on seedling buffalograss in the spring of the first year of establishment until the turfgrass is fully green and has established new roots.

### Application Directions

Apply RightLine DITHIOPYR 2 EW through conventional liquid application equipment in a minimum of 20 gallons of water per acre (0.5 gallons per 1000 sq. ft.). Apply with equipment that provides a uniform spray distribution. A hand held spray gun may be used. Calibrate application equipment prior to usage. Avoid streaking, skips, or excess overlaps during application. The use of marker dyes or foams aids in making more accurate applications.

### Preemergence Application Rates, Frequency and Timing

For preemergence grass and broadleaf weed control, apply RightLine DITHIOPYR 2 EW as single or sequential application at 1 to 2 pints (0.25 to 0.5 lb ai dithiopyr) per acre. Applicators may choose to make a single application or sequential applications of 1 to 2 pints (0.25 to 0.5 lb ai dithiopyr) per acre at 5 to 10 week intervals based on one or more of the factors listed below.

- Length of residual weed control desired
- Height of turf (lower cut turf may require higher use rates)
- History and success of weed control at the application site (higher application rates should be used if herbicide treatment history is unknown or weed control was poor with previous applications)
- Exposure to high temperatures and heavy rainfall or irrigation (this will shorten the residual preemergence performance)
- On turf sites adjacent to hard surfaces such as but not limited to driveways, sidewalks and parking lots where residual activity may be reduced
- Some target weed species (such as but not limited to *Poa annua*, goosegrass and sandbur) will require higher listed use rates

### Postemergence Crabgrass Control

This product provides both preemergence and postemergence control of crabgrass (including large, smooth, and southern species) in established lawns and ornamental turf. This product provides postemergence control of crabgrass through the 3 to 5 tiller stage of growth dependent upon location. The addition of a nonionic surfactant at a minimum of 0.25% v/v (2 pt per 100 gallons of spray) is recommended to improve postemergence control past the 5 leaf stage of growth. Read and follow the surfactant manufacturer's label directions. Postemergence control of this product can be improved by not mowing turfgrass within two days before or after application.

When applied at 2 pints (0.5 lb ai dithiopyr) per acre this product has demonstrated postemergent crabgrass control through the 3 to 5 tiller stage of growth in the western, southern and transition regions where warm-season turfgrasses are the predominate species.

In regions where cool-season turfgrasses are the predominant species, early postemergence crabgrass control is obtained when this product is applied prior to tiller initiation of crabgrass (less than 5 leaves per plant), which generally corresponds to the time when crabgrass seedlings are easily observed in lawn or turf.

For preemergence residual control of crabgrass, apply at least 0.5 inch of water after application; but in order to optimize postemergence control delay irrigation for 6 hours after application.

### *Poa annua* (annual bluegrass) Control

Apply RightLine DITHIOPYR 2 EW for preemergence control of *Poa annua* (annual bluegrass) at a rate of 1.5 to 2 pints (0.38 to 0.5 lb ai dithiopyr) per acre.

- Apply 6 to 8 weeks before overseeding perennial ryegrass into bermudagrass. This is specific to perennial ryegrass; not recommended for *Poa trivialis* or bentgrass.
- Minimum seeding rate of perennial ryegrass is 400 lbs per acre.
- Use limited to fairways and roughs.
- Perennial varieties of *Poa annua* (var. *repens*) may not be controlled as well as the true annual variety.
- **DO NOT** apply earlier than 16 weeks after over-seeding unless injury to the ryegrass can be tolerated.
- A follow-up treatment 16 weeks after overseeding offers an early season crabgrass treatment and helps suppress some winter annual broadleaf weeds.

### Goosegrass Control

For best results, apply RightLine DITHIOPYR 2 EW at 2 pints (0.5 lb ai dithiopyr) per acre just prior to goosegrass germination. Base the application timing on local experience or soil temperatures. If targeting both crabgrass and goosegrass, a single application applied at preemergence crabgrass timing may not be adequate. When targeting both crabgrass and goosegrass it is best to make sequential applications. Based on past experience and crabgrass pressure, a lower rate may be used for the first application with the sequential application being made at 2 pints (0.5 lb ai dithiopyr) per acre.

### Use Directions for Noncropland and Natural Areas

Apply RightLine DITHIOPYR 2 EW for preemergence control of listed annual grasses and broadleaf weeds in non-crop land (see listing above) and natural areas as a single or sequential application.

Apply RightLine DITHIOPYR 2 EW prior to germination of target weeds or to bare ground. The best weed control is obtained when applications are made preemergence and to soil that is free of clods, weeds and debris such as leaves. For total vegetation control tank mixing this product with herbicides containing active ingredient such as but not limited to glyphosate is necessary.

To be effective, RightLine DITHIOPYR 2 EW must be activated by 0.5 inch or more of rainfall or irrigation prior to germination of target weeds. Once the treatment is activated, avoid excessive soil disruption such as grading roadsides that may break down the herbicide barrier. Minimal surface disruption such as raking should not break down the herbicide barrier.

### Use Precautions:

- For ornamentals within non-crop areas, apply only after transplanting when soil around roots has been thoroughly settled by rainfall or irrigation and no cracks are present, and only to plants listed in the Tolerant Ornamental section of this label, or injury may result.

### Use Restrictions:

- **DO NOT** apply when weather conditions favor drift to non-target areas. This product may injure foliage of non-target plants.
- **DO NOT** graze livestock or feed forage cut from areas treated with this product.

### Equivalent Application Rates:

Equivalent Rates of RightLine DITHIOPYR 2 EW			
(pt/acre)	(fl oz/1000 sq ft)	(fl oz/100 sq ft)	(ml/100 sq ft)
2 (0.5 lb ai dithiopyr)	0.73	0.073	2.2

Make sequential applications at 3 to 4 month intervals for extended preemergence weed control.

**DO NOT** exceed maximum use rates per year.

### Maximum Use Rates

- **Split or sequential applications:** **DO NOT** use more than 0.73 fl. oz. of RightLine DITHIOPYR 2 EW per 1000 sq ft (2 pints (0.5 lb ai dithiopyr) per acre) per application or more than 2.2 fl. oz. of RightLine DITHIOPYR 2 EW per 1000 sq ft (6 pints (1.5 lbs ai dithiopyr) per acre) per year.

### Use Directions for Ornamentals (Landscape, Field Grown, and Container Grown) and Christmas Trees

RightLine DITHIOPYR 2 EW provides preemergence control of listed annual grasses and broadleaf weeds in areas planted with tolerant ornamental plants listed on this label. It is intended for use on plants grown for aesthetic purposes in landscaped areas, in container or field grown production nurseries or in Christmas tree production. When applied as directed, the ornamental plants listed on this label have shown tolerance to applications of RightLine DITHIOPYR 2 EW.

#### Use Precautions:

- Apply RightLine DITHIOPYR 2 EW to established ornamentals only.
- Applications of RightLine DITHIOPYR 2 EW over-the-top of plants with newly forming buds may cause injury. Possible plant injury may be avoided by application as a directed spray to the soil surface beneath ornamental plant foliage.
- Injury may be incurred if RightLine DITHIOPYR 2 EW is applied in the following manner. Grower assumes all risk if RightLine DITHIOPYR 2 EW is applied to:
  - Unrooted liners or cuttings that have been planted in pots for the first time
  - Pots less than six inches wide

#### Use Restrictions:

- **DO NOT** apply this product to bare roots of ornamental plants as injury may result.
- **DO NOT** apply by air.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** incorporate this product into the soil. Dilution of active ingredient and possible injury to plant roots may occur.
- **DO NOT** apply around ornamental plants that have been weakened or are under stress (due to drought, flooding, excessive fertilizer or soil salts, wind injury, hail, frost damage, winter injury, injury from previously applied pesticides or injury due to insects, heat stress, nematodes or diseases).
- **DO NOT** apply when weather conditions favor drift to non-target areas. This product may injure foliage of non-target plants unless they are listed on this label.
- **DO NOT** apply this product directly to plants that are grown for food (e.g., fruit trees or maple trees tapped for syrup).
- **DO NOT** apply this product in enclosed structures and greenhouses.
- **DO NOT** apply more than 2 pints of RightLine DITHIOPYR 2 EW (0.5 lb ai dithiopyr) per acre (0.73 fl oz per 1000 sq ft) per application and no more than 6 pints of RightLine DITHIOPYR 2 EW (1.5 lbs ai dithiopyr) per acre (2.2 fl. oz per 1000 sq ft) per year.
- In New York State, **DO NOT** apply more than 2 pints of RightLine DITHIOPYR 2 EW (0.5 lb ai dithiopyr) per acre per year. In Nassau and Suffolk counties of New York, **DO NOT** exceed 1 pint per year of this product (equivalent to 0.25 lb of ai dithiopyr per acre).

#### Shadehouse Areas

RightLine DITHIOPYR 2 EW may be applied in open shadehouse-type structures where the natural flow of air is unimpeded. **DO NOT** apply within three weeks prior to enclosing greenhouses or poly-type structures.

**Treatment of Ornamental Species Not Listed on the Label for RightLine DITHIOPYR 2 EW:** It is impossible to evaluate tolerance to this product on all ornamental plant species or varieties or under all possible growing conditions. Users who wish to use RightLine DITHIOPYR 2 EW on ornamental species not currently listed on this label may determine the suitability for use by treating a small number of ornamental plants at labeled rate. Prior to treatment of larger areas, treated plants should be observed for any symptoms of herbicidal injury, such as foliar damage, reduced vigor or stand reduction, for 30 to 60 days of normal growing conditions to determine if the treatment is acceptable to the grower. The user assumes the responsibility for any plant damage resulting from the use of RightLine DITHIOPYR 2 EW on plant species not currently listed on this label as tolerant.

### Application Directions

Apply RightLine DITHIOPYR 2 EW as a directed spray or as a broadcast over-the-top spray to established ornamentals (see ornamental plant listing for acceptable application method). Make directed sprays to the soil at the base of the ornamentals.

To reduce injury potential:

- Apply to established ornamentals
- Apply product with calibrated equipment using a minimum of 1 gallon of water per 1000 sq. ft.
- Shortly after application apply overhead irrigation to activate the herbicide and wash RightLine DITHIOPYR 2 EW from plant surface onto soil surface.
- In the spring when buds are rapidly growing and expanding, over the top application of RightLine DITHIOPYR 2 EW may temporarily injure new growth of desirable plants. To reduce the possibility of injury at this time, wait to apply RightLine DITHIOPYR 2 EW over the top of newly emerged vegetation until it has hardened off, unless local experience indicates that the ornamental plant will not be injured by the over the top application.
- **DO NOT** apply to plants that are under stress such as heat, drought or frost damage.

RightLine DITHIOPYR 2 EW is a preemergence herbicide that controls weeds during germination. RightLine DITHIOPYR 2 EW does not control emerged broadleaf or grass weeds except crabgrass up to tiller initiation (up to 5 leaves per plant) in ornamental or bare ground settings. Apply prior to germination of target weeds. Optimum weed control is obtained when applications are made to soil that is free of clods, weeds and debris such as leaves. Prior to applying, control existing vegetation by cultivation, hand weeding, or use of a postemergence herbicide labeled for use in ornamentals. After applying RightLine DITHIOPYR 2 EW, excessive soil disruption may breakdown the herbicide barrier. Minimal surface disruption such as raking should not break down the herbicide barrier once the product has been activated with moisture. Following transplanting, care must be taken that soil or planting mixes have settled firmly through irrigation, rainfall or packing and that there are no cracks that would allow direct contact of this product to the plant roots or plant injury may occur.

### Application Rates

Apply RightLine DITHIOPYR 2 EW prior to germination of target weed species. Make sequential applications at 3 to 4 month intervals for extended preemergence weed control. **DO NOT** exceed maximum use rates.

When treating a small area, apply RightLine DITHIOPYR 2 EW with a calibrated sprayer that assures accurate, uniform spray distribution. In general, RightLine DITHIOPYR 2 EW should be thoroughly mixed with water at 1.5 to 2 pints (0.5 to 0.73 oz of product per 1000 sq ft) per acre per application and applied at 20 to 40 psi in a minimum of 1 gallon of water per 1000 sq ft.

Equivalent Rates of RightLine DITHIOPYR 2 EW			
(pt/acre)	(fl oz/1000 sq ft)	(fl oz/100 sq ft)	(ml/100 sq ft)
2 (0.5 lb ai dithiopyr)	0.73	0.073	2.2

### Tolerant Ornamentals

When applied as directed under the conditions described on this label, ornamentals listed below have shown tolerance when grown in container, field, and landscape settings.

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
abelia ( <i>Abelia x grandiflora</i> )	nana grand surprise	x	x
acacia, redolens ( <i>Acacia redolens</i> )		x	x
abyssinian red banana ( <i>Ensete ventricosum</i> )	maureli	x	x
Agave†	blue glow	x	x
( <i>Agave bovicornuta</i> )	Queen Victoria	x	x
( <i>A. gypsophila</i> )		x	x
( <i>A. victoriae-reginae</i> )	royal	x	x
( <i>A. vilmoriniana</i> )		x	x
Ajuga carpet bugle ( <i>Ajuga reptans</i> )	bronze		x
( <i>Ajuga genevensis</i> )	bronze beauty		x
almond, flowering ( <i>Prunus glandulosa</i> )			x
apple† ( <i>Malus pumila</i> )			x
aralia, Japanese ( <i>Fatsia japonica</i> )			x
arborvitae ( <i>Thuja occidentalis</i> )	George Peabody nigra pyramidalis smaragh techny woodwardii	x	x x x x x
arborvitae, dwarf golden ( <i>Thuja orientalis</i> )	aurea nana	x	x
ash, green ( <i>Fraxinus pennsylvanica</i> )			x
ash, autumn purple ( <i>Fraxinus americana</i> )	autumn purple		x
aster, Chinese ( <i>Callistephus chinensis</i> )	dwarf queen		x
azalea ( <i>Rhododendron</i> spp.)	brilliant buccaneer carror chimes (Belgian) Elsie Lee		x x x x x



Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
beach grass ( <i>Ammophila breviligulata</i> )			x
bearberry (common) ( <i>Arctostaphylos uva-ursi</i> )	Massachusetts		x
bee balm ( <i>Monarda didyma</i> )			x
begonia ( <i>Begonia</i> spp.)			x
birch, river ( <i>Betula nigra</i> )	dura heat	x	x
birch, European white ( <i>Betula pendula</i> )			x
blackeyed Susan ( <i>Rudbeckia hirta</i> )	goldstrum		x
blanket flower ( <i>Gaillardia</i> spp.)			x
blood grass ( <i>Imperata cylindrica</i> )	rubra	x	x
blue fescue ( <i>Festuca ovina</i> )			x
bluebeard ( <i>Caryopteris x clandonensis</i> )	dark knight	x	x
blueberry <sup>1</sup> ( <i>Vaccinium</i> spp.)	bluecrop blue jay Jersey north blue northland		x x x x x
bottlebrush ( <i>Callistemon citrinus</i> )	Little John	x	x
bougainvillea ( <i>Bougainvillea</i> sp.)	James Walker pink dream purple queen rosenka Scarlet O' Hara		x x x x x

## Acceptable Application Method Noted by a (X)

Name	Tolerant Cultivars	Over the Top	Directed
bower vine ( <i>Pandorea jasminoides</i> )	rosea	x	x
boxwood, green beauty ( <i>Buxus microphylla japonica</i> )	green beauty	x	x
boxwood, welleri ( <i>Buxus sempervirens</i> )	winter gem common boxwood	x x	x x
broom ( <i>Cytisus scoparius</i> ) ( <i>Genista pilosa</i> )	moonlight Vancouver gold		x x
cactus ( <i>Echinocactus grusonii</i> )	golden barrel	x	x
camellia  ( <i>Camellia japonica</i> )  ( <i>Camellia sasanqua</i> )	debutante  mathotiana supreme  chansonette  setsukgekka	x  x  x	x  x  x
candytuft ( <i>Iberis sempervirens</i> )	snow white		x
carex, variegated ( <i>Carex</i> spp.)		x	x
carpet bugle ( <i>Ajuga reptans</i> ) ( <i>Ajuga genevensis</i> )	bronze bronze beauty		x x
cedar, red ( <i>Juniperus virginiana</i> )			x
celosia ( <i>Celosia</i> spp.)			x
centaura ( <i>Centaurea montana</i> )			x
cherry tree <sup>†</sup> ( <i>Prunus x yedoensis</i> )	yoshino	x	x
Chinese pistache ( <i>Pistacia chinensis</i> )			x
chrysanthemum ( <i>Chrysanthemum</i> sp.)	mandarin time	x	x
clevera ( <i>Clevera japonica</i> )	Leann	x	x

## Acceptable Application Method Noted by a (X)

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
cilvia ( <i>Clivia miniata</i> )		x	x
cockscomb, plumosa ( <i>Celosia cristata</i> )	scarlet plumosa		x
coleus ( <i>Coleus blumei</i> )	red kewpie		x
columbine ( <i>Aquilegia</i> spp.)			x
coneflower, purple ( <i>Echinacea purpurea</i> )	magnus purple	x	x
copper leaf ( <i>Acalypha wilkesiana</i> )			x
coreopsis ( <i>Coreopsis</i> spp.)	moonbeam		x
corn flower ( <i>Centaurea</i> spp.)			x
cotoneaster ( <i>Cotoneaster apiculatus</i> )			x
coyotebrush ( <i>Baccharis pilularis</i> )			x
cycad ( <i>Cycas revoluta</i> )			x
cypress, bald ( <i>Taxodium distichum</i> )		x	x
cypress, Italian ( <i>Cupressus sempervirens</i> )	glauca tiny tower	x	x x
cypress, hinoki false ( <i>Chamaecyparis obtusa</i> )	gracilis torulosa	x	x x
cypress, leyland ( <i>Cupressocyparis leylandii</i> ) hybrid		x	x
daffodil ( <i>Narcissus</i> spp.)	King Alfred		x
damianita ( <i>Chrisactinia mexicana</i> )			x
daylilly ( <i>Hemerocallis</i> spp.)	Aztec gold bright yellow (hybrid) single gold (evergreen) Wilson's yellow		x x x x

## Acceptable Application Method Noted by a (X)

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
dianthus (sweet William) ( <i>Dianthus</i> spp.)			x
( <i>Dianthus gratianopolitanus</i> )	firewatch	x	x
delphinium ( <i>Delphinium</i> spp.)	magic fountain		x
desert spoon ( <i>Dasylirion wheeleri</i> )		x	x
dogwood ( <i>Cornus florida</i> )			x
dogwood, American ( <i>Cornus sericea</i> )	flavarimea		x
Douglas fir ( <i>Pseudotsuga menziesii</i> )			x
dracaena ( <i>Cordyline indivisa</i> ) ( <i>Cordyline australis</i> )		x x	x x
dusty miller ( <i>Senecio cineraria</i> )		x	x
elm ( <i>Ulmus parvifolia</i> )	drake		x
escallonia ( <i>Escallonia x exoniensis</i> )	fradesi	x	x
eulaliagrass/maiden grass ( <i>Miscanthus sinensis</i> )	gracillimus variegatus morning light	x x x	x x x
euonymus ( <i>Euonymus fortunei</i> )	Argenteo-variegata colorata emerald gaiety emerald n' gold gold edge golden princess tricolor vegetus		x x x x x x x x
( <i>Euonymus japonicus</i> )	Aureomarginata microphylla variegata	x	x x

Acceptable Application Method Noted by a (X)

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
	'Moness' silver princess silver king	x	x x
<i>(Euonymus kiatschovicus)</i>	Manhattan	x	x
euryops, green leaved <i>(Euryops pectinatus)</i>	viridis	x	x
fan palm, European <i>(Chamaerops humilis)</i>			x
fan palm, Mexican <i>(Washingtonia robusta)</i>			x
fern (various) <i>(Asparagus spp.)</i>			x
fescue <i>(Festuca glauca)</i>			x
fescue, blue <i>(Festuca cinerea)</i>	Elijah blue		x
fetterbush <i>(Leucothoe fontanesiana)</i>	rainbow		x
figus <i>(Ficus retusa)</i>	nitidia		x
fir fraser <i>(Abies fraseri)</i>			x
fortnight lily <i>(Moraea bicolor)</i>		x	x
Forsythia <i>(Forsythia x 'Arnold Dwarf)</i>	arnold dwarf		x
<i>(Forsythia viridissima)</i>	bronxensis dwarf		x
<i>(Forsythia x intermedia)</i>	lynwood gold		x
<i>(Forsythia x 'Meadowlark')</i>	meadowlark		x
<i>(Forsythia x intermedia)</i>	spring glory	x	x
<i>(Forsythia suspensa)</i>	weeping		x
fountain grass, purple <i>(Pennisetum setaceum)</i>	rubrum	x	x
fringe flower, Chinese <i>(Loropetalum chinense)</i>	Chang's ruby ruby purple diamond	x x	x x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
fuchsia ( <i>Fuchsia</i> spp.)			x
galium ( <i>Galium odoratum</i> )			x
gardenia ( <i>Gardenia jasminoides</i> )	August beauty	x	x
	Frost proof	x	x
	mystery		x
	radicans	x	x
	veitchii	x	x
	white gem	x	x
( <i>Gardenia thunbergia</i> )		x	x
Garlic, variegated society <sup>†</sup> ( <i>Thulbaghia violacea</i> )	variegata	x	x
gayfeather ( <i>Liatis spicata</i> )	floristan violet	x	x
gazania ( <i>Gazania rigens leucolaena</i> )	trailing gazania	x	x
geranium ( <i>Pelargonium x hortorum</i> )			x
globe thistle ( <i>Echinops ritro</i> )		x	x
gum ( <i>Eucalyptus citriodora</i> )			x
hawthorn ( <i>Crataegus</i> spp.)	cockspur white		x
	crimson cloud		x
	enchantress		x
	Jack Evans		x
	Washington white		x
hawthorn, Indian ( <i>Rhaphiolepis indica</i> )	ballerina	x	x
	enchantress	x	x
heather, twisted ( <i>Erica cinerea</i> )	Mediterranean pink		x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
heliotrope ( <i>Heliotropum arborescens</i> )	lowa		x
hemlock, Canada ( <i>Tsuga canadensis</i> )			x
hibiscus ( <i>Hibiscus sp.</i> )	blue bird		x
	brilliant		x
	hula girl		x
( <i>Hibiscus rosa-sinensis</i> )	Seminole pink		x
holly ( <i>Ilex x 'Nellie R. Stevens'</i> ) ( <i>Ilex x attenuata</i> )	Nellie R. Stevens	x	x
	fosteri	x	x
	Savannah		x
holly, blue ( <i>Ilex x meserveae</i> )	blue boy		x
	blue girl		x
	China girl		x
holly, cassine ( <i>Ilex cassine</i> )		x	x
holly Chinese ( <i>Ilex cornuta</i> )	Burfordii	x	x
	Carissa	x	x
	needlepoint	x	x
holly, Japanese ( <i>Ilex crenata</i> )	compacta	x	x
	hellerie		x
	Japanese northern beauty		x
	sky pencil	x	x
	steeds	x	x
holly, yaupon ( <i>Ilex vomitoria</i> )		x	x
honeysuckle ( <i>Lonicera xylosteum</i> )	Claveyi dwarf		x
( <i>Lonicera japonica</i> )	halliana		x
( <i>Lonicera tatarica</i> )	Canadian white		x
	Zabelli		x
( <i>Lonicera x brownii</i> )	dropmore scarlet	x	x

**Acceptable Application Method Noted by a (X)**

<b>Name</b>	<b>Tolerant Cultivars</b>	<b>Over the Top</b>	<b>Directed</b>
hop bush, purple ( <i>Dodonea viscosa</i> )	purpurea	x	x
hosta ( <i>Hosta sieboldii</i> ) ( <i>Hosta lancifolia</i> )	albo marginata		x x
ice plant ( <i>Carpobrotus edulis</i> )		x	x
ice plant, rosea ( <i>Drosanthemum floribundum</i> )		x	x
ice plant, white trailing ( <i>Delosperma alba</i> )		x	x
ice plant, purple ( <i>Lampranthus productus</i> )		x	x
ice plant, red spike ( <i>Cephalophyllumalstonii</i> )		x	x
impatiens ( <i>Impatiens</i> spp.) ( <i>I. balsamina</i> )		x	x x
iris ( <i>Iris</i> spp)	dwarf blue wedgewood		x x
ivy, English ( <i>Hedera helix</i> )	Bulgaria thordale		x x
jasmine, Asiatic ( <i>Trachelospermum asiaticum</i> )		x	x
jasmine, star ( <i>Trachelospermum jasminoides</i> )			x
juniper ( <i>Juniperus</i> spp.)	Arcadia Armstrong bar harbor blue chip blue Pacific shore blue point blue rug blue star broadmoor buffalo calgary carpet emerald sea	x x x x x x x x	x x x x x x x x x x x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
	emerald spreader		x
	endora compacta		x
	fruitlandi		x
	gold coast	x	x
	green		x
	grey owl	x	x
	gold tip		x
	hetzi		x
	hughes		x
	icee blue	x	x
	Manhattan blue		x
	parsonii	x	x
	pfitzeriana		x
	plumosa		x
	Prince of Wales		x
	procumbens dwarf		x
	prostrate Japanese garden	x	x
	San Jose		x
	sargent blue		x
	sargent green		x
	scandia		x
	scopulorum moonglow		x
	scopulorum skyrocket	x	x
	sea of gold	x	x
	spartan		x
	tamariscifolia		x
	tamarix	x	x
	torulosa - Hollywood	x	x
	twisted		x
	weberi		x
	Youngstown		x
	Yukon belle		x
king palm ( <i>Archontophoenix cunninghamiana</i> )		x	x
lantana ( <i>Lantana sellowiana</i> )		x	x
laurel, Carolina cherry ( <i>Prunus caroliniana</i> )	bright n' tight	x	x
laurel, mountain ( <i>Kalmia latifolia</i> )			x
laurel, Texas mountain ( <i>Sophora secundiflora</i> )		x	x

Acceptable Application Method Noted by a (X)

Name	Tolerant Cultivars	Over the Top	Directed
leucothoe ( <i>Leucothoe fontanesiana</i> )			x
ligustrum, Japanese ( <i>Ligustrum japonicum</i> )			x
lily ( <i>Agapanthus</i> spp.)	streamline		x
lily, Asiatic ( <i>Lilium asiaticum</i> )		x	x
lily, Kaffir ( <i>Clivia miniata</i> )		x	x
Lily of the Nile ( <i>Agapanthus africanus</i> )	albus Peter Pan		x x
lilyturf ( <i>Liriope muscari</i> )	blue moon evergreen giant lilac beauty majestic monroe white silvery sunproof variegata	x  x  x	x x x x x x
lilyturf, creeping ( <i>Liriope spicata</i> )			x
magnolia ( <i>Magnolia grandiflora</i> )	D.D. Blanchard	x	x
magnolia, saucer ( <i>Magnolia x soulangeana</i> )		x	x
mandevilla ( <i>Mandevilla splendens</i> ) ( <i>Mandevilla x amabilis</i> )	Red Riding Hood crimson jewel	x x	x x
maple, amur ( <i>Acer ginnala</i> )	emerald elf	x	x
maple, Japanese ( <i>Acer palmatum</i> )		x	x
maple, Norway ( <i>Acer platanoides</i> )			x
maple, red <sup>†</sup> ( <i>Acer rubrum</i> )	red sunset	x	x
maple, silver ( <i>Acer saccharinum</i> )			x
maple sugar <sup>†</sup> ( <i>Acer saccharum</i> )			x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
marguerite, blue ( <i>Felicia amelloides</i> )		x	x
marigold ( <i>Tagetes patula</i> )	honeycomb variegata wheeleris dwarf		x x x
metrosideros ( <i>Metrosideros collinus</i> )	'springfire'	x	x
mock orange † ( <i>Philadelphus</i> spp.)	golden snowflake double white		x x
mondo grass ( <i>Ophiopogon japonicus</i> )		x	x
moss rose ( <i>Portulaca grandiflora</i> )	sunnyside		x
mountainash ( <i>Sorbus aucuparia</i> )			x
myrtle, crape ( <i>Lagerstroemia indica</i> )	Byer's hardy lavender Byer's white faurei langer muskogee peppermint lace standard pink zuni	x x    x  x	x x x x x x x x
myrtle, wax ( <i>Myrica californica</i> )			x
myrtle, willow ( <i>Agonis flexuosa</i> )			x
narcissus ( <i>Narcissus</i> spp.)			x
New Zealand flax ( <i>Phormium</i> sp.) ( <i>Phormium tenax</i> )	rainbow chief rainbow queen Jack Spratt	x x x	x x x
oak, laurel ( <i>Quercus laurifolia</i> )		x	x
oak, pin ( <i>Quercus palustris</i> )			x

**Acceptable Application Method Noted by a (X)**

<b>Name</b>	<b>Tolerant Cultivars</b>	<b>Over the Top</b>	<b>Directed</b>
oak, red ( <i>Quercus rubra</i> )			x
oak, shumard ( <i>Quercus shumardii</i> )		x	x
oak, southern ( <i>Quercus virginiana</i> )			x
oak, willow ( <i>Quercus phellos</i> )		x	x
oleander ( <i>Nerium oleander</i> )	hardy red Mrs. Roeding petite pink sister agnes	x	x x x x
oleaster hedge ( <i>Eleagnus x ebbengi</i> )		x	x
orange, jessamine† ( <i>Murraya paniculata</i> )		x	x
osmanthus ( <i>Osmanthus fragens</i> )		x	x
osmanthus, holly leaf ( <i>Osmanthus heterophyllus</i> )	goshiki	x	x
osteospermum ( <i>Osteospermum fruticosum</i> )	whirligig		x
pachysandra ( <i>Pachysandra terminalis</i> )			x
palm, bangalow ( <i>Archontophoenix cunninghamiana</i> )			x
palm, bismark ( <i>Bismarckia nobilis</i> )			x
palm, California fan ( <i>Washingtonia filifera</i> )		x	x
palm, cardboard ( <i>Zamia furfuracea</i> )		x	x
palm, majesty ( <i>Ravenea rivularis</i> )		x	x
palm, paurotis ( <i>Accolorrhaphe wrightii</i> )		x	x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
palm, pindo 'blue' ( <i>Butia capitata</i> )		x	x
palm, queen ( <i>Syagrus romanzoffianum</i> )		x	x
pampas grass ( <i>Cortaderia selloana</i> )	ivory feathers	x	x
pansy ( <i>Viola x wittrockiana</i> )			x
paper flower ( <i>Bougainvillea glabra</i> )	Barbara Karst	x	x
peach <sup>†</sup> ( <i>Prunus persica</i> )			x
pepper tree, California ( <i>Schinus molle</i> )		x	x
periwinkle, dwarf ( <i>Vinca minor</i> )			x
petunia ( <i>Petunia x hybrida</i> )	picoti	x	x
philodendron, tree ( <i>Philodendron selloum</i> )		x	x
photinia, red tip ( <i>Photinia x fraseri</i> )			x
piers ( <i>Pieris taiwanensis</i> )			x
piers, Japanese ( <i>Pieris japonica</i> )	mountain fire	x	x
pine, Afghan ( <i>Pinus eldarica</i> )		x	x
pine, aleppo ( <i>Pinus halapensis</i> )		x	x
pine, Austrian black ( <i>Pinus nigra</i> )		x	x
pine, Canary Island ( <i>Pinus canariensis</i> )		x	x
pine, Japanese black ( <i>Pinus thunbergia</i> )		x	x
pine, loblolly ( <i>Pinus taeda</i> )		x	x
pine, longleaf ( <i>Pinus palustris</i> )			x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
pine, mugo or Swiss Mt. ( <i>Pinus mugo</i> )			x
pine, Scotch ( <i>Pinus sylvestris</i> )			x
pine, slash ( <i>Pinus elliotii</i> )			x
pine, Virginia ( <i>Pinus virginiana</i> )			x
pine, white ( <i>Pinus strobus</i> )		x	x
pineapple, guava <sup>†</sup> ( <i>Feijoa sellowiana</i> )			x
pittosporum, ( <i>Pittosporum tobira</i> )	golf ball shimi crème de menthe Wheeler's dwarf	x x x	x x x
plum, purple <sup>†</sup> ( <i>Prunus cistena</i> )			x
plumbago, cape ( <i>Plumbago auriculata</i> )	royal cape	x	x
plume grass ( <i>Erianthus ravennae</i> )		x	x
Podocarpus ( <i>Podocarpus henkelii</i> )	yellowwood	x	x
potentilla ( <i>Potentilla fruticosa</i> ) ( <i>Potentilla nepalensis</i> )	abbotswood		x x
privet ( <i>Ligustrum x vicaryii</i> ) ( <i>Ligustrum japonicum</i> )	golden vicary regal texanum yellow tipped	x	x x x x
privet, glossy ( <i>Ligustrum lucidum</i> )		x	x
pyracantha or firethorn ( <i>Pyracantha x 'Gnome'</i> ) ( <i>Pyracantha coccinea</i> ) ( <i>Pyracantha koidzumii</i> )	gnome lalandei victory	x	x x x
queen palm ( <i>Arecastrum rammanzoffianum</i> )			x
quince, Japanese <sup>†</sup> ( <i>Chaenomeles japonica</i> )			x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
red hot poker ( <i>Kniphofia uvaria</i> )	flamenco	x	x
redbud, eastern ( <i>Cercis canadensis</i> )			x
redwood, coast ( <i>Sequoia sempervirens</i> )		x	x
rhododendron ( <i>Rhododendron</i> spp.)	album Cunningham white PJM purple gem silvery pink		x x x x x
rhododendron, Carolina ( <i>Rhododendron carolinianum</i> )			x
rhododendron, catawba ( <i>Rhododendron catawbiense</i> )			x
rhododendron, rhodie max -rosebay ( <i>Rhododendron maximum</i> )			x
ribbon grass ( <i>Phalaris arundinacea</i> )			x
rockcross ( <i>Arabis caucasica</i> )	snowcap		x
rose <sup>†</sup> ( <i>Rosa banksiae</i> )	luta		x
rose, groundcover ( <i>Rosa x Noare</i> ) ( <i>Rosa x Noaschnee</i> ) ( <i>Rosa x Noatrum</i> )	flower carpet red flower carpet white flower carpet pink	x x x	x x x
rose, knockout shrub ( <i>Rosa</i> spp. <i>hybrid</i> )	knockout	x	x
rose, rock ( <i>Cistus purpureus</i> )	'brilliancy'	x	x
rosemary <sup>†</sup> ( <i>Rosmarinus officinalis</i> )			x
rosemary, bog ( <i>Andromeda polifolia</i> )	nana		x
salvia ( <i>Salvia farinacea</i> )	rhea		x
sedge, leather leaf ( <i>Carex buchananii</i> )		x	x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
sedum ( <i>S. spurium</i> )	dragon blood red red carpet yellow		x x x
senecia ( <i>Senecia kleinia</i> )		x	x
silk tree ( <i>Albizia julibrissin</i> )		x	x
smoketree ( <i>Cotinus coggyria obovatus</i> )	Grace	x	x
smoketree, royal purple ( <i>Cotinus coggyria</i> )	royal purple		x
snapdragon ( <i>Antirrhinum</i> spp.)			x
snow-in-summer ( <i>Cerastium tomentosum</i> )		x	x
snowball, common ( <i>Viburnum opulus</i> )	sterile	x	x
sourwood ( <i>Oxydendrum arboreum</i> )			x
spiraea ( <i>Astilbe x arendsii</i> )	fanall		x
spiraea ( <i>Spiraea x vanhouttei</i> )	bridal wreath spiraea	x	x
spiraea ( <i>Spiraea</i> spp.)	Anthony Waterer red dolchica froebeli pink goldenflame red snowmound white		x x x x x
spiraea, garland ( <i>Spiraea x arguta</i> )			x
spruce, Black Hills ( <i>Picea glauca var densata</i> )			x
spruce, Colorado blue ( <i>Picea pungens</i> )	glauca	x	x
spruce, dwarf Alberta ( <i>Picea glauca v. albertiana</i> )	conica	x	x
spruce, Norway ( <i>Picea abies</i> )			x
spruce, white ( <i>Picea glauca</i> )	conica		x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
spurge, Japanese ( <i>Pachysandra terminalis</i> )	green sheen	x	x
sweet bay ( <i>Laurus nobilis</i> )			x
sweetflag ( <i>Acorus calamus</i> ) ( <i>A. gramineus</i> )	ogon	x	x x
sweetgum ( <i>Liquidambar styraciflua</i> )			x
sweet olive <sup>†</sup> ( <i>Osmanthus fragrans</i> )			x
sycamore ( <i>Platanus occidentalis</i> ) ( <i>P.I. racemosa</i> )	American California	x	x x
tea tree, New Zealand ( <i>Leptospermum scoparium</i> )	ruby glow martini	x x	x x
tree fern (tiki fern) ( <i>Asparagus virgatus</i> )			x
trumpet flower or Carolina Jessamine ( <i>Gelsemium sempervirens</i> )			x
tulip ( <i>Tulip</i> spp.)	apeldoorn		x
tufted hairgrass ( <i>Deschampsia caespitosa</i> )			x
verbena, shrub ( <i>Lantana sellowiana</i> )			x
Verbena, St. Paul's ( <i>Verbena peruviana</i> )	St. Paul		x
viburnum ( <i>Viburnum</i> spp.)	American cranberry bush arrowwood European cranberry bush linden Mohica wright		x x x x x x
vinca (periwinkle) ( <i>Vinca minor</i> )			x
weigela ( <i>Weigela florida</i> )	java red	x	x

Name	Tolerant Cultivars	Acceptable Application Method Noted by a (X)	
		Over the Top	Directed
windmill palm ( <i>Trachycarpus fortunei</i> )			x
wisteria, Japanese ( <i>Wisteria floribunda</i> )	Texas purple	x	x
xylosma ( <i>Xylosma congestum</i> )			x
yarrow ( <i>Achillea</i> spp.)			x
yaupon ( <i>Ilex vomitoria</i> )	dwarf		x
yellow bells ( <i>Tecoma stans</i> )		x	x
yesterday-today-and- tomorrow ( <i>Brunfelsia pauciflora</i> )	floribunda	x	x
yew ( <i>Taxus cuspidata</i> ) ( <i>Taxus x media</i> )	capitata denisiformis	x	x x
yucca, red ( <i>Hesperaloe parvifolia</i> )		x	x

† Ornamental species only. **DO NOT** use on plants grown for food or feed.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal.

### **Pesticide Storage**

Store this product only in its original container in a dry, cool, secured storage area. Store this product above 32°F to avoid crystallization. If crystals form or product freezes, move product to area with ambient temperature above 32°F and shake well until crystals have dissolved.

### **Pesticide Disposal**

Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### **Container Handling**

#### **NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS)**

**DO NOT** reuse or refill this container.

Offer for recycling, if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**IMPORTANT: READ BEFORE USE  
CONDITION OF SALE AND LIMITATION OF  
WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the unopened product container at once.

By using the 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. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of RightLine, LLC. To the extent consistent with applicable law, such risks shall be assumed by the user or buyer.

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EPA 20240328