

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505T) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

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EPA Reg. Number:

Date of Issuance:

3/23/23

NOTICE	OF	PESTICIDE:
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X Registration Reregistration (under FIFRA, as amended) Term of Issuance: Conditional

Name of Pesticide Product:

RightLine DITHIOPYR 2 L

Name and Address of Registrant (include ZIP Code):

RightLine, LLC c/o Pyxis Regulatory Consulting, Inc. 4110 136<sup>th</sup> St. Ct., NW Gig Harbor, WA 98332

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/registration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Continues page 2

Signature of Approving Official:	Date:
Mindy Ondish	3/23/23
Mindy Ondish, Product Manager 23	
Herbicide Branch, Registration Division (7505T)	

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- 2. You are required to comply with the data requirements described in the generic data call-in (GDCI) identified below:
  - a. Dithiopyr GDCI-128994-1426

You must comply with all of the data requirements within the established deadlines. If you have questions about the GDCI listed above, you may contact the Chemical Review Manager in the Pesticide Re-Evaluation Division: <a href="http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1">http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1</a>

3. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF:

• Basic CSF dated 11/4/2022

If you have any questions, please contact Derek Corbin at 202-566-2571 or at Corbin.Derek@epa.gov.

Enclosure

[Note to reviewer: [Text] in brackets denotes optional text.]

[Note to reviewer: {Text} in braces denotes where in the final label text will appear.]

Master Label includes:

Sub Label A: Commercial Use Sub Label B: Residential Use

{BOOKLET FRONT PANEL}
[Sub Label A: Commercial Use]

DITHIOPYR

GROUP

3

HERBICIDE

[company logo]

### RightLine DITHIOPYR 2 L

#### 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

[Solution for turf professionals]

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:**

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.]

EPA Reg. No. 93051-10

Manufactured for: RightLine, LLC 950 Falcon Drive Malden, MO 63863 NET CONTENTS: [Lot][Batch][No.]: ACCEPTED

03/23/2023

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

93051-10

EPA Est. No.:

#### **{LANGUAGE INSIDE BOOKLET}**

#### **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 ≥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 rinsate.

**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 ≥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 L is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to RightLine DITHIOPYR 2 L 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 L 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 resistancemanagement 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 L 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 L 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 L 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 L Alone with Liquid Fertilizer as the Carrier

Determine the compatibility of RightLine DITHIOPYR 2 L 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 L 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 isoxoben 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 L 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 L 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		Amount of Pesticide added to SprayCarrier (assuming volume is 25 gpa) Add:  Level Teaspoons per Pint Jar of CarrierSolution
Dry	1 lb	1 1/2
Liquid	1 qt	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 L 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 L

Used as directed, RightLine DITHIOPYR 2 L 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	Scientific Name
Grasses	
barley	Hordeum spp.
barnyardgrass	Echinochloa crus-galli
bluegrass, annual	Poa annua
brome	Bromus spp.
crabgrass, large	Digitaria sanguinalis
crabgrass, smooth	Digitaria ischaemum
crabgrass, southern	Digitaria ciliaris
crowfootgrass	Dactyloctenium aegyptium
dallisgrass (seedling)	Paspalum dilatatum
foxtail, giant	Setaria faberi
foxtail, green	Setaria verdi
foxtail, yellow	Setaria pumilia
goosegrass	Eleusine indica
kikuyugrass	Pennisetum clandestinum
Mary's grass (Japanese stiltgrass)	Microstegium vimineum (Trin.) A.Camus var. imberbe
oats, wild	Avena fatua
ryegrass (annual & perennial)	Lolium spp.
sandbur	Cenchrus spp.
smutgrass	Sporobolus indicus
southwestern cupgrass	Eriochloa gracilis

Broadleaf Weeds	
bittercress	Cardamine spp.
carpetweed	Mollugo verticillata
chickweed	Stellaria spp.
dandelion, common	Taraxacum officinale
geranium, Carolina	Geranium carolinianum
henbit	Lamium spp.
knotweed, prostrate	Polygonum aviculare

Broadleaf Weeds	
lespedeza, common	Lespedeza striata
marestail	Conyza canadensis
medic, black	Medicago lupulina
mulberry weed	Fatoua villosa
mustard	Brassica spp.
oxalis, buttercup	Oxalis pes-caprae
parsley-piert	Alchemilla arvensis
pigweed, redroot	Amaranthus retroflexus
pineappleweed	Matricaria matricarioides
purslane, common	Portulaca oleracea
rocket, London	Sisymbrium irio
shepherdspurse	Capsella bursa-pastoris
sowthistle	Sonchus oleraceus
speedwell, corn	Veronica arvensis
spurge, garden	Euphorbia hirta
spurge, prostrate	Euphorbia humistrata
spurge, spotted	Euphorbia maculata
willowherb	Epilobium spp.
woodsorrel, creeping	Oxalis corniculata
woodsorrel, yellow	Oxalis stricta

#### **USES**

#### **Use Directions For Turf Grass**

Use RightLine DITHIOPYR 2 L 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 L will prevent the germination of annual bluegrass. RightLine DITHIOPYR 2
  L 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 L 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- aerification, 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-aerification.
- 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 L (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 L (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 L (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 L should only be applied to the following turfgrass species which are tolerant to this product.

#### **Established Cool Season Turfgrasses**

Common NameScientific Namebentgrass, creeping†Agrostis palustrisbluegrass, KentuckyPoa pratensisfescue, fine††Festuca rubra

fescue, tall Lolium arundinaceum ryegrass, perennial Lolium perenne

#### **Established Warm Season Turfgrasses**

Common NameScientific NamebahiagrassPaspalum notatumbermudagrass\*\*\*Cynodon dactylonbuffalograss\*\*\*Buchloe dactyloidescarpetgrassAxonopus affinis

centipedegrass Eremochloa ophiuroides
kikuyugrass Pennisetum clandestinum
seashore paspalum Paspalum vaginatum
St. Augustinegrass Stenotaphrum secundatum

zoysiagrass Zoysia japonica

- 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.
- 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.
- DO NOT use this product on Tifgreen (328) hybrid bermudagrass as undesirable turfgrass injury may result. Other common and hybrid bermudagrass varieties are tolerant.
- 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 L 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 L 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 L 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 L 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 L 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 L 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 L 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 L						
(pt/acre) (fl oz/1000 sq ft) (fl oz/100 sq ft) (ml/100 sq ft)						
2	0.73	0.073	2.2			
(0.5 lb ai dithiopyr)						

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 L 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 L 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 L 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 L.

#### **Use Precautions:**

- Apply RightLine DITHIOPYR 2 L to established ornamentals only.
- Applications of RightLine DITHIOPYR 2 L 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 L is applied in the following manner. Grower assumes all risk if RightLine DITHIOPYR 2 L is applied to:
  - o Unrooted liners or cuttings that have been planted in pots for the first time
  - o 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 L (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 L (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 L (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 L 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 L: 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 L 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 L on plant species not currently listed on this label as tolerant.

#### **Application Directions**

Apply RightLine DITHIOPYR 2 L 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 L from plant surface onto soil surface.
- In the spring when buds are rapidly growing and expanding, over the top application of RightLine DITHIOPYR 2 L may temporarily injure new growth of desirable plants. To reduce the possibility of injury at this time, wait to apply RightLine DITHIOPYR 2 L 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 L is a preemergence herbicide that controls weeds during germination. RightLine DITHIOPYR 2 L 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 L, 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 L 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 L with a calibrated sprayer that assures accurate, uniform spray distribution. In general, RightLine DITHIOPYR 2 L 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 L					
(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.

			Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed	
abelia (Abelia x grandiflora)	nana grand surprise	х	X X	
acacia, redolens (Acacia redolens)		Х	Х	
abyssinian redbanana (Ensete ventricosum)	maureli	Х	х	
Agave <sup>†</sup> (Agave bovicornuta)	blue glow Queen Victoria	X X X	X X X	
(A. gypsophila (A. victoriae-reginae)	royal	X X	X X	
(A. vilmoriniana)		Х	х	
Ajuga carpet bugle (Ajuga reptans) (Ajuga genevensis)	bronze bronze beauty		X X	
almond, flowering ( <i>Prunus gladulosa</i> )	on the bounty		Х	
apple <sup>†</sup> <i>(Malus pumila)</i>			Х	
aralia, Japanese <i>(Fatsia japonica)</i>			Х	
arborvitae (Thuja occidentalis)	George Peabody nigra	Х	X X	
	pyramidalis smaragh		x x	
	techny woodwardii		X X	

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
arborvitae, dwarf golden ( <i>Thuja orientalis)</i>	aurea nana	Х	Х
ash, green (Fraxinus pennsylvanica)			х
ash, autumn purple (Fraxinus americana)	autumn purple		х
aster, Chinese (Callistephus chinensis)	dwarf queen		х
azalea	brilliant		Х
(Rhododendron spp.)	buccaneer		х
	carror		Х
	chimes (Belgian)		х
	Elsie Lee		х
	exbury		x
	fashion		x
	Girard's crimson	X	x
	hardijzer beauty		х
	hershey red		X
	higasa		x
	hinocrimson		x
		v	
	high tide	X	X
	Holland (hybrid)		X
	Marion Lee		Х
	northern lights		X
	Nuccio's Wild Cherry	X	Х
	orange cup		Х
	orchid lights		х
	pink gumbo	Х	Х
	pride of Mobile	X	X
	snow southern charm		X X
azalea, flame (Rhododendron	Southern Gramm		X
calendulaceum)			
azalea, Kurume or			Х
kirishima	coral bells	х	x
(Rhododendron obtusum)			
bamboo, heavenly (Nandina domestica)	compacta nana		X
(Ivanullia uolilestica)	plum passion	x	X X
banana shrub	piani paccion	X	X
(Michelia figo)		^	
barberry, Japanese	aurea		X
(Berberis thunbergii)	crimson pygmy dwarf pygmy	X	X X
	green	I	Х

		Acceptable Application Method Noted by a (X)		
Name	Tolerant Cultivars	Over the Top	Directed	
	kobold		Х	
	pygmy red		х	
	rose glow		Х	
barberry, purple ( <i>Berberis thunbergii</i> var atropurpurea)	atropurpurea		х	
basket flower (Gaillardia grandiflora)			Х	
beach grass (Ammophila breviligulata)			х	
bearberry (common) (Arctostaphylos uva-ursi)	Massachusetts		Х	
bee balm (Monarda didyma)			Х	
begonia <i>(Begonia</i> spp.)			х	
birch, river (Betula nigra)	dura heat	Х	х	
birch, European white (Betula pendula)			х	
blackeyed Susan (Rudbeckia hirta)	goldstrum		х	
blanket flower (Gaillardia spp.)			х	
blood grass (Imperata cylindrica)	rubra	Х	Х	
blue fescue (Festuca ovina)			х	
bluebeard (Caryopteris x clandonensis)	dark knight	Х	Х	
blueberry <sup>†</sup>	bluecrop		Х	
(Vaccinium spp.)	blue jay		х	
	Jersey		х	
	north blue		х	
	northland		Х	
bottlebrush (Callistemon citrinus)	Little John	Х	Х	
bougainvillea	James Walker		х	
(Bougainvillea sp.)	pink dream		x	
	purple queen	Х	х	
	rosenka	X	X	
	Scarlet O' Hara	X	Х	
bower vine (Pandorea jasminoides)	rosea	Х	Х	
boxwood, green beauty (Buxus microphylla japonica)	green beauty	Х	х	

			Application ed by a (X)
Name	Tolerant Cultivars	Over the Top	Directed
boxwood, welleri	winter gem	Х	Х
(Buxus sempervirens)	common boxwood	Х	х
broom			
(Cytisus scoparius)	moonlight		Х
(Genista pilosa)	Vancouver gold		Х
cactus	golden barrel	Х	Х
(Echinocactus grusonii)	gordon barron	^	
camellia			
(Camellia japonica)	debutante		х
(Carriella japorlica)	mathotiana supreme	х	x
(Camellia sasanqua)	chansonette	x	x
(Carricina Sasariqua)	setsukgekka	x	x
candytuft	snow white	^	X
(Iberis sempervirens)	SHOW WILLE		_ ^
· · · · · · · · · · · · · · · · · · ·		.,	
carex, variegated		Х	Х
(Carex spp.)			
carpet bugle			
(Ajuga reptans)	bronze		Х
(Ajuga genevensis)	bronze beauty		Х
cedar, red			Х
(Juniperus virginiana)			
celosia			х
(Celosia spp.)			
centaura			Х
(Centaurea montana)			
cherry tree†	yoshino	Х	Х
(Prunus x yedoensis)			
Chinese pistache			Х
(Pistacia chinensis)			
chrysanthemum	mandarin time	Х	Х
(Chrysanthemum sp.)	manaam timo	^	
cleyera	Leann	Х	Х
(Cleyera japonica)	LCann	^	^
clivia		V	v
clivia (Clivia miniata)		X	Х
	poorlot plumose		.,
cockscomb, plumosa	scarlet plumosa		X
(Celosia cristata)	and house in		
coleus	red kewpie		Х
(Coleus blumei)			
columbine			Х
(Aquilegia spp.)			
coneflower, purple			Х
(Echinacea purpurea)	magnus purple	Х	Х
copper leaf			Х
(Acalypha wilkesiana)			
coreopsis	moonbeam		Х
(Coreopsis spp.)			

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
corn flower			Х
(Centaurea spp.)			
cotoneaster			Х
(Cotoneaster apiculatus)			
coyotebrush			Х
(Baccharis pilularis)			
cycad			Х
(Cycas revoluta)			
cypress, bald		Х	Х
(Taxodium distichum)			
cypress, Italian	glauca		Х
(Cupressus sempervirens)	tiny tower	x	X
cypress, hinoki false	gracilis		X
(Chamaecyparis obtusa)	torulosa	х	x
cypress, leyland	loruiooa	X	X
(Cupressocyparis leylandii)		^	^
hybrid			
daffodil	King Alfred		V
( <i>Narcissus</i> spp.)	King Aired		Х
damianita			,,
(Chrisactinia mexicania)			Х
daylilly	Aztec gold		Х
(Hemerocallis spp.)	bright yellow (hybrid)		Х
	single gold (evergreen)		Х
	Wilson's yellow		Х
dianthus (sweet William)			Х
(Dianthus spp.)			
(Dianthus	firewatch	Х	Х
gratianopolitanus)			
delphinium	magic fountain		Х
(Delphinium spp.)			
desert spoon		Х	Х
(Dasilyrion wheeleri)			
dogwood			Х
(Cornus florida)			
dogwood, American	flavarimea		х
(Cornus sericea)			
Douglas fir			Х
(Pseudotsuga menziesii)			[
dracaena			
(Cordyline indivisa)		x	x
(Cordyline australis)		x	x
dusty miller	+	X	X
(Senecio cineraria)		^	_ ^
elm	drake		Х
(Ulmus parvifolia)	lare		_ ^
escallonia	+		
escalionia ( <i>Escallonia x exonienis</i> )	fradoci	V	
(Localionia x exorileriis)	fradesi	X	Х

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
eulaliagrass/maiden grass	gracillimus	Х	Х
(Miscanthus sinensis)	variegatus	Х	х
	morning light	х	Х
euonymus			
(Euonymus fortunei)	Argenteo-variegata		x
,	colorata		x
	emerald gaiety		x
	emerald n' gold		x
	gold edge		
			X
	golden princess		X
	tricolor		X
	vegetus		х
(Euonymus japonicus)	Aureomarginata		х
	microphylla variegata	х	х
	'Moness" silver princess	х	x
	silver king		x
(Euonymus kiatschovicus)	Manhattan	х	X
euryops, green leaved (Euryops pectinatus)	viridis	Х	х
fan palm, European (Chamaerops humilis)			х
fan palm, Mexican (Washingtonia robusta)			х
fern (various) (Asparagus spp.)			х
fescue			Х
(Festuca glauca)			
fescue, blue (Festuca cinerea)	Elijah blue		Х
fetterbush	rainbow		Х
(Leucothoe fontanesiana)			
ficus <i>(Ficus retusa)</i>	nitidia		Х
fir fraser			Х
(Abies fraseri)			
fortnight lily		Х	Х
(Moraea bicolor)			
Forsythia			
( <i>Forsythia</i> x 'Arnold Dwarf)	arnold dwarf		х
(Forsythia viridissima)	bronxensis dwarf		х
(Forsythia xintermedia)	lynwood gold		х
(Forsythia x'Meadowlark')	meadowlark		Х
(Forsythia x intermedia)	spring glory	х	x
(Forsythia suspensa)	weeping		х

		Acceptable Applicati Method Noted by a (2	
Name	Tolerant Cultivars	Over the Top	Directed
fountain grass, purple (Pennisetum setaceum)	rubrum	X	х
fringe flower, Chinese	Chang's ruby	Х	Х
(Loropetalum chinense)	ruby purple diamond	Х	Х
fuchsia <i>(Fuchsia spp.</i> )			х
galium <i>(Galium ordoratum)</i>			х
gardenia	August beauty	Х	Х
(Gardenia jasminoides)	Frost proof	х	Х
	mystery		Х
	radicans	Х	Х
	veitchii	Х	Х
	white gem	Х	Х
(Gardenia thunbergia)		Х	Х
Garlic, variegated society <sup>†</sup> ( <i>Thulbaghia violacea)</i>	variegata	Х	Х
gayfeather	floristan violet	Х	Х
(Liatris spicata)			
gazania			
<i>(Ga</i> zania <i>rigens</i>	trailing gazania	х	x
leucolaena)			
geranium (Pelargonium x hortorum)			Х
globe thistle (Echinops ritro)		Х	х
gum (Eucalyptus citriodora)			х
hawthorn	cockspur white		Х
(Crataegus spp.)	crimson cloud		Х
	enchantress		Х
	Jack Evans		Х
	Washington white		Х
hawthorn, Indian	ballerina enchantress	Х	Х
(Rhaphiolepsis indica)		Х	Х
heather, twisted <i>(Erica cinerea)</i>	Mediterranean pink		х
heliotrope (Heliotropum arborescens)	lowa		х
hemlock, Canada (Tsuga canadensis)			х
hibiscus	blue bird		х
(Hibiscus sp.)	brilliant		x
( · ····· · · · · · · · · · · · · · · ·	hula girl		x
(Hibiscus rosa-sinensis)	Seminole pink		x
holly (Nov. v. (Nollia B. Stavana)	Nollio B. Stoyers		
(Ilex x 'Nellie R. Stevens')	Nellie R. Stevens	X	X
(Ilex x attenuata)	fosteri Savannah	X	X
	Pavaililali		X

Top   Dilue   Dilue			Acceptable Application Method Noted by a (X)	
China girl	Name	Tolerant Cultivars		Directed
China girl	holly, blue	blue boy		Х
Molly, cassine	(Ilex x meserveae)	blue girl		х
(Ilex cassine)         Burfordii         X         X           (Ilex cornuta)         Carissa         X         X           nolly, Japanese         compacta         X         X           (Ilex crenata)         bellerie         X         X           Japanese northern beauty         X         X           klellerie         X         X           kappencia         X         X           klellerie         X         X           kappencia         X         X           kledes		China girl		Х
(Ilex cornuta)         Carissa needlepoint         x         x           (Ilex crenata)         compacta hellerie         x         x           (Ilex crenata)         hellerie         x         x           Japanese northern beauty sky pencil         x         x           steeds         x         x           (Ilex vomitoria)         x         x           nonly, yaupon (Ilex vomitoria)         x         x           noneysuckle         (Lonicera xylosteum)         x         x           (Lonicera xylosteum)         Claveyí dwarf         x         x           (Lonicera tatarica)         Canadian white         x         x           (Lonicera x brownii)         dropmore scarlet         x         x           (Lonicera x brownii)         purpurea         x         x           (Lonicera x brownii)         dropmore scarlet         x         x           (Hosta sieboldii)         x         x         x           (Hosta sieboldii)<	holly, cassine ( <i>Ilex cassine</i> )		х	Х
needlepoint	holly, Chinese	Burfordii	Х	Х
nolly, Japanese (Ilex crenata)    hellerie	(Ilex cornuta)	Carissa	х	х
hellerie   Japanese northern beauty   sky pencil   x   x   x   x   x   x   x   x   x		needlepoint	Х	Х
Japanese northern beauty sky pencil x x x x x x x x x x x x x x x x x x x	holly, Japanese	compacta	Х	Х
sky pencil x x x x x x x x x x x x x x x x x x x	(Ilex crenata)	hellerie		х
Steeds				Х
nolly, yaupon (Ilex vomitoria) noneysuckle (Lonicera yalosteum ) (Lonicera japonica) (Lonicera tatarica) (Lonicera tatarica) (Lonicera tatarica) (Lonicera x brownii) nop bush, purple (Dodonea viscosa) nosta (Hosta sieboldii) (Hosta sieboldii) (Carpobrotus edulis) ce plant (Carpobrotus edulis) ce plant, rosea (Drosanthemum floribundum) ce plant, purple (Lampranthus productus) ce plant, red spike (Cephalophyllumalstonii) mpatiens (Impatiens spp.) (I. balsamina) ris (Iris spp) wedgewood vx cerplant (Iris spisa) wedgewood vx cerplast  A  A  A  A  A  A  A  A  A  A  A  A  A			Х	Х
(Ilex vomitoria)       X         noneysuckle       X         (Lonicera xylosteum)       Claveyí dwarf         (Lonicera tatarica)       X         (Lonicera tatarica)       Canadian white         Zabelli       X         (Lonicera x brownii)       dropmore scarlet       X         Nop bush, purple       purpurea       X         (Dodonea viscosa)       Nosta       X         (Hosta sieboldii)       X       X         (Hosta lancifolia)       albo marginata       X         X ce plant       X       X         (Carpobrotus edulis)       X       X         X ce plant, rosea       X       X         (Drosanthemum fibribundum)       X       X         X ce plant, white trailing       X       X         (Delosperma alba)       X       X         X ce plant, purple       X       X         (Lampranthus productus)       X       X         X ce plant, red spike       X       X         (Cephalophyllumalstonii)       X       X         X mpatiens       X       X         (In blasamina)       X       X         X rise       X       X		steeds	Х	Х
Claveyi dwarf   X	holly, yaupon (Ilex vomitoria)		х	х
(Lonicera xylosteum )         Claveyí dwarf         x           (Lonicera japonica)         halliana         x           (Lonicera tatarica)         Canadian white         x           Zabelli         x         x           (Lonicera x brownii)         dropmore scarlet         x         x           nop bush, purple         purpurea         x         x           (Dodonea viscosa)         purpurea         x         x           (Hosta sieboldii)         x         x         x           (Hosta lancifolia)         albo marginata         x         x           (Cerplant         x         x         x           (Carpobrotus edulis)         x         x         x           ce plant, rosea         x         x         x           (Drosanthemum         floribundum)         x         x           ce plant, white trailing         x         x         x           (Delosperma alba)         x         x         x           ce plant, purple         x         x         x           (Lampranthus productus)         x         x         x           ce plant, red spike         x         x         x           (Li balsamin	/			
(Lonicera japonica)     halliana     X       (Lonicera tatarica)     Canadian white     X       Zabelli     X       (Lonicera x brownii)     dropmore scarlet     X       nop bush, purple     purpurea     X       (Dodonea viscosa)     X       nosta     (Hosta sieboldii)     X       (Hosta lancifolia)     albo marginata     X       (Ce plant (Carpobrotus edulis)     X     X       (Ce plant, rosea     X     X       (Drosanthemum floribundum)     X     X       (Ce plant, purple     X     X       (Lampranthus productus)     X     X       (ce plant, red spike     X     X       (Cephalophyllumalstonii)     X     X       mpatiens     X     X       (In balsamina)     X     X       vis     dwarf blue     X       (Iris spp)     wedgewood     X       vy, English     Bulgaria thorndale     X       (Hedera helix)     X     X       asmine, Asiatic     X     X       (Trachelospermum     X     X		Claveví dwarf		×
(Lonicera tatarica)     Canadian white Zabelli     x       (Lonicera x brownii)     dropmore scarlet     x       nop bush, purple (Dodonea viscosa)     purpurea     x       (Hosta sieboldii)     (Hosta lancifolia)     x       (Hosta lancifolia)     albo marginata     x       ce plant (Carpobrotus edulis)     x     x       ce plant, rosea (Drosanthemum floribundum)     x     x       ce plant, white trailing (Delosperma alba)     x     x       ce plant, purple (Lampranthus productus)     x     x       ce plant, red spike (Cephalophyllumalstonii)     x     x       mpatiens (Impatiens spp.) (I. balsamina)     x     x       ris (Impatiens spp)     wedgewood     x       vy, English (Hedera helix)     Bulgaria thorndale     x       asmine, Asiatic (Trachelospermum     x     x				
Zabelli dropmore scarlet x x x x x x x x x x x x x x x x x x x				
(Lonicera x brownii)     dropmore scarlet     x     x       nop bush, purple (Dodonea viscosa)     purpurea     x     x       nosta (Hosta sieboldii)     x     x       (Hosta lancifolia)     albo marginata     x     x       ce plant (Carpobrotus edulis)     x     x     x       (ce plant, rosea (Drosanthemum floribundum)     x     x     x       ce plant, white trailing (Delosperma alba)     x     x     x       ce plant, purple (Lampranthus productus)     x     x     x       ce plant, red spike (Cephalophyllumalstonii)     x     x     x       mpatiens (Impatiens spp.) (I. balsamina)     x     x     x       ris (Iris spp)     wedgewood     x     x       vy, English (Hedera helix)     Bulgaria thorndale     x       (Trachelospermum     x     x	(Lornoora tatarroa)			
hop bush, purple (Dodonea viscosa) hosta (Hosta sieboldii) (Hosta lancifolia) ce plant (Carpobrotus edulis) ce plant, rosea (Drosanthemum floribundum) ce plant, white trailing (Delosperma alba) ce plant, red spike (Cephalophyllumalstonii) mpatiens (Impatiens spp.) (I. balsamina) ris (Iris spp) wedgewood vy, English (Hedera helix) albo marginata x x x x x x x x x x x x x x x x x x	(Lonicera x brownii)		x	
hosta (Hosta sieboldii) (Hosta lancifolia) ce plant (Carpobrotus edulis) ce plant, rosea (Drosanthemum floribundum) ce plant, white trailing (Delosperma alba) ce plant, purple (Lampranthus productus) ce plant, red spike (Cephalophyllumalstonii) mpatiens (Impatiens spp.) (I. balsamina) ris classing dwarf blue vy, English (Hedera helix) asmine, Asiatic (Trachelospermum	hop bush, purple			х
(Hosta sieboldii)     x       (Hosta lancifolia)     albo marginata       ce plant     x       (Carpobrotus edulis)     x       ce plant, rosea     x       (Drosanthemum     x       floribundum)     x       ce plant, white trailing     x       (Delosperma alba)     x       ce plant, purple     x       (Lampranthus productus)     x       ce plant, red spike     x       (Cephalophyllumalstonii)     x       Impatiens     x       (Insasamina)     x       vis     dwarf blue       vy, English     Bulgaria thorndale       (Hedera helix)     x       asmine, Asiatic     x       (Trachelospermum	,			
(Hosta lancifolia)       albo marginata       x         (Carpobrotus edulis)       x       x         (Drosanthemum floribundum)       x       x         (ce plant, white trailing (Delosperma alba)       x       x         (ce plant, purple (Lampranthus productus)       x       x         (ce plant, red spike (Cephalophyllumalstonii)       x       x         (Inpatiens spp.)       x       x         (I. balsamina)       x       x         vy, English (Hedera helix)       Bulgaria thorndale       x         (Trachelospermum       x       x				×
ce plant (Carpobrotus edulis)  ce plant, rosea (Drosanthemum filoribundum)  ce plant, white trailing (Delosperma alba)  ce plant, purple (Lampranthus productus)  ce plant, red spike (Cephalophyllumalstonii)  mpatiens (Impatiens spp.) (I. balsamina)  ris (Iris spp)  wedgewood  vy, English (Hedera helix) asmine, Asiatic (Trachelospermum		alho marginata		
(Carpobrotus edulis)       (ce plant, rosea     X     X       (Drosanthemum     X     X       floribundum)     X     X       (ce plant, white trailing     X     X       (Delosperma alba)     X     X       (ce plant, purple     X     X       (Lampranthus productus)     X     X       (ce plant, red spike     X     X       (Cephalophyllumalstonii)     X     X       Impatiens     X     X       (Inspatiens spp.)     X     X       (I. balsamina)     X     X       vis     Wedgewood     X       (Vy, English     Bulgaria thorndale     X       (Hedera helix)     X       asmine, Asiatic     X     X       (Trachelospermum     X	,	albomarginata		
ce plant, rosea (Drosanthemum floribundum) ce plant, white trailing (Delosperma alba) ce plant, purple (Lampranthus productus) ce plant, red spike (Cephalophyllumalstonii) impatiens (Impatiens spp.) (I. balsamina) ris (Iris spp) wedgewood vy, English (Hedera helix) asmine, Asiatic (Trachelospermum			^	^
(Drosanthemum floribundum) ice plant, white trailing (Delosperma alba) ice plant, purple (Lampranthus productus) ice plant, red spike (Cephalophyllumalstonii) impatiens (Impatiens spp.) (I. balsamina) iris (Iris spp) ivy, English (Hedera helix) asmine, Asiatic (Trachelospermum				v
floribundum) ice plant, white trailing (Delosperma alba) ice plant, purple (Lampranthus productus) ice plant, red spike (Cephalophyllumalstonii) impatiens (Impatiens spp.) (I. balsamina) ix  x  x  x  x  x  x  x  x  x  x  x  x			^	^
ce plant, white trailing (Delosperma alba) ce plant, purple (Lampranthus productus) ce plant, red spike (Cephalophyllumalstonii) mpatiens (Impatiens spp.) (I. balsamina) ris (Iris spp) wedgewood vy, English (Hedera helix) asmine, Asiatic (Trachelospermum	•			
(Delosperma alba) (Ce plant, purple (Lampranthus productus) (Ce plant, red spike (Cephalophyllumalstonii) (Inpatiens spp.) (I. balsamina) (Is spp) (Iris spp) (Vy, English (Hedera helix) (Trachelospermum)  X X X  X X  X X  X X  X X  X X  X X				v
ce plant, purple (Lampranthus productus) ce plant, red spike (Cephalophyllumalstonii) mpatiens (Impatiens spp.) (I. balsamina) x x x x  x  x  x  x  x  x  x  x  x  x			^	^
(Lampranthus productus)       (ce plant, red spike     x     x       (Cephalophyllumalstonii)     x     x       (Impatiens (Impatiens spp.)     x     x       (I. balsamina)     x     x       (Iris (Iris spp)     wedgewood     x       vy, English     Bulgaria thorndale     x       (Hedera helix)     x     x       (Trachelospermum     x     x				
ce plant, red spike (Cephalophyllumalstonii) mpatiens (Impatiens spp.) (I. balsamina) x x x x x x x x x x x x x x x x x x x			^	^
(Cephalophyllumalstonii)       Impatiens     X       (Impatiens spp.)     X       (I. balsamina)     X       ris     dwarf blue       (Iris spp)     wedgewood       vy, English     Bulgaria thorndale       (Hedera helix)     X       asmine, Asiatic     X       (Trachelospermum     X			<b>-</b>	
Impatiens         X           (Impatiens spp.)         X           (I. balsamina)         X           ris         dwarf blue           (Iris spp)         wedgewood           vy, English         Bulgaria thorndale           (Hedera helix)         X           asmine, Asiatic         X           (Trachelospermum         X			^	^
(Impatiens spp.)       (I. balsamina)     x       (Is alsamina)     x    <			+	<b>-</b>
(I. balsamina) x x x  Iris dwarf blue x x  (Iris spp) wedgewood x x  Ivy, English Bulgaria thorndale x x  (Hedera helix) x x  (Trachelospermum				_ ^
ris dwarf blue x (Iris spp) wedgewood x  vy, English Bulgaria thorndale x (Hedera helix) x (asmine, Asiatic x (Trachelospermum				
(Iris spp)     wedgewood     x       vy, English     Bulgaria thorndale     x       (Hedera helix)     x       asmine, Asiatic     x     x       (Trachelospermum     x     x	,	dwarf blue	^	
vy, English     Bulgaria thorndale     x       (Hedera helix)     x       asmine, Asiatic     x     x       (Trachelospermum     x     x				
(Hedera helix) x asmine, Asiatic x x (Trachelospermum				
asmine, Asiatic x x (Trachelospermum		Bulgaria morridale		
(Trachelospermum	•	+	<b>-</b>	
			×	×
asiaticum)	(Tracneiospermum asiaticum)			

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
asmine, star (Trachelospermum asminoides)			Х
uniper	Arcadia		Х
Juniperus <i>spp</i> .)	Armstrong		Х
	bar harbor		Х
	blue chip	х	Х
	blue Pacific shore	x	Х
	blue point	х	х
	blue rug	x	Х
	blue star	x	Х
	broadmoor		х
	buffalo		х
	calgary carpet		х
	emerald sea		Х
	emerald spreader		Х
	endora compacta		Х
	fruitlandi		Х
	gold coast	x	х
	green		х
	grey owl	x	X
	gold tip		X
	hetzi		x
	hughes		x
	icee blue	×	X
	Manhattan blue		x
	parsonii	x	X
	pfitzeriana		X
	plumosa		X
	Prince of Wales		X
	procumbens dwarf		X
	prostrate Japanese garden	×	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		
	tamarix	v	X
	torulosa – Hollywood	X X	X

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
	twisted		Х
	weberi		х
	Youngstown		x
	Yukon belle		X
dia a a a las	T GROTT BEILE		
king palm		Х	Х
(Archontophoenix			
cunninghamiana)			
antana		Х	Х
(Lantana sellowiana)			
aurel, Carolina cherry	bright n' tight	Х	Х
(Prunus caroliniana)			
aurel, mountain			х
(Kalmia latifolia)			
aurel, Texas mountain		Х	Х
Sophora secundiflora)			
eucothoe			Х
(Leucothoe fontanesiana)			
igustrum, Japanese			Х
(Ligustrum japonicum)			
ily	streamline		Х
(Agapanthus spp.)	Streamline		^
ily, Asiatic			
		X	Х
Lilium asiaticum)			
ily, Kaffir		Х	Х
(Clivia miniate)			
Lily of the Nile	albus		Х
(Agapanthus africanus)	Peter Pan		Х
ilyturf	blue moon	Х	Х
Liriope muscari)	evergreen giant		Х
	lilac beauty		Х
	majestic	Х	Х
	monroe white		Х
	silvery sunproof	Х	Х
	variegata		Х
ilyturf, creeping			х
(Liriope spicata)			
magnolia	D.D. Blanchard	Х	Х
(Magnolia grandiflora)			
nagnolia, saucer		Х	х
(Magnolia x soulangeana)			
mandevilla			
Mandevilla splendens)	Red Riding Hood	x	х
(Mandevilla x amabilis)	crimson jewel	x	X
maple, amur	emerald elf	X	X
(Acer ginnala)		^	^
maple, Japanese	+		V
Acer palmatum)		X	Х

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

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
oak, shumard		Х	Х
(Quercus shumardii)			
oak, southern			х
(Quercus virginiana)			
oak, willow		Х	Х
(Quercus phellos)			
oleander	hardy red		Х
(Nerium oleander)	Mrs. Roeding	X	x
	petite pink		х
	sister agnes		Х
oleaster hedge		Х	х
(Elaeagnus X ebbengi)			
orange, jessamine†		Х	Х
(Murraya paniculata)			
osmanthus		Х	Х
(Osmanthus fragens)			
osmanthus, holly leaf	goshiki	Х	х
(Osmanthus heterophyllus)			
osteospermum	whirligig		х
(Osteospermum			
fruticosum)			
pachysandra			х
(Pachysandra terminalis)			
palm, bangalow			х
(Archontophoenix			
cuninghamiana)			
palm, bismark			Х
(Bismarckia nobilis)			
palm, California fan		Х	Х
(Washingtonia filifera)			
palm, cardboard		Х	Х
(Zamia furfuracea)			
palm, majesty		Х	Х
(Ravenea rivularis)			
palm, paurotis		Х	Х
(Acoelorraphe wrightii)			· ·
palm, pindo 'blue' ( <i>Butia</i>		Х	Х
capitata)			^
palm, queen		Х	Х
(Syagrus romanzoffianum)			^
pampas grass			Х
(Cortaderia selloana)	ivory feathers	x	X
pansy	21,712		Х
(Viola x wittrockiana)			^
paper flower	Barbara Karst	х	Х
(Bougainvillea glabra)	Darbara Raist	^	^
peach <sup>†</sup>			Х
(Prunus persica)			_ ^

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
pepper tree, California (Schinus molle)		Х	Х
periwinkle, dwarf (Vinca minor)			х
petunia ( <i>Petunia x hybrida</i> )	picoti	Х	х
philodendron, tree (Philodendron selloum)		х	Х
photinia, red tip (Photinia x fraseri)			х
pieris ( <i>Pieris taiwanensis</i> )			х
pieris, Japanese (Pieris japonica)	mountain fire	Х	х
pine, Afghan ( <i>Pinus eldarica)</i>		Х	х
pine, aleppo ( <i>Pinus halapensis</i> )		Х	Х
pine, Austrian black ( <i>Pinus nigra</i> )		Х	Х
pine, Canary Island (Pinus canariensis)		Х	х
pine, Japanese black (Pinus thunbergiia)		Х	х
pine, loblolly (Pinus taeda)		Х	х
pine, longleaf ( <i>Pinus palustris</i> )			х
pine, mugo or Swiss Mt. (Pinus mugo)			Х
pine, Scotch (Pinus sylvestris)			Х
pine, slash <i>(Pinus elliottii)</i>			Х
pine, Virginia <i>(Pinus virginiana)</i>			Х
pine, white (Pinus strobus)		Х	Х
pineapple, guava <sup>†</sup> ( <i>Feijoa sellowiana)</i>			х
pittosporum, (Pittosporum tobira)	golf ball shimi crème de menthe Wheeler's dwarf	X X X	X X X
plum, purple† ( <i>Prunus cistena</i> )			Х
plumbago, cape (Plumbago auriculata)	royal cape	Х	х

		Acceptable Application	
Name	Tolerant Cultivars	Over the Top	Directed
plume grass (Erianthus ravennae)		Х	Х
Podocarpus ( <i>Podocarpus</i> henkelii)	yellowood	х	Х
potentilla (Potentilla fruticosa) (Potentilla nepalensis)	abbotswood		X X
privet (Ligustrum x vicaryii) (Ligustrum japonicum)	golden vicary regal texanum yellow tipped	х	x x x x
privet, glossy (Ligustrum lucidum)		Х	Х
pyracantha or firethorn (Pyricantha x 'Gnome') (Pyricantha coccinea) (Pyracantha koidzumii)	gnome lalandei victory	х	X X X
queen palm (Arecastrum rammanzoffianum)			Х
quince, Japanese <sup>†</sup> ( <i>Chaenomeles japonica</i> )			Х
red hot poker (Kniphofia uvaria)	flamenco	Х	Х
redbud, eastern (Cercis canadensis)			Х
redwood, coast (Sequoia sempervirens)		х	Х
rhododendron (Rhododendron spp)	album Cunningham white PJM purple gem silvery pink		x x x x
rhododendron, Carolina Rhododendron carolinianum)			Х
rhododendron, catawba (Rhododendron catawbiense)			Х
rhododendron, rhodie max – rosebay ( <i>Rhododendron maximum</i> )			Х
ribbon grass (Phalaris arundinacea)			Х
rockcress (Arabis caucaisca)	snowcap		Х
rose <sup>†</sup> (Rosa banksiae)	luta		Х

			Application ed by a (X)
Name	Tolerant Cultivars	Over the Top	Directed
rose, groundcover			
(Rosa x Noare)	flower carpet red	X	Х
(Rosa x Noaschnee)	flower carpet white	X	Х
(Rosa x Noatrum)	flower carpet pink	X	Х
rose, knockout shrub <i>(Rosa</i> spp. hybrid)	knockout	Х	Х
rose, rock ( <i>Cistus</i> purpureus)	'brilliancy'	Х	Х
rosemary <sup>†</sup> (Rosmarinus officinalis)			х
rosemary, bog (Andromeda polifolia)	nana		х
salvia (Salvia farinacea)	rhea		х
sedge, leather leaf (Carex buchananii)		Х	Х
sedum	dragon blood red		Х
(S. spurium)	red carpet		X
( =	yellow		х
senecia			
(Senecia kleinia)		Х	х
silk tree		Х	Х
(Albizia julibrissin)			
smoketree ( <i>Cotinus coggyria</i>	Grace	Х	х
obovatus)			
smoketree, royal purple (Cotinus coggygria)	royal purple		Х
snapdragon <i>(Antirrhinum</i> spp.)			Х
snow-in-summer (Cerastium tomentosum)		Х	Х
snowball, common (Viburmum opulus)	sterile	Х	х
sourwood (Oxydendrum arboreum)			Х
spiraea (Astilbe X arendsii)	fanall		х
spiraea (Spiraea X vanhouttei)	bridal wreath spiraea	Х	х
spiraea	Anthony Waterer red		Х
(Spiraea spp.)	dolchica		X
(	froebeli pink		X
	goldenflame red		x
	snowmound white		х
spiraea, garland (Spiraea X arguta)			х
spruce, Black Hills (Picea glauca var densata)			Х

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
spruce, Colorado blue	glauca	Х	Х
(Picea pungens)			
spruce, dwarf Alberta			
(Picea glauca v. albertiana)	conica	Х	Х
spruce, Norway			Х
(Picea abies)			
spruce, white	conica		Х
Picea glauca)			
spurge, Japanese			
(Pachysandra terminalis)	green sheen	Х	х
sweet bay			Х
(Laurus nobilis)			
sweetflag			
(Acorus calamus)			x
(A. gramineus)	ogon	x	X
sweetgum			Х
(Liquidambar styraciflua)			
sweet olive <sup>†</sup>			Х
(Osmanthus fragrans)			
sycamore			
(Platanus occidentalis)	American		x
(P.I racemosa)	California	x	x
tea tree, New Zealand	ruby glow	X	X
(Leptospermum	martini	x	x
scoparium)		^	_ ^
tree fern (tiki fern)			х
(Asparagus virgatus)			^
trumpet flower or Carolina			х
Jessamine			^
(Gelsemium sempervirens)			
tulip	apeldoorn		x
(Tulip spp)	apeldoom		^
tufted hairgrass			х
(Deschampsia caespitosa)			^
verbena, shrub		+	Х
(Lantana sellowiana)			^
Verbena, St. Paul's	St. Paul		
(Verbena, St. Paul S (Verbena peruviana.)	OI. Faul		X
viburnum	Amorican aranharmahush	+	
( <i>Viburnum</i> spp.)	American cranberry bush arrowood		X
( νιουπαιπορρ.) 	European cranberry bush		X
	linden		X X
	Mohican		x
	wright		×
L vinca (periwinkle)	wilgin		
(Vinca minor)			Х
weigela	<u>l</u> .		
(Weigela florida)	java red	X	Х

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

<sup>&</sup>lt;sup>†</sup> 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 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. **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.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, RIGHTLINE, LLC 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. To the extent consistent with applicable law, no agent of RightLine, LLC is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISENT WITH APPLICABLE LAW, RIGHTLINE, LLC 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 RIGHTLINE, LLC'S ELECTION, THE REPLACEMENT OF PRODUCT.

[EPA Approval Date]

[Note to reviewer: [Text] in brackets denotes optional text.]

[Note to reviewer: {Text} in braces denotes where in the label text will appear.]

#### **{BOOKLET FRONT PANEL}**

[Sub Label B: Residential Use]

DITHIOPYR GROUP 3 HERBICIDE

[company logo]

### RightLine DITHIOPYR 2 L

#### SPECIALTY HERBICIDE

Provides control of listed annual grasses and broadleaf weeds in: Established lawns; Ornamental turf; Landscape ornamentals

In New York State, do not use more than 1 pint of this product per acre per year (equivalent to 0.25 lb of active ingredient per acre).

Controls [tough] listed weeds including crabgrass barnyardgrass annual bluegrass [barley] [brome] [crowfootgrass] [seedling dallisgrass] [giant foxtail] [green foxtail] [yellow foxtail] [goosegrass] [kikuyugrass] [Mary's grass] [Japanese stiltgrass] [wild oats] annual and perennial ryegrass [sandbur] smutgrass [bittercress] [carpetweed] chickweed [Carolina geranium] henbit [prostrate knotweed] [common lespedeza] [marestail] [black medic] [mulberry weed] [mustard] oxalis [pineappleweed] [parsley-piert] [redroot pigweed] [common purslane] [London rocket] [shepherdspurse] [corn speedwell] [garden spurge] [prostrate spurge] [spotted spurge] [creeping woodsorrel]

Season Long Crabgrass Control [non-staining]

Easy to use

Apply in the fall for [annual bluegrass], [chickweed], [henbit] and other winter weeds

Provides early post emergent crabgrass control [non-staining]

Effective crabgrass control/prevention leads to [thicker], [healthier] [lawns] [non-staining]

[Prevents] [Controls] [crabgrass] [non-staining]

Just one application needed

Season Long Crabgrass Prevention [non-staining]

Apply [early Spring], [Spring], [late Spring]

Use for a [beautiful] lawn [non-staining]

Prevents crabgrass and other listed weeds like [spurge][,] [oxalis] [from germinating] [non-staining]

For use on cool season and warm season turfgrass

More than a crabgrass preventer, also a [spurge] [oxalis] [preventer]

#### **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:	
Contains 240 grams per liter or 2 lb active ingredient per U.S.	gallon.

# CAUTION

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

EPA Reg. No. 93051-10 EPA Est. No.:

#### Manufactured for:

RightLine, LLC 950 Falcon Drive Malden, MO 63863

#### **NET CONTENTS:**

[Lot][Batch][No.]:

#### **{LANGUAGE INSIDE BOOKLET}**

#### **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, absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wear long-sleeved shirt and long pants, chemical-resistant gloves made of barrier laminate or butyl rubber ≥14 mils, and shoes plus socks. 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.

## **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 rinsate.

**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.

Not for use on plants being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in ornamental gardens or on lawns and grounds.

#### WEED RESISTANCE MANAGEMENT

For resistance management, RightLine DITHIOPYR 2 L is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to RightLine DITHIOPYR 2 L and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same area. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. 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 L or other Group 3 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in an area.
- 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.
- 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.
- 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 for additional pesticide resistance-management and/or integrated weed-management recommendations for 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 L provides control of crabgrass and other annual grasses and broadleaf weeds in established lawns, ornamental turf and landscape ornamentals.

This product will not control established weeds, except for crabgrass in early stages of growth. This stage of growth for crabgrass generally corresponds to the time when crabgrass seedlings are first visible in established turfgrasses and individual plants have five leaves or less. Applications to crabgrass after tiller initiation may not provide satisfactory control. For optimum control, all other applications of this product should be made preemergence (prior to germination of target weeds).

This product is most effective when activated by 0.5 inch or more of rainfall or sprinkler irrigation. To optimize control ensure that activation has occurred prior to germination of most grass and broadleaf weeds.

Keep people and pets out of treated area until sprays have dried.

#### MANDATORY SPRAY DRIFT MANAGEMENT

#### **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.

- 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.

#### 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**

Apply RightLine DITHIOPYR 2 L with a hand-held pump-up or backpack sprayer in 1 to 2 gallons of water per 1000 sq ft. Fill the clean spray tank to about three-fourths of the required volume of water for the area being treated. Add the required amount of RightLine DITHIOPYR 2 L to the spray tank and complete the filling process. Mix well prior to application.

#### **Use Rates**

Application Rate per acre		Equivalent Rate per 1000 sq ft <sup>†</sup>		
lb active ingredient		Pint (pt)	•	Fluid Ounces (fl oz)
0.25	1	0.02	2.2	0.37
0.5	2	0.04	4.4	0.73

<sup>&</sup>lt;sup>1</sup> 1000 sq ft is equal to an area 100 ft X 10 ft or square area about 32 ft on a side.

## **Equivalent Rates for Treatment of Small Areas:**

	Equivalent Rate per 500 sq ft		Equivalent Rate per 100 sq ft		sq ft	
	(pt)	(tsp)	(fl oz)	(pt)	(tsp)	(fl oz)
(pt per 1000 sq ft)						
0.04	0.02	2.2	0.37	0.004	0.44	0.073
0.02	0.01	1.1	0.18	0.002	0.22	0.037

## Grass and Broadleaf Weeds Controlled by RightLine DITHIOPYR 2 L

For preemergence grass and broadleaf weed control, apply RightLine DITHIOPYR 2 L as single or sequential application at 1 to 2 pints (0.25 to 0.5 lb active ingredient) per acre. Used as directed, RightLine DITHIOPYR 2 L controls annual grass and broadleaf weeds listed below if applied preemergence. This product will not control emerged broadleaf weeds or grasses (except for crabgrass prior to tiller initiation). Therefore, the area to be treated should be free of weeds prior to application.

#### **Grasses**

barley	foxtail, green
barnyardgrass	foxtail, yellow
bluegrass, annual	goosegrass
brome	kikuyugrass
crabgrass, large	Mary's grass (Japanese stiltgrass)
crabgrass, smooth	oats, wild
crabgrass, southern	ryegrass (annual & perennial)
crowfootgrass	sandbur
dallisgrass (seedling)	Smutgrass
	southwest cupgrass
foxtail, giant	

#### **Broadleaf Weeds**

bittercress	parsley-piert
carpetweed	pigweed, redroot
Chickweed	pineappleweed
geranium, Carolina	purslane, common
henbit	rocket, London
knotweed, prostrate	shepherdspurse
lespedeza, common	speedwell, corn
marestail	spurge, garden
medic, black	spurge, prostrate
mulberry weed	spurge, spotted willowherb
mustard	woodsorrel, creeping
oxalis, buttercup	woodsorrel, yellow

#### **USES**

## **Turfgrass**

Use RightLine DITHIOPYR 2 L on seeded, sodded, or sprigged lawns and ornamental turfgrass that are well established. For preemergence grass and broadleaf weed control, apply RightLine DITHIOPYR 2 L as single or sequential application at 1 to 2 pints (0.25 to 0.5 lb active ingredient) per acre.

#### **Use Precautions:**

Newly established turf following seeding or sprigging must have developed a good root system and a uniform stand, and should have received at least two mowings before the first application of this product. 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. Note precaution below for sodding.

RightLine DITHIOPYR 2 L will prevent the germination of annual bluegrass. RightLine
 DITHIOPYR 2 L will not affect established annual bluegrass. If maintenance of annual bluegrass

is desired, using this product during 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 L 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 is well rooted and exposed edges have filled in thoroughly.
- Early postemergence applications of this product will control crabgrass only if applied prior to the fifth leaf (first tiller) stage of growth.
- For best results, cultural practices that disturb the soil, such as verticutting and core-, spike-, or hydro- aerification, should be done before applying this product.

#### **Use Restrictions:**

- **DO NOT** apply this product until the turfgrass has recovered from cultural practices such as verticutting or core-, spike-, or hydro-aerification.
- DO NOT use clippings from treated turf for mulching around vegetables or fruit trees.
- **DO NOT** apply more than 4.4 teaspoons (0.73 fl oz) of RightLine DITHIOPYR 2 L per 1000 sq ft per application.
- **DO NOT** apply more than 13.2 teaspoons (2.2 fl oz) of RightLine DITHIOPYR 2 L per 1000 sq ft (1.5 lb active ingredient per acre) per year using split or sequential applications at 1 to 2 pints (0.25 to 0.5 lb active ingredient) per acre.
- DO NOT apply by air.
- DO NOT apply this product through any type of irrigation system.
- In New York State, **DO NOT** use more than 1 pint (2.2 tsp, 0.37 fl oz per 1000 sq ft) of this product per acre per year (equivalent to 0.25 lb of ai dithiopyr 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 split application program totaling more than 4.4 teaspoons 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.

#### **Tolerant Turfgrass**

RightLine DITHIOPYR 2 L should be used only on the following turfgrass species which are tolerant to this product:

#### **Established Cool Season Turfgrasses**

bentgrass, creeping<sup>†</sup> bluegrass, Kentucky fescue, fine<sup>††</sup> fescue, tall ryegrass, perennial

## **Established Warm Season Turfgrasses**

bahiagrass bermudagrass<sup>†††</sup> buffalograss<sup>††††</sup> carpetgrass centipedegrass kikuyugrass seashore paspalum St. Augustinegrass zoysiagrass

- <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.
- 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.
- DO NOT use this product on Tifgreen (328) hybrid bermudagrass as undesirable turfgrass injury may result. Other common and hybrid bermudagrass varieties are tolerant.
- 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 uniformly to the treatment area as a coarse spray. Avoid streaking, skips, or excess overlaps during application. For control or suppression of grass and broadleaf weeds, apply RightLine DITHIOPYR 2 L as a preventative (preemergence) treatment prior to their germination and emergence anytime of the year.

## **Crabgrass Control**

**Spring Application:** RightLine DITHIOPYR 2 L provides preemergence control of crabgrass (including the large, smooth, and southern species) when applied prior to crabgrass emergence in established lawns and ornamental turf. This product also provides early postemergence control of crabgrass during early crabgrass seedling growth following emergence. However, it is often difficult to observe very small crabgrass seedlings at early stages of growth in well-established turfgrass. Early postemergence crabgrass control is obtained only when this product is applied prior to tiller initiation (spreading) of crabgrass (less than 5 leaves per plant), which generally corresponds to the time when crabgrass seedlings are easily observed in lawn or turf. The practical benefit of this product's additional, early postemergence activity is a "window of application" during which control of crabgrass can be achieved that is 2 to 8 weeks longer than products that provide only preemergence control. Depending upon climatic conditions and rate of growth, the time from crabgrass emergence until tiller initiation will vary from 2 to 8 weeks.

**Fall Application:** This product can also be applied in the late summer or fall (late August through November) for preemergence weed control. A fall application followed by an appropriately timed spring application provides season-long weed control. **DO NOT** exceed the maximum use rate per year.

Postemergence Crabgrass Control in Warm Season Turf: 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 recommendations. Postemergence control of this product can be improved by mowing turfgrass no sooner than two days prior and two days after application.

When applied at 0.73 fl oz per 1000 sq ft per application 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.

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.

#### **Restrictions:**

**DO NOT** use clippings from treated turf for mulching around vegetables or fruit trees.

**DO NOT** apply through any type of irrigation system.

**DO NOT** apply by air.

## **Annual Bluegrass Control in the South and Coastal South Regions**

For extended control of annual bluegrass in the south and coastal south regions, an initial application of 4.4 teaspoons of RightLine DITHIOPYR 2 L per 1000 sq ft (0.5 lb active ingredient per acre) 6 to 8 weeks before overseeding bermudagrass with perennial ryegrass may be followed by a second application of 2.2 to 4.4 teaspoons of RightLine DITHIOPYR 2 L per 1000 sq ft (0.25 to 0.5 lb active ingredient per acre) 120 days after overseeding. Use a minimum seeding rate of 9 lbs perennial ryegrass seed per 1000 sq. ft. Some injury to overseeded perennial ryegrass may occur (see Reseeding, Overseeding, or Sprigging precautions under Turfgrass).

## **Landscape Ornamental Use**

RightLine DITHIOPYR 2 L 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. Apply RightLine DITHIOPYR 2 L as single or sequential application at 0.22 to 0.44 teaspoons per 100 sq ft.

#### **Use Precautions:**

• Only apply RightLine DITHIOPYR 2 L to established ornamentals listed as tolerant on the Tolerant Ornamental table or injury may result.

#### **Use Restrictions:**

- DO NOT apply this product to bare roots of ornamental plants as injury may result.
- **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 as tolerant 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 to pots less than six inches wide.
- **DO NOT** apply this product in enclosed structures and greenhouses.
- **DO NOT** apply more than 4.4 teaspoons (0.73 fl oz) of RightLine DITHIOPYR 2 L per 1000 sq ft (0.5 lb active ingredient per acre) per application and no more than 13.2 (2.2 fl oz) teaspoons of RightLine DITHIOPYR 2 L per 1000 sq ft (1.5 lb active ingredient per acre) per year using split or sequential applications at 0.22 to 0.44 teaspoons per 100 sq ft.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply by air.
- In New York State, **DO NOT** use more than 1 pint (2.2 tsp, 0.37 fl oz per 1000 sq ft) of this product per acre per year (equivalent to 0.25 lb of ai dithiopyr per acre).

Treatment of Ornamental Species Not Listed on the Label for RightLine DITHIOPYR 2 L: It is impossible to evaluate tolerance of all ornamental plant species or varieties to this product or under all possible growing conditions. Users who wish to use RightLine DITHIOPYR 2 L 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, during 30 to 60 days of normal growing conditions to determine if the treatment is non-injurious.

## **Application Directions**

Apply RightLine DITHIOPYR 2 L as a spray in established ornamentals or as a broadcast over-the-top spray to certain established ornamentals (see ornamental plant listing). Make directed sprays to the soil at the base of the ornamentals.

To reduce injury potential:

- 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 L from plant surface to the soil surface.
- In the spring when buds are rapidly growing and expanding, applications of RightLine DITHIOPYR 2 L made over the top of desirable plants may cause temporary injury. To reduce the possibility of injury at this time, wait to apply RightLine DITHIOPYR 2 L over the top of newly emerged vegetation until it has hardened off, unless your experience indicates that the ornamental plant will not be injured by an over the top application.
- **DO NOT** apply to plants that are under stress such as heat, drought or frost damage as the potential for injury is increased.
- Injury may be incurred if RightLine DITHIOPYR 2 L is applied to seedling beds, cutting beds or newly transplanted beds. User assumes all risk when applications are made prior to ornamentals being well established and listed as tolerant on the ornamental table.

RightLine DITHIOPYR 2 L is a preemergence herbicide that controls weeds during germination. RightLine DITHIOPYR 2 L does not control emerged broadleaf or grass weeds except crabgrass up to tiller initiation (less than 5 leaves per plant). Apply prior to germination of target weeds to bare ground. 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 weedy vegetation by cultivation, hand weeding, or use of a postemergence herbicide labeled for safe use with the ornamental. After applying RightLine DITHIOPYR 2 L, excessive soil disruption may breakdown the herbicide barrier. Minimal surface disruption such as raking should not break down the herbicide barrier but should not be done until after the herbicide has been activated with 1/2 inch of rainfall or irrigation. Following transplanting, care must be taken that soil or planting mixes have settled firmly through packing, irrigation or rainfall and that there are no cracks that would allow direct contact of this product to the plant roots. Make sequential applications at 3 to 4 month intervals for extended preemergence weed control. **DO NOT** exceed maximum use rates.

#### **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.

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
abelia (Abelia x grandiflora)	nana grand surprise	Х	X X
acacia, redolens (Acacia redolens)		Х	Х
abyssinian red banana (Ensete ventricosum)	maureli	х	Х
Agave <sup>†</sup>	blue glow	Х	Х

			Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed	
/A	Queen Victoria	Х	Х	
(Agave bovicornuta)		Х	Х	
(A. gypsophila		X	X	
(A. victoriae-reginae)	royal	X	X	
(A. vilmoriniana)		Х	Х	
Ajuga carpet bugle				
(Ajuga reptans)	bronze		Х	
(Ajuga genevensis)	bronze beauty		Х	
almond, flowering ( <i>Prunus gladulosa)</i>			Х	
apple <sup>†</sup> ( <i>Malus pumila)</i>			Х	
aralia, Japanese (Fatsia japonica)			Х	
arborvitae	George Peabody	х	Х	
(Thuja occidentalis)	nigra		x	
•	pyramidalis		Х	
	smaragh		х	
	techny		х	
	woodwardii		Х	
arborvitae, dwarf golden ( <i>Thuja orientalis)</i>	aurea nana	Х	Х	
ash, green (Fraxinus pennsylvanica)			Х	
ash, autumn purple	autumn purple		Х	
(Fraxinus americana)	durant arraga		.,	
aster, Chinese (Callistephus chinensis)	dwarf queen		Х	
azalea	brilliant		Х	
(Rhododendron spp.)	buccaneer		X	
	carror		X	
	chimes (Belgian) Elsie Lee		X	
	exbury		X	
	fashion		X	
	Girard's crimson	X	X X	
	hardijzer beauty	^	X	
	hershey red		X	
	higasa		X	
	hinocrimson		X	
	high tide	x	X	
	Holland (hybrid)		X	
	Marion Lee		X	
	northern lights		x	
	Nuccio's Wild Cherry	х	х	
	orange cup		х	
	orchid lights		Х	
	pink gumbo	x	x	
	pride of Mobile	х	х	
	snow		Х	
	southern charm		X	

		Acceptable A	
Name	Tolerant Cultivars	Over the Top	Directed
azalea, flame			Х
(Rhododendron			
calendulaceum)			
azalea, Kurume or			Х
kirishima	coral bells	X	Х
(Rhododendron obtusum)			
bamboo, heavenly	compacta		Х
(Nandina domestica)	nana		Х
	plum passion	Х	Х
banana shrub ( <i>Michelia figo</i> )		Х	Х
barberry, Japanese	aurea		Х
(Berberis thunbergii)	crimson pygmy	х	X
,	dwarf pygmy		х
	green		х
	kobold		х
	pygmy red		х
	rose glow		х
barberry, purple	atropurpurea		Х
(Berberis thunbergiivar			,
atropurpurea)			
basket flower			Х
(Gaillardia grandiflora)			^
beach grass			Х
(Ammophila breviligulata)			^
bearberry (common)	Massachusetts		Х
(Arctostaphylos uva-ursi)	iviassaciiusetts		^
bee balm			
			Х
(Monarda didyma)			
begonia			Х
(Begonia spp.)	di una la ant		
birch, river	dura heat	Х	Х
(Betula nigra)			
birch, European white			Х
(Betula pendula)			
blackeyed Susan	goldstrum		Х
(Rudbeckia hirta)			
blanket flower			Х
(Gaillardia spp.)			
blood grass	rubra	Х	Х
(Imperata cylindrica)			
blue fescue			Х
(Festuca ovina)			
bluebeard	dark knight	Х	Х
(Caryopteris x			
clandonensis)			

		Acceptable A			
		Method Note	Method Noted by a (X)		
Name	Tolerant Cultivars	Over the Top	Directed		
blueberry <sup>†</sup>	bluecrop		Х		
(Vaccinium spp.)	blue jay		Х		
,	Jersey		Х		
	north blue		Х		
	northland		Х		
bottlebrush	Little John	Х	Х		
(Callistemon citrinus)					
bougainvillea	James Walker		Х		
(Bougainvillea sp.)	pink dream		х		
	purple queen	X	х		
	rosenka	X	X		
	Scarlet O' Hara	X	X		
bower vine	rosea	Х	Х		
(Pandorea jasminoides)	. 3334				
boxwood, green beauty	green beauty	Х	Х		
(Buxus microphylla	g				
japonica)					
boxwood, welleri	winter gem	Х	Х		
(Buxus sempervirens)	common boxwood	X	x		
broom	Commen beaweed				
(Cytisus scoparius)	moonlight		х		
(Genista pilosa)	Vancouver gold		x		
, , ,					
cactus (Echinocactus grusonii)	golden barrel	Х	Х		
(Echinocactus grusonii)					
camellia	debutante		v		
(Camellia japonica)			X		
(Comollio acconque)	mathotiana supreme chansonette	X	X		
(Camellia sasanqua)		X	X		
a and its ift	setsukgekka snow white	X	X		
candytuft	Show write		Х		
(Iberis sempervirens)					
carex, variegated		Х	Х		
(Carex spp.)					
carpet bugle	h		.,		
(Ajuga reptans)	bronze		X		
(Ajuga genevensis)	bronze beauty		Х		
cedar, red			Х		
(Juniperus virginiana)					
celosia			Х		
(Celosia spp.)					
centaura			Х		
(Centaurea montana)	, cohine		,,		
cherry tree†	yoshino	X	Х		
(Prunus x yedoensis)			,,		
Chinese pistache			Х		
(Pistacia chinensis)	as a sala via ti				
chrysanthemum	mandarin time	X	Х		
(Chrysanthemum sp.)	Loons		.,		
cleyera	Leann	X	Х		
(Cleyera japonica)					

		Acceptable A	
	T	Method Note	
Name	Tolerant Cultivars	Over the Top	Directed
clivia		Х	Х
(Clivia miniata)			
cockscomb, plumosa	scarlet plumosa		Х
(Celosia cristata)			
coleus	red kewpie		Х
(Coleus blumei)			
columbine			Х
(Aquilegia spp.)			
coneflower, purple			Х
(Echinacea purpurea)	magnus purple	Х	Х
copper leaf			х
(Acalypha wilkesiana)			
coreopsis	moonbeam		Х
(Coreopsis spp.)			
corn flower			Х
(Centaurea spp.)			
cotoneaster			Х
(Cotoneaster apiculatus)			
coyotebrush			Х
(Baccharis pilularis)			
cycad			Х
(Cycas revoluta)			
cypress, bald		Х	Х
(Taxodium distichum)			
cypress, Italian	glauca		Х
(Cupressus sempervirens)	tiny tower	Х	Х
cypress, hinoki false	gracilis		Х
(Chamaecyparis obtusa)	torulosa	Х	Х
cypress, leyland		Х	Х
(Cupressocyparis leylandii)			
hybrid			
daffodil	King Alfred		Х
(Narcissus spp.)			
damianita			х
(Chrisactinia mexicania)			
daylilly	Aztec gold		Х
(Hemerocallis spp.)	bright yellow (hybrid)		x
	single gold (evergreen)		х
	Wilson's yellow		Х
dianthus (sweet William)			х
(Dianthus spp.)			
(Dianthus	firewatch	Х	Х
gratianopolitanus)	1		
delphinium	magic fountain		Х
(Delphinium spp.)	1		
desert spoon		Х	Х
(Dasilyrion wheeleri)			
dogwood			Х
(Cornus florida)			

		Acceptable A	
Name	Tolerant Cultivars	Over the	Directed
Ivailie	l olerant Cultivars	Top	Directed
dogwood, American	flavarimea		х
(Cornus sericea)			
Douglas fir			Х
(Pseudotsuga menziesii)			
dracaena			
(Cordyline indivisa)		Х	Х
(Cordyline australis)		X	Х
dusty miller		Х	Х
(Senecio cineraria)			
elm	drake		Х
(Ulmus parvifolia)			
escallonia			
(Escallonia x exonienis)	fradesi	x	х
eulaliagrass/maiden grass	gracillimus	Х	Х
(Miscanthus sinensis)	variegatus	Х	Х
	morning light	Х	Х
euonymus			
(Euonymus fortunei)	Argenteo-variegata		Х
	colorata		Х
	emerald gaiety		Х
	emerald n' gold		Х
	gold edge		Х
	golden princess		Х
	tricolor		Х
	vegetus		Х
(Euonymus japonicus)	Aureomarginata		Х
	microphylla variegata	Х	Х
	'Moness" silver princess	Х	Х
	silver king		Х
(Euonymus kiatschovicus)	Manhattan	Х	Х
euryops, green leaved	viridis	x	Х
(Euryops pectinatus)			
fan palm, European			Х
(Chamaerops humilis)			
fan palm, Mexican			Х
(Washingtonia robusta)			
fern (various)			Х
(Asparagus spp.)			
fescue			Х
(Festuca glauca)			
fescue, blue	Elijah blue		Х
(Festuca cinerea)			
fetterbush	rainbow		Х
(Leucothoe fontanesiana)			

		Acceptable A	
		Method Note	
Name	Tolerant Cultivars	Over the Top	Directed
ficus	nitidia		Х
(Ficus retusa)			
fir fraser			Х
(Abies fraseri)			
fortnight lily		Х	Х
(Moraea bicolor)			
Forsythia			
(Forsythia x 'Arnold Dwarf)	arnold dwarf		Х
(Forsythia viridissima)	bronxensis dwarf		х
(Forsythia xintermedia)	lynwood gold		x
(Forsythia x'Meadowlark')	meadowlark		X
(r creyuna x meademant)			
(Forsythia x intermedia)	spring glory	Х	Х
(Forsythia suspensa)	weeping		х
fountain grass, purple	rubrum	Х	х
(Pennisetum setaceum)			
fringe flower, Chinese	Chang's ruby	Х	Х
(Loropetalum chinense)	ruby purple diamond	X	X
fuchsia	raby parpie diamena		X
(Fuchsia spp.)			^
galium <i>(Galium ordoratum)</i>			Х
gardenia	August beauty	Х	Х
(Gardenia jasminoides)	Frost proof	X	X
(	mystery		X
	radicans	x	×
	veitchii	x	X
	white gem		
(Cardania thumbaraia)	writte gerii	X	X
(Gardenia thunbergia)	<u> </u>	Х	Х
Garlic, variegated society <sup>†</sup> ( <i>Thulbaghia violacea)</i>	variegata	X	X
gayfeather	floristan violet	Х	Х
(Liatris spicata)			
gazania			
(Gazania <i>rigens</i>	trailing gazania	X	х
leucolaena)			
geranium			Х
(Pelargonium x hortorum)			^
globe thistle		.,	.,
		X	X
(Echinops ritro)			
gum			Х
(Eucalyptus citriodora)			
hawthorn	cockspur white		Х
(Crataegus spp.)	crimson cloud		Х
	enchantress		х
	Jack Evans		х
	Washington white		x
hawthorn, Indian	ballerina	Х	Х

		Acceptable Application	
		Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
heather, twisted (Erica cinerea)	Mediterranean pink		Х
heliotrope	lowa		Х
(Heliotropum arborescens)			
hemlock, Canada			Х
(Tsuga canadensis)			
hibiscus	blue bird		Х
(Hibiscus sp.)	brilliant		X
(* ************************************	hula girl		X
(Hibiscus rosa-sinensis)	Seminole pink		X
holly			^
(Ilex x 'Nellie R. Stevens')	Nellie R. Stevens	x	x
(Ilex x attenuata)	fosteri	x	x
(nex x atteriaata)	Savannah	^	x
holly, blue	blue boy	+	X
(llex x meserveae)	blue girl		X
(nex x meserveae)	China girl		X
holly, cassine	Crima giri		
(llex cassine)		X	Х
holly, Chinese	Burfordii		
	Carissa	X	X
(Ilex cornuta)		X	X
hally language	needlepoint	X	X
holly, Japanese <i>(Ilex crenata)</i>	compacta hellerie	X	X
(liex crenata)			X
	Japanese northern beauty sky pencil	V	X
	steeds	X	X
hally yaupan	Sieeus	X	X
holly, yaupon <i>(Ilex vomitoria)</i>		×	Х
,			
honeysuckle <i>(Lonicera</i> xylosteum <i>)</i>	Claveyí dwarf		.,
(Lonicera xylosteum ) (Lonicera japonica)	halliana		X
(Lonicera japonica) (Lonicera tatarica)	Canadian white		X
(LOTIICETA (AlaTICA)	Zabelli		X X
(Lonicora y brownii)	dropmore scarlet		, ,
<i>(Lonicera x brownii)</i> hop bush, purple		X	X
(Dodonea viscosa)	purpurea	X	Х
,			
hosta (Hosto sigholdii)			v
(Hosta sieboldii)	albo marginata		X
(Hosta lancifolia)	albo marginata	+	X
ice plant <i>(Carpobrotus edulis)</i>		X	Х
		+	.,
ice plant, rosea		X	Х
(Drosanthemum			
floribundum)	+	+	_
ice plant, white trailing (Delosperma alba)		Х	Х
ice plant, purple		Х	Х
(Lampranthus productus)			

		Acceptable Application	
Name	Tolerant Cultivars	Method Note Over the	Directed
	Tolerani Cultivars	Top	Directed
ce plant, red spike (Cephalophyllumalstonii)		Х	Х
mpatiens			Х
(Impatiens spp.)			
(I. balsamina)		Х	х
ris	dwarf blue		Х
(Iris spp)	wedgewood		х
vy, English	Bulgaria		Х
(Hedera helix)	thorndale		х
asmine, Asiatic		Х	Х
(Trachelospermum			
asiaticum)			
asmine, star			х
(Trachelospermum			
iasminoides)			
uniper	Arcadia		Х
Juniperus spp.)	Armstrong		X
(Sumperas opp.)	bar harbor		x
	blue chip	x	X
	blue Pacific shore	x	x
	blue point	x	x
	blue rug	x	x
	blue star	x	X
	broadmoor	^	x
	buffalo		x
	calgary carpet		x
	emerald sea		x
	emerald spreader		x
	endora compacta		x
	fruitlandi		x
	gold coast	×	x
	green	^	
	grey owl		X X
	gold tip	X	
	hetzi		X
	hughes		X X
	icee blue	×	x
	Manhattan blue	^	x
	parsonii	х	X
	pfitzeriana	^	X
	plumosa		x
	Prince of Wales		x
	procumbens dwarf		
	prostrate Japanese garden	X	X
	San Jose	_ ^	X X
	sargent blue		
	sargent green		X
	sargent green scandia		X
	scopulorum moonglow		X
	scopulorum skyrocket		X
		X	X
	sea of gold	X	Х

		Acceptable Application Method Noted by a (X)	
	- 1 10 W		
Name	Tolerant Cultivars	Over the Top	Directed
	tamariscifolia		Х
	tamarix	Х	х
	torulosa - Hollywood	Х	Х
	twisted		х
	weberi		Х
	Youngstown		Х
	Yukon belle		Х
king palm		Х	Х
(Archontophoenix			
cunninghamiana)			
lantana		Х	Х
(Lantana sellowiana)			
laurel, Carolina cherry	bright n' tight	Х	Х
(Prunus caroliniana)	Singht in digit.	^	Α
laurel, mountain	+		Х
(Kalmia latifolia)			^
laurel, Texas mountain		X	X
(Sophora secundiflora)		^	^
leucothoe	+		
			Х
(Leucothoe fontanesiana)			
ligustrum, Japanese			Х
(Ligustrum japonicum)			
lily	streamline		Х
(Agapanthus spp.)			
lily, Asiatic		Х	Х
(Ĺilium asiaticum)			
lily, Kaffir		Х	Х
(Clivia miniata)			
Lily of the Nile	albus		Х
(Agapanthus africanus)	Peter Pan		X
lilyturf	blue moon	Х	
(Liriope muscari)	evergreen giant	^	X
(Linope muscari)			X
	lilac beauty		X
	majestic	X	X
	monroe white		X
	silvery sunproof	Х	X
	variegata		Х
lilyturf, creeping			Х
(Liriope spicata)			
magnolia	D.D. Blanchard	Х	Х
(Magnolia grandiflora)			
magnolia, saucer		Х	х
(Magnolia x soulangeana)			
mandevilla			
(Mandevilla splendens)	Red Riding Hood	Х	Х
(Mandevilla x amabilis)	crimson jewel	x	х
maple, amur	emerald elf	X	X
(Acer ginnala)		^	
maple, Japanese	+		~
(Acer palmatum)		X	Х
(Acei paiillatulli)			

		Acceptable Application	
		Method Note	
Name	Tolerant Cultivars	Over the Top	Directed
maple, Norway (Acer platanoides)			Х
maple, red <sup>†</sup> (Acer rubrum)	red sunset	Х	х
maple, silver (Acer saccharinum)			Х
maple sugar <sup>†</sup> (Acer saccharum)			Х
marguerite, blue (Felicia amelloides)		х	Х
marigold (Tagetes patula)	honeycomb variegata wheelerís dwarf		X X X
metrosideros (Metrosideros collinus)	'springfire'	х	X
mock orange <sup>†</sup> ( <i>Philadelphus spp</i> )	golden snowflake double white		X X
mondo grass (Ophiopogon japonicus)		х	Х
moss rose (Portulaca grandiflora)	sunnyside		Х
mountainash (Sorbus aucuparia)			Х
myrtle, crape	Byer's hardylavender	Х	Х
(Lagerstroemia indica)	Byer's white	X	Х
	faurei		Х
	langer		Х
	muskogee		Х
	peppermint lace	Х	Х
	standard pink		Х
	zuni	X	Х
myrtle, wax <i>(Myrica californica)</i>			Х
myrtle, willow ( <i>Agonis flexuosa</i> )			Х
narcissus <i>(Narcissus spp</i> .)			Х
New Zealand flax			
(Phormium sp.)	rainbow chief rainbow queen	X X	X X
(Phormium tenax)	Jack Spratt	×	X
oak, laurel (Quercus laurifolia)		Х	Х
oak, pin (Quercus palustris)			Х
oak, red (Quercus rubra)			Х
oak, shumard (Quercus shumardii)		Х	Х

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
oak, southern (Quercus virginiana)			Х
oak, willow (Quercus phellos)		Х	Х
oleander (Nerium oleander)	hardy red Mrs. Roeding petite pink sister agnes	х	X X X
oleaster hedge ( <i>Elaeagnu</i> s X <i>ebbengi</i> )		х	х
orange, jessamine† ( <i>Murraya paniculata</i> )		Х	Х
osmanthus (Osmanthus fragens)		Х	Х
osmanthus, holly leaf (Osmanthus heterophyllus)	goshiki	Х	Х
osteospermum (Osteospermum fruticosum)	whirligig		Х
pachysandra (Pachysandra terminalis)			Х
palm, bangalow rchontophoenix cuninghamiana)			х
palm, bismark (Bismarckia nobilis)			х
palm, California fan (Washingtonia filifera)		х	х
palm, cardboard <i>(Zamia furfuracea)</i>		Х	Х
palm, majesty <i>(Ravenea rivularis)</i>		Х	Х
palm, paurotis (Acoelorraphe wrightii)		Х	Х
palm, pindo 'blue' ( <i>Butia</i> <i>capitata)</i>		Х	Х
palm, queen (Syagrus romanzoffianum)		Х	Х
pampas grass (Cortaderia selloana)	ivory feathers	Х	X X
pansy (Viola x wittrockiana)			х
paper flower (Bougainvillea glabra)	Barbara Karst	Х	Х
peach <sup>†</sup> ( <i>Prunus persica)</i>			Х
pepper tree, California <i>(Schinus molle)</i>		Х	Х
periwinkle, dwarf <i>(Vinca minor)</i>			Х

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
petunia	picoti	Х	Х
(Petunia x hybrida)			
philodendron, tree		Х	Х
(Philodendron selloum)			
photinia, red tip			Х
(Photinia x fraseri)			
pieris			Х
(Pieris taiwanensis)			
pieris, Japanese ( <i>Pieris japonica)</i>	mountain fire	Х	Х
pine, Afghan <i>(Pinus eldarica)</i>		Х	Х
pine, aleppo			ν,
pine, aleppo (Pinus halapensis)		X	Х
pine, Austrian black	+	<del>-</del>	V
pine, Austrian black (Pinus nigra)		X	Х
pine, Canary Island	+	X	Х
(Pinus canariensis)		^	^
pine, Japanese black		Х	Х
(Pinus thunbergiia)		^	^
pine, loblolly		Х	Х
(Pinus taeda)			
pine, longleaf			Х
(Pinus palustris)			
pine, mugo or Świss Mt.			Х
(Pinus mugo)			
pine, Scotch			х
(Pinus sylvestris)			
pine, slash			х
(Pinus elliottii)			
pine, Virginia			х
(Pinus virginiana)			
pine, white		Х	Х
(Pinus strobus)			
pineapple, guava <sup>†</sup>			Х
(Feijoa sellowiana)			
pittosporum,	golf ball	Х	х
(Pittosporum tobira)	shimi crème de menthe	X	x
	Wheeler's dwarf	Х	Х
plum, purple†			Х
(Prunus cistena)	<del> </del>		
plumbago, cape	royal cape	X	х
(Plumbago auriculata)			
plume grass		Х	Х
(Erianthus ravennae)	La lla con a d		
Podocarpus ( <i>Podocarpus</i> henkelii)	yellowood	Х	Х
potentilla	+		
Potentilla fruticosa)	abbotswood		x
(Potentilla nepalensis)			X
(1 otoriulia riopalerisis)	_L		_ ^

		Acceptable Application Method Noted by a (X)	
Nome	Tolorent Cultivers		
Name	Tolerant Cultivars	Top	Directed
privet			
(Ligustrum x vicaryii)	golden vicary		Х
(Ligustrum japonicum)	regal		Х
	texanum	Х	X
	yellow tipped		X
privet, glossy (Ligustrum lucidum)		Х	Х
pyracantha or firethorn			
(Pyricantha x 'Gnome')	gnome		X
(Pyricantha coccinea)	lalandei		Х
(Pyracantha koidzumii)	victory	х	Х
queen palm			Х
(Arecastrum			
rammanzoffianum)			
quince, Japanese <sup>†</sup>			Х
(Chaenomeles japonica)			^
red hot poker	flamenco	Х	Х
(Kniphofia uvaria)	liamenco	^	^
redbud, eastern			V
(Cercis canadensis)			Х
,			.,
redwood, coast		X	X
(Sequoia sempervirens)	1		
rhododendron	album		X
(Rhododendron spp)	Cunningham White		X
	PJM <sub>.</sub>		Х
	purple gem		X
	silvery pink		Х
rhododendron, Carolina			Х
(Rhododendron			
carolinianum)			
rhododendron, catawba			Х
(Rhododendron			
catawbiense)			
rhododendron, rhodie max			X
– rosebay			
(Rhododendron maximum)			
ribbon grass			X
(Phalaris arundinacea)			
rockcress	snowcap		Х
(Arabis caucaisca)			
rose <sup>†</sup>	luta		Х
(Rosa banksiae)			
rose, groundcover			
(Rosa x Noare)	flower carpet red	x	х
(Rosa x Noaschnee)	flower carpet white	X	х
(Rosa x Noatrum)	flower carpet pink	х	х
rose, knockout shrub	knockout	Х	Х
(Rosa spp. hybrid)			
rose, rock ( <i>Cistus</i>	ʻbrilliancy'	х	Х
purpureus)	J. Illianoy	^	^

		Acceptable Application	
		Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
rosemary <sup>†</sup>			Х
(Rosmarinus officinalis)			
rosemary, bog	nana		Х
(Andromeda polifolia)			
salvia	rhea		Х
(Salvia farinacea)			
sedge, leather leaf		Х	Х
(Carex buchananii)			
sedum	dragon blood red		Х
(S. spurium)	red carpet		x
(0.0)	yellow		X
senecia	<i>y</i> = =		
(Senecia kleinia)		х	x
silk tree		X	X
(Albizia julibrissin)		^	
smoketree	Grace	X	Х
(Cotinus coggyria	O ace	^	^
obovatus)			
smoketree, royal purple	royal purple		V
(Cotinus coggygria)	loyarpurpie		X
0070 /			
snapdragon			Х
(Antirrhinum spp.)			
snow-in-summer		Х	Х
(Cerastium tomentosum)			
snowball, common	sterile	Х	Х
(Viburmum opulus)			
sourwood			Х
(Oxydendrum arboreum)			
spiraea	fanall		Х
(Astilbe X arendsii)			
spiraea	bridal wreath spiraea	Х	Х
(Spiraea X vanhouttei)			
spiraea	Anthony Waterer red		х
<i>(Spiraea</i> spp.)	dolchica		х
	froebeli pink		х
	goldenflame red		Х
	snowmound white		Х
spiraea, garland			Х
(Spiraea X arguta)			
spruce, Black Hills			Х
(Picea glauca var densata)	<u> </u>		<u> </u>
spruce, Colorado blue	glauca	х	Х
(Picea pungens)	ľ		
spruce, dwarf Alberta			
(Picea glauca v. albertiana)	conica	x	x
spruce, Norway			х
(Picea abies)			
spruce, white	conica		х
(Picea glauca)			<u> </u>

		Acceptable Application	
		Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
spurge, Japanese		.,	
(Pachysandra terminalis)	green sheen	X	Х
sweet bay (Laurus nobilis)			Х
sweetflag ( <i>Acorus</i>			
calamus) (A.			Х
gramineus)	ogon	Х	х
sweetgum (Liquidambar styraciflua)			Х
sweet olive <sup>†</sup>			х
(Osmanthus fragrans)			
sycamore			
(Platanus occidentalis)	American		x
(P.I racemosa)	California	x	x
tea tree, New Zealand	ruby glow	х	Х
(Leptospermum	martini	х	х
scoparium)			
tree fern (tiki fern)			Х
(Asparagus virgatus)			
trumpet flower or Carolina			Х
Jessamine			
(Gelsemium sempervirens)			
tulip <i>(Tulip spp</i> )	apeldoorn		Х
tufted hairgrass			Х
(Deschampsia caespitosa)			^
verbena, shrub			х
(Lantana sellowiana)			^
Verbena, St. Paul's	St. Paul		Х
(Verbena peruviana.)			
viburnum	American cranberry bush		Х
(Viburnum spp.)	arrowood		х
	European cranberry bush		Х
	linden		Х
	Mohican		х
	wright		Х
vinca (periwinkle)			X
(Vinca minor)	+		
weigela	iovo rod		
(Weigela florida)	java red	X	X
windmill palm (Trachycarpus fortunei)			Х
wisteria, Japanese	Tayas nurnia	<del> </del>	
(Wisteria floribunda)	Texas purple	X	Х
xylosma			Х
(Xylosma congestum)			
yarrow			х
(Achillea spp.)			
yaupon	dwarf		х
(Ilex vomitoria)			

		Acceptable Application Method Noted by a (X)	
Name	Tolerant Cultivars	Over the Top	Directed
yellow bells (Tecoma stans)		х	Х
yesterday-today-and- tomorrow (Brunfelsia pauciflora)	floribunda	Х	Х
yew (Taxus cuspidata) (Taxus x media)	capitata denisiformis	х	x x
yucaa, red (Hesperaloe parvifolia)		х	Х

<sup>&</sup>lt;sup>†</sup> 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 and 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 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. **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 approval date]