



U.S. ENVIRONMENTAL PROTECTION AGENCY

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

EPA Reg. Number:

91234-204

Date of Issuance:

9/22/20

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

A319.15

Name and Address of Registrant (include ZIP Code):

Beth Anderson  
Atticus, LLC  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

**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.

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/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Shaja B. Joyner, Product Manager 20  
Fungicide-Herbicide Branch  
Registration Division 7505P

Date:

9/22/20

2. You are required to comply with the data requirements described in the DCI identified below:
  - a. Flumioxazin GDCI-129034-1236

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

3. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 91234-204.”
4. Submit one copy of the final printed label for the record before you release the product for shipment.

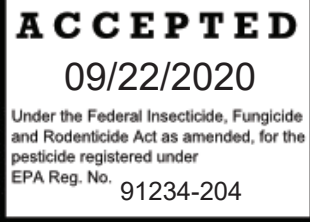
Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list 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. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 9/15/2020
- Alternate CSF #1 dated 9/15/2020

If you have any questions, please contact Nathan Mellor by phone at 703-347-8562, or via email at [mellor.nathan@epa.gov](mailto:mellor.nathan@epa.gov).

Enclosure



{Note to reviewer: [Text] in brackets denotes optional or explanatory language}  
{Note to reviewer: {Text} in braces denotes where in the final label text will appear}  
{BOOKLET FRONT PANEL LANGUAGE}

Pages 1 - 31: Master Label – A319.15  
Pages 32 - 45: Subpart 1 – A319.15 - Aquatic  
Pages 46 - 63: Subpart 2 – A319.15 - IVM  
Pages 64 - 87: Subpart 3 – A319.15 – T&O

Pages 1 - 31: Master Label – A319.15

FLUMIOXAZIN	GROUP 14	HERBICIDE
-------------	----------	-----------

# A319.15 [™]

[Alternate Brand Name: Semera SC / Schooner SC]

Contains flumioxazin, the active ingredient used in [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

**[FOR THE MANAGEMENT OF UNDESIRABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS]\*\*]**

**[FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES]\*\*]**

**[FOR USE IN CONTAINER AND FIELD-GROWN CONIFERS (INCLUDING CHRISTMAS TREES) AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPES AND MAINTAIN NON-CROP AREAS AND DORMANT BERMUDAGRASS]\*\*]**

ACTIVE INGREDIENT:	(% by weight)
Flumioxazin* .....	41.4%
OTHER INGREDIENTS: .....	58.6%
TOTAL .....	100.0%

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione

A319.15 contains 4 pounds flumioxazin per gallon.

[\*\*Not for use in California]

[For ≤ 5 Gallon Containers:] [Shake Well Before Use]  
[For > 5 Gallon Containers:] [Shake Well, Agitate or Recirculate Before Use]

**KEEP OUT OF REACH OF CHILDREN**

**Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you DO NOT understand the label, find someone to explain it to you in detail.)**

### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at **1-844-685-9173** for emergency medical treatment information.

**For Chemical Emergency:  
Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

See [below] [inside label booklet] for [additional] [First Aid,] [Precautionary Statements] [and] [Directions for Use].

[A319.15] is not manufactured, or distributed by Nufarm, seller of [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

**EPA Reg. No.: 91234-XX**

**EPA Est. No.:**

**Net Contents:**

Manufactured for:  
**Atticus, LLC**  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing spray mist. 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.

### PERSONAL PROTECTIVE EQUIPMENT (PPE):

#### Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- chemical-resistant gloves made of any waterproof material
- shoes and socks.

#### User Safety Requirements

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

### USER SAFETY RECOMMENDATIONS

#### Users Should:

- 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

If not used in accordance with directions on the label, this product is toxic to non-target plants and aquatic invertebrates. For terrestrial uses: **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. **DO NOT** apply directly to treated, finished drinking water reservoirs or drinking water receptacles when water is intended for human consumption. Drift and runoff may be hazardous to non-target plants and aquatic organisms in water adjacent to treated areas. **DO NOT** apply where runoff is likely to occur. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to plants. Use strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is needed.

**DO NOT** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing

this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

#### **PHYSICAL OR CHEMICAL HAZARDS**

**DO NOT** mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

#### **DIRECTIONS FOR USE**

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

Read the entire label before using this product. Use strictly in accordance with label precautionary statements and directions, and with applicable state and federal regulations.

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

**DO NOT** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil or water is: coveralls, chemical resistant gloves made of waterproof material, 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 (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural crops on farms, forests, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

**DO NOT** enter or allow others to enter the treated area until sprays have dried.

#### **PRODUCT INFORMATION**

This product is a fast-acting contact herbicide that controls selected submersed, emergent, and floating aquatic weeds. It is most effective when applied to young, actively-growing weeds in water with a pH of less than 8.5.

Application of this product to public aquatic areas may require special approval and/or permits. Consult with local state agencies, if required.

#### **USE RESTRICTIONS**

- **DO NOT** apply to intertidal or estuarine areas.
- **DO NOT** exceed 400 ppb of this product during any one application.
- **DO NOT** re-treat the same section of water with this product more than 6 times per year.
- **DO NOT** retreat the same section of water within 28 days of application, except in areas with dense

- weed vegetation. In these areas, treat the remaining weeds within 10 to 14 days.
- In high density weed populations only treat 1/2 the water body at onetime.
- Treated water may not be used for irrigation purposes on food crops until at least five (5) days after application.
- **DO NOT** use in water utilized for crawfish farming.

#### USE PRECAUTIONS

- There is no post-application holding restriction against use of treated water for drinking or recreational purposes (e.g. swimming, fishing).
- Treated water may be used for irrigation purposes on turf and landscape ornamentals as outlined in the **Irrigation Restrictions Following Application** table.

This product is a fast acting contact herbicide for use in the management of undesirable aquatic vegetation in slow moving or quiescent waters, to maintain non-crop areas, conifer and poplar re-forestation sites, container and field-grown conifers (including Christmas trees) and deciduous trees, around established woody ornamentals in landscapes and dormant Bermudagrass.

This product is also effective as a preemergence and/or postemergence herbicide for control of selected grass and broadleaf weeds.

This product controls weeds by inhibiting protoporphyrinogen oxidase, an essential enzyme required by plants for chlorophyll biosynthesis. Seedling weeds are controlled preemergence when exposed to sunlight following contact with the soil-applied herbicide.

This product may cause spotting or speckling on foliage if the spray solution directly contacts actively-growing plant foliage or green bark. Leaves that receive indirect (drift) spray contact may be affected in a similar manner. Translocation of this product is limited, and under most conditions established and vigorously growing woody ornamentals will rapidly outgrow any injury symptoms. **However, direct application to actively-growing foliage can cause severe injury or death with sensitive ornamental plant species, especially in herbaceous bedding plants and flowers.**

**IMPORTANT:** When applied as directed, plants listed on this label have shown tolerance to this product. However, this product is a very active herbicide. Exercise responsible judgment and caution until familiarity is gained with this product. Due to variability within species, crop growth stage, environmental conditions and application techniques, it is directed that users test this product under local growing conditions on a small number of plants and evaluate for 4 to 6 weeks for phytotoxicity. Testing this product on a small number of plants will determine if the herbicide can be used safely on a widespread application. Neither the seller nor the manufacturer of this product has investigated the safety to plants not listed on the label.

#### WEED RESISTANCE MANAGEMENT

This product is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 14 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 this product or other Group 14 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 seedling 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.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective and 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 including 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 sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action.
- Contact your local sales representative, agricultural dealer, consultant, local extension specialist, applicator, crop advisor, and/or appropriate state agricultural extension service representative for additional pesticide resistance- management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- Report any incidence of non-performance of this product against a particular weed species to your local sales representative or agricultural dealer, or contact Atticus, LLC at (984) 465-4754.

#### **BEST MANAGEMENT PRACTICES**

- Plant into weed-free fields and keep fields as weed-free as possible.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple weed control practices including mechanical cultivation, biological management practices, and crop rotation.
- Fields with difficult-to-control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.
- **DO NOT** allow weed escapes to produce seeds, roots or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup of the weed seed-bank.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
- Prevent an influx of weeds into the field by managing field borders.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed control program should consider all of the weeds present.
- Difficult-to-control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.
- Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed control program. **DO NOT** use more than two applications of this or any other herbicide with the same mechanism of action within one year unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes.



### PREEMERGENCE APPLICATION

Make the preemergence application of this product prior to weed emergence. Moisture is necessary to activate this product for residual weed control. Moisture is needed to move this product into the soil for preemergence weed control. Dry weather following application of this product may reduce effectiveness. However, when adequate moisture is received after dry conditions, this product will control susceptible germinating weeds.

When adequate moisture is not received soon after this product is applied to soil, weed control may be improved by using shallow cultivation. If weeds begin to emerge, irrigate (1/2" of water) or cultivate uniformly with shallow tillage equipment that will not damage the crop. Deep cultivation reduces the effectiveness of this product.

### POSTEMERGENCE APPLICATION

For best results, apply this product to actively-growing weeds. The most effective postemergence weed control with this product occurs when applied in combination with a surfactant to weeds less than 2 inches in height. Applying this product under conditions that **DO NOT** promote active weed growth will reduce herbicide effectiveness. **DO NOT** apply this product when the weeds are under stress due to drought, excessive water and extremes in temperatures or disease. This product is most effective when applied under sunny conditions at temperatures above 65° F. This product is rainfast one hour after application. **DO NOT** make applications if rain is expected within one hour of application or efficacy may be reduced.

### SOIL CHARACTERISTICS

Application of this product to soils with high organic matter and/or high clay content may require higher dosages than with soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

### TANK MIXES

**NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, to the extent allowed by applicable law.**

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

### TANK MIX APPLICATION

In addition to weeds controlled by this product used alone, tank mixtures with other herbicides provides a broader spectrum of weed control. This product can be tank-mixed with other herbicides including, but not limited to those products listed below.

### TANK MIX COMBINATIONS FOR NON-SELECTIVE VEGETATION CONTROL

2,4-D	hexazinone	picloram
bromacil	imazapic	pramitol
chlorsulfuron	imazapyr	prodiamine
dicamba	metsulfuron-methyl	simazine
diuron	norflurazon	sulfometuron-methyl
clopyralid	oryzalin	tebuthiuron
glyphosate	pendimethalin	Triclopyr

**Tank Mixing – Conifer and Poplar Release Treatments[\*\*]**

Certain liquid formulations of other pesticides may increase the postemergence activity of this product, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with this product may be potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with this product may be more injurious than this product applied alone and need to be tested to determine if they can be used safely on a widespread basis.

**[\*\*Not for use in California]**

**Tank Mixing - Container and Field-Grown Conifers**

This product may be tank-mixed with products containing the following active ingredients labeled for use in conifers:

clethodim	glyphosate*	oryzalin
prodiamine	simazine*	

**\*DO NOT** apply glyphosate or simazine to containerized ornamentals.

**Tank Mixing - Field and Container Grown Deciduous Trees**

This product may be tank-mixed with products containing the following active ingredient labeled for use in deciduous trees:

clethodim	glyphosate*	metolachlor
oryzalin	pendimethalin	prodiamine
simazine*		

**\*DO NOT** apply glyphosate or simazine to containerized plants.

**Tank Mixing - With Other Turfgrass Herbicides**

This product may be tank-mixed with Manor Herbicide (metsulfuron-methyl; EPA Reg. No. 228-373).

## SPRAY DRIFT MANAGEMENT

### ○ Mandatory Spray Drift

#### Aerial Applications

- **DO NOT** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Boom-less Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 10 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.

#### Controlling Droplet Size - Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.
- BOOM HEIGHT - Ground Boom  
Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.
- RELEASE HEIGHT - Aircraft  
Higher release heights increase the potential for spray drift. When applying aerially to crops, **DO NOT** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.
- 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.
- Boom-less 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.

#### **APPLICATION AND SPRAYER INFORMATION**

Apply this product with sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. Apply by backpack or handgun sprayer, airboat, helicopter, airplane, or other application equipment that will ensure thorough coverage of plant foliage. **Important:** Thoroughly clean spray equipment, including all tanks, hoses, booms, screens and nozzles. **DO NOT use spray equipment used to apply this product to apply other materials or to any desirable plant foliage.** Equipment with this product's residue remaining in the system may result in crop injury to subsequently treated crops.

#### **BROADCAST APPLICATION**

Apply this product, and this product's tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume.

#### **BAND APPLICATION**

When banding, use proportionately less water and this product per acre.

## HANDGUN APPLICATION

Applications may also be made using a handgun sprayer. Use a spray volume of at least 40 gallons per acre to insure uniform coverage.

## BACKPACK APPLICATION

When applying this product with a backpack sprayer follow all above restrictions. Calibrate backpack sprayers to deliver 1 gallon of spray solution per 500 to 1,000 square feet.

### Mixing Rate for This Product in 1 Gallon of Spray Solution for Backpack Applications

Application Volume	Rate (fl oz/A) (lbs ai /A)	Fl oz to Mix in 1 gal Water	Teaspoons to Mix in 1 gal Water	Mls to Mix in 1 gal Water
1 gal per 500 sq ft (87 GPA)	8 (0.25 lbs ai/A)	0.09	0.6	2.7
	10 (0.31 lbs ai/A)	0.11	0.7	3.4
	12 (0.38 lbs ai/A)	0.14	0.8	4.1
1 gal per 750 sq ft (65 GPA)	8 (0.25 lbs ai/A)	0.14	0.8	4.1
	10 (0.31 lbs ai/A)	0.17	1	5.1
	12 (0.38 lbs ai/A)	0.21	1.2	6.1
1 gal per 1,000 sq ft (44 GPA)	8 (0.25 lbs ai/A)	0.18	1.1	5.3
	10 (0.31 lbs ai/A)	0.23	1.4	6.8
	12 (0.38 lbs ai/A)	0.27	1.6	8.1

Example: Applicator wants to spray 1 gallon of this product solution per 1,000 square feet of ground bed at a rate of 12 fl oz/A (0.38 lbs ai/A). Mix 0.27 fl oz (1.6 teaspoons or 8.1 mls) of this product in 1 gallon of water.

## AERIAL APPLICATION

To obtain satisfactory weed control, aerial application of this product, must provide uniform coverage of surface weeds and sufficient contact time. When applied by air, this product may not provide adequate control of some submersed weeds. Avoid spraying this product within 200 feet of dwellings, adjacent sensitive crops or environmentally sensitive areas. To obtain satisfactory application and avoid drift, the following directions must be observed:

### Volume and Pressure

Apply this product in a minimum of 5 gallons of water per acre with a maximum spray pressure of 40 PSI. Application at less than 5 gallons per acre may not provide adequate weed control. Higher gallonage applications provide more consistent weed control.

### Nozzles and Nozzle Operation

Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles including diaphragm type nozzles to avoid unwanted discharge of spray solution. The nozzle must be directed toward the rear of the aircraft, at an angle between 0° and 15° downward. **DO NOT** place nozzles on the outer 25% of the wings or rotors.

### Adjuvants

Refer to the additive section or the tank mix partners label for adjuvant specifications.

## **SPRAYER PREPARATION**

Before applying this product, start with clean, well maintained application equipment. Clean the spray tank, as well as all hoses and booms to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to the sulfonylurea and phenoxy herbicides, are active at very small amounts and can cause crop injury when applied to susceptible crops. Clean the spray equipment according to the manufacturer's directions for the last product used before the equipment is used to apply this product. If two or more products were tank-mixed prior to this product's application, follow the most restrictive cleanup procedure.

### **Mixing Instructions**

- Mix with water having pH of 5 to 7. If pH is higher than 7, use an appropriate buffer to reduce pH to desirable range.
- Fill clean spray tank 1/2 full of desired level with water and add buffering agent if necessary.
- Add the required amount of this product to the spray tank while agitating.
- Fill spray tank to desired level with water. Ensure that this product is thoroughly mixed before making applications. Continue agitation until spray solution has been applied.
- If tank mixing this product with other labeled herbicides, add water-soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions.
- Mix the amount of spray solution that can be applied the day of mixing. Apply this product within 48 hours of mixing.
- 

## **CARRIER VOLUME AND SPRAY PRESSURE**

### **PREEMERGENCE APPLICATION**

To ensure uniform coverage, use 10 to 40 gallons of spray solution per acre. When making backpack applications, apply 50 to 100 gallons of spray solution per acre. Nozzle must meet manufacturer's gallonage and pressure directions for preemergence herbicide application.

### **POSTEMERGENCE APPLICATION**

To ensure thorough coverage, use 15 to 30 gallons of spray solution per acre. Use 20 to 30 gallons per acre if dense vegetation or heavy residue is present on the soil surface. When applying with a backpack sprayer, apply 1 gallon of spray solution per 500 to 1,000 square feet. Nozzle selection must meet manufacturer's gallonage and pressure directions for postemergence herbicide application.

### **ADDITIVES**

When applying this product to the foliage of floating or emerged aquatic weeds, mix with an adjuvant approved for use in aquatic sites. Follow adjuvant manufacturer's label rates. Verify mixing compatibility by a jar test before using.

When applying this product after weed emergence in terrestrial settings, mix with an agronomically approved adjuvant. A non-ionic surfactant containing at least 80% active ingredient must be used when applying this product as part of a postemergence weed control program. Verify mixing compatibility by a jar test before using.

### **ADJUVANTS**

Refer to the additive section or the tank mix partners label for adjuvant specifications. When applying release treatments, **DO NOT** mix this product with any adjuvant or fertilizer.

### **JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND THIS PRODUCT**

Perform a jar test before mixing commercial quantities of this product, when using this product for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pint of the water to a quart jar. Use water from the same source and temperature as which will be used in the spray tank mixing operation.

2. Add 1 milliliter of this product to the quart jar for every 3 fl oz (0.09 lbs ai/A) of this product per acre being applied (4 ml if 12 fl oz (0.38 lbs ai/A) per acre is the desired rate of this product), gently mix until product goes into suspension.
3. Add 1 milliliter of non-ionic surfactant or 60 millimeter of crop oil concentrate, gently mix.
4. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
5. An ideal tank mix combination will be uniform. If any of the following conditions are observed question the choice of adjuvant:
  - a) Layer of oil or globules on the mixture's surface.
  - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: Thickening texture (coagulated) like gelatin.

### SPRAYER CLEANUP

If spray equipment is dedicated to herbicide applications, the following steps are to clean the spray equipment:

- Completely drain the spray tank and rinse the application equipment thoroughly, including the inside and outside of the tank and all in-line screens.

If spray equipment will be used for purposes other than applying herbicides, it must be thoroughly cleaned following application of this product. The following steps must be used to clean the spray equipment:

1. Completely drain the spray tank and rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the tank with clean water and flush all hoses, booms, screens and nozzles.
3. Top off tank with clean water and household ammonia. Use 1 gallon of 3% household ammonia for every 100 gallons of water.
4. Circulate through sprayer for 5 minutes.
5. Then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes.
6. Loosen any diaphragms before flushing the spray system, allowing cleaning solution to spray through the open diaphragm.
7. Drain tank completely.
8. Add enough clean water to the spray tank to flush hoses, booms, screens and nozzles for 2 minutes.
9. Remove all nozzles and screens and rinse them with clean water.

### WEEDS CONTROLLED

When this product is applied preemergence or postemergence at directed rates and weed stages, the following grasses and broadleaf weeds are controlled:

TABLE 1 – WEEDS CONTROLLED	
COMMON NAME	SCIENTIFIC NAME
Alyssum, Hoary	<i>Berteroa incana</i>
Amaranth	
Palmer	<i>Amaranthus palmeri</i>
Spiny	<i>Amaranthus spinosus</i>
American Burnweed	<i>Erechtites hieracifolia</i>
Barnyardgrass*	<i>Echinochloa crus-galli</i>
Beggarweed, Florida	<i>Desmodium Tortuosum</i>
Bittercress, Hairy	<i>Cardamine hirsute</i>
Bluegrass, Annual	<i>Poa annua</i>
Burclover, California	<i>Medicago Polymorpha</i>
Carpetweed	<i>Mollugo verticillata</i>
Chamberbitter	<i>Phyllanthus urinaria</i>
Chickweed	
Common	<i>Stellaria media</i>
Mouseear	<i>Cerastium vulgatum</i>
Crabgrass	
Large*	<i>Digitaria sanguinalis</i>
Smooth*	<i>Digitaria ishaemum</i>

Southern*	<i>Digitaria ciliaris</i>
Croton, Tropic	<i>Croton glandulosus</i> var. <i>septentrionalis</i>
Dandelion*	<i>Taraxacum officinale</i>
Dogfennel	<i>Eupatorium capillifolium</i>
Doveweed	<i>Murdannia nudiflora</i>
Eclipta	<i>Eclipta prostrate</i>
Filaree, Redstem*	<i>Erodium cicutarium</i>
Foxtail	
Bristly*	<i>Setaria verticillata</i>
Giant*	<i>Setaria faberi</i>
Green*	<i>Setaria viridis</i>
Yellow*	<i>Setaria glauca</i>
Galinsoga, Hairy	<i>Galinsoga ciliata</i>
Geranium, Carolina	<i>Geranium carolinianum</i>
Goosegrass*	<i>Eleusine indica</i>
Groundsel, Common	<i>Senecio vulgaris</i>
Groundsel, Tree	<i>Bachharis halimifolia</i>
Henbit	<i>Lamium amplexicaule</i>
Horseweed*	<i>Conyza Canadensis</i>
Indigo, Hairy	<i>Indigofera hirsute</i>
Ivy, Ground*	<i>Glechoma hederacea</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia	<i>Kochia scoparia</i>
Kyllinga, Green*	<i>Kyllinga brevifolia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, Common	<i>Chenopodium album</i>
Lovegrass, California*	<i>Eragrostis diffusa</i>
Liverwort	<i>Marchantia polymorpha</i>
Mallow	
Common	<i>Malva neglecta</i>
Little	<i>Malva parviflora</i>
Venice	<i>Hibiscus trionum</i>
Marsh Parsley	<i>Apium leptophyllum</i>
Mayweed*	<i>Anthemis cotula</i>
Morningglory	
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>
Ivyleaf	<i>Ipomoea hederacea</i>
Red/Scarlet	<i>Ipomoea coccinea</i>
Smallflower	<i>Jacquemontia tamnifolia</i>
Tall	<i>Ipomoea purpurea</i>
Moss	<i>Bryum</i> spp.
Mulberry Weed	<i>Fatua villosa</i>
Mustard	
Tumble	<i>Sisymbrium altissimum</i>
Wild	<i>Brassica kaber</i>
Nightshade	
Black	<i>Solanum nigrum</i>
Eastern Black	<i>Solanum ptycanthum</i>
Hairy	<i>Solanum sarrachoides</i>
Northern Willowherb	<i>Epilobium cillatum</i>
Panicum	
Fall*	<i>Panicum dichotomiflorum</i>
Texas*	<i>Panicum texanum</i>
Parsley-Peirt	<i>Alchemilla arvensis</i>
Pearlwort, Birdseye*	<i>Sagina procumbens</i>
Pennycress, Field	<i>Thlaspi arvense</i>
Phyllanthus, Longstalked	<i>Phyllanthus tenellus</i>
Pigweed	
Prostrate	<i>Amaranthus blitoides</i>
Redroot	<i>Amaranthus retroflexus</i>
Smooth	<i>Amaranthus hybridus</i>
Tumble	<i>Amaranthus albus</i>
Pineapple-weed*	<i>Matricaria matricarioides</i>
Plantain	



Broadleaf*	<i>Plantago major</i>
Buckhorn*	<i>Plantago lanceolata</i>
Pointsettia, Wild	<i>Euphorbia heterophylla</i>
Pondweed, Sago	<i>Potamogeton pectinatus</i>
Puncturevine	<i>Tribulus terrestris</i>
Purslane, Common	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scabra</i>
Ragweed	
Common	<i>Ambrosia artemisiifolia</i>
Giant	<i>Ambrosia trifida</i>
Redmaids	<i>Calandrinia ciliate</i>
Redweed	<i>Melochia corchorifolia</i>
Rocket, Yellow	<i>Barbarea vulgaris</i>
Senna, Coffee	<i>Cassia occidentalis</i>
Sesbania, Hemp	<i>Sesbania exaltata</i>
Shepherd's-Purse	<i>Capsella burse-pastoris</i>
Sida, Prickly (Teaweed)	<i>Sida spinosa</i>
Signalgrass*	<i>Brachiaria platyphylla</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sowthistle, Annual	<i>Sonchus oleraceus</i>
Spiderwort, Tropical	<i>Commelina benghalensis</i>
Spurge	
Petty	<i>Euphorbia peplus</i>
Prostrate	<i>Euphorbia humistrata</i> Engelm
Spotted	<i>Euphorbia maculate</i>
Starbur, Bristly*	<i>Acanthospermum hispidum</i>
Tassle-flower	<i>Emilia</i> spp.
Thistle	
Canada*	<i>Cirsium arvense</i>
Russian	<i>Salsola iberica</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Waterhemp	
Common	<i>Amaranthus rudis</i>
Tall	<i>Amaranthus tuberculatus</i>
Woodsorrel, Yellow*	<i>Oxalis stricta</i>

\*Preemergence control only

### AQUATIC WEED CONTROL

This product may be applied to the following quiescent or slow-moving bodies of water:

- Bayous
- Canals
- Drainage ditches
- Lakes
- Marshes
- Ponds (including golf course ponds)
- Reservoirs

This product is most effective when applied to young, actively-growing weeds in water with a pH of less than 8.5. Application of this product to public aquatic areas may require special approval and/or permits. Consult with local state agencies, if required.

#### USE RESTRICTIONS

- **DO NOT** apply to intertidal or estuarine areas.
- **DO NOT** exceed 400 ppb of this product during any one application.
- **DO NOT** re-treat the same section of water with this product more than 6 times per year.
- Not for homeowner use.
- **RTI: DO NOT** retreat the same section of water within 28 days of application, except in areas with dense weed vegetation. In these areas, treat the remaining weeds within 10 to 14 days.
- In high density weed populations only treat 1/2 the water body at one time.
- Treated water may not be used for irrigation purposes on food crops until at least five (5) days after application.
- **DO NOT** use in water utilized for crawfish farming.

**USE PRECAUTIONS**

- There is no post-application holding restriction against use of treated water for drinking or recreational purposes (e.g. swimming, fishing).
- Treated water may be used for irrigation purposes on turf and landscape ornamentals as outlined in the **Irrigation Restrictions Following Application** table.

**IRRIGATION RESTRICTIONS FOLLOWING APPLICATION**

Application Method	Application Rate	Average Water Depth	Turf and Landscape Ornamentals	Ornamentals grown for production in Greenhouse and Nursery
Surface Spray	6 to 12 oz (0.19 – 0.38 lbs ai/A) per surface acre	Greater than 3 feet	None	5 days
		Less than 3 feet	12 hours	5 days
Subsurface	Less than 200 ppb	N/A	1 day	5 days
	200 to 300 ppb	N/A	2 days	5 days
	300 to 400 ppb	N/A	3 days	5 days

**DIRECTIONS FOR USE  
TO CONTROL FLOATING AND EMERGED WEEDS USING SURFACE APPLICATION**

This product will control weeds and algae listed in Table 2 when applied as a broadcast spray with appropriate equipment. For best results, apply this product to the foliage of actively-growing weeds.

**Table 2. Floating and Emerged Weeds**

Common Name	Scientific Name
Alligator Weed	<i>Alternanthera philoxeroides</i>
Duckweed*	<i>Lemna</i> spp.
Frog’s-bit	<i>Limnobium spongia</i>
Mosquito Fern	<i>Azolla</i> spp.
Water Fern	<i>Salvinia</i> spp.
Water Lettuce	<i>Pistia stratiotes</i>
Watermeal*	<i>Wolffia</i> spp.
Water Pennywort	<i>Hydrocotyle</i> spp.
Filamentous algae	<i>Pithophara</i>
Filamentous algae	<i>Cladophora</i>

\* Coverage is essential for effective duckweed and watermeal control. Any duckweed and/or watermeal escapes left in the water column will quickly re-infest the water body. Apply 200 ppb concentration throughout the water body to control duckweed and watermeal. – see **DIRECTIONS FOR USE TO CONTROL SUBMERSED AND FLOATING WEEDS USING SUBSURFACE APPLICATIONS** section for additional application information.

**Surface Application**

Apply this product as a broadcast spray at 6 to 12 fl oz (0.19 to 0.38 lbs ai/A) of formulated product per acre plus an adjuvant approved for use in aquatics.

This product is a contact herbicide that quickly degrades in the water column so plants that **DO NOT** initially come in contact with the herbicide will not be controlled. Apply this product in a minimum of 30 gallons of water per acre to all areas of the water body where weeds exist. Coverage is essential for effective control as all floating weeds need to be exposed to lethal concentrations in all parts of the water body. Any untreated escapes or re-introductions of plants that were not treated will reestablish in areas where surface weeds had previously been controlled. If a second application is required to provide control, make a treatment once the return of these weeds

is first observed, but no sooner than 28 days after the last treatment.

Application of this product during early morning hours may enhance weed control. When applying to densely packed actively-growing surface weeds, ensure adequate coverage. Rapid decomposition of vegetation resulting from herbicide treatment can result in loss of oxygen in water. A sudden decrease in dissolved oxygen can result in fish suffocation. If aquatic vegetation is dense, treat floating surface weeds in sections to avoid a rapid decrease in dissolved oxygen.

This product may be tank-mixed with 2,4-D, diquat, glyphosate or other registered foliar-applied herbicides for enhanced control of floating and emergent weeds.

Consult a manufacturer's label for specific rate restrictions and weeds controlled. Always follow the most restrictive label restrictions and precautions for all products used when making an application involving tank mixes.

### Application Equipment

Apply this product with sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. Apply by backpack or handgun sprayer, airboat, helicopter, airplane or other application equipment that will ensure thorough coverage of target plant foliage.

## DIRECTIONS FOR USE TO CONTROL SUBMERSED AND FLOATING WEEDS USING SUBSURFACE APPLICATIONS

This product will control submersed and floating weeds listed in Table 3, **Submersed and Floating Weeds Controlled by Subsurface Application**, when applied subsurface with appropriate equipment.

**Table 3. Submersed and Floating Weeds Controlled by Subsurface Application**

Common Name	Scientific Name
Coontail	<i>Ceratophyllum demersum</i>
Duckweed	<i>Lemna</i> spp.
Fanwort	<i>Cabomba caroliniana</i>
Hydrilla	<i>Hydrilla verticillata</i>
Hygrophila	<i>Hygrophila polysperma</i>
Naiad, Southern	<i>Najas guadalupensis</i>
Pondweed, Curlyleaf	<i>Potamogeton crispus</i>
Pondweed, Sago	<i>Potamogeton pectinatus</i>
Pondweed, Variable-Leaf	<i>Potamogeton diversifolius</i>
Water Fern	<i>Salvinia</i> spp.
Water Lettuce	<i>Pistia stratiotes</i>
Watermeal	<i>Wolffia</i> spp.
Watermilfoil, Eurasian	<i>Myriophyllum spicatum</i>
Watermilfoil, Variable-Leaf	<i>Myriophyllum heterophyllum</i>

### Subsurface Treatment

Apply this product at a rate that will produce an initial concentration of 200 to 400 ppb (of active ingredient flumioxazin) in the water column.

This product is rapidly absorbed by target plants, but also breaks down quickly in water with a pH greater than 8.5. The pH of water surrounding mats of submersed vegetation can exceed 8.5 by early to mid-day, due to photosynthetic processes. Application of this product under these conditions may provide only partial weed control, and regrowth is likely. For best control, apply this product in a minimum of 30 gallons of water per acre in

the early morning to actively-growing weeds and early in the season before surface matting occurs. Complete coverage and sufficient contact time of submersed weeds with this product is required for optimal performance. Application of this product with subsurface trailing hoses designed to distribute the herbicide within the plant stand will provide more effective and longer-term control of submersed weeds. Use Table 3, **Subsurface Application Rates** to determine the amount of this product needed to achieve desired concentration at different water depths. Use higher concentrations when weed biomass is heavy and/or weeds are more mature and topped-out. Any untreated plants that are left in the water column can re-infest treated areas that had previously been controlled. If a second application is required to provide control, make a treatment once the return of these weeds is first observed, but no sooner than 28 days after the last treatment.

When applying this product to densely packed actively-growing submersed weeds, a rapid decomposition of vegetation resulting from herbicide treatment can result in loss of oxygen in water. A sudden decrease in dissolved oxygen can result in fish suffocation. If aquatic vegetation is dense, treat submersed weeds in sections to avoid a rapid decrease in dissolved oxygen.

This product may be tank-mixed with other registered submersed-applied herbicides for enhanced control of submersed and floating weeds.

**Application Equipment for Water Column Treatment**

To improve distribution in the water column and ensure adequate coverage, when possible apply this product with subsurface trailing hoses in order to place the herbicide under the surface and throughout the biomass of aquatic vegetation. Keep swath width to a minimum in order to maximize contact with submersed aquatic vegetation. In small shallow water bodies, surface sprays may be required to apply this product. Apply by backpack or handgun sprayer or other application equipment that will ensure adequate coverage of target plant.

**Information on Hydrilla Control in Florida**

Apply this product as a subsurface treatment for hydrilla control. For best control of hydrilla apply during the late Winter/early Spring and/or early to late Fall. Efficacy of this product will be enhanced at these timings due to lower potential biomass present and lower pH of the water. If applied to mature topped-out hydrilla, this product will cause some discoloration and loss of growing tips, but regrowth will be rapid.

Tank mixing this product with other registered herbicides is advised, especially if hydrilla is approaching maturity or biomass is heavy.

**Subsurface Application Rates**

Water Depth (feet)	Pints of This Product Required Per Surface Acre to Achieve Desired Water Concentration		
	200 ppb (lbs)	300 ppb (lbs)	400 ppb (lbs)
1	1.1 (0.55 lbs ai/A)	1.6 (0.8 lbs ai/A)	2.1 (1.05 lbs ai/A)
2	2.1 (1.05 lbs ai/A)	3.2 (1.6 lbs ai/A)	4.2 (2.1 lbs ai/A)
3	3.2 (1.6 lbs ai/A)	4.8 (2.4 lbs ai/A)	6.4 (3.2 lbs ai/A)
4	4.2 (2.1 lbs ai/A)	6.4 (3.2 lbs ai/A)	8.5 (4.25 lbs ai/A)
5	5.3 (2.6 lbs ai/A)	8.0 (4 lbs ai/A)	10.6 (5.3 lbs ai/A)

**Example:** to achieve an initial concentration of 200 ppb of flumioxazin in a 4-foot deep water column, apply 4.2 pints (2.1 lbs ai/A) of this product per surface acre.

## **BARE GROUND NON-CROP AREAS**

### **DIRECTIONS FOR USE**

#### **TO MAINTAIN BARE GROUND NON-CROP AREAS**

This product, when used as directed, can be used for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed-free. Apply this product only to:

- Bare ground under guard rails, above-ground pipelines, and railroad beds and railroad yards
- Bare ground in parking and storage areas, plant sites, substations, pumping stations, and tank farms
- Bare ground areas of airports, brick yards, industrial plant sites, lumber yards, military installations, and storage areas
- Bare ground around farm buildings, and along ungrazed fence rows, wind breaks and shelter belts
- Road surfaces, improved roadside areas and gravel shoulders.

This product offers residual and postemergence control of susceptible broadleaf and grass weeds as well as additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase.

#### **USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** apply when weather conditions favor spray drift from treated areas.
- **DO NOT** incorporate into soil after application.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply to moist or wet desirable plant foliage.
- **DO NOT** apply within 300 feet of non-dormant pome or stone fruit crops.
- **DO NOT** re-apply this product within 30 days.
- **DO NOT** apply when these soil and environmental conditions are present.

#### **USE PRECAUTIONS**

- Treatment of powdery, dry soil or light sandy soil, or light sandy soil when there is little to no likelihood of rainfall soon after may result in off-target movement and possible damage to actively-growing susceptible crops when soil particles are moved by wind or water.

#### **PREEMERGENCE APPLICATION**

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai) per acre of this product per broadcast acre as a preemergence application. Make preemergence (to weed emergence) applications of this product must be made to a weed-free soil surface. Preemergence applications of this product must be completed prior to weed emergence.

#### **POSTEMERGENCE APPLICATION**

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai) per acre of this product per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 quart per acre crop oil concentrate). The addition of an adjuvant enhances this product activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of this product. Emerged weeds are controlled postemergence with this product, however, translocation of this product within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with this product occurs when applied in combination with a surfactant to weeds less than 2 inches in height.

**DIRECTIONS FOR USE  
IN CONIFER RE-FORESTATION SITES FOLLOWING TIMBER HARVEST\*\***

This product is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in conifer re-forestation sites following timber harvest operations. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses. This product may be used as a site preparation treatment prior to transplanting of conifers or as a conifer release treatment after stand establishment.

**[\*\*Not for use in California]**

**Site Preparation - Application Before Transplanting**

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply this product before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, this product may be tank-mixed with a burndown herbicide to provide preemergence weed control.

Apply this product in at least 10 gallons of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

**Conifer Release Treatments — Applications only within 3 years after transplanting.**

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. **DO NOT** apply this product over the top of trees after budbreak or needle spotting and defoliation may occur. This product should not affect new growth of trees. See Table 4 for a list of tolerant conifers for over-the-top treatments.

**IMPORTANT:** When applied as directed, the conifers listed in Table 4 have shown tolerance to this product. However, this product is a very active herbicide. Exercise responsible judgment and caution until familiarity is gained with this product. If a desired conifer species is not listed in Table 4, evaluate the safety of this product on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Test this product on a small number of plants to determine if this product can be used safely on a widespread basis. **DO NOT** apply this product over the top of conifers until trees have been growing in the treated area for at least one year. The use of nylon mesh wraps, commonly used to deter animal browsing, may increase plant injury if placed on plants after over-the-top application of this product.

**USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** apply when weather conditions favor spray drift from treated areas.
- **DO NOT** incorporate into soil after application.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply to moist or wet desirable plant foliage.
- **DO NOT** apply within 300 feet of non-dormant pome or stone fruit crops.
- **DO NOT** re-apply this product within 30 days.
- **DO NOT** apply when these soil and environmental conditions are present.

**USE PRECAUTIONS**

- Treatment of powdery, dry soil or light sandy soil, or light sandy soil when there is little to no likelihood of rainfall soon after may result in off-target movement and possible damage to actively-growing susceptible crops when soil particles are moved by wind or water.

**DIRECTIONS FOR USE  
IN POPLAR PLANTATIONS AND TIMBER RE-FORESTATION SITES\*\***

This product is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in poplar plantations and timber re-forestation sites following timber harvest operations. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses. This product may be used as a site preparation treatment prior to transplanting of trees or as a release treatment after stand establishment.

**[\*\* Not for use in California]**

**Site Preparation - Application Before Transplanting**

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply this product before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, this product may be tank-mixed with a burndown herbicide to provide preemergence weed control.

Apply this product in at least 10 gallons of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

**Release Treatments — Applications Within 3 Years After Transplanting**

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. **DO NOT** apply this product over the top of trees after budbreak or leaf spotting and defoliation may occur. This product should not affect new growth of trees of tolerant poplars for over-the-top treatments.

**TANK MIXING — Poplar Release Treatments**

Certain liquid formulations of other pesticides may increase the postemergence activity of this product but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with this product may be more injurious than this product applied alone and need to be tested to determine if they can be used safely on a widespread basis.

**ADJUVANTS — Poplar Release Treatments**

When applying release treatments, **DO NOT** mix this product with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, poplars (*Populus balsamifera*, *P. niger* and *P. tremuloides*), hybrid poplars (*P. sp. x sp.*), and cottonwoods (*P. deltoids* and *P. trichocarpa*) have shown tolerance to this product. However, this product is a very active herbicide. Exercise responsible judgment and caution until familiarity is gained with this product. Test this product on a small number of plants to determine if this product can be used safely on a widespread basis. **DO NOT** apply this product over-the-top unless trees are more than one year old.

**USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** apply when weather conditions favor spray drift from treated areas.
- **DO NOT** incorporate into soil after application.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply to moist or wet desirable plant foliage.
- **DO NOT** apply within 300 feet of non-dormant pome or stone fruit crops.
- **DO NOT** re-apply this product within 30 days.
- **DO NOT** apply when these soil and environmental conditions are present.

## USE PRECAUTIONS

- Treatment of powdery, dry soil or light sandy soil, or light sandy soil when there is little to no likelihood of rainfall soon after may result in off-target movement and possible damage to actively-growing susceptible crops when soil particles are moved by wind or water.

## DIRECTIONS FOR USE TURF & ORNAMENTAL SITES<sup>[\*\*]</sup>

This product is a preemergence and early postemergence herbicide for control of selected grass and broadleaf weeds in and around ornamental woody shrubs, deciduous trees and conifers (including Christmas trees) grown outdoors in containers or in the field (in-ground), to maintain non-crop areas and dormant Bermudagrass. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses.

This product controls weeds by inhibiting protoporphyrinogen oxidase, an essential enzyme required by plants for chlorophyll biosynthesis. Seedling weeds are controlled preemergence when exposed to sunlight following contact with the soil-applied herbicide.

**[\*\*Not for use in California]**

## USE RESTRICTIONS

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** apply in enclosed greenhouse structures if plants are present.
- **DO NOT** move plants for 24 hours into enclosed greenhouses until the area treated with this product has been watered.
- **DO NOT** apply when weather conditions favor spray drift from treated areas.
- **DO NOT** graze treated fields or hay to livestock.
- **DO NOT** incorporate into soil after application.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply when plants are under stress from insects, diseases, animals or winter injury, planting shock or any other stresses.
- Only apply to healthy established trees and ornamentals.
- Not for homeowner use.
- RTI: 14 days.

## DIRECTIONS FOR USE

### IN ESTABLISHED CONTAINER AND FIELD-GROWN CONIFERS (INCLUDING CHRISTMAS TREES)<sup>[\*\*]</sup>

Apply this product as a single or split application to established container and field-grown conifers, which includes applications to Christmas tree plantations. The conifers listed in Table 4 have exhibited tolerance to this product only when the product is applied to dormant or hardened-off plant material. If applied over the top of plant foliage, apply this product before spring bud break or after conifers have sufficiently hardened-off. During periods of cool, cloudy weather, use caution to ensure conifers have hardened-off prior to herbicide application. **DO NOT** apply to conifers within 1 year of seedling emergence.

**[\*\*Not for use in California]**

## PREEMERGENCE APPLICATION

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai per acre) of this product per broadcast acre before weeds emerge. Apply to weed-free, established conifers grown in containers or in the field (in-ground). If possible, irrigate treated area with 0.5 to 0.75 inch of water immediately following application. This product may be sprayed directly over conifers listed in Table 4, provided bud break has not occurred or plants are hardened-off. Needle burn may be observed on new flush if plants are actively-growing at time of application. However, this product will typically not affect subsequent growth. If conifers are not dormant or hardened-off at time of application, and foliar injury



cannot be tolerated, apply this product as a directed spray, taking care to minimize direct contact or drift of sprays onto foliage. Mechanically incorporating this product after application will disturb soil surfaces, which may reduce herbicidal efficacy. When applied before weed germination, this product will control broadleaf and grassy weeds listed in Table 1.

**POSTEMERGENCE APPLICATION**

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai) per acre of this product per broadcast acre after weeds have emerged. This product may be sprayed directly over conifers listed in Table 4, provided bud break has not occurred or plants are hardened-off. Needle burn may be observed on new flush if plants are actively-growing at time of application. However, this product will typically not affect subsequent growth. If conifers are not dormant or hardened-off at the time of application, and foliar injury cannot be tolerated, apply this product as a directed spray, taking care to minimize direct contact or drift of sprays onto foliage.

If applied when weeds are actively-growing and no larger than 2 inches in height, this product will provide postemergence control of broadleaf weeds and grasses listed in Table 1. Postemergence control of this product may be more effective with certain weed species, and may not control mature, stressed or hardened-off weeds that are not actively-growing at the time of application.

**TOLERANT CONIFERS**

This product may be applied to the conifer species listed in Table 4. If a desired conifer species is not listed in Table 4, evaluate the safety of this product on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Testing this product on a small number of plants will determine if this product can be used safely on a widespread basis.

**USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** re-apply this product within 30 days.

**TABLE 4 - TOLERANT CONIFER TREE SPECIES**

COMMON NAME	SCIENTIFIC NAME
Arborvitae	
American	<i>Thuja occidentalis</i>
Oriental	<i>Thuja orientalis</i>
Fir	
Concolor	<i>Abies concolor</i>
Cork Bark	<i>Abies lasiocarpa</i>
Douglas	<i>Pseudotsuga menziesii</i>
Fraser	<i>Abies fraseri</i>
Grand	<i>Abies grandis</i>
Noble	<i>Abies procera</i>
Turkish	<i>Abies bommuelleriana</i>
Hemlock	
Eastern	<i>Tsuga Canadensis</i>
Western	<i>Tusga heterophylla</i>
Juniper	
Blue Star	<i>Juniperus scopularum</i>
Creeping	<i>Juniperus horizontalis</i>

Japanese Garden	<i>Juniperus chinensis</i>
Tamarix	<i>Juniperus Sabina</i>
Pine	
Austrian	<i>Pinus nigra</i>
Eastern White	<i>Pinus strobes</i>
Jack	<i>Pinus banksiana</i>
Japanese Black	<i>Pinus thunbergiana</i>
Loblolly	<i>Pinus taeda</i>
Lodgepole	<i>Pinus contorta</i>
Longleaf	<i>Pinus palustris</i>
Mugo	<i>Pinus mugo</i>
Ponderosa	<i>Pinus ponderosa</i>
Sand	<i>Pinus clausa</i>
Scotch	<i>Pinus sylvestris</i>
Shortleaf	<i>Pinus echinata</i>
Slash	<i>Pinus elliotii</i>
Virginia	<i>Pinus virginiana</i>
Spruce	
Blue	<i>Picea pungens</i>
Dwarf Alberta	<i>Picea glauca conica</i>
Norway	<i>Picea abies</i>
Sitka	<i>Picea sitchensis</i>
Yew	
English	<i>Taxus baccata</i>
Japanese	<i>Taxus cuspidate</i>

#### DIRECTIONS FOR USE

##### IN CONTAINER AND FIELD DECIDUOUS TREES AND NON-BEARING FRUIT AND NON-BEARING NUT TREES[\*\*]

This product may be applied as single or split applications to container and field-grown deciduous trees with an established root system. The deciduous trees listed in Table 5 have exhibited tolerance to this product only when applied to the soil and base of plants. Application of this product to deciduous foliage or green bark may result in unacceptable injury.

This product may be applied to established (or transplanted) container and field-grown deciduous trees. **DO NOT** apply to trees that are less than one year old or have been transplanted less than one year, unless completely protected by non-porous wraps, grow tubes, waxed protectors or other forms of protection to young foliage and/or bark. **DO NOT** harvest fruit or nuts from treated trees within one year of application.

**IMPORTANT:** Direct application of this product to the soil surface and away from plant foliage and bark. Avoid direct spray contact on plant surfaces, foliage and green bark or injury may result. Application of this product after bud swell may cause injury if herbicide contacts foliage. Avoid application under environmental conditions that favor drift to non-targeted areas.

**[\*\*Not for use in California]**

##### PREEMERGENCE APPLICATION

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai) per acre of this product per broadcast acre as a preemergence (to weed emergence) application. Apply this product to weed-free deciduous trees grown in containers or in the field (in-ground). If possible, irrigate treated area with 0.5 to 0.75 inch of water immediately following application. This product may be applied to the soil surface and base of deciduous trees, provided that direct and indirect (drift)

applications to plant foliage, flowers and green bark does not occur. Mechanically incorporating this product will disturb soil surfaces, which may reduce herbicidal efficacy. The use of spray shields that limit exposure of foliage and bark to this product is suggested. When applied before weed germination, this product will control broadleaf and grassy weeds. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses.

**POSTEMERGENCE APPLICATION**

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai) per acre of this product per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant). Make postemergence (to weed emergence) applications of this product when weeds are actively-growing and are no larger than 2 inches in height. The addition of a surfactant enhances this product activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of this product. When applied after weed germination, this product will provide preemergence and postemergence control of broadleaf weeds and grasses. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses

Postemergence control of this product may be more effective with certain weed species, and may not control mature, stressed or hardened-off weeds that are not actively-growing at the time of application.

**TOLERANT DECIDUOUS TREES, NON-BEARING FRUIT AND NON-BEARING NUT TREES**

This product may be applied as a directed spray to the deciduous, non-bearing fruit and non-bearing nut trees species listed in Table 5. If a desired tree species is not listed in Table 5, evaluate the safety of this product on a small number of plants under commercial growing conditions and monitor plant response for four to six weeks for phytotoxicity. Testing this product on a small number of plants will determine if this product can be used safely on a widespread basis.

**USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** re-apply this product within 30 days.

**TABLE 5 – TOLERANT DECIDUOUS TREE SPECIES**

COMMON NAME	SCIENTIFIC NAME
Apricot*	<i>Prunus</i> spp.
Ash	<i>Fraxinus</i> spp.
Birch	<i>Betula</i> spp.
Buckeye	<i>Aesculus</i> spp.
Cherry*	<i>Prunus</i> spp.
Chestnut	<i>Castanea</i> spp.
Citrus*	<i>Citrus</i> spp.
Dogwood	<i>Cornus</i> spp.
Eucalyptus	<i>Eucalyptus</i> spp.
Ginkgo	<i>Ginkgo</i> spp.
Hawthorn	<i>Crataegus</i> spp.
Honeylocust	<i>Gleditsia</i> spp.
Larch	<i>Larix</i> spp.
Lilac	<i>Syringa</i> spp.
Maple**	<i>Acer</i> spp.
Myrtle, Crepe	<i>Lagerstroemia indica</i>
Oak	<i>Quercus</i> spp.

Poplar	<i>Populus</i> spp.
Peach*	<i>Prunus</i> spp.
Plum*	<i>Prunus</i> spp.
Pecan*	<i>Carya</i> spp.
Redbud	<i>Cercis Canadensis</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Plantanus</i> spp.
Walnut, Black	<i>Juglans nigra</i>
Willow	<i>Salix</i> spp.

\*Non-bearing trees only.

\*\*Not for use on maple trees used for production of maple sap or syrup.

### DIRECTIONS FOR USE

#### AROUND ESTABLISHED WOODY LANDSCAPE ORNAMENTALS AND TO MAINTAIN NON-CROP AREAS[\*\*]

Application of this product in the vicinity of ornamental plants is limited to directed sprays around well-established woody shrubs and trees including azalea, euonymus, holly, and the conifers and deciduous trees listed in Tables 4 and 5. This product may also be applied to maintain weed control in non-crop areas in apartment complexes, fence rows, gravel surfaces and driveways, ground mats and pads prior to the addition of containerized plants, golf courses, lumberyards, office complexes, parks, parking areas, recreational sites, schools, sidewalks, storage areas, grass waterways and rain gardens. **DO NOT** apply this product within any enclosed structure in residential or commercial landscapes.

This product offers postemergence and residual control of susceptible grasses and broadleaf weeds, as well as additional mode of action to assist in the control of resistant weeds. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses. The length of residual control is dependent on the rate applied, rainfall and temperature. Length of residual control will decrease as temperature and precipitation increase.

**IMPORTANT: Contact with spray or spray drift of this product may cause severe injury or destruction of certain desirable plants, especially herbaceous species including bedding plants or direct-seeded annual and perennial flowers. Therefore, DO NOT apply this product over the top of ornamental plants growing in the landscape, and DO NOT allow spray of this product to contact, drift or splash from soil onto the foliage, green stems, exposed roots or fruit of desirable plants. Avoid application of this product under conditions that favor drift of sprays onto desired ornamentals or turfgrass. The use of spray shields that limit the plant exposure to this product is directed when applying this product near desirable plants.**

**DO NOT** apply this product around landscape ornamentals until plants have been actively-growing for at least 30 days after transplanting, or for at least two months before ornamentals will be planted into treated areas.

[\*\*Not for use in California]

#### PREEMERGENCE APPLICATION (NO WEEDS ARE PRESENT)

Mix 0.18 to 0.27 fl oz (5.3 to 8.1 mls; 0.006 to 0.004 lb ai) of this product per gallon of spray solution, and apply 1 gallon of spray solution to 1,000 square feet (8 to 12 fl oz/A) prior to weed germination (see Backpack Application table for more options and details). Apply this product to weed-free soil, mulch or gravel surfaces. Moisture is necessary to activate this product on soil for residual weed control. When applied before weed germination, this product will control the broadleaf weeds and grasses listed in Table 1.

Established landscape ornamentals have shown tolerance to this product **only** when applied to the soil at the base of the plant. For maximum plant safety when using around desirable ornamentals, direct applications of this product to the soil, and leave a sufficient untreated buffer to ensure spray solution does not contact desired plants. **DO NOT** harvest fruit or nuts from treated trees within one year of application.

### **POSTEMERGENCE APPLICATION (WEEDS ARE PRESENT)**

Mix 0.18 to 0.27 fl oz (5.3 to 8.1 mls; 0.006 to 0.004 lb ai) of this product per gallon of spray solution (8 to 12 fl oz/A), and apply 1 gallon of spray solution to 1,000 square feet to actively-growing weeds (see calibration chart for backpack sprayers). Tank mixing this product with glyphosate will increase the spectrum of postemergence weed control over this product alone, provide faster postemergence weed control than glyphosate alone, and provide preemergence and postemergence control of the broadleaf weeds and grasses listed in Table 1.

Established landscape ornamentals have shown tolerance to applications of this product plus glyphosate **only** when applied to the soil at the base of the plant, and sprays **DO NOT** directly contact or drift onto desirable plants. For maximum plant safety when using around desirable ornamentals, direct applications of this product plus glyphosate towards the soil, and leave a sufficient non-treated buffer to ensure spray solution does not contact desired plants.

Thorough spray coverage of weeds is necessary to maximize weed control. Spray coverage must be uniform, but **DO NOT** spray to the point of runoff.

**IMPORTANT:** Completely read and follow the glyphosate label. When tank mixing this product with other products, always follow the most restrictive use conditions on either label.

### **USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** re-apply this product within 30 days.
- **DO NOT** harvest fruit or nuts from treated trees within one year of application.
- Not for homeowner use.

### **DIRECTIONS FOR USE**

#### **ON DORMANT BERMUDAGRASS GROWN ON RESIDENTIAL SITES, GOLF COURSES AND SOD PRODUCTION [\*\*]**

This product may be applied as a single or split application to well-established dormant Bermudagrass. This product will provide preemergence and early postemergence control of annual bluegrass, chickweed, henbit and other winter annual weeds. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses. This product will also provide preemergence control of crabgrass, goosegrass and other summer annual weeds. This product may be applied to dormant turfgrass in such areas as apartment complexes, golf courses, sod farms, roadsides, sports fields, campgrounds, office complexes, parks, parking areas, recreational sites, schools and residential turf. Bermudagrass exhibits tolerance to this product only when applied to semi-dormant or completely dormant turf in the late fall and before active growth resumes in the late winter/early spring. Application of this product to actively-growing turfgrass (warm season and cool season) or during green-up may cause unacceptable injury.

**[\*\*Not for use in California]**

### **BROADCAST APPLICATIONS**

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per broadcast acre as a preemergence (to weed emergence) application. If weeds are present at the time of application apply this product plus an adjuvant (0.25% v/v non-ionic surfactant). Make postemergence (to weed emergence) applications of this product when weeds are actively-growing and no larger than 2 inches in height. Thorough spray coverage is necessary to maximize the postemergence activity of this product. When applied after weed germination, this product will provide preemergence and postemergence control of broadleaf weeds and grasses. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses. Postemergence weed control with this product

may be more effective on certain weed species, and may not control mature, stressed or hardened-off weeds that are not actively-growing at the time of application.

This product will provide best control of annual bluegrass when applied in the late fall while plants are small. Control may be less effective when applied in the winter under cold conditions when weeds are not actively-growing. A second application of this product may be required to provide adequate season-long annual bluegrass control. This product will provide best control of crabgrass, goosegrass and other summer annual weeds when applied in the late winter before turfgrass resumes active growth.

#### **TANK MIXING WITH OTHER TURFGRASS HERBICIDES**

This product may be tank-mixed with Manor Herbicide (metsulfuron-methyl, EPA Reg. No. 228-373).

#### **USE AROUND BENTGRASS AND POA GREENS**

This product has limited potential for lateral movement on level terrain, but can potentially move down-slope after excessive rainfall and affect sensitive turf species including bentgrass and *Poa trivialis*. When applied upslope from bentgrass greens or Bermudagrass greens overseeded with *Poa trivialis*, allow an adequate buffer zone between greens and the treated area. If uncertain about the size of the buffer, 15 feet is suggested.

Risk of movement is decreased when this product is applied to soil at less than field capacity. Avoid application when heavy rain is imminent or when the soil is saturated.

#### **USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per year.
- Exercise good judgment and caution when applying to dormant turfgrass until familiarity is gained with this product.
- **DO NOT** apply to golf course putting greens.
- **DO NOT** apply to warm season turfgrass that has been overseeded with cool season turfgrass (ex. perennial rye, *Poa trivialis*).
- **DO NOT** irrigate within 1 hour before or after application.
- **DO NOT** apply if rain is expected within 1 hour after application.
- **DO NOT** mow turfgrass within 12 hours after application.
- **DO NOT** apply within 30 days prior to cutting or lifting sod.
- **DO NOT** re-apply this product within 30 days.
- **DO NOT** apply in fall before turfgrass has ceased active growth or in late winter/ early spring after turfgrass has resumed active growth.
- Not for homeowner use.

#### **USE PRECAUTIONS**

- Allow 8 weeks between application and seeding or sodding of turfgrass.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### CONTAINER HANDLING:

**[Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **“NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable “No refillable” or “Refillable” designation. Follow the container disposal [handling] instructions below that apply to your container type / size.”

**[Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

[For Residential uses]

**[Nonrefillable container. DO NOT** reuse or refill this container. If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.]

[For Commercial Uses]

**[For plastic containers ≤ 5 gallons: Nonrefillable Container: DO NOT** reuse or refill this container. Triple 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[For plastic containers > 5 gallons: Nonrefillable container. DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[Refillable containers larger than 5 gallons:]** Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

#### LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT: READ BEFORE USE.** Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. 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, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

[A319.15] is a trademark of Atticus, LLC

[Payload® SC Herbicide] and [Clipper® SC Aquatic Herbicide] are registered trademarks of Nufarm Americas Inc.



## {LANGUAGE ON LABEL AFFIXED TO CONTAINER}

FLUMIOXAZIN	GROUP 14	HERBICIDE
-------------	----------	-----------

### A319.15™

[Alternate Brand Name: Semera SC / Schooner SC]

Contains flumioxazin, the active ingredient used in [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

[FOR THE MANAGEMENT OF UNDESIRABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS]\*\*] [FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR REFORESTATION SITES]\*\*] [FOR USE IN CONTAINER AND FIELD-GROWN CONIFERS (INCLUDING CHRISTMAS TREES) AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPES AND MAINTAIN NON-CROP AREAS AND DORMANT BERMUDAGRASS]\*\*]

ACTIVE INGREDIENT:	(% by weight)
Flumioxazin*	41.4%
OTHER INGREDIENTS:	58.6%
TOTAL	100.0%

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isindole-1,3(2H)-dione

A319.15 contains 4 pounds flumioxazin per gallon.

[\*\*Not for use in California]

### KEEP OUT OF REACH OF CHILDREN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you **DO NOT** understand the label, find someone to explain it to you in detail.)

#### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at **1-844-685-9173** for emergency medical treatment information.

#### For Chemical Emergency:

**Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing spray mist. 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.

**ENVIRONMENTAL HAZARDS:** If not used in accordance with directions on the label, this product is toxic to non-target plants and aquatic invertebrates. For terrestrial uses: **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. **DO NOT** apply directly to treated, finished drinking water reservoirs or drinking water receptacles when water is intended for human consumption. Drift and runoff may be hazardous to non-target plants and aquatic organisms in water adjacent to treated areas. **DO NOT** apply where runoff is likely to occur. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### CONTAINER HANDLING:

[Note to Reviewer: The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "No refillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size."

[Note to Reviewer: The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

[For Residential uses]

[Nonrefillable container. **DO NOT** reuse or refill this container. If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.]

[For Commercial Uses]

[For plastic containers ≤ 5 gallons: Nonrefillable Container: **DO NOT** reuse or refill this container. Triple 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

[For plastic containers > 5 gallons: Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

[Refillable containers larger than 5 gallons:] Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by

State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

This pesticide is toxic to plants. Use strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is needed.

**DO NOT** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**PHYSICAL OR CHEMICAL HAZARDS: DO NOT** mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

See inside label booklet for additional Precautionary Statements and Directions for Use.

[A319.15] is not manufactured, or distributed by Nufarm Inc, seller of [Payload® SC Herbicide.] [and] [Clipper® SC Herbicide].

Manufactured for:  
**Atticus, LLC**  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

**EPA Reg. No.: 91234-XX**  
**EPA Est. No.:** \_\_\_\_\_  
**NET CONTENTS:** \_\_\_\_\_

{Note to reviewer: [Text] in brackets denotes optional or explanatory language}  
{Note to reviewer: {Text} in braces denotes where in the final label text will appear}

**{BOOKLET FRONT PANEL LANGUAGE}**

Subpart 1 – A319.15 - Aquatic

FLUMIOXAZIN	GROUP 14	HERBICIDE
-------------	----------	-----------

# A319.15 [™]

[Alternate Brand Name: Semera SC / Schooner SC]

Contains flumioxazin, the active ingredient used in [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

**[FOR THE MANAGEMENT OF UNDESIRABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS]**

ACTIVE INGREDIENT:	(% by weight)
Flumioxazin* .....	41.4%
<b>OTHER INGREDIENTS:</b> .....	<b>58.6%</b>
<b>TOTAL</b> .....	<b>100.0%</b>

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione

A319.15 contains 4 pounds flumioxazin per gallon.

[For ≤ 5 Gallon Containers:] [Shake Well Before Use]  
[For > 5 Gallon Containers:] [Shake Well, Agitate or Recirculate Before Use]

**KEEP OUT OF REACH OF CHILDREN**

**Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you DO NOT understand the label, find someone to explain it to you in detail.)**

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at **1-844-685-9173** for emergency medical treatment information.

**For Chemical Emergency:  
Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night**

**Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

See [below] [inside label booklet] for [additional] [First Aid,] [Precautionary Statements] [and] [Directions for Use].

[A319.15] is not manufactured, or distributed by Nufarm, seller of [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

EPA Reg. No.: 91234-XX

EPA Est. No.:

Net Contents:

Manufactured for:  
**Atticus, LLC**  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing spray mist. 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.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE):

##### Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- chemical-resistant gloves made of any waterproof material
- shoes and socks.

##### Use Safety Requirements

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

#### USER SAFETY RECOMMENDATIONS

##### Users Should:

- 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

If not used in accordance with directions on the label, this product can be toxic to non-target plants and aquatic invertebrates. **DO NOT** apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption. Drift and runoff may be hazardous to non-target plants and aquatic organisms in water adjacent to treated areas. **DO NOT** apply where runoff is likely to occur. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to plants. Use strictly in accordance with the drift and run-off precautions on this label in order to minimize off- site exposures.

Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is needed.

**DO NOT** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing

this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

#### **PHYSICAL OR CHEMICAL HAZARDS**

**DO NOT** mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

#### **DIRECTIONS FOR USE**

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

Read the entire label before using this product. Use strictly in accordance with label precautionary statements and directions, and with applicable state and federal regulations.

**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.

#### **WEED RESISTANCE MANAGEMENT**

This product is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 14 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 this product or other Group 14 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 seedling 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.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective and 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 including 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 sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix

products so that there are multiple effective mechanisms of action.

- Contact your local sales representative, agricultural dealer, consultant, local extension specialist, applicator, crop advisor, and/or appropriate state agricultural extension service representative for additional pesticide resistance- management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- Report any incidence of non-performance of this product against a particular weed species to your local sales representative or agricultural dealer, or contact Atticus, LLC at (984) 465-4754.

#### **BEST MANAGEMENT PRACTICES**

- Plant into weed-free fields and keep fields as weed-free as possible.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple weed control practices including mechanical cultivation, biological management practices, and crop rotation.
- Fields with difficult-to-control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.
- **DO NOT** allow weed escapes to produce seeds, roots or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup of the weed seed-bank.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
- Prevent an influx of weeds into the field by managing field borders.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed control program should consider all of the weeds present.
- Difficult-to-control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.
- Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed control program. **DO NOT** use more than two applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes.

#### **TANK MIXES**

**NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, to the extent allowed by applicable law.**

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

#### **PRODUCT INFORMATION**

This product is a fast-acting contact herbicide that controls selected submersed, emergent, and floating aquatic weeds. It is most effective when applied to young, actively-growing weeds in water with a pH of less than 8.5.

This product may be applied to the following quiescent or slow-moving bodies of water:

- Bayous
- Canals
- Drainage ditches
- Lakes
- Marshes
- Ponds (including golf course ponds)
- Reservoirs

Application of this product to public aquatic areas may require special approval and/or permits. Consult with local

state agencies, if required.

**USE RESTRICTIONS**

- **DO NOT** apply to intertidal or estuarine areas.
- **DO NOT** exceed 400 ppb of this product during any one application.
- **DO NOT** re-treat the same section of water with this product more than 6 times per year.
- **DO NOT** retreat the same section of water within 28 days of application, except in areas with dense weed vegetation. In these areas, treat the remaining weeds within 10 to 14 days.
- In high density weed populations only treat 1/2 the water body at onetime.
- Treated water may not be used for irrigation purposes on food crops until at least five (5) days after application.
- **DO NOT** use in water utilized for crawfish farming.
- Not for homeowner use.

**USE PRECAUTIONS**

- There is no post-application holding restriction against use of treated water for drinking or recreational purposes (e.g. swimming, fishing).
- Treated water may be used for irrigation purposes on turf and landscape ornamentals as outlined in the **Irrigation Restrictions Following Application** table.

**IRRIGATION RESTRICTIONS FOLLOWING APPLICATION**

Application Method	Application Rate	Average Water Depth	Turf and Landscape Ornamentals	Ornamentals Grown for Production in Greenhouse and Nursery
Surface Spray	6 to 12 oz (0.19 – 0.38 lbs ai/A) per surface acre	Greater than 3 feet	None	5 days
		Less than 3 feet	12 hours	5 days
Subsurface	Less than 200 ppb	N/A	1 day	5 days
	200 to 300 ppb	N/A	2 days	5 days
	300 to 400 ppb	N/A	3 days	5 days



## SPRAY DRIFT MANAGEMENT

### ○ Mandatory Spray Drift

#### Aerial Applications

- **DO NOT** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Boom-less Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 10 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.

#### Controlling Droplet Size - Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.
- **BOOM HEIGHT - Ground Boom**  
Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.
- **RELEASE HEIGHT - Aircraft**  
Higher release heights increase the potential for spray drift. When applying aerially to crops, **DO NOT** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.
- **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.
- **Boom-less 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.

### **APPLICATION AND SPRAYER INFORMATION**

#### **Mixing Instructions**

- Mix with water having pH of 5 to 7. If pH is higher than 7, use an appropriate buffer to reduce pH to desirable range.
- Fill clean spray tank 1/2 full of desired level with water and add buffering agent if necessary.
- Add the required amount of this product to the spray tank while agitating.
- Fill spray tank to desired level with water. Ensure that this product is thoroughly mixed before making applications. Continue agitation until spray solution has been applied.
- Mix only the amount of spray solution that can be applied the day of mixing. Apply this product within 48 hours of mixing.

#### **ADDITIVES**

When applying this product to the foliage of floating or emerged aquatic weeds, mix with an adjuvant approved for use in aquatic sites. Mix this product with a non-ionic surfactant containing at least 80% active ingredient. Follow adjuvant manufacturer's label rates. Verify mixing compatibility by a jar test before using.

## JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND THIS PRODUCT

Perform a jar test before mixing commercial quantities of this product, when using this product for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pint of the water to a quart jar. Use water from the same source and temperature as which will be used in the spray tank mixing operation.
2. Add 1 milliliter of this product to the quart jar for every 3 fl oz (0.09 lbs ai/A) of this product per acre being applied (4 ml if 12 fl oz per acre is the desired rate of this product), gently mix until product goes into suspension.
3. Add 1 milliliter of non-ionic surfactant, gently mix.
4. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
5. An ideal tank mix combination will be uniform. If any of the following conditions are observed question the choice of adjuvant:
  - a) Layer of oil or globules on the mixture's surface.
  - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: Thickening texture (coagulated) like gelatin.

## Sprayer Cleanup

If spray equipment is dedicated to application of aquatic herbicides, the following steps are to clean the spray equipment:

- Completely drain the spray tank and rinse the application equipment thoroughly, including the inside and outside of the tank and all in-line screens.

If spray equipment will be used for purposes other than applying aquatic herbicides, it must be thoroughly cleaned following application of this product. The following steps must be used to clean the spray equipment:

1. Completely drain the spray tank and rinse the application equipment thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the tank with clean water and flush all hoses, booms, screens and nozzles.
3. Top off tank with clean water.
4. Circulate through sprayer for 5 minutes.
5. Then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes.
6. Drain tank completely.
7. Remove all nozzles and screens and rinse them with clean water.

## AERIAL APPLICATION

To obtain satisfactory weed control, aerial application of this product, must provide uniform coverage of surface weeds and sufficient contact time. When applied by air, this product may not provide adequate control of some submersed weeds. Avoid spraying this product within 200 feet of dwellings, adjacent sensitive crops or environmentally sensitive areas. To obtain satisfactory application and avoid drift, the following directions must be observed:

### Volume and Pressure

Apply this product in a minimum of 5 gallons of water per acre with a maximum spray pressure of 40 PSI. Application at less than 5 gallons per acre may not provide adequate weed control. Higher gallonage applications provide more consistent weed control.

### Nozzles and Nozzle Operation

Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles including diaphragm

type nozzles to avoid unwanted discharge of spray solution. The nozzle must be directed toward the rear of the aircraft, at an angle between 0° and 15° downward. **DO NOT** place nozzles on the outer 25% of the wings or rotors.

**Adjuvants**

Refer to the additive section or the tank mix partners label for adjuvant specifications.

**DIRECTIONS FOR USE  
TO CONTROL FLOATING AND EMERGED WEEDS USING SURFACE APPLICATION**

This product will control weeds and algae listed in Table 1 when applied as a broadcast spray with appropriate equipment. For best results, apply this product to the foliage of actively-growing weeds.

**Table 1. Floating and Emerged Weeds**

Common Name	Scientific Name
Alligator Weed	<i>Alternanthera philoxeroides</i>
Duckweed*	<i>Lemna</i> spp.
Frog’s-bit	<i>Limnobium spongia</i>
Mosquito Fern	<i>Azolla</i> spp.
Water Fern	<i>Salvinia</i> spp.
Water Lettuce	<i>Pistia stratiotes</i>
Watermeal*	<i>Wolffia</i> spp.
Water Pennywort	<i>Hydrocotyle</i> spp.
Filamentous algae	<i>Pithophara</i>
Filamentous algae	<i>Cladophora</i>

\* Coverage is essential for effective duckweed and watermeal control. Any duckweed and/or watermeal escapes left in the water column will quickly re-infest the water body. Apply 200 ppb concentration throughout the water body to control duckweed and watermeal. – see **DIRECTIONS FOR USE TO CONTROL SUBMERSED AND FLOATING WEEDS USING SUBSURFACE APPLICATIONS** section for additional application information.

**Surface Application**

Apply this product as a broadcast spray at 6 to 12 fl oz (0.19 to 0.38 lbs ai/A) of formulated product per acre plus an adjuvant approved for use in aquatics.

This product is a contact herbicide that quickly degrades in the water column so plants that **DO NOT** initially come in contact with the herbicide will not be controlled. Apply this product in a minimum of 30 gallons of water per acre to all areas of the water body where weeds exist. Coverage is essential for effective control as all floating weeds need to be exposed to lethal concentrations in all parts of the water body. Any untreated escapes or re-introductions of plants that were not treated will reestablish in areas where surface weeds had previously been controlled. If a second application is required to provide control, make a treatment once the return of these weeds is first observed, but no sooner than 28 days after the last treatment.

Application of this product during early morning hours may enhance weed control. When applying to densely packed actively-growing surface weeds, ensure adequate coverage. Rapid decomposition of vegetation resulting from herbicide treatment can result in loss of oxygen in water. A sudden decrease in dissolved oxygen can result in fish suffocation. If aquatic vegetation is dense, treat floating surface weeds in sections to avoid a rapid decrease in dissolved oxygen.

This product may be tank-mixed with 2,4-D, diquat, glyphosate or other registered foliar-applied herbicides for enhanced control of floating and emergent weeds.

Consult a manufacturer’s label for specific rate restrictions and weeds controlled. Always follow the most restrictive

label restrictions and precautions for all products used when making applications involving tank mixes.

**Application Equipment**

Apply this product with sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. Apply by backpack or handgun sprayer, airboat, helicopter, airplane or other application equipment that will ensure thorough coverage of target plant foliage.

**DIRECTIONS FOR USE  
TO CONTROL SUBMERSED AND FLOATING WEEDS USING SUBSURFACE APPLICATIONS**

This product will control submersed and floating weeds listed in Table 2, **Submersed and Floating Weeds Controlled by Subsurface Application**, when applied subsurface with appropriate equipment.

**Table 2. Submersed and Floating Weeds Controlled by Subsurface Application**

Common Name	Scientific Name
Coontail	<i>Ceratophyllum demersum</i>
Duckweed	<i>Lemna</i> spp.
Fanwort	<i>Cabomba caroliniana</i>
Hydrilla	<i>Hydrilla verticillata</i>
Hygrophila	<i>Hygrophila polysperma</i>
Naiad, Southern	<i>Najas guadalupensis</i>
Pondweed, Curlyleaf	<i>Potamogeton crispus</i>
Pondweed, Sago	<i>Potamogeton pectinatus</i>
Pondweed, Variable-Leaf	<i>Potamogeton diversifolius</i>
Water Fern	<i>Salvinia</i> spp.
Water Lettuce	<i>Pistia stratiotes</i>
Watermeal	<i>Wolffia</i> spp.
Watermilfoil, Eurasian	<i>Myriophyllum spicatum</i>
Watermilfoil, Variable-Leaf	<i>Myriophyllum heterophyllum</i>

**Subsurface Treatment**

Apply this product at a rate that will produce an initial concentration of 200 to 400 ppb (of active ingredient flumioxazin) in the water column.

This product is rapidly absorbed by target plants, but also breaks down quickly in water with a pH greater than 8.5. The pH of water surrounding mats of submersed vegetation can exceed 8.5 by early to mid-day, due to photosynthetic processes. Application of this product under these conditions may provide only partial weed control, and regrowth is likely. For best control, apply this product in a minimum of 30 gallons of water per acre in the early morning to actively-growing weeds and early in the season before surface matting occurs. Complete coverage and sufficient contact time of submersed weeds with this product is required for optimal performance. Application of this product with subsurface trailing hoses designed to distribute the herbicide within the plant stand will provide more effective and longer-term control of submersed weeds. Use Table 3, *Subsurface Application Rates* to determine the amount of this product needed to achieve desired concentration at different water depths. Use higher concentrations when weed biomass is heavy and/or weeds are more mature and topped-out. Any untreated plants that are left in the water column can re-infest treated areas that had previously been controlled. If a second application is required to provide control, make a treatment once the return of these weeds is first observed, but no sooner than 28 days after the last treatment.

When applying this product to densely packed actively-growing submersed weeds, a rapid decomposition of vegetation resulting from herbicide treatment can result in loss of oxygen in water. A sudden decrease in dissolved

oxygen can result in fish suffocation. If aquatic vegetation is dense, treat submersed weeds in sections to avoid a rapid decrease in dissolved oxygen.

This product may be tank-mixed with other registered submersed-applied herbicides for enhanced control of submersed and floating weeds.

#### Application Equipment for Water Column Treatment

To improve distribution in the water column and ensure adequate coverage, when possible apply this product with subsurface trailing hoses in order to place the herbicide under the surface and throughout the biomass of aquatic vegetation. Keep swath width to a minimum in order to maximize contact with submersed aquatic vegetation. In small shallow water bodies, surface sprays may be required to apply this product. Apply by backpack or handgun sprayer or other application equipment that will ensure adequate coverage of target plant.

#### Information on Hydrilla Control in Florida

Apply this product as a subsurface treatment for hydrilla control. For best control of hydrilla apply during the late Winter/early Spring and/or early to late Fall. Efficacy of this product will be enhanced at these timings due to lower potential biomass present and lower pH of the water. If applied to mature topped-out hydrilla, this product will cause some discoloration and loss of growing tips, but regrowth will be rapid.

Tank mixing this product with other registered herbicides is advised, especially if hydrilla is approaching maturity or biomass is heavy.

#### Subsurface Application Rates

Water Depth (feet)	Pints of This Product Required Per Surface Acre to Achieve Desired Water Concentration		
	200 ppb	300 ppb	400 ppb
1	1.1 (0.55 lbs ai/A)	1.6 (0.8 lbs ai/A)	2.1 (1.05 lbs ai/A)
2	2.1 (1.05 lbs ai/A)	3.2 (1.6 lbs ai/A)	4.2 (2.1 lbs ai/A)
3	3.2 (1.6 lbs ai/A)	4.8 (2.4 lbs ai/A)	6.4 (3.2 lbs ai/A)
4	4.2 (2.1 lbs ai/A)	6.4 (3.2 lbs ai/A)	8.5 (4.25 lbs ai/A)
5	5.3 (2.6 lbs ai/A)	8.0 (4 lbs ai/A)	10.6 (5.3 lbs ai/A)

**Example:** to achieve an initial concentration of 200 ppb of flumioxazin in a 4-foot deep water column, apply 4.2 pints (2.1 lbs ai/A) of this product per surface acre.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### CONTAINER HANDLING:

**[Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **“NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable “No refillable” or “Refillable” designation. Follow the container disposal [handling] instructions below that apply to your container type / size.”

**[Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

[For Residential uses]

**[Nonrefillable container. DO NOT** reuse or refill this container. If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.]

[For Commercial Uses]

**[For plastic containers ≤ 5 gallons: Nonrefillable Container: DO NOT** reuse or refill this container. Triple 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[For plastic containers > 5 gallons: Nonrefillable container. DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[Refillable containers larger than 5 gallons:]** Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

#### LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT: READ BEFORE USE.** Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. 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, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

[A319.15] is a trademark of Atticus, LLC

[Payload® SC Herbicide] and [Clipper® SC Aquatic Herbicide] are registered trademarks of Nufarm Americas Inc.



{LANGUAGE ON LABEL AFFIXED TO CONTAINER}

FLUMIOXAZIN GROUP 14 HERBICIDE

### A319.15™

[Alternate Brand Name: Semera SC / Schooner SC]

Contains flumioxazin, the active ingredient used in [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

[FOR THE MANAGEMENT OF UNDESIRABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS]

ACTIVE INGREDIENT:	(% by weight)
Flumioxazin*	41.4%
OTHER INGREDIENTS:	58.6%
TOTAL	100.0%

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isindole-1,3(2H)-dione

A319.15 contains 4 pounds flumioxazin per gallon.

### KEEP OUT OF REACH OF CHILDREN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you **DO NOT** understand the label, find someone to explain it to you in detail.)

HOT LINE NUMBER
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment information.

#### For Chemical Emergency:

Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing spray mist. 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.

**ENVIRONMENTAL HAZARDS:** If not used in accordance with directions on the label, this product is toxic to non-target plants and aquatic invertebrates. For terrestrial uses: **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark. **DO NOT** apply directly to treated, finished drinking water reservoirs or drinking water receptacles when water is intended for human consumption. Drift and runoff may be hazardous to non-target plants and aquatic organisms in water adjacent to treated areas. **DO NOT** apply where runoff is likely to occur. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to plants. Use strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is needed.

### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### CONTAINER HANDLING:

[**Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **“NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable “No refillable” or “Refillable” designation. Follow the container disposal [handling] instructions below that apply to your container type / size.”

[**Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

[For Residential uses]

**[Nonrefillable container. DO NOT** reuse or refill this container. If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.]

[For Commercial Uses]

**[For plastic containers ≤ 5 gallons: Nonrefillable Container. DO NOT** reuse or refill this container. Triple 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[For plastic containers > 5 gallons: Nonrefillable container. DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[Refillable containers larger than 5 gallons:]** Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**DO NOT** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**PHYSICAL OR CHEMICAL HAZARDS: DO NOT** mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

See inside label booklet for additional Precautionary Statements and Directions for Use.

[A319.15] is not manufactured, or distributed by Competitor Company, seller of [Nufarm Americas Inc.].

Manufactured for:  
**Atticus, LLC**  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

**EPA Reg. No.: 91234-XX**  
**EPA Est. No.:** \_\_\_\_\_  
**NET CONTENTS:** \_\_\_\_\_

{Note to reviewer: [Text] in brackets denotes optional or explanatory language}  
{Note to reviewer: {Text} in braces denotes where in the final label text will appear}

**{BOOKLET FRONT PANEL LANGUAGE}**

Subpart 2 – A319.15 - IVM

FLUMIOXAZIN	GROUP	14	HERBICIDE
-------------	-------	----	-----------

# A319.15<sup>[TM]</sup>

[Alternate Brand Name: Semera SC / Schooner SC]

Contains flumioxazin, the active ingredient used in [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

**FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE- FORESTATION SITES**

<b>ACTIVE INGREDIENT:</b>	<b>(% by weight)</b>
Flumioxazin*.....	41.4%
<b>OTHER INGREDIENTS:</b> .....	<u>58.6%</u>
<b>TOTAL:</b> .....	100.0%

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione P

A319.15 contains 4 pounds flumioxazin per gallon.

[For ≤ 5 Gallon Containers:] [Shake Well Before Use]  
[For > 5 Gallon Containers:] [Shake Well, Agitate or Recirculate Before Use]

**KEEP OUT OF REACH OF CHILDREN**

**Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you DO NOT understand the label, find someone to explain it to you in detail.)**

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at **1-844-685-9173** for emergency medical treatment information.

**For Chemical Emergency:  
Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

See [below] [inside label booklet] for [additional] [First Aid,] [Precautionary Statements] [and] [Directions for Use].

[A319.15] is not manufactured, or distributed by Nufarm, seller of [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

EPA Reg. No.: 91234-XX

EPA Est. No.:

Net Contents:

Manufactured for:  
**Atticus, LLC**  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing spray mist. 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.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

**Applicators and other handlers must wear:**

- long-sleeved shirt and long pants
- chemical-resistant gloves made of any waterproof material
- shoes and socks.

**User Safety Requirements**

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

**USER SAFETY RECOMMENDATIONS**

**Users Should:**

- 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**

If not used in accordance with directions on the label, this product is toxic to non-target plants and aquatic invertebrates. For terrestrial uses: **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark. Drift and runoff may be hazardous to non-target plants and aquatic organisms in water adjacent to treated areas. **DO NOT** apply where runoff is likely to occur. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to plants. Use strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Under some conditions this product may have a potential to run off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, including no till, limited till and contour plowing; these methods also reduce pesticide run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands or on the downhill side of fields where run-off could occur will minimize water run-off.

**DO NOT** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**PHYSICAL OR CHEMICAL HAZARDS**

**DO NOT** mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

**DIRECTIONS FOR USE**

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

Read the entire label before using this product. Use strictly in accordance with label precautionary statements and directions, and with applicable state and federal regulations.

**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.

#### **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 (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural crops on farms, forests, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

**DO NOT** enter or allow others to enter the treated area until sprays have dried.

#### **TANK MIXES**

**NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, to the extent allowed by applicable law.**

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

#### **PRODUCT INFORMATION**

This product is a selective herbicide to maintain bare ground non-crop areas when used in accordance with this label. This product is effective as a preemergence and/or postemergence herbicide for control of selected grass and broadleaf weeds.

This product controls weeds by inhibiting protoporphyrinogen oxidase, an essential enzyme required by plants for chlorophyll biosynthesis. Seedling weeds are controlled preemergence when exposed to sunlight following contact with the soil-applied herbicide.

#### **USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** apply when weather conditions favor spray drift from treated areas.
- **DO NOT** incorporate into soil after application.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply to moist or wet desirable plant foliage.
- **DO NOT** apply within 300 feet of non-dormant pome or stone fruit crops.
- **DO NOT** apply when these soil and environmental conditions are present.
- RTI: 30 days.

#### **USE PRECAUTIONS**

- Treatment of powdery, dry soil or light sandy soil, or light sandy soil when there is little to no likelihood of rainfall soon after may result in off-target movement and possible damage to actively-growing susceptible crops when soil particles are moved by wind or water.

#### **WEED RESISTANCE MANAGEMENT**

This product is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 14 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 this product or other Group 14 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 seedling 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.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective and 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 including 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 sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action.
- Contact your local sales representative, agricultural dealer, consultant, local extension specialist, applicator, crop advisor, and/or appropriate state agricultural extension service representative for additional pesticide resistance- management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- Report any incidence of non-performance of this product against a particular weed species to your local sales representative or agricultural dealer, or contact Atticus, LLC at (984) 465-4754.

#### **BEST MANAGEMENT PRACTICES**

- Plant into weed-free fields and keep fields as weed-free as possible.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple weed control practices including mechanical cultivation, biological management practices, and crop rotation.
- Fields with difficult-to-control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.
- **DO NOT** allow weed escapes to produce seeds, roots or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup of the weed seed-bank.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
- Prevent an influx of weeds into the field by managing field borders.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed control program should consider all of the weeds present.
- Difficult-to-control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.
- Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed control program. **DO NOT** use more than two applications of this or any other herbicide with the same mechanism of action within one year unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes.

### PREEMERGENCE APPLICATION

Make the preemergence application of this product prior to weed emergence. Moisture is necessary to activate this product for residual weed control. Moisture is needed to move this product into the soil for preemergence weed control. Dry weather following application of this product may reduce effectiveness.

### POSTEMERGENCE APPLICATION

For best results, apply this product to actively-growing weeds. Applying this product under conditions that **DO NOT** promote active weed growth will reduce herbicide effectiveness.

**DO NOT** apply this product when the weeds are under stress due to drought, excessive water and extremes in temperatures or disease. This product is most effective when applied under sunny conditions at temperatures above 65° F.

This product is rainfast one hour after application. **DO NOT** make applications if rain is expected within one hour of application or efficacy may be reduced.

### APPLICATION EQUIPMENT

**Important:** Thoroughly clean spray equipment, including all tanks, hoses, booms, screens and nozzles. **DO NOT use spray equipment used to apply this product to apply other materials to any desirable plant foliage.** Equipment with this product's residue remaining in the system may result in crop injury to subsequently treated crops.

### SPRAYER PREPARATION

Before applying this product, start with clean, well maintained application equipment. Clean the spray tank, as well as all hoses and booms to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to the sulfonyleurea and phenoxy herbicides, are active at very small amounts and can cause crop injury when applied to susceptible crops. Clean the spray equipment according to the manufacturer's directions for the last product used before the equipment is used to apply this product. If two or more products were tank-mixed prior to this product's application, follow the most restrictive cleanup procedure.

### MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. Agitate solution. Agitation creates a rippling or rolling action on the water surface.
3. If tank mixing this product with other labeled herbicides, add water-soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
4. Add any required adjuvants.
5. Fill spray tank to desired level with water. **Continue agitation until all spray solution has been applied.**
6. Mix only the amount of spray solution that can be applied the day of mixing. Apply this product within 48 hours of mixing.

### SPRAYER CLEANUP

If spray equipment is dedicated to herbicide applications, the following steps are to clean the spray equipment:

- Completely drain the spray tank and rinse the application equipment thoroughly, including the inside and outside of the tank and all in-line screens.

If spray equipment will be used for purposes other than applying herbicides, it must be thoroughly cleaned following application of this product. The following steps must be used to clean the spray equipment:

- Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
- Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles.
- Top off tank, add suitable commercial spray tank cleaning material, following label directions, or add 1 gallon of 3% household ammonia for every 100 gallons of water, circulate through sprayer for 5 minutes, and then flush all



- hoses, booms, screens and nozzles for a minimum of 15 minutes.
- Drain tank completely.
- Add enough clean water to the spray tank to allow all hoses, booms, screens and nozzles to be flushed for 2 minutes.
- Remove all nozzles and screens and rinse them with clean water.

## SPRAY DRIFT MANAGEMENT

### ○ Mandatory Spray Drift

#### Aerial Applications

- **DO NOT** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Boom-less Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 10 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.
 Controlling Droplet Size - Aircraft
  - Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.
- BOOM HEIGHT - Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

- **RELEASE HEIGHT - Aircraft**  
Higher release heights increase the potential for spray drift. When applying aurally to crops, **DO NOT** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.
- **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.
- **Boom-less 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.

#### WEEDS CONTROLLED

When this product is applied preemergence or postemergence at directed rates and weed stages, the following grasses and broadleaf weeds are controlled:

TABLE 1 – WEEDS CONTROLLED	
COMMON NAME	SCIENTIFIC NAME
Alyssum, Hoary	<i>Berteroa incana</i>
Amaranth	
Palmer	<i>Amaranthus palmeri</i>
Spiny	<i>Amaranthus spinosus</i>
American Burnweed	<i>Erechtites hieraciifolius</i>
Barnyardgrass*	<i>Echinochloa crus-galli</i>
Beggarweed, Florida	<i>Desmodium tortuosum</i>
Bittercress, Hairy	<i>Cardamine hirsuta</i>
Bluegrass, Annual	<i>Poa annua</i>
Burclover, California	<i>Medicago polymorpha</i>
Carpetweed	<i>Mollugo verticillata</i>
Chamberbitter	<i>Phyllanthus urinaria</i>
Chickweed	
Common	<i>Stellaria media</i>
Mouseear	<i>Cerastium vulgatum</i>
Crabgrass	
Large*	<i>Digitaria sanguinalis</i>
Smooth*	<i>Digitaria ischaemum</i>
Southern*	<i>Digitaria ciliaris</i>
Croton, Tropic	<i>Croton glandulosus var. septentrionalis</i>
Dandelion*	<i>Taraxacum officinale</i>
Dogfennel	<i>Eupatorium capillifolium</i>
Doveweed	<i>Murdannia nudiflora</i>
Eclipta	<i>Eclipta prostrata</i>

Filaree, Redstem*	<i>Erodium cicutarium</i>
Foxtail	
Bristly*	<i>Setaria verticillata</i>
Giant*	<i>Setaria faberi</i>
Green*	<i>Setaria viridis</i>
Yellow*	<i>Setaria glauca</i>
Galinsoga, Hairy	<i>Galinsoga ciliata</i>
Geranium, Carolina	<i>Geranium carolinianum</i>
Goosegrass*	<i>Eleusine indica</i>
Groundsel, Common	<i>Senecio vulgaris</i>
Groundsel, Tree	<i>Baccharis halimifolia</i>
Henbit	<i>Lamium amplexicaule</i>
Horseweed*	<i>Conyza canadensis</i>
Indigo, Hairy	<i>Indigofera hirsuta</i>
Ivy, Ground*	<i>Glechoma hederacea</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia	<i>Bassia scoparia</i>
Kyllinga, Green*	<i>Kyllinga brevifolia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, Common	<i>Chenopodium album</i>
Lovegrass, California*	<i>Eragrostis diffusa</i>
Liverwort	<i>Marchantia polymorpha</i>
Mallow	
Common	<i>Malva neglecta</i>
Little	<i>Malva parviflora</i>
Venice	<i>Hibiscus trionum</i>
Marsh Parsley	<i>Apium leptophyllum</i>
Mayweed*	<i>Anthemis cotula</i>
Morningglory	
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>
Ivyleaf	<i>Ipomoea hederacea</i>
Red/Scarlet	<i>Ipomoea coccinea</i>
Smallflower	<i>Jacquemontia tamnifolia</i>
Tall	<i>Ipomoea purpurea</i>
Moss	<i>Bryum</i> spp.
Mulberry Weed	<i>Fatoua villosa</i>
Mustard	
Tumble	<i>Sisymbrium altissimum</i>
Wild	<i>Brassica kaber</i>
Nightshade	
Black	<i>Solanum nigrum</i>
Eastern Black	<i>Solanum ptycanthum</i>
Hairy	<i>Solanum sarrachoides</i>
Northern Willowherb	<i>Epilobium ciliatum</i>
Panicum	
Fall*	<i>Panicum dichotomiflorum</i>
Texas*	<i>Panicum texanum</i>
Parsley-Piert	<i>Alchemilla arvensis</i>
Pearlwort, Birdseye*	<i>Sagina procumbens</i>
Pennycress, Field	<i>Thlaspi arvense</i>
Phyllanthus, Longstalked	<i>Phyllanthus tenellus</i>
Pigweed	
Prostrate	<i>Amaranthus blitoides</i>
Redroot	<i>Amaranthus retroflexus</i>
Smooth	<i>Amaranthus hybridus</i>
Tumble	<i>Amaranthus albus</i>
Pineapple-weed*	<i>Matricaria matricarioides</i>
Plantain	
Broadleaf*	<i>Plantago major</i>
Buckhorn*	<i>Plantago lanceolata</i>
Pointsettia, Wild	<i>Euphorbia heterophylla</i>
Pondweed, Sago	<i>Potamogeton pectinatus</i>
Puncturevine	<i>Tribulus terrestris</i>
Purslane, Common	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scabra</i>
Ragweed	
Common	<i>Ambrosia artemisiifolia</i>
Giant	<i>Ambrosia trifida</i>
Redmaids	<i>Calandrinia ciliata</i>
Redweed	<i>Melochia corchorifolia</i>

Rocket, Yellow	<i>Barbarea vulgaris</i>
Senna, Coffee	<i>Cassia occidentalis</i>
Sesbania, Hemp	<i>Sesbania exaltata</i>
Shepherd's-Purse	<i>Capsella burse-pastoris</i>
Sida, Prickly (Teaweed)	<i>Sida spinosa</i>
Signalgrass*	<i>Brachiaria platyphylla</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sowthistle, Annual	<i>Sonchus oleraceus</i>
Spiderwort, Tropical	<i>Commelina benghalensis</i>
Spurge	
Petty	<i>Euphorbia peplus</i>
Prostrate	<i>Euphorbia humistrata Engelm</i>
Spotted	<i>Euphorbia maculate</i>
Starbur, Bristly*	<i>Acanthospermum hispidum</i>
Tassle-flower	<i>Emilia spp.</i>
Thistle	
Canada*	<i>Cirsium arvense</i>
Russian	<i>Salsola iberica</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Waterhemp	
Common	<i>Amaranthus rudis</i>
Tall	<i>Amaranthus tuberculatus</i>
Woodsorrel, Yellow*	<i>Oxalis stricta</i>

\*Preemergence control only

### DIRECTIONS FOR USE

#### TO MAINTAIN BARE GROUND NON-CROP AREAS

This product, when used as directed, can be used for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed-free. Apply this product only to:

- Bare ground under guard rails, above-ground pipelines, and railroad beds and railroad yards
- Bare ground in parking and storage areas, plant sites, substations, pumping stations, and tank farms
- Bare ground areas of airports, brick yards, industrial plant sites, lumber yards, military installations, and storage areas
- Bare ground around farm buildings, and along ungrazed fence rows, wind breaks and shelter belts
- Road surfaces, improved roadside areas and gravel shoulders.

Follow all applicable directions as outlined above under Product Information. See Table 1 for a list of broadleaf weeds and grasses controlled by this product.

This product offers residual and postemergence control of susceptible broadleaf and grass weeds as well as additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase.

#### PREEMERGENCE APPLICATION

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai per acre) of this product per broadcast acre as a preemergence application. Make preemergence (to weed emergence) applications of this product to a weed-free soil surface. Preemergence applications of this product must be completed prior to weed emergence. Moisture is necessary to activate this product on soil for residual weed control. Dry weather following application of this product may reduce effectiveness. However, when adequate moisture is received after dry conditions, this product will control susceptible germinating weeds.

#### POSTEMERGENCE APPLICATION

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai per acre) of this product per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 quart per acre crop oil concentrate). The addition of an adjuvant enhances this product activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of this product. Emerged weeds are controlled postemergence with this product, however, translocation of this product within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with this product occurs when applied in combination with a surfactant to weeds less than 2 inches in height.

#### SOIL CHARACTERISTICS

Application of this product to soils with high organic matter and/or high clay content may require higher dosages than

with soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

## **CARRIER VOLUME AND SPRAY PRESSURE**

### **PREEMERGENCE APPLICATION**

To ensure uniform coverage, use 10 to 30 gallons of spray solution per acre. Nozzle selection must meet manufacturer's gallonage and pressure directions for preemergence herbicide application.

### **POSTEMERGENCE APPLICATION**

To ensure thorough coverage, use 15 to 30 gallons of spray solution per acre. Use 20 to 30 gallons per acre if dense vegetation or heavy residue is present on the soil surface. Nozzle selection must meet manufacturer's gallonage and pressure directions for postemergence herbicide application.

## **ADDITIVES**

### **POSTEMERGENCE APPLICATION**

When applying this product after weed emergence, mix with an agronomically approved adjuvant. Use a crop oil concentrate which contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant containing at least 80% active ingredient when applying this product as part of a postemergence weed control program. Verify mixing compatibility by a jar test before using.

A spray grade nitrogen source (either ammonium sulfate at 2.0 to 2.5 pounds per acre or a 28 to 32% nitrogen solution at 1 to 2 quarts per acre) may be added to the spray mixture along with a crop oil concentrate or non-ionic surfactant to enhance weed control. The addition of a nitrogen source does not replace the need for crop oil concentrate or non-ionic surfactant.

## **JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND THIS PRODUCT**

When using this product and an adjuvant, including in stale seed bed, layby, hooded/shielded or reduced tillage situations, perform a jar test before mixing commercial quantities of this product, when using this product for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pint of the water to a quart jar. Use water from the same source and temperature as which will be used in the spray tank mixing operation.
2. Add 1 milliliter of this product to the quart jar for every 3 fl oz (0.09 lbs ai/A) of this product per acre being applied (4 mls if 12 fl oz per acre is the desired rate of this product), gently mix until product goes into suspension.
3. Add 60 mls of crop oil to the quart jar or 1 milliliter of non-ionic surfactant if it is being used in place of oil, gently mix.
4. If nitrogen is being used, add 16 mls of the 28 to 32% nitrogen source to the quart jar. If ammonium sulfate is being used, add 19 g AMS to the quart jar in place of the 28 to 32% nitrogen.
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank mix combination will be uniform. If any of the following conditions are observed question the choice of adjuvant:
  - a) Layer of oil or globules on the mixture's surface.
  - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: Thickening texture (coagulated) like gelatin.

## **APPLICATION EQUIPMENT**

Application equipment must be clean and in good repair. Nozzles must be uniformly spaced on boom and frequently checked for accuracy.

## **BROADCAST APPLICATION**

Apply this product, and this product's tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume.

## BAND APPLICATION

When banding, use proportionately less water and this product per acre.

## HANDGUN APPLICATION

Applications may also be made using a handgun sprayer. Use a spray volume of at least 40 gallons per acre to insure uniform coverage.

## AERIAL APPLICATION

To obtain satisfactory weed control with aerial applications of this product, uniform coverage must be obtained. Avoid spraying this product within 200 feet of dwellings, adjacent sensitive crops or environmentally sensitive areas. To obtain satisfactory application and drift, the following directions must be observed:

### Volume Pressure

Use this product in 5 to 10 gallons of water per acre with a maximum spray pressure of 40 PSI. Application at less than 5 gallons per acre will provide inadequate weed control. Higher gallonage applications provide more consistent weed control.

### Nozzle and Nozzle Operation

Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles, including diaphragm type nozzles to avoid unwanted discharge of spray solution. The nozzle must be directed toward the rear of the aircraft, at an angle between 0° and 15° downward. **DO NOT** place nozzles on the outer 25% of the wings or rotors.

### Adjuvants

Refer to the additive section or the tank mix partner's label for adjuvant specifications.

## TANK MIX APPLICATION

In addition to weeds controlled by this product used alone, tank mixtures with other preemergence and postemergence herbicides registered for use in non-crop areas provide a broader spectrum of weed control. This product must be tank-mixed with other non-crop herbicides including, but not limited to those products listed below.

## TANK MIX COMBINATIONS FOR NON-SELECTIVE VEGETATION CONTROL

2,4-D	hexazinone	picloram
bromacil	imazapic	pramitol
chlorsulfuron	imazapyr	prodiamine
dicamba	metsulfuron-methyl	simazine
diuron	norflurazon	sulfometuron-methyl
clopyralid	oryzalin	tebuthiuron
glyphosate	pendimethalin	triclopyr

**IMPORTANT:** Completely read and follow the label of any potential tank mix partner. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label.

## USE RESTRICTIONS

- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** apply more than 12 fl oz per application.
- **DO NOT** re-apply this product within 30 days.

## DIRECTIONS FOR USE

### IN CONIFER RE-FORESTATION SITES FOLLOWING TIMBER HARVEST\*\*

This product is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in

conifer re-forestation sites following timber harvest operations. This product may be used as a site preparation treatment prior to transplanting of conifers or as a conifer release treatment after stand establishment.

**[\*\*Not for use in California]**

**Site Preparation - Application Before Transplanting**

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply this product before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, this product may be tank-mixed with a burndown herbicide to provide preemergence weed control.

Apply this product in at least 10 gallons of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

**Conifer Release Treatments — Applications only within 3 years after transplanting.**

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. **DO NOT** apply this product over the top of trees after budbreak or needle spotting and defoliation may occur. This product should not affect new growth of trees. See Table 2 for a list of tolerant conifers for over the top treatments.

**TANK MIXING — Conifer Release Treatments**

Certain liquid formulations of other pesticides may increase the postemergence activity of this product, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with this product may be more injurious than this product applied alone and need to be tested to determine if they can be used safely on a widespread basis.

**ADJUVANTS — Conifer Release Treatments**

When using as a Conifer Release Treatment, **DO NOT** mix this product with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, the conifers listed in Table 2 have shown tolerance to this product. However, this product is a very active herbicide. Exercise responsible judgment and caution until familiarity is gained with this product. If a desired conifer species is not listed in Table 2, evaluate the safety of this product on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Test this product on a small number of plants to determine if this product can be used safely on a widespread basis. **DO NOT** apply this product over the top of conifers until trees have been growing in the treated area for at least one year. The use of nylon mesh wraps, commonly used to deter animal browsing, may increase plant injury if placed on plants after over-the-top application of this product.

**USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** re-apply this product within 30 days.

**TABLE 2. TOLERANT CONIFER TREE SPECIES**

COMMON NAME	SCIENTIFIC NAME
Arborvitae	
American	<i>Thuja occidentalis</i>
Oriental	<i>Thuja orientalis</i>
Fir	
Concolor	<i>Abies concolor</i>
Cork Bark	<i>Abies lasiocarpa</i>
Douglas	<i>Pseudotsuga menziesii</i>
Fraser	<i>Abies fraseri</i>
Grand	<i>Abies grandis</i>

Noble	<i>Abies procera</i>
Turkish	<i>Abies bommuelleriana</i>
Hemlock	
Eastern	<i>Tsuga Canadensis</i>
Western	<i>Tusga heterophylla</i>
Juniper	
Blue Star	<i>Juniperus scopularum</i>
Creeping	<i>Juniperus horizontalis</i>
Japanese Garden	<i>Juniperus chinensis</i>
Tamarix	<i>Juniperus Sabina</i>
Pine	
Austrian	<i>Pinus nigra</i>
Eastern White	<i>Pinus strobes</i>
Jack	<i>Pinus banksiana</i>
Japanese Black	<i>Pinus thunbergiana</i>
Loblolly	<i>Pinus taeda</i>
Lodgepole	<i>Pinus contorta</i>
Longleaf	<i>Pinus palustris</i>
Mugo	<i>Pinus mugo</i>
Ponderosa	<i>Pinus ponderosa</i>
Sand	<i>Pinus clausa</i>
Scotch	<i>Pinus sylvestris</i>
Shortleaf	<i>Pinus echinata</i>
Slash	<i>Pinus elliottii</i>
Virginia	<i>Pinus virginiana</i>
Spruce	
Blue	<i>Picea pungens</i>
Dwarf Alberta	<i>Picea glauca conica</i>
Norway	<i>Picea abies</i>
Sitka	<i>Picea sitchensis</i>
Yew	
English	<i>Taxus baccata</i>
Japanese	<i>Taxus cuspidate</i>

## DIRECTIONS FOR USE

### IN POPLAR PLANTATIONS AND TIMBER RE-FORESTATION SITES

This product is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in poplar plantations and timber re-forestation sites following timber harvest operations. This product may be used as a site preparation treatment prior to transplanting of trees or as a release treatment after stand establishment.

#### Site Preparation - Application Before Transplanting

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply this product before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, this product may be tank-mixed with a burndown herbicide to provide preemergence weed control.

Apply this product in at least 10 gallons of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.



### **Release Treatments — Applications Within 3 Years After Transplanting**

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. **DO NOT** apply this product over the top of trees after budbreak or leaf spotting and defoliation may occur. This product should not affect new growth of trees of tolerant poplars for over-the-top treatments.

### **TANK MIXING — Poplar Release Treatments**

Certain liquid formulations of other pesticides may increase the postemergence activity of this product, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with this product may be more injurious than this product applied alone and need to be tested to determine if they can be used safely on a widespread basis.

### **ADJUVANTS — Poplar Release Treatments**

When applying release treatments, **DO NOT** mix this product with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, poplars (*Populus balsamifera*, *P. niger* and *P. tremuloides*), hybrid poplars (*P. sp. x sp.*), and cottonwoods (*P. deltoids* and *P. trichocarpa*) have shown tolerance to this product. However, this product is a very active herbicide. Exercise responsible judgment and caution until familiarity is gained with this product. Test this product on a small number of plants to determine if this product can be used safely on a widespread basis. **DO NOT** apply this product over-the-top unless trees are more than one year old.

### **USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** re-apply this product within 30 days.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### CONTAINER HANDLING:

**[Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **“NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable “No refillable” or “Refillable” designation. Follow the container disposal [handling] instructions below that apply to your container type / size.”

**[Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

[For Residential uses]

**[Nonrefillable container. DO NOT** reuse or refill this container. If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.]

[For Commercial Uses]

**[For plastic containers ≤ 5 gallons: Nonrefillable Container: DO NOT** reuse or refill this container. Triple 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[For plastic containers > 5 gallons: Nonrefillable container. DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[Refillable containers larger than 5 gallons:]** Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

#### LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT: READ BEFORE USE.** Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. 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, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

[A319.15] is a trademark of Atticus, LLC

[Payload® SC Herbicide] and [Clipper® SC Aquatic Herbicide] are registered trademarks of Nufarm Americas Inc.

# {LANGUAGE ON LABEL AFFIXED TO CONTAINER}

## FLUMIOXAZIN GROUP 14 HERBICIDE

### A319.15™

[Alternate Brand Name: Semera SC / Schooner SC]

Contains flumioxazin, the active ingredient used in [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

[FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR RE-FORESTATION SITES]

ACTIVE INGREDIENT:	(% by weight)
Flumioxazin*	41.4%
OTHER INGREDIENTS:	58.6%
TOTAL	100.0%

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isindole-1,3(2H)-dione

A319.15 contains 4 pounds flumioxazin per gallon.

### KEEP OUT OF REACH OF CHILDREN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you **DO NOT** understand the label, find someone to explain it to you in detail.)

HOT LINE NUMBER
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment information.

#### For Chemical Emergency:

Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing spray mist. 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.

**ENVIRONMENTAL HAZARDS:** If not used in accordance with directions on the label, this product is toxic to non-target plants and aquatic invertebrates. For terrestrial uses: **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. **DO NOT** apply directly to treated, finished drinking water reservoirs or drinking water receptacles when water is intended for human consumption. Drift and runoff may be hazardous to non-target plants and aquatic organisms in water adjacent to treated areas. **DO NOT** apply where runoff is likely to occur. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to plants. Use strictly in accordance with the drift and runoff precautions on this label in order to minimize off-site exposures.

Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is needed.

### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### CONTAINER HANDLING:

**[Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "No refillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size."

**[Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

[For Residential uses]

**[Nonrefillable container. DO NOT** reuse or refill this container. If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.]

[For Commercial Uses]

**[For plastic containers ≤ 5 gallons: Nonrefillable Container: DO NOT** reuse or refill this container. Triple 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[For plastic containers > 5 gallons: Nonrefillable container. DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[Refillable containers larger than 5 gallons:]** Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**DO NOT** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**PHYSICAL OR CHEMICAL HAZARDS: DO NOT** mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

See inside label booklet for additional Precautionary Statements and Directions for Use.

**[A319.15]** is not manufactured, or distributed by Competitor Company, seller of [Nufarm Americas Inc.].

Manufactured for:  
**Atticus, LLC**  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

**EPA Reg. No.: 91234-XX**  
**EPA Est. No.:** \_\_\_\_\_  
**NET CONTENTS:** \_\_\_\_\_

{Note to reviewer: [Text] in brackets denotes optional or explanatory language}  
{Note to reviewer: {Text} in braces denotes where in the final label text will appear}

**{BOOKLET FRONT PANEL LANGUAGE}**

Subpart 3 – A319.15 – T&O

FLUMIOXAZIN	GROUP	<b>14</b>	HERBICIDE
-------------	-------	-----------	-----------

# A319.15 [™]

Contains flumioxazin, the active ingredient used in [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

**[FOR USE IN CONTAINER AND FIELD-GROWN CONIFERS (INCLUDING CHRISTMAS TREES) AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPES AND MAINTAIN NON-CROP AREAS AND DORMANT BERMUDAGRASS]\*\*]**

ACTIVE INGREDIENT:	(% by weight)
Flumioxazin* .....	41.4%
<b>OTHER INGREDIENTS:</b> .....	<b>58.6%</b>
<b>TOTAL</b> .....	<b>100.0%</b>

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione

A319.15 contains 4 pounds flumioxazin per gallon.

**[\*\*Not for use in California]**

[For ≤ 5 Gallon Containers:] [Shake Well Before Use]  
[For > 5 Gallon Containers:] [Shake Well, Agitate or Recirculate Before Use]

**KEEP OUT OF REACH OF CHILDREN**

**Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you DO NOT understand the label, find someone to explain it to you in detail.)**

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at **1-844-685-9173** for emergency medical treatment information.

**For Chemical Emergency:  
Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

See [below] [inside label booklet] for [additional] [First Aid,] [Precautionary Statements] [and] [Directions for Use].

**[A319.15]** is not manufactured, or distributed by Nufarm, seller of [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

EPA Reg. No.: 91234-XX

EPA Est. No.:

**Net Contents:**

Manufactured for:  
**Atticus, LLC**  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing spray mist. 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.

### PERSONAL PROTECTIVE EQUIPMENT (PPE):

#### Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- chemical-resistant gloves made of any waterproof material
- shoes and socks.

#### User Safety Requirements

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

### USER SAFETY RECOMMENDATIONS

#### Users Should:

- 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

If not used in accordance with directions on the label, this product is toxic to non-target plants and aquatic invertebrates. For terrestrial uses: **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. **DO NOT** apply directly to treated, finished drinking water reservoirs or drinking water receptacles when water is intended for human consumption. Drift and runoff may be hazardous to non-target plants and aquatic organisms in water adjacent to treated areas. **DO NOT** apply where runoff is likely to occur. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to plants. Use strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is needed.

**DO NOT** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit



and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

#### PHYSICAL OR CHEMICAL HAZARDS

**DO NOT** mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

#### DIRECTIONS FOR USE

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

Read the entire label before using this product. Use strictly in accordance with label precautionary statements and directions, and with applicable state and federal regulations.

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

**DO NOT** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil or water is: coveralls, chemical resistant gloves made of waterproof material, 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 (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural crops on farms, forests, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

**DO NOT** enter or allow others to enter the treated area until sprays have dried.

#### PRODUCT INFORMATION

This product is a fast-acting contact herbicide that controls selected submersed, emergent, and floating aquatic weeds. It is most effective when applied to young, actively-growing weeds in water with a pH of less than 8.5.

Application of this product to public aquatic areas may require special approval and/or permits. Consult with local state agencies, if required.

#### USE RESTRICTIONS

- **DO NOT** apply to intertidal or estuarine areas.

- **DO NOT** exceed 400 ppb of this product during any one application.
- **DO NOT** re-treat the same section of water with this product more than 6 times per year.
- **DO NOT** retreat the same section of water within 28 days of application, except in areas with dense weed vegetation. In these areas, treat the remaining weeds within 10 to 14 days.
- In high density weed populations only treat 1/2 the water body at onetime.
- Treated water may not be used for irrigation purposes on food crops until at least five (5) days after application.
- **DO NOT** use in water utilized for crawfish farming.
- Not for homeowner use.

#### **USE PRECAUTIONS**

- There is no post-application holding restriction against use of treated water for drinking or recreational purposes (e.g. swimming, fishing).
- Treated water may be used for irrigation purposes on turf and landscape ornamentals as outlined in the **Irrigation Restrictions Following Application** table.

This product is a fast acting contact herbicide for use in the management of undesirable aquatic vegetation in slow moving or quiescent waters, to maintain non-crop areas, conifer and poplar re-forestation sites, container and field-grown conifers (including Christmas trees) and deciduous trees, around established woody ornamentals in landscapes and dormant Bermudagrass.

This product is also effective as a preemergence and/or postemergence herbicide for control of selected grass and broadleaf weeds.

This product controls weeds by inhibiting protoporphyrinogen oxidase, an essential enzyme required by plants for chlorophyll biosynthesis. Seedling weeds are controlled preemergence when exposed to sunlight following contact with the soil-applied herbicide.

This product may cause spotting or speckling on foliage if the spray solution directly contacts actively-growing plant foliage or green bark. Leaves that receive indirect (drift) spray contact may be affected in a similar manner. Translocation of this product is limited, and under most conditions established and vigorously growing woody ornamentals will rapidly outgrow any injury symptoms. **However, direct application to actively-growing foliage can cause severe injury or death with sensitive ornamental plant species, especially in herbaceous bedding plants and flowers.**

**IMPORTANT:** When applied as directed, plants listed on this label have shown tolerance to this product. However, this product is a very active herbicide. Exercise responsible judgment and caution until familiarity is gained with this product. Due to variability within species, crop growth stage, environmental conditions and application techniques, it is directed that users test this product under local growing conditions on a small number of plants and evaluate for 4 to 6 weeks for phytotoxicity. Testing this product on a small number of plants will determine if the herbicide can be used safely on a widespread application. Neither the seller nor the manufacturer of this product has investigated the safety to plants not listed on the label.

#### **WEED RESISTANCE MANAGEMENT**

This product is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 14 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 this product or other Group 14 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 seedling 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.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective and 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 including 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 sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action.
- Contact your local sales representative, agricultural dealer, consultant, local extension specialist, applicator, crop advisor, and/or appropriate state agricultural extension service representative for additional pesticide resistance- management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- Report any incidence of non-performance of this product against a particular weed species to your local sales representative or agricultural dealer, or contact Atticus, LLC at (984) 465-4754.

#### **BEST MANAGEMENT PRACTICES**

- Plant into weed-free fields and keep fields as weed-free as possible.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple weed control practices including mechanical cultivation, biological management practices, and crop rotation.
- Fields with difficult-to-control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.
- **DO NOT** allow weed escapes to produce seeds, roots or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup of the weed seed-bank.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
- Prevent an influx of weeds into the field by managing field borders.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed control program should consider all of the weeds present.
- Difficult-to-control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.
- Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed control program. **DO NOT** use more than two applications of this or any other herbicide with the same mechanism of action within one year unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-

chemical methods to remove escapes.

#### **PREEMERGENCE APPLICATION**

Make the preemergence application of this product prior to weed emergence. Moisture is necessary to activate this product for residual weed control. Moisture is needed to move this product into the soil for preemergence weed control. Dry weather following application of this product may reduce effectiveness. However, when adequate moisture is received after dry conditions, this product will control susceptible germinating weeds.

When adequate moisture is not received soon after this product is applied to soil, weed control may be improved by using shallow cultivation. If weeds begin to emerge, irrigate (1/2" of water) or cultivate uniformly with shallow tillage equipment that will not damage the crop. Deep cultivation reduces the effectiveness of this product.

#### **POSTEMERGENCE APPLICATION**

For best results, apply this product to actively-growing weeds. The most effective postemergence weed control with this product occurs when applied in combination with a surfactant to weeds less than 2 inches in height. Applying this product under conditions that **DO NOT** promote active weed growth will reduce herbicide effectiveness. **DO NOT** apply this product when the weeds are under stress due to drought, excessive water and extremes in temperatures or disease. This product is most effective when applied under sunny conditions at temperatures above 65° F. This product is rainfast one hour after application. **DO NOT** make applications if rain is expected within one hour of application or efficacy may be reduced.

#### **SOIL CHARACTERISTICS**

Application of this product to soils with high organic matter and/or high clay content may require higher dosages than with soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

#### **TANK MIXES**

**NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, to the extent allowed by applicable law.**

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

#### **TANK MIX APPLICATION**

In addition to weeds controlled by this product used alone, tank mixtures with other herbicides provides a broader spectrum of weed control. This product can be tank-mixed with other herbicides including, but not limited to those products listed below.

#### **TANK MIX COMBINATIONS FOR NON-SELECTIVE VEGETATION CONTROL**

2,4-D	hexazinone	picloram
bromacil	imazapic	pramitol
chlorsulfuron	imazapyr	prodiamine
dicamba	metsulfuron-methyl	simazine
diuron	norflurazon	sulfometuron-methyl
clopyralid	oryzalin	tebuthiuron
glyphosate	pendimethalin	Triclopyr

**Tank Mixing – Conifer and Poplar Release Treatments[\*\*]**

Certain liquid formulations of other pesticides may increase the postemergence activity of this product, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with this product may be potential for injury when applied over the top of various plants.

Therefore, tank mixtures of these materials with this product may be more injurious than this product applied alone and need to be tested to determine if they can be used safely on a widespread basis.

**[\*\*Not for use in California]**

**Tank Mixing - Container and Field-Grown Conifers**

This product may be tank-mixed with products containing the following active ingredients labeled for use in conifers:

clethodim	glyphosate*	oryzalin
prodiamine	simazine*	

**\*DO NOT** apply glyphosate or simazine to containerized ornamentals.

**Tank Mixing - Field and Container Grown Deciduous Trees**

This product may be tank-mixed with products containing the following active ingredient labeled for use in deciduous trees:

clethodim	glyphosate*	metolachlor
oryzalin	pendimethalin	prodiamine
simazine*		

**\*DO NOT** apply glyphosate or simazine to containerized plants.

**Tank Mixing - With Other Turfgrass Herbicides**

This product may be tank-mixed with Manor Herbicide (metsulfuron-methyl, EPA Reg. No. 228-373).

## SPRAY DRIFT MANAGEMENT

### ○ Mandatory Spray Drift

#### Aerial Applications

- **DO NOT** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Boom-less Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 10 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.

#### Controlling Droplet Size - Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

- **BOOM HEIGHT - Ground Boom**  
Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.
- **RELEASE HEIGHT - Aircraft**  
Higher release heights increase the potential for spray drift. When applying aurally to crops, **DO NOT** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.
- **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.
- **Boom-less 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.

#### **APPLICATION AND SPRAYER INFORMATION**

Apply this product with sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. Apply by backpack or handgun sprayer, airboat, helicopter, airplane, or other application equipment that will ensure thorough coverage of plant foliage. **Important:** Thoroughly clean spray equipment, including all tanks, hoses, booms, screens and nozzles. **DO NOT use spray equipment used to apply this product to apply other materials or to any desirable plant foliage.** Equipment with this product's residue remaining in the system may result in crop injury to subsequently treated crops.

#### **BROADCAST APPLICATION**

Apply this product, and this product's tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume.

#### **BAND APPLICATION**

When banding, use proportionately less water and this product per acre.

#### **HANDGUN APPLICATION**

Applications may also be made using a handgun sprayer. Use a spray volume of at least 40 gallons per acre to insure uniform coverage.

## BACKPACK APPLICATION

When applying this product with a backpack sprayer follow all above restrictions. Calibrate backpack sprayers to deliver 1 gallon of spray solution per 500 to 1,000 square feet.

### Mixing Rate for This Product in 1 Gallon of Spray Solution for Backpack Applications

Application Volume	Rate (fl oz/A)	Fl oz to Mix in 1 gal Water	Teaspoons to Mix in 1 gal Water	Mls to Mix in 1 gal Water
1 gal per 500 sq ft (87 GPA)	8 (0.25 lbs ai/A)	0.09	0.6	2.7
	10 (0.31 lbs ai/A)	0.11	0.7	3.4
	12 (0.38 lbs ai/A)	0.14	0.8	4.1
1 gal per 750 sq ft (65 GPA)	8 (0.25 lbs ai/A)	0.14	0.8	4.1
	10 (0.31 lbs ai/A)	0.17	1	5.1
	12 (0.38 lbs ai/A)	0.21	1.2	6.1
1 gal per 1,000 sq ft (44 GPA)	8 (0.25 lbs ai/A)	0.18	1.1	5.3
	10 (0.31 lbs ai/A)	0.23	1.4	6.8
	12 (0.38 lbs ai/A)	0.27	1.6	8.1

Example: Applicator wants to spray 1 gallon of this product solution per 1,000 square feet of ground bed at a rate of 12 fl oz/A (0.38 lbs ai/A). Mix 0.27 fl oz (1.6 teaspoons or 8.1 mls) of this product in 1 gallon of water.

## AERIAL APPLICATION

To obtain satisfactory weed control, aerial application of this product, must provide uniform coverage of surface weeds and sufficient contact time. When applied by air, this product may not provide adequate control of some submersed weeds. Avoid spraying this product within 200 feet of dwellings, adjacent sensitive crops or environmentally sensitive areas. To obtain satisfactory application and avoid drift, the following directions must be observed:

### Volume and Pressure

Apply this product in a minimum of 5 gallons of water per acre with a maximum spray pressure of 40 PSI. Application at less than 5 gallons per acre may not provide adequate weed control. Higher gallonage applications provide more consistent weed control.

### Nozzles and Nozzle Operation

Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles including diaphragm type nozzles to avoid unwanted discharge of spray solution. The nozzle must be directed toward the rear of the aircraft, at an angle between 0° and 15° downward. **DO NOT** place nozzles on the outer 25% of the wings or rotors.

### Adjuvants

Refer to the additive section or the tank mix partners label for adjuvant specifications.

## SPRAYER PREPARATION

Before applying this product, start with clean, well maintained application equipment. Clean the spray tank, as well as all hoses and booms to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to the sulfonylurea and phenoxy herbicides, are active at very small amounts and can cause crop injury when applied to susceptible crops. Clean the spray equipment according to the manufacturer's directions for the last product used before the equipment is used to apply this product. If



two or more products were tank-mixed prior to this product's application, follow the most restrictive cleanup procedure.

#### **Mixing Instructions**

- Mix with water having pH of 5 to 7. If pH is higher than 7, use an appropriate buffer to reduce pH to desirable range.
- Fill clean spray tank 1/2 full of desired level with water and add buffering agent if necessary.
- Add the required amount of this product to the spray tank while agitating.
- Fill spray tank to desired level with water. Ensure that this product is thoroughly mixed before making applications. Continue agitation until spray solution has been applied.
- If tank mixing this product with other labeled herbicides, add water-soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions.
- Mix the amount of spray solution that can be applied the day of mixing. Apply this product within 48 hours of mixing.

## **CARRIER VOLUME AND SPRAY PRESSURE**

### **PREEMERGENCE APPLICATION**

To ensure uniform coverage, use 10 to 40 gallons of spray solution per acre. When making backpack applications, apply 50 to 100 gallons of spray solution per acre. Nozzle must meet manufacturer's gallonage and pressure directions for preemergence herbicide application.

### **POSTEMERGENCE APPLICATION**

To ensure thorough coverage, use 15 to 30 gallons of spray solution per acre. Use 20 to 30 gallons per acre if dense vegetation or heavy residue is present on the soil surface. When applying with a backpack sprayer, apply 1 gallon of spray solution per 500 to 1,000 square feet. Nozzle selection must meet manufacturer's gallonage and pressure directions for postemergence herbicide application.

### **ADDITIVES**

When applying this product to the foliage of floating or emerged aquatic weeds, mix with an adjuvant approved for use in aquatic sites. Follow adjuvant manufacturer's label rates. Verify mixing compatibility by a jar test before using.

When applying this product after weed emergence in terrestrial settings, mix with an agronomically approved adjuvant. A non-ionic surfactant containing at least 80% active ingredient must be used when applying this product as part of a postemergence weed control program. Verify mixing compatibility by a jar test before using.

### **ADJUVANTS**

Refer to the additive section or the tank mix partners label for adjuvant specifications. When applying release treatments, **DO NOT** mix this product with any adjuvant or fertilizer.

### **JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND THIS PRODUCT**

Perform a jar test before mixing commercial quantities of this product, when using this product for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pint of the water to a quart jar. Use water from the same source and temperature as which will be used in the spray tank mixing operation.
2. Add 1 milliliter of this product to the quart jar for every 3 fl oz (0.09 lbs ai/A) of this product per acre being applied (4 ml if 12 fl oz per acre is the desired rate of this product), gently mix until product goes into suspension.
3. Add 1 milliliter of non-ionic surfactant or 60 millimeter of crop oil concentrate, gently mix.
4. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
5. An ideal tank mix combination will be uniform. If any of the following conditions are observed question the choice of adjuvant:
  - a) Layer of oil or globules on the mixture's surface.

- b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
- c) Clabbering: Thickening texture (coagulated) like gelatin.

**SPRAYER CLEANUP**

If spray equipment is dedicated to herbicide applications, the following steps are to clean the spray equipment:

- Completely drain the spray tank and rinse the application equipment thoroughly, including the inside and outside of the tank and all in-line screens.

If spray equipment will be used for purposes other than applying herbicides, it must be thoroughly cleaned following application of this product. The following steps must be used to clean the spray equipment:

1. Completely drain the spray tank and rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the tank with clean water and flush all hoses, booms, screens and nozzles.
3. Top off tank with clean water and household ammonia. Use 1 gallon of 3% household ammonia for every 100 gallons of water.
4. Circulate through sprayer for 5 minutes.
5. Then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes.
6. Loosen any diaphragms before flushing the spray system, allowing cleaning solution to spray through the open diaphragm.
7. Drain tank completely.
8. Add enough clean water to the spray tank to flush hoses, booms, screens and nozzles for 2 minutes.
9. Remove all nozzles and screens and rinse them with clean water.

**WEEDS CONTROLLED**

When this product is applied preemergence or postemergence at directed rates and weed stages, the following grasses and broadleaf weeds are controlled:

TABLE 1 – WEEDS CONTROLLED	
COMMON NAME	SCIENTIFIC NAME
Alyssum, Hoary	<i>Berteroa incana</i>
Amaranth	
Palmer	<i>Amaranthus palmeri</i>
Spiny	<i>Amaranthus spinosus</i>
American Burnweed	<i>Erechtites hieracifolia</i>
Barnyardgrass*	<i>Echinochloa crus-galli</i>
Beggarweed, Florida	<i>Desmodium Tortuosum</i>
Bittercress, Hairy	<i>Cardamine hirsute</i>
Bluegrass, Annual	<i>Poa annua</i>
Burclover, California	<i>Medicago Polymorpha</i>
Carpetweed	<i>Mollugo verticillata</i>
Chamberbitter	<i>Phyllanthus urinaria</i>
Chickweed	
Common	<i>Stellaria media</i>
Mouseear	<i>Cerastium vulgatum</i>
Crabgrass	
Large*	<i>Digitaria sanguinalis</i>
Smooth*	<i>Digitaria ishaemum</i>
Southern*	<i>Digitaria ciliaris</i>
Croton, Tropic	<i>Croton glandulosus var. septentrionalis</i>
Dandelion*	<i>Taraxacum officinale</i>
Dogfennel	<i>Eupatorium capillifolium</i>
Doveweed	<i>Murdannia nudiflora</i>
Eclipta	<i>Eclipta prostrate</i>
Filaree, Redstem*	<i>Erodium cicutarium</i>
Foxtail	
Bristly*	<i>Setaria verticillata</i>
Giant*	<i>Setaria faberi</i>
Green*	<i>Setaria viridis</i>

Yellow*	<i>Setaria glauca</i>
Galinsoga, Hairy	<i>Galinsoga ciliata</i>
Geranium, Carolina	<i>Geranium carolinianum</i>
Goosegrass*	<i>Eleusine indica</i>
Groundsel, Common	<i>Senecio vulgaris</i>
Groundsel, Tree	<i>Bachharris halimifolia</i>
Henbit	<i>Lamium amplexicaule</i>
Horseweed*	<i>Conyza Canadensis</i>
Indigo, Hairy	<i>Indigofera hirsute</i>
Ivy, Ground*	<i>Glechoma hederacea</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia	<i>Kochia scoparia</i>
Kyllinga, Green*	<i>Kyllinga brevifolia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, Common	<i>Chenopodium album</i>
Lovegrass, California*	<i>Eragrostis diffusa</i>
Liverwort	<i>Marchantia polymorpha</i>
Mallow	
Common	<i>Malva neglecta</i>
Little	<i>Malva parviflora</i>
Venice	<i>Hibiscus trionum</i>
Marsh Parsley	<i>Apium leptophyllum</i>
Mayweed*	<i>Anthemis cotula</i>
Morningglory	
Entireleaf	<i>Ipomoea hederacea var. integruscula</i>
Ivyleaf	<i>Ipomoea hederacea</i>
Red/Scarlet	<i>Ipomoea coccinea</i>
Smallflower	<i>Jacquemontia tamnifolia</i>
Tall	<i>Ipomoea purpurea</i>
Moss	<i>Bryum spp.</i>
Mulberry Weed	<i>Fatua villosa</i>
Mustard	
Tumble	<i>Sisymbrium altissimum</i>
Wild	<i>Brassica kaber</i>
Nightshade	
Black	<i>Solanum nigrum</i>
Eastern Black	<i>Solanum ptycanthum</i>
Hairy	<i>Solanum sarrachoides</i>
Northern Willowherb	<i>Epilobium cillatum</i>
Panicum	
Fall*	<i>Panicum dichotomiflorum</i>
Texas*	<i>Panicum texanum</i>
Parsley-Peirt	<i>Alchemilla arvensis</i>
Pearlwort, Birdseye*	<i>Sagina procumbens</i>
Pennycress, Field	<i>Thlaspi arvense</i>
Phyllanthus, Longstalked	<i>Phyllanthus tenellus</i>
Pigweed	
Prostrate	<i>Amaranthus blitoides</i>
Redroot	<i>Amaranthus retroflexus</i>
Smooth	<i>Amaranthus hybridus</i>
Tumble	<i>Amaranthus albus</i>
Pineapple-weed*	<i>Matricaria matricarioides</i>
Plantain	
Broadleaf*	<i>Plantago major</i>
Buckhorn*	<i>Plantago lanceolata</i>
Pointsettia, Wild	<i>Euphorbia heterophylla</i>
Pondweed, Sago	<i>Potamogeton pectinatus</i>
Puncturevine	<i>Tribulus terrestris</i>
Purslane, Common	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scabra</i>
Ragweed	
Common	<i>Ambrosia artemisiifolia</i>
Giant	<i>Ambrosia trifida</i>
Redmaids	<i>Calandrinia ciliate</i>
Redweed	<i>Melochia corchorifolia</i>

Rocket, Yellow	<i>Barbarea vulgaris</i>
Senna, Coffee	<i>Cassia occidentalis</i>
Sesbania, Hemp	<i>Sesbania exaltata</i>
Shepherd's-Purse	<i>Capsella burse-pastoris</i>
Sida, Prickly (Teaweed)	<i>Sida spinosa</i>
Signalgrass*	<i>Brachiaria platyphylla</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sowthistle, Annual	<i>Sonchus oleraceus</i>
Spiderwort, Tropical	<i>Commelina benghalensis</i>
Spurge	
Petty	<i>Euphorbia peplus</i>
Prostrate	<i>Euphorbia humistrata Engelm</i>
Spotted	<i>Euphorbia maculate</i>
Starbur, Bristly*	<i>Acanthospermum hispidum</i>
Tassle-flower	<i>Emilia spp.</i>
Thistle	
Canada*	<i>Cirsium arvense</i>
Russian	<i>Salsola iberica</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Waterhemp	
Common	<i>Amaranthus rudis</i>
Tall	<i>Amaranthus tuberculatus</i>
Woodsorrel, Yellow*	<i>Oxalis stricta</i>

\*Preemergence control only

#### DIRECTIONS FOR USE TURF & ORNAMENTAL SITES[\*\*]

This product is a preemergence and early postemergence herbicide for control of selected grass and broadleaf weeds in and around ornamental woody shrubs, deciduous trees and conifers (including Christmas trees) grown outdoors in containers or in the field (in-ground), to maintain non-crop areas and dormant Bermudagrass. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses.

This product controls weeds by inhibiting protoporphyrinogen oxidase, an essential enzyme required by plants for chlorophyll biosynthesis. Seedling weeds are controlled preemergence when exposed to sunlight following contact with the soil-applied herbicide.

**[\*\*Not for use in California]**

#### USE RESTRICTIONS

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** apply in enclosed greenhouse structures if plants are present.
- **DO NOT** move plants for 24 hours into enclosed greenhouses until the area treated with this product has been watered.
- **DO NOT** apply when weather conditions favor spray drift from treated areas.
- **DO NOT** graze treated fields or hay to livestock.
- **DO NOT** incorporate into soil after application.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply when plants are under stress from insects, diseases, animals or winter injury, planting shock or any other stresses.
- Only apply to healthy established trees and ornamentals.
- Not for homeowner use.
- RTI: 14 days.

## DIRECTIONS FOR USE

### IN ESTABLISHED CONTAINER AND FIELD-GROWN CONIFERS (INCLUDING CHRISTMAS TREES)\*\*]

Apply this product as a single or split application to established container and field-grown conifers, which includes applications to Christmas tree plantations. The conifers listed in Table 4 have exhibited tolerance to this product only when the product is applied to dormant or hardened-off plant material. If applied over the top of plant foliage, apply this product before spring bud break or after conifers have sufficiently hardened-off. During periods of cool, cloudy weather, use caution to ensure conifers have hardened-off prior to herbicide application. **DO NOT** apply to conifers within 1 year of seedling emergence.

**[\*\*Not for use in California]**

#### PREEMERGENCE APPLICATION

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai per acre) of this product per broadcast acre before weeds emerge. Apply to weed-free, established conifers grown in containers or in the field (in-ground). If possible, irrigate treated area with 0.5 to 0.75 inch of water immediately following application. This product may be sprayed directly over conifers listed in Table 4, provided bud break has not occurred or plants are hardened-off. Needle burn may be observed on new flush if plants are actively-growing at time of application. However, this product will typically not affect subsequent growth. If conifers are not dormant or hardened-off at time of application, and foliar injury cannot be tolerated, apply this product as a directed spray, taking care to minimize direct contact or drift of sprays onto foliage. Mechanically incorporating this product after application will disturb soil surfaces, which may reduce herbicidal efficacy. When applied before weed germination, this product will control broadleaf and grassy weeds listed in Table 1.

#### POSTEMERGENCE APPLICATION

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai) per acre of this product per broadcast acre after weeds have emerged. This product may be sprayed directly over conifers listed in Table 4, provided bud break has not occurred or plants are hardened-off. Needle burn may be observed on new flush if plants are actively-growing at time of application. However, this product will typically not affect subsequent growth. If conifers are not dormant or hardened-off at the time of application, and foliar injury cannot be tolerated, apply this product as a directed spray, taking care to minimize direct contact or drift of sprays onto foliage.

If applied when weeds are actively-growing and no larger than 2 inches in height, this product will provide postemergence control of broadleaf weeds and grasses listed in Table 1. Postemergence control of this product may be more effective with certain weed species, and may not control mature, stressed or hardened-off weeds that are not actively-growing at the time of application.

#### TOLERANT CONIFERS

This product may be applied to the conifer species listed in Table 4. If a desired conifer species is not listed in Table 4, evaluate the safety of this product on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Testing this product on a small number of plants will determine if this product can be used safely on a widespread basis.

#### USE RESTRICTIONS

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** re-apply this product within 30 days.

**TABLE 4 - TOLERANT CONIFER TREE SPECIES**

COMMON NAME	SCIENTIFIC NAME
Arborvitae	
American	<i>Thuja occidentalis</i>
Oriental	<i>Thuja orientalis</i>
Fir	
Concolor	<i>Abies concolor</i>
Cork Bark	<i>Abies lasiocarpa</i>
Douglas	<i>Pseudotsuga menziesii</i>
Fraser	<i>Abies fraseri</i>
Grand	<i>Abies grandis</i>
Noble	<i>Abies procera</i>
Turkish	<i>Abies bommuelleriana</i>
Hemlock	
Eastern	<i>Tsuga Canadensis</i>
Western	<i>Tusga heterophylla</i>
Juniper	
Blue Star	<i>Juniperus scopularum</i>
Creeping	<i>Juniperus horizontalis</i>
Japanese Garden	<i>Juniperus chinensis</i>
Tamarix	<i>Juniperus Sabina</i>
Pine	
Austrian	<i>Pinus nigra</i>
Eastern White	<i>Pinus strobes</i>
Jack	<i>Pinus banksiana</i>
Japanese Black	<i>Pinus thunbergiana</i>
Loblolly	<i>Pinus taeda</i>
Lodgepole	<i>Pinus contorta</i>
Longleaf	<i>Pinus palustris</i>
Mugo	<i>Pinus mugo</i>
Ponderosa	<i>Pinus ponderosa</i>
Sand	<i>Pinus clausa</i>
Scotch	<i>Pinus sylvestris</i>
Shortleaf	<i>Pinus echinata</i>
Slash	<i>Pinus elliotii</i>
Virginia	<i>Pinus virginiana</i>
Spruce	
Blue	<i>Picea pungens</i>
Dwarf Alberta	<i>Picea glauca conica</i>
Norway	<i>Picea abies</i>
Sitka	<i>Picea sitchensis</i>
Yew	
English	<i>Taxus baccata</i>
Japanese	<i>Taxus cuspidate</i>

**DIRECTIONS FOR USE**

**IN CONTAINER AND FIELD DECIDUOUS TREES AND NON-BEARING FRUIT AND NON-BEARING NUT TREES[\*\*]**

This product may be applied as single or split applications to container and field-grown deciduous trees with an established root system. The deciduous trees listed in Table 5 have exhibited tolerance to this product only when

applied to the soil and base of plants. Application of this product to deciduous foliage or green bark may result in unacceptable injury.

This product may be applied to established (or transplanted) container and field-grown deciduous trees. **DO NOT** apply to trees that are less than one year old or have been transplanted less than one year, unless completely protected by non-porous wraps, grow tubes, waxed protectors or other forms of protection to young foliage and/or bark. **DO NOT** harvest fruit or nuts from treated trees within one year of application.

**IMPORTANT:** Direct application of this product to the soil surface and away from plant foliage and bark. Avoid direct spray contact on plant surfaces, foliage and green bark or injury may result. Application of this product after bud swell may cause injury if herbicide contacts foliage. Avoid application under environmental conditions that favor drift to non-targeted areas.

**[\*\*Not for use in California]**

#### **PREEMERGENCE APPLICATION**

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai) per acre of this product per broadcast acre as a preemergence (to weed emergence) application. Apply this product to weed-free deciduous trees grown in containers or in the field (in-ground). If possible, irrigate treated area with 0.5 to 0.75 inch of water immediately following application. This product may be applied to the soil surface and base of deciduous trees, provided that direct and indirect (drift) applications to plant foliage, flowers and green bark does not occur. Mechanically incorporating this product will disturb soil surfaces, which may reduce herbicidal efficacy. The use of spray shields that limit exposure of foliage and bark to this product is suggested. When applied before weed germination, this product will control broadleaf and grassy weeds. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses.

#### **POSTEMERGENCE APPLICATION**

Apply 8 to 12 fl oz (0.25 to 0.38 lb ai) per acre of this product per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant). Make postemergence (to weed emergence) applications of this product when weeds are actively-growing and are no larger than 2 inches in height. The addition of a surfactant enhances this product activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of this product. When applied after weed germination, this product will provide preemergence and postemergence control of broadleaf weeds and grasses. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses

Postemergence control of this product may be more effective with certain weed species, and may not control mature, stressed or hardened-off weeds that are not actively-growing at the time of application.

#### **TOLERANT DECIDUOUS TREES, NON-BEARING FRUIT AND NON-BEARING NUT TREES**

This product may be applied as a directed spray to the deciduous, non-bearing fruit and non-bearing nut trees species listed in Table 5. If a desired tree species is not listed in Table 5, evaluate the safety of this product on a small number of plants under commercial growing conditions and monitor plant response for four to six weeks for phytotoxicity. Testing this product on a small number of plants will determine if this product can be used safely on a widespread basis.

#### **USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** re-apply this product within 30 days.

**TABLE 5 – TOLERANT DECIDUOUS TREE SPECIES**

COMMON NAME	SCIENTIFIC NAME
Apricot*	<i>Prunus</i> spp.
Ash	<i>Fraxinus</i> spp.
Birch	<i>Betula</i> spp.
Buckeye	<i>Aesculus</i> spp.
Cherry*	<i>Prunus</i> spp.
Chestnut	<i>Castanea</i> spp.
Citrus*	<i>Citrus</i> spp.
Dogwood	<i>Cornus</i> spp.
Eucalyptus	<i>Eucalyptus</i> spp.
Ginkgo	<i>Ginkgo</i> spp.
Hawthorn	<i>Crataegus</i> spp.
Honeylocust	<i>Gleditsia</i> spp.
Larch	<i>Larix</i> spp.
Lilac	<i>Syringa</i> spp.
Maple**	<i>Acer</i> spp.
Myrtle, Crepe	<i>Lagerstroemia indica</i>
Oak	<i>Quercus</i> spp.
Poplar	<i>Populus</i> spp.
Peach*	<i>Prunus</i> spp.
Plum*	<i>Prunus</i> spp.
Pecan*	<i>Carya</i> spp.
Redbud	<i>Cercis Canadensis</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Plantanus</i> spp.
Walnut, Black	<i>Juglans nigra</i>
Willow	<i>Salix</i> spp.

\*Non-bearing trees only.

\*\*Not for use on maple trees used for production of maple sap or syrup.

**DIRECTIONS FOR USE**

**AROUND ESTABLISHED WOODY LANDSCAPE ORNAMENTALS AND TO MAINTAIN NON-CROP AREAS[\*\*]**

Application of this product in the vicinity of ornamental plants is limited to directed sprays around well-established woody shrubs and trees including azalea, euonymus, holly, and the conifers and deciduous trees listed in Tables 4 and 5. This product may also be applied to maintain weed control in non-crop areas in apartment complexes, fence rows, gravel surfaces and driveways, ground mats and pads prior to the addition of containerized plants, golf courses, lumberyards, office complexes, parks, parking areas, recreational sites, schools, sidewalks, storage areas, grass waterways and rain gardens. **DO NOT** apply this product within any enclosed structure in residential or commercial landscapes.

This product offers postemergence and residual control of susceptible grasses and broadleaf weeds, as well as additional mode of action to assist in the control of resistant weeds. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses. The length of residual control is dependent on the rate applied, rainfall and temperature. Length of residual control will decrease as temperature and precipitation increase.

**IMPORTANT: Contact with spray or spray drift of this product may cause severe injury or destruction of certain desirable plants, especially herbaceous species including bedding plants or direct-seeded annual and perennial flowers. Therefore, DO NOT apply this product over the top of ornamental plants growing in the landscape, and**



**DO NOT allow spray of this product to contact, drift or splash from soil onto the foliage, green stems, exposed roots or fruit of desirable plants. Avoid application of this product under conditions that favor drift of sprays onto desired ornamentals or turfgrass. The use of spray shields that limit the plant exposure to this product is directed when applying this product near desirable plants.**

**DO NOT** apply this product around landscape ornamentals until plants have been actively-growing for at least 30 days after transplanting, or for at least two months before ornamentals will be planted into treated areas.

**[\*\*Not for use in California]**

#### **PREEMERGENCE APPLICATION (NO WEEDS ARE PRESENT)**

Mix 0.18 to 0.27 fl oz (5.3 to 8.1 mls; 0.006 to 0.004 lb ai) of this product per gallon of spray solution, and apply 1 gallon of spray solution to 1,000 square feet (8 to 12 fl oz/A) prior to weed germination (see Backpack Application table for more options and details). Apply this product to weed-free soil, mulch or gravel surfaces. Moisture is necessary to activate this product on soil for residual weed control. When applied before weed germination, this product will control the broadleaf weeds and grasses listed in Table 1.

Established landscape ornamentals have shown tolerance to this product **only** when applied to the soil at the base of the plant. For maximum plant safety when using around desirable ornamentals, direct applications of this product to the soil, and leave a sufficient untreated buffer to ensure spray solution does not contact desired plants. **DO NOT** harvest fruit or nuts from treated trees within one year of application.

#### **POSTEMERGENCE APPLICATION (WEEDS ARE PRESENT)**

Mix 0.18 to 0.27 fl oz (5.3 to 8.1 mls; 0.006 to 0.004 lb ai) of this product per gallon of spray solution (8 to 12 fl oz/A), and apply 1 gallon of spray solution to 1,000 square feet to actively-growing weeds (see calibration chart for backpack sprayers). Tank mixing this product with glyphosate will increase the spectrum of postemergence weed control over this product alone, provide faster postemergence weed control than glyphosate alone, and provide preemergence and postemergence control of the broadleaf weeds and grasses listed in Table 1.

Established landscape ornamentals have shown tolerance to applications of this product plus glyphosate **only** when applied to the soil at the base of the plant, and sprays **DO NOT** directly contact or drift onto desirable plants. For maximum plant safety when using around desirable ornamentals, direct applications of this product plus glyphosate towards the soil, and leave a sufficient non- treated buffer to ensure spray solution does not contact desired plants.

Thorough spray coverage of weeds is necessary to maximize weed control. Spray coverage must be uniform, but **DO NOT** spray to the point of runoff.

**IMPORTANT:** Completely read and follow the glyphosate label. When tank mixing this product with other products, always follow the most restrictive use conditions on either label.

#### **USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- **DO NOT** re-apply this product within 30 days.
- **DO NOT** harvest fruit or nuts from treated trees within one year of application.
- Not for homeowner use.

#### **DIRECTIONS FOR USE**

##### **ON DORMANT BERMUDAGRASS GROWN ON RESIDENTIAL SITES, GOLF COURSES AND SOD PRODUCTION[\*\*]**

This product may be applied as a single or split application to well-established dormant Bermudagrass. This

product will provide preemergence and early postemergence control of annual bluegrass, chickweed, henbit and other winter annual weeds. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses. This product will also provide preemergence control of crabgrass, goosegrass and other summer annual weeds. This product may be applied to dormant turfgrass in such areas as apartment complexes, golf courses, sod farms, roadsides, sports fields, campgrounds, office complexes, parks, parking areas, recreational sites, schools and residential turf. Bermudagrass exhibits tolerance to this product only when applied to semi-dormant or completely dormant turf in the late fall and before active growth resumes in the late winter/early spring. Application of this product to actively-growing turfgrass (warm season and cool season) or during green-up may cause unacceptable injury.

**[\*\*Not for use in California]**

#### **BROADCAST APPLICATIONS**

Apply 8 to 12 fl oz (0.25 to 0.38 lbs ai/A) of this product per broadcast acre as a preemergence (to weed emergence) application. If weeds are present at the time of application apply this product plus an adjuvant (0.25% v/v non-ionic surfactant). Make postemergence (to weed emergence) applications of this product when weeds are actively-growing and no larger than 2 inches in height. Thorough spray coverage is necessary to maximize the postemergence activity of this product. When applied after weed germination, this product will provide preemergence and postemergence control of broadleaf weeds and grasses. See Table 1 under WEEDS CONTROLLED section for a list of broadleaf weeds and grasses. Postemergence weed control with this product may be more effective on certain weed species, and may not control mature, stressed or hardened-off weeds that are not actively-growing at the time of application.

This product will provide best control of annual bluegrass when applied in the late fall while plants are small. Control may be less effective when applied in the winter under cold conditions when weeds are not actively-growing. A second application of this product may be required to provide adequate season-long annual bluegrass control. This product will provide best control of crabgrass, goosegrass and other summer annual weeds when applied in the late winter before turfgrass resumes active growth.

#### **TANK MIXING WITH OTHER TURFGRASS HERBICIDES**

This product may be tank-mixed with Manor Herbicide (metsulfuron-methyl, EPA Reg. No. 228-373).

#### **USE AROUND BENTGRASS AND POA GREENS**

This product has limited potential for lateral movement on level terrain, but can potentially move down-slope after excessive rainfall and affect sensitive turf species including bentgrass and *Poa trivialis*. When applied upslope from bentgrass greens or Bermudagrass greens overseeded with *Poa trivialis*, allow an adequate buffer zone between greens and the treated area. If uncertain about the size of the buffer, 15 feet is suggested.

Risk of movement is decreased when this product is applied to soil at less than field capacity. Avoid application when heavy rain is imminent or when the soil is saturated.

#### **USE RESTRICTIONS**

- **DO NOT** apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- **DO NOT** apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- **DO NOT** apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per year.
- Exercise good judgment and caution when applying to dormant turfgrass until familiarity is gained with this product.
- **DO NOT** apply to golf course putting greens.
- **DO NOT** apply to warm season turfgrass that has been overseeded with cool season turfgrass (ex. perennial rye, *Poa trivialis*).
- **DO NOT** irrigate within 1 hour before or after application.
- **DO NOT** apply if rain is expected within 1 hour after application.
- **DO NOT** mow turfgrass within 12 hours after application.

- **DO NOT** apply within 30 days prior to cutting or lifting sod.
- **DO NOT** re-apply this product within 30 days.
- **DO NOT** apply in fall before turfgrass has ceased active growth or in late winter/ early spring after turfgrass has resumed active growth.
- Not for homeowner use.

**USE PRECAUTIONS**

- Allow 8 weeks between application and seeding or sodding of turfgrass.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### CONTAINER HANDLING:

**[Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **“NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable “No refillable” or “Refillable” designation. Follow the container disposal [handling] instructions below that apply to your container type / size.”

**[Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

[For Residential uses]

**[Nonrefillable container. DO NOT** reuse or refill this container. If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.]

[For Commercial Uses]

**[For plastic containers ≤ 5 gallons: Nonrefillable Container: DO NOT** reuse or refill this container. Triple 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[For plastic containers > 5 gallons: Nonrefillable container. DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[Refillable containers larger than 5 gallons:]** Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

#### LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT: READ BEFORE USE.** Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. 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, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

[A319.15] is a trademark of Atticus, LLC

[Payload® SC Herbicide] and [Clipper® SC Aquatic Herbicide] are registered trademarks of Nufarm Americas Inc.

**{LANGUAGE ON LABEL AFFIXED TO CONTAINER}**

FLUMIOXAZIN	GROUP	14	HERBICIDE
-------------	-------	----	-----------

**A319.15™**

Contains flumioxazin, the active ingredient used in [Payload® SC Herbicide] [and] [Clipper® SC Aquatic Herbicide].

[FOR THE MANAGEMENT OF UNDESIRABLE AQUATIC VEGETATION IN SLOW MOVING OR QUIESCENT WATERS]\*\*] [FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS, CONIFER AND POPLAR REFORESTATION SITES]\*\*] [FOR USE IN CONTAINER AND FIELD-GROWN CONIFERS (INCLUDING CHRISTMAS TREES) AND DECIDUOUS TREES, AROUND ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPES AND MAINTAIN NON-CROP AREAS AND DORMANT BERMUDAGRASS]\*\*]

<b>ACTIVE INGREDIENT:</b>	( <b>% by weight</b> )
Flumioxazin*	41.4%
<b>OTHER INGREDIENTS:</b>	58.6%
<b>TOTAL</b>	100.0%

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione

A319.15 contains 4 pounds flumioxazin per gallon.

**[\*\*Not for use in California]**

**KEEP OUT OF REACH OF CHILDREN**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you **DO NOT** understand the label, find someone to explain it to you in detail.)

<b>HOT LINE NUMBER</b>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at <b>1-844-685-9173</b> for emergency medical treatment information.

**For Chemical Emergency:**

**Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing spray mist. 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.

**ENVIRONMENTAL HAZARDS:** If not used in accordance with directions on the label, this product is toxic to non-target plants and aquatic invertebrates. For terrestrial uses: **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. **DO NOT** apply directly to treated, finished drinking water reservoirs or drinking water receptacles when water is intended for human consumption. Drift and runoff may be hazardous to non-target plants and aquatic organisms in water adjacent to treated areas. **DO NOT** apply where runoff is likely to occur. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to plants. Use strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:**

[**Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements]

**NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable “No Refillable” or “Refillable” designation. Follow the container disposal [handling] instructions below that apply to your container type / size.”

[**Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

[For Residential uses]

[**Nonrefillable container. DO NOT** reuse or refill this container. If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.]

[For Commercial Uses]

[**For plastic containers ≤ 5 gallons: Nonrefillable Container: DO NOT** reuse or refill this container. Triple 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

[**For plastic containers > 5 gallons: Nonrefillable container. DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

[**Refillable containers larger than 5 gallons:**] Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State agency with primary responsibility for regulating pesticides before applying to public waters to

determine if a permit is needed.

**DO NOT** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**PHYSICAL OR CHEMICAL HAZARDS: DO NOT** mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

See inside label booklet for additional Precautionary Statements and Directions for Use.

[A319.15] is not manufactured, or distributed by Competitor Company, seller of [Nufarm Americas Inc.].

Manufactured for:  
**Atticus, LLC**  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

**EPA Reg. No.: 91234-XX**  
**EPA Est. No.:** \_\_\_\_\_  
**NET CONTENTS:** \_\_\_\_\_