

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

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

100-1472

EPA Reg. Number:

Date of Issuance:

8/28/2015

NOTICE OF PESTICIDE:

X Registration
Reregistration
(under FIFRA, as amended)

Term of Issuance:
Conditional

Name of Pesticide Product:

A15457LG

Name and Address of Registrant (include ZIP Code):

Adora Clark Syngenta Crop Protection, LLC P.O. Box 18300 410 Swing Road Greensboro, NC 27419

**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)(C). You must comply with the following conditions:

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

Signature of Approving Official:	Date:
Shaya Bogner	08/28/2015
(for) Cynthia Giles-Parker, Chief	
Fungicide Branch	
Registration Division 7505P	

EPA Form 8570-6

- 2. You are required to submit to the Agency the following studies by the dates indicated below.
  - a. Acute oral toxicity to larval honey bees.
  - b. Chronic oral toxicity to larval honey bees.
  - c. Chronic oral toxicity to adult honey bees.

Protocols for both of the chronic bee studies must be submitted within 60 days of the registration. The deadline for you to submit each of the bee studies is 09/01/18.

Tier II studies are required if triggered by the Tier I studies listed above. In the event Tier III studies are triggered by the Tier II results, they will also be required. If any higher tier studies are necessary, you must submit them to EPA within 3 years of notification by the agency that such higher tier studies are required.

- d. A controlled water monitoring study to provide further data on the environmental fate of benzovindiflupyr in the aquatic environment must be submitted to the Agency. A protocol must be submitted within 90 days of the registration. A preliminary report must be submitted by 12/31/16. An updated report must be submitted by 12/31/17. The completed study must be submitted by 09/01/18. If the EPA does not respond to the submitted protocol within sixty (60) days of receipt, EPA and the Registrant will discuss and agree to reasonable extensions of the dates for submission of the preliminary report and study.
- e. Field study to determine the effectiveness of vegetative filter strips (VFS). The study should address effectiveness relative to run-off reduction, sediment transport rates and delivery totals of benzovindiflupyr in water bodies. A protocol must be submitted within 90 days of the registration. A preliminary report must be submitted by 12/31/16. The deadline for you to submit the study is 09/01/18. If the EPA does not respond to the submitted protocol within sixty (60) days of receipt, EPA and the Registrant will discuss and agree to reasonable extensions of the dates for submission of the preliminary report and study.
- f. Based on the EPA's review of the results of the studies in pagragraphs d. and e., EPA may determine either that the study described in paragraph d. must be extended or that other studies or monitoring are needed in order to allow the Agency to continue to conclude that benzovindiflupyr does not pose unreasonable adverse effects on the environment insofar as aquatic risk are concerned as per the agreement letter of August 28, 2015.
- g. In addition to the VFS study, the registrant within one hundred and twenty (120) days of registration must submit plans for an educational program on VFS. The program will start in 2015. It will include educational resources on best practices for construction and maintenance of filter strips and information on the effectiveness of vegetative filter strips as related to their size. The educational resources will be focused on use by landowners and those leasing land. The resources may be generic (not chemical or product-specific) and will be developed in collaboration with partners in the Extension, University, State Lead Agency, and other education communities to meet State and local needs. Copies of all educational materials must be submitted to the Agency. Additionally, status reports on the materials'

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creation, distribution efforts, and any public feedback resulting from trainings/dissemination of the materials are required.

h. An additional chronic (42-d) sediment toxicity study with the freshwater amphipod, *Hyalella azteca*. A protocol must be submitted within ninety (90) days of the issuance of the registration. The deadline for the study is 09/01/17.

If the EPA determines, based on the data submitted pursuant to the conditions in the Notice or on any other data or other information received by the Agency, that one or more label revisions are required to prevent unreasonable adverse effects on the environment insofar as aquatic risks are concerned, EPA may notify the Registrant of the Agency's determination that identified revisions to the label are necessary as per the agreement letter from the Registrant dated August 28, 2015. If labels revisions are necessary to mitigate adverse effects, you must incorporate all revisions identified by the Agency and submit for approval a revised label within sixty (60) days of the Agency's notification to you of the need for such a revised label. In the event of such a revision, product may not be released for shipment under the terms of this registration more than twelve (12) months after the Agency approves such a revised label unless the product bears the appropriate revised label.

- 3. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 100-1472."
- 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 with such a reference, 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.

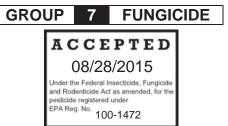
A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

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- Basic CSF dated 02/05/2013
- Alternate CSF 1 dated 02/05/2013

If you have any questions, please contact Shaunta Hill by phone at 703-347-8961, or via email at hill.shaunta@epa.gov.

### A15457LG



## **Fungicide**

A broad-spectrum fungicide for prevention and control of listed diseases in golf course turfgrasses, ornamental crops grown in greenhouses, shade-houses, lath houses, outdoor nurseries, retail nurseries, and commercial landscapes

Active Ingredients:	
Benzovindiflupyr*	10.27%
Other Ingredients:	89.73%
Total:	100.0%

\*CAS No. 1072957-71-1

A15457LG is an emulsifiable concentrate (EC) that contains 0.83 lb benzovindiflupyr of active ingredient per gallon.

This product contains >10% petroleum distillates.

### KEEP OUT OF REACH OF CHILDREN.

# **DANGER/PELIGRO**

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.)

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-RUTE

EPA Est.

SCP

Net Contents:

	FIRST AID		
If in eyes	Hold eye open and rinse slowly and gently with water for 15-20		
	minutes		
	<ul> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> </ul>		
	Call a poison control center or doctor for treatment advice.		
If on skin or	Take off contaminated clothing.		
clothing	Rinse skin immediately with plenty of water for 15-20 minutes.		
	Call a poison control center or doctor for treatment advice.		
If inhaled	Move person to fresh air.		
	If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.		
	Call a poison control center or doctor for further treatment		
	advice.		
If swallowed	Immediately call a poison control center or doctor.		
	Do not induce vomiting unless told to do so by a poison control		
	center or doctor.		
	Do not give <i>any</i> liquid to the person.		
	Do not give anything by mouth to an unconscious person.		
Have the produc	t container or label with you when calling a poison control center or		
doctor, or going for treatment.			
NOTE TO PHYSICIAN			
Contains p	etroleum distillates. May pose an aspiration pneumonia hazard.		

# Probable mucosal damage may contraindicate the use of gastric lavage. **HOT LINE NUMBER**

For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident)

Call

1-800-888-8372

### PRECAUTIONARY STATEMENTS

### **Hazards to Humans and Domestic Animals**

### **DANGER**

Corrosive to the eye. Causes irreversible eye damage. Causes skin irritation. Harmful if inhaled, swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing. Avoid breathing spray mist.

# **Personal Protective Equipment (PPE)**

### Applicators and other handlers must wear:

Coveralls worn over short-sleeved shirt and short pants

- Chemical-resistant footwear plus socks
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, or Viton®
- Protective eyewear (goggles, face shield, or safety glasses)
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing or loading

### **User Safety Requirements**

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

### **Engineering Control Statements**

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

# User Safety Recommendations Users should:

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

Benzovindiflupyr is toxic to fish, aquatic invertebrates and mammals. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated area. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

# **Surface Water Advisory**

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. Do not apply within 15 feet of surface water features such as ponds, streams. Avoid applications when rainfall is expected to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

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.

### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

### **DIRECTIONS FOR USE**

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

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

### AGRICULTURAL USE REQUIREMENTS

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, or Viton®
- Chemical-resistant footwear plus socks
- Protective evewear

### NON-AGRICULTURAL USE REQUIREMENTS

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

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.

### **USE RESTRICTIONS AND PRECAUTIONS**

**DO NOT** apply in residential landscapes.

**DO NOT** apply more than 0.95 fl oz of A15457LG per 1000 sq ft per year (0.32 gallons A15457LG per acre per year) to turfgrass.

**DO NOT** apply within 15 feet of any golf course water body.

**DO NOT** apply to turfgrass by air.

**DO NOT** apply to turfgrass through irrigation systems (chemigation).

**DO NOT** spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

#### PRODUCT INFORMATION

A15457LG is a broad-spectrum fungicide. It has preventative, systemic and curative properties. A15457LG provides excellent disease control of many major turfgrass and ornamental diseases. A15457LG may be applied and integrated into a resistance management program. All applications should be made according to the use directions that follow.

### **USE INFORMATION**

**Application**: Thorough coverage of foliage is necessary to provide good disease control. Make no more spray solution than is needed for application. For control of foliar diseases, allow A15457LG to completely dry prior to irrigating. For control of soll-borne diseases A15457LG can be applied to turfgrass and watered in after application or applied by directed spray or drench application to ornamental crops.

**Adjuvants:** When an adjuvant is to be used with this product, Syngenta recommends the use of a Chemical Producers and Distributors Association certified adjuvant and is approved for use in turfgrass or ornamental crops.

**Efficacy:** Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications if the maximum amount of A15457LG has been used. If isolates resistant to Group 7 fungicides are present, efficacy can be reduced for certain diseases. The shorter spray intervals may be

required under conditions of heavy infection pressure with highly susceptible varieties, or when environmental conditions are conducive to disease.

### **Integrated Pest Management (IPM)**

A15457LG should be integrated into an overall disease and pest management strategy whenever the use of a fungicide is required. Sound pest management resulting in healthy, vigorous plants is the foundation of a good IPM program. Cultural practices such as proper choice of varieties; nutrient management; proper cutting height (for turfgrass); thatch management (for turfgrass); and proper watering, drainage, and moisture stress management should be integrated with the use of fungicides to increase plant vigor and reduce the susceptibility to disease. Immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

### **Resistance Management**

A15457LG contains benzovindiflupyr, an SDHI fungicide in Group 7. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use of this product should conform to resistance management strategies established for the crop and use area. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include rotating with products having different modes of action or limiting the total number of applications per season. Syngenta encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label. A15457LG should not be alternated or tank mixed with any fungicide to which resistance has already developed.

Some turf and ornamental disease pathogens are known to have developed resistance to products used repeatedly for their control. A15457LG should be alternated with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Since A15457LG is an SDHI fungicide (Group 7 fungicide), avoid alternation with other SDHI fungicides.

As part of a resistance management strategy:

- Apply no more than 2 sequential applications to ornamental crops and landscape plants unless otherwise stated.
- Apply no more than 3 sequential applications to turfgrass unless otherwise stated.
- When tank-mixing or alternating, use an effective partner one that provides satisfactory disease control when used alone at the mixture rate.
- Apply early in the crop production cycle to minimize fungal pressure from listed diseases.

**Spray Drift Management:** To avoid spray drift, do not apply when conditions favor drift beyond the target area. The interaction of many equipment- and weather-related

factors determines the potential for spray drift. AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER.

# **MIXING AND APPLICATION METHODS**

# **Spray Equipment**

#### **Nozzles**

- Equip sprayers with nozzles that provide accurate and uniform application.
- Nozzles should be the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- It is suggested that screens be used to protect the pump and to prevent nozzles from clogging.
- Screens placed on suction side of pump should be 16-mesh or coarser.
- Do not place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.
- Check nozzle manufacturer's recommendations.

## Pump

- Use a pump with capacity to:
  - 1. Maintain the recommend psi for the nozzles being used to apply the spray mixture.
  - 2. Provide sufficient agitation in tank to keep mixture in suspension this requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state recommendations. For specific local directions and spray schedules, consult the current state agricultural recommendations.

# **Mixing Instructions**

To prepare spray solution, partially fill the spray tank with clean water and begin agitation. Add the specified amount of A15457LG to the tank, allowing time for good dispersion, then add an adjuvant, if recommended. If tank mixes are required, product should be added to the spray tank in the following order: WG or dry flowable formulations, wettable powders and flowable (aqueous suspensions) products. Finish filling the tank to the desired volume to obtain the proper spray concentration. Maintain agitation throughout the spraying operation. Do not allow spray mixture to stand overnight or for prolonged periods. Make up only the amount of spray required for immediate use. Sprayers should be thoroughly cleaned immediately after application. Do not use silicone based products with A15457LG due to possible phytotoxicity. If

# spray tank mixture is unsprayed for more than 18 hours (overnight), re-suspend product with agitation for 20 minutes.

- A15457LG is an emulsifiable concentrate (EC) formulation.
- Prepare no more spray mixture than is required for the immediate operation.
- Thoroughly clean spray equipment before using this product.
- Agitate the spray solution before and during application.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

### A15457LG Alone (No Tank Mix)

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- With the agitator running, add A15457LG to the tank.
- Continue agitation while adding the remainder of the water.
- Begin application of the spray solution after A15457LG has completely dispersed into the mix water.
- Maintain agitation until all of the mixture has been sprayed.

**A15457LG + Tank Mixtures:** A15457LG is usually compatible with many tank-mix partners registered for use on the listed use site.

If tank mixes are desired, observe all directions, precautions, and limitations on labeling of all products used. Consult compatibility charts or your local or state turf or ornamental crop authority for compatibility information. Do not combine A15457LG in the spray tank with pesticides, surfactants, or fertilizers unless compatibility charts or your own prior use has shown that the combination is physically compatible, effective, and non-injurious under your conditions of use.

To determine the physical compatibility of A15457LG with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to 1 qt of water. Add wettable powders and water dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

# Mixing in the Spray Tank

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- With the agitator running, add the tank-mix partner(s) into the tank in the same order as described above.
- Allow the material to completely dissolve and disperse into the mix water.
   Continue agitation while adding the remainder of the water and A15457LG to the spray tank.
- Allow A15457LG to completely disperse.
- Spray the mixture with the agitator running.

## **Application Instructions**

A15457LG may be applied with all types of spray equipment commonly used for making ground, foliar and aerial applications. Proper adjustments and calibration of spraying equipment to give good coverage is essential for good disease control.

# **Application through Irrigation Systems (Chemigation) – Ornamentals Only**

- Apply this product only through center pivot, solid set, overhead boom, hand move, moving wheel irrigation systems, ebb and flow and drip or micro irrigation equipment. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- Excessive water may reduce efficacy.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide labelprescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

# **Operating Instructions**

- The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent watersource contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quickclosing check-valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

# Solid Set, Overhead Boom, Hand Move Irrigation, Ebb and Flood, Drip and Other Micro Irrigation Equipment

- Determine the area covered by the irrigation equipment.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20- to 30-minute interval. When applying A15457LG through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of A15457LG required to treat the area covered by the irrigation system.
- Add the required amount of A15457LG into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the A15457LG solution has cleared the last sprinkler head or emitter.

### **Aerial Application**

- Thorough coverage is necessary to provide good disease control.
- Apply in a minimum of 2 gallons of water per acre unless specified otherwise.
- Avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur.
- Do not apply directly to humans or animals.

### SPECIFIC INSTRUCTIONS FOR PUBLIC WATER SYSTEMS

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a
  functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional
  equivalent in the water supply line upstream from the point of pesticide
  introduction. As an option to the RPZ, the water from the public water system
  should be discharged into a reservoir tank prior to pesticide introduction. There
  shall be a complete physical break (air gap) between the outlet end of the fill pipe
  and the top or overflow rim of the reservoir tank of at least twice the inside
  diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, automatic, quickclosing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

- The system must contain functional interlocking controls to automatically shut off
  the pesticide injection pump when the water pump motor stops, or in cases
  where there is no water pump, when the water pressure decreases to the point
  where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

### SPECIFIC USE DIRECTIONS

### **GOLF COURSE TURF**

A15457LG is for control of certain pathogens causing foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds, and rusts of turf.

**Turfgrass Tolerance:** A15457LG plant tolerance has been found to be safe for all turfgrass species on the label; however, not all possible tank-mix combinations have been tested under all conditions. When possible, test the combinations on a small portion of the turf to ensure that a phytotoxic response will not occur as a result of application.

**Apply by Ground Application Only:** Apply in sufficient water to provide good coverage. Typical application volumes range from 30 to 175 gallons of spray per acre. Thorough coverage is necessary to provide good disease control.

Target Diseases	Use Rate (fl oz product per 1,000 sq ft)	Use Rate (fl oz product per acre)	Application Interval (days)	Remarks
Anthracnose (Colletotrichum cereale)	0.236	10.3	14	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. For optimum disease control, tank-mix or alternate A15457LG with a contact fungicide such as Daconil Action™, Daconil Weather Stik® or Daconil Ultrex®.
Brown Patch ( <i>Rhizoctonia</i> solani)	0.236	10.3	14-21	Apply when conditions are favorable for disease development. Apply A15457LG on a 14-day schedule to tees and greens and on a 21-day schedule to fairways.
Large patch / zoysia	0.236	10.3	14-21	Make 1 or 2 applications in

-	Use Rate	Use Rate	Application	
Target Diseases	(fl oz product per 1,000 sq ft)	(fl oz product per acre)	Interval (days)	Remarks
patch (Rhizoctonia solani)				fall prior to infection or when conditions are favorable for infection. A spring application prior to green-up may be required based on length of the infection period. Initiate first application for large patch/zoysia patch when soil temperature at a 2 – 4" depth average 65°F.
Leaf and Sheath Spot ( <i>Waitea circinata</i> var. <i>zeae</i> )	0.236	10.3	14-21	For Leaf and Sheath spot, apply when conditions are favorable for infection such as sequential days of temperatures at or above 90°F. Curative control may necessitate several applications, use higher rates at shorter intervals for curative control.
Brown Ring Patch (Waitea circinata var. circinata)	0.236	10.3	14-21	Apply when conditions are favorable for disease development.
Cool Weather Brown Patch, Yellow Patch (Rhizoctonia cerealis)	0.236	10.3	14-21	Make 1 or 2 applications in fall or when conditions are favorable for disease development.
Dollar Spot (Sclerotinia homoeocarpa)	0.236	10.3	14-21	Apply preventatively when conditions are favorable for disease development. Tankmix A15457LG with a contact fungicide such as Daconil Action or Secure®.
Snow mold Gray (Typhula spp.) Pink (Microdochium nivale)	0.236	10.3	Late Fall	Make one application in the late fall before snow cover. Do not apply on top of snow. Tank-mix with a fungicide from a different FRAC group such as Daconil, Secure or Medallion®.
Microdochium Patch ( <i>Microdochium</i> <i>nivale</i> )	0.236	10.3	14	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Gray Leaf Spot* (Pyricularia grisea)	0.236	10.3		Use A15457LG in a preventative disease control program. Begin applications before disease is present and alternate with other fungicide chemistries that control gray leaf spot.
Copper Spot (Gloeocercospora sorghi)	0.236	10.3	14	Use A15457LG in a preventative disease control program. Begin applications before disease is present and alternate with other fungicide chemistries that control

Target Diseases	Use Rate (fl oz product per 1,000 sq ft)	Use Rate (fl oz product per acre)	Application Interval (days)	Remarks
				copper spot.
Leaf Rust Stem Rust Stripe Rust (Puccinia spp.)	0.236	10.3	14-21	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Melting Out ( <i>Drechslera poae</i> )	0.236	10.3	14	Apply when conditions are favorable for disease development.
Powdery Mildew (Erysiphe graminis)	0.236	10.3	14	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Red Thread (Laetisaria fuciformis	0.236	10.3	14	Apply when conditions are favorable for disease development.
Southern Blight (Sclerotium rolfsii)	0.236	10.3	14	Apply when conditions are favorable for disease development.
Algae	0.236	10.3	14	For optimum control of algae, A15457LG should be tankmixed or alternated with a fungicide such as Daconil Action, Daconil Weather Stik, Daconil Ultrex, Concert® or Renown™.

<sup>\*</sup>Do not make more than two sequential applications of A15457LG for control of Gray Leaf Spot. For all other diseases when Gray Leaf Spot is not present, do not make more than three sequential applications of A15457LG.

Do not apply more than 0.95 fl oz of A15457LG per 1,000 sq ft per year (0.32 gallons A15457LG per acre per year).

One gallon (128 fl oz) A15457LG contains 0.83 lb benzovindiflupyr.

A15457LG: Rate Conversion Chart for Turf

FI Oz	Fl Oz	
Product per	Product per	Maximum Yearly
1,000 Sq Ft	Acre	Applications
0.236	10.3	4

### **ORNAMENTALS**

A15457LG is for control of listed foliar and root diseases of ornamental plants. A15457LG may be applied to container, bench, flat, plug, liner, bed or field-grown ornamentals crops in greenhouses, shade-houses, lath houses, outdoor nurseries, and retail nurseries. A15457LG may also be applied to ornamental plants in commercial landscapes.

A15457LG applications should begin prior to disease development and continue throughout the season at listed use rates and specified intervals following resistance management guidelines. A15457LG works best when used as part of a preventative disease management program.

Apply A15457LG as a foliar broadcast or directed spray application. Apply foliar applications in sufficient water to ensure complete coverage of the target plant for best control. Repeat applications at specified intervals.

A15457LG may be applied to control soilborne, seedling, and crown diseases of production ornamentals as a preventative, directed spray or drench treatment prior to infection. Good coverage of the pre-infection area (root zone, root ball, crown, etc.) is necessary for satisfactory control. Apply directed sprays and drench applications prior to infection as healthy roots are necessary to optimize disease protection.

For resistance management, do not make more than two sequential drench applications of A15457LG before alternating with a fungicide of a different mode of action.

Caution should be taken before making application of A15457LG as a drench to small bedding plants in the seedling/plug stage due to possible phytotoxicity. A limited quantity of plants should be tested prior to full-scale application.

Use of A15457LG as a "rescue" (late curative or eradicant) treatment may not always result in satisfactory disease control.

# **Plant Safety**

Plant safety has been found to be acceptable for many ornamental crops; however, not all possible plant species and varieties have been tested under all conditions. It is recommended to test A15457LG alone and with any mixtures on a small portion of the crop to ensure that a phytotoxic response will not occur.

# **Use Rates - Foliar Diseases Controlled**

Disease	Foliar Use Rates and Remarks (fl oz product per 100 gallons)	Foliar Use Rates and Remarks (fl oz product per 50 gallons)
Alternaria Leaf Spot (Alternaria spp.) Anthracnose (Colletotrichum spp.) Apple Scab (Venturia inaequalis) Ascochyta blight (Ascochyta spp.) Cercospora leaf spot (Cercospora spp., Cercosporidium spp.) Corynespora leaf spot (Corynespora spp.) Leaf Rust (Puccinia spp.) Leaf Spots (Septoria spp., Helminthosporium spp., Dreshelera spp., Cylindrocladium spp., Stemphyllium spp.) Powdery Mildew (Blumeria spp., Sphaerotheca spp., Erysiphe spp.) Mycosphaerella blight (Mycosphaerella spp.)	Apply 7-10.5 fl oz every 7-14 days	Apply 3.5-5.25 fl oz every 7-14 days

# **Use Rates – Flower Blight Diseases Controlled**

Disease	Use Rates and Remarks (fl oz product per 100 gallons)	Use Rates and Remarks (fl oz product per 50 gallons)
Anthracnose (Collectotrichum spp., Elsinoe spp.) Ascochyta Ray Blight (Ascochyta spp.)	Apply 4-7 fl oz every 7-14 days	Apply 2-3.5 fl oz every 7-14 days

# **Soilborne Diseases Controlled – Directed Spray**

Disease	Use Rates and Remarks (fl oz product per 100 gallons)	Use Rates and Remarks (fl oz product per 50 gallons)	
Rhizoctonia solani Sclerotium rolfsii	Apply 9-10.5 fl oz every 7-21 days	Apply 4.5-5.25 fl oz every 7-21 days	

### Soilborne Diseases Controlled – Drench to Container-Grown Plants

See Ornamentals Section for additional drench directions.

Disease	Use Rate for Drench Solution (fl oz product/100 gallons)	Use Rate for Drench Solution (fl oz product/50 gallons)	Remarks
Rhizoctonia solani Sclerotium rolfsii	3-4.4 fl oz	1.5-2.2 fl oz	Apply 1-2 pints of the solution per square foot surface area every 7-28 days to container-grown plants.

## **Specific Use Restrictions:**

- For ornamental crops grown outdoors, do not exceed 13.7 fl oz/A (1.6 oz/5,000 sq ft) in a single application and 41.1 fl oz/A (4.7 fl oz/5,000 sq ft) per year.
- For ornamental crops grown indoors, do not exceed 13.7 fl oz/A (1.6 fl oz/5,000 sq ft) in a single application and 41.1 fl oz/A (4.7 fl oz/5,000 sq ft) per crop.

### STORAGE AND DISPOSAL

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

# **Pesticide Storage**

Store in original container only. Store in a cool, dry and well-ventilated place. Protect from excessive heat. Keep container closed when not in use. Do not store near food or feed.

### **Pesticide Disposal**

Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

## **Container Handling [less than or equal to 5 gallons]**

Non-refillable 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 incineration, or by other procedures approved by state and local authorities.

# Container Handling [greater than 5 gallons – mini-bulk]

Non-refillable 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. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several ties. 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 incineration, or by other procedures approved by state and local authorities.

### Container Handling [greater than 5 gallons – bulk]

Refillable container. Refill this container with pesticide only. Do not use 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 container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by other procedures allowed by state and local authorities.

### CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.

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