

# Fulfill<sup>®</sup>

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GROUP

9B

INSECTICIDE

## Insecticide

For control of listed aphids in cotton, hops, pecans, potatoes (and other tuberous root and corm vegetables), tobacco, and vegetables

### ACTIVE INGREDIENT:

Pymetrozine<sup>1</sup> ..... 50.0%

OTHER INGREDIENTS: ..... 50.0%

TOTAL: ..... 100.0%

<sup>1</sup>CAS No. 123312-89-0

*(Fulfill Insecticide is a water-dispersible granule containing 50% active ingredient by weight.)*

EPA Reg. No. 66222-274

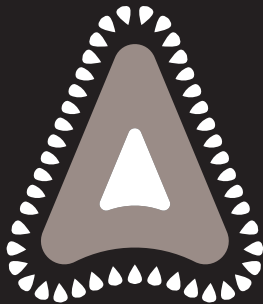
EPA Est. No. 67545-AZ-01

**KEEP OUT OF REACH OF CHILDREN  
[CAUTION]**

See additional precautionary statements and directions for use in booklet.

**How can we help? 1-866-406-6262**

Net Contents **27.5 ounces**



**INSECTICIDE**

**ADAMA**

**FIRST AID****If on skin or clothing**

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

**If in eyes**

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

**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 treatment advice.

**If swallowed**

- Call a poison control center or doctor immediately for treatment advice.
- Have a person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

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

For emergency medical treatment information, call ProPharma 24 hours a day at 1-877-250-9291.

**In case of spills, fire, leaks or accident call INFOTRAC at 1-800-535-5053.**

**PRECAUTIONARY STATEMENTS**  
**Hazards to Humans and Domestic Animals**  
**CAUTION**

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

**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves made of any waterproof material – Category A (e.g., barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinylchloride [PVC] ≥ 14 mils, or Viton® ≥ 14 mils).
- Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, 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 immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### **Environmental Hazards**

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash water.

### **Physical and Chemical Hazards**

Do not use, pour, spill, or store near heat or open flame.

## **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.**

### **AGRICULTURAL USE REQUIREMENTS** *(continued)*

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
- Chemical-resistant gloves made of any waterproof material – Category A (e.g., barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinylchloride [PVC] ≥ 14 mils, or Viton® ≥ 14 mils)
- Shoes plus socks

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

### **PRODUCT INFORMATION**

Fulfill® Insecticide controls listed aphid species in cotton, hops, pecans, potatoes (and other tuberous root and corm vegetables), tobacco, and vegetables.

Apply Fulfill Insecticide to plant foliage when aphids first appear, before populations build to damaging levels. Thorough spray coverage is essential for best performance. Apply Fulfill Insecticide in sufficient water to ensure good coverage of all plant surfaces. The use of greater water volumes will result in better coverage, especially under adverse conditions (e.g., hot, dry) or where a dense plant canopy exists. See the **CROP USE DIRECTIONS** section of this label for specific instructions on spray volumes for different crops.

With all applications of Fulfill Insecticide, the use of a penetrating type spray adjuvant, at the manufacturer's specified rate, will improve coverage and result in optimum insect control, especially in hard-to-wet crops.

Fulfill Insecticide exhibits excellent translaminar movement (movement across the leaf surface and into plant tissue) and is rainfast as soon as the spray solution has dried.

### **Mode of Action**

Fulfill Insecticide works primarily by ingestion, but also has some contact activity. Affected aphids stop feeding shortly after exposure, but may remain on the plant foliage until they die, which is usually within 4-10 days. Fulfill Insecticide has residual activity in the plant and will control aphids that move onto the plant after spraying.

### **Suitability for Integrated Pest Management Programs**

Fulfill Insecticide is suitable for Integrated Pest Management (IPM) programs as it has a low toxicity to beneficial insects (including honeybees and bumblebees) and mites. It can be used in IPM programs using beneficial insects and during periods of pollination. However, do not apply Fulfill Insecticide directly to bees that are actively foraging in the field.

### **Phytotoxicity**

Fulfill Insecticide has been tested for phytotoxicity at the label rates and has shown no effects on the crops listed on this label.

### **Resistance Management**

Fulfill Insecticide contains a Group 9B Insecticide (pymetrozine) belonging to a group of compounds of unknown or non-specific mode of action (selective feeding blockers).

It is strongly advised that Fulfill Insecticide be used in a sound resistance management program that includes rotation with other products with different modes of action. ADAMA encourages responsible product stewardship to ensure effective long-term control of the insects on this label.

## **Aphids Controlled<sup>1</sup>**

### **Common Name**

Asparagus aphid  
Bean aphid  
Bird cherry-oat aphid  
Blackmargined aphid  
Black pecan aphid  
Buckthorn aphid  
Cabbage aphid  
Corn leaf aphid  
English grain aphid  
Green peach aphid  
Hop aphid  
Lettuce aphid  
Melon/cotton aphid  
Pea aphid  
Potato aphid  
Potato psyllid  
Red lettuce aphid  
Tobacco aphid  
Turnip aphid  
Yellow pecan aphid

### **Scientific Name**

*Brachycorynella asparagi*  
*Aphis fabae*  
*Rhopalosiphum padi*  
*Monellia caryella*  
*Mellanocallis caryaefoliae*  
*Aphis nasturtii*  
*Brevicoryne brassicae*  
*Rhopalosiphum maidis*  
*Sitobion avenae*  
*Myzus persicae*  
*Phorodon humuli*  
*Nasonovia ribis-nigri*  
*Aphis gossypii*  
*Acyrtosiphon pisum*  
*Macrosiphum euphorbiae*  
*Paratrioza cockerelli*  
*Uroleucon pseudambrosiae*  
*Myzus nicotianae*  
*Lipaphis erysimi*  
*Monelliopsis pecanis*

<sup>1</sup> See individual crop sections for information on which aphid species most typically infest a particular crop.

### **Rotational Restrictions**

The rotational (plantback) restriction for Fulfill Insecticide is 30 days for all crops.

## APPLICATION PROCEDURES

### Ground Spray Equipment

Use sufficient water to provide thorough, uniform coverage.

Use sprayer nozzles that provide accurate, uniform application and medium-sized droplets.

Calibrate sprayer from manufacturer's instructions or state's specifications to ensure delivery of adequate spray volume per unit area.

Applications using sufficient water volume to provide thorough and uniform coverage will provide the most effective aphid pest control. For ground applications, use the minimum spray volume indicated in the **CROP USE DIRECTIONS** section of this label. In situations where a dense canopy exists and/or aphid infestations are high, use greater water volumes.

### Aerial Application

Apply Fulfill Insecticide in water, using the minimum spray volume indicated in the **CROP USE DIRECTIONS** section of this label. Increase spray volume under adverse conditions (i.e., high temperature, low relative humidity, dense plant canopy). Do not apply under conditions where uniform coverage cannot be obtained or where excessive spray drift or inversion may occur. Do not apply directly to humans or animals.

### Spray Drift Precautions

As with all crop protection products, it is important to avoid off-target movement. Do not allow spray to drift onto adjacent land or crops. Follow these instructions to avoid spray drift.

- Do not apply when wind velocity exceeds 15 mph. Do not make applications when wind gusts approach 15 mph.
- Do not spray when conditions are favorable for drift (high temperatures, low relative humidity, drought). Do not apply during temperature inversions. If an inversion condition is suspected, consult with local weather services before making an application.
- Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift, and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

- Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage. Do not make applications more than 10 ft. above the crop canopy.
- For aerial applications, mount the spray boom on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length must be used and must not exceed 75% of wing span or rotor diameter.

### **Chemigation**

**Application Through Irrigation Systems – Potatoes only (Not for use in CA):** Fulfill Insecticide alone or in combination with other products, which are registered for application through sprinkler irrigation, may be applied through irrigation systems. Apply this product only through center pivot, solid set, hand move, or moving wheel irrigation systems. Do not apply Fulfill Insecticide through any other type of irrigation system. Lack of effectiveness or illegal pesticide residues can result from nonuniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts. 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.

**Using Water from Public Water Systems:** DO NOT APPLY FULFILL INSECTICIDE THROUGH ANY IRRIGATION SYSTEM **PHYSICALLY CONNECTED** TO A PUBLIC WATER SYSTEM. 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. Fulfill Insecticide may be applied through irrigation systems which may be **supplied** by a public water system **only if** the water from the public water system is 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 to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Any irrigation system using water supplied from a public water system must also meet the following requirements.

### **Operating Instructions FOR ALL SPECIFIED TYPES OF IRRIGATION SYSTEMS**

1. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
2. The system must contain a functional check-valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
4. 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.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump, or a Venturi injector), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
8. Do not apply when wind speed favors drift beyond the area intended for treatment.

### Calibration and Application Instructions

Apply Fulfill Insecticide under the schedule specified in the specific crop use directions, not according to the irrigation schedule unless the events coincide.

Set the equipment to apply the minimum amount of water per acre. Run the system at 80-95% of the manufacturer's maximum rated travel speed.

The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

### Center Pivot Irrigation Equipment

**Notes:** (1) Use only drive systems that provide uniform water distribution. (2) Do not use end guns when chemigating Fulfill Insecticide through center pivot systems because of nonuniform application. (3) Plug the first nozzle closest to the well head to protect the water source.

1. Determine the size of the area to be treated.
2. Determine the time required to apply 0.1-0.25 inches of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated maximum travel speed.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of Fulfill Insecticide, and any tank mix partners, required to treat the area covered by the irrigation system.
5. Add the required amount of Fulfill Insecticide, any tank mix partners, and sufficient water to meet the injection time requirements to the solution tank. (See the **MIXING PROCEDURES** section of this label.)
6. Make sure the system is fully charged with water before starting injection of the Fulfill Insecticide solution. Time the injection to last at least as long as it takes to bring the system to full pressure.

7. Maintain constant agitation in the solution tank during the injection period.
8. Inject the specified amount of Fulfill Insecticide per acre continuously for one complete revolution of the system.
9. Stop the injection equipment after treatment is completed. Continue to operate the system until the Fulfill Insecticide solution has cleared all of the sprinkler heads.
10. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water.

### **Solid Set, Hand Move, and Moving Wheel Irrigation Equipment**

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of Fulfill Insecticide required to treat the area covered by the irrigation system.
4. Add the required amount of Fulfill Insecticide, and any other tank mix partners, into the same quantity of water used to calibrate the injection period. (See the **MIXING PROCEDURES** section of this label.)
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of Fulfill Insecticide per acre for either a 20-40 minute period at the end of a regular irrigation set, or as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the Insecticide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the Fulfill Insecticide solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

## MIXING PROCEDURES

Prepare no more spray mixture than is needed for the immediate application. Thoroughly clean spray equipment before using this product. Agitate the spray solution before and during application. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Keep product container tightly closed when not in use.

**Fulfill Insecticide Alone:** Add 1/2 of the required amount of water to the mix tank. With the agitator running, add the Fulfill Insecticide to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the Fulfill Insecticide has completely and uniformly dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

**Note:** Do not use liquid fertilizer as a carrier for Fulfill Insecticide.

**Fulfill Insecticide + Tank Mixtures:** Add 1/2 of the required amount of water to the mix tank. Start the agitator running before adding any tank mix partners. Add tank mix partners in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables) such as Fulfill Insecticide, liquid flowables, liquids and emulsifiable concentrates. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all of the mixture has been applied.

**Note:** When using Fulfill Insecticide in tank mixtures, add all products in water-soluble packaging to the tank before any other tank mix partner, including Fulfill Insecticide. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using Fulfill Insecticide in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank mix product label. Do not exceed any label dosage rate, and follow the most restrictive label precautions and limitations. Do not mix this product with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

**Compatibility:** Fulfill Insecticide is compatible with most Insecticide, fungicide, fertilizers, and micronutrient products. However, test the physical compatibility of Fulfill Insecticide with tank mix partners before use. To determine the physical compatibility of Fulfill Insecticide with other products, use a jar test, as described below.

Using a 1½ 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 acceptable, use the same procedure for adding required ingredients to the spray tank. If the combination proves not to be physically compatible, do not use these products in a tank mix.

The crop safety of all potential tank mixes on all crops may not have been tested. Before applying any tank mixture not specified on this label, confirm the safety to the target crop.

**IMPORTANT:** Do not tank mix Fulfill Insecticide with Bravo® Weather Stik®, Dithane® Rainshield™, or any other pesticide containing a sticker component in its formulation because this may drastically reduce Fulfill Insecticide's control of pests.

## CROP USE DIRECTIONS

Fulfill Insecticide must be used only for the sites and pests at the indicated rates and limitations specified in the following tables.

### ROW CROPS

Crop	Pests <sup>1</sup>	Rate Per Acre Per Application	Remarks
Cotton	Cotton aphid	<b>Foliar application:</b> 2.75 oz./A	Apply when aphids first appear, before populations build to damaging levels. Two applications may be needed to control persistent aphid populations.
	Whiteflies	<b>Foliar application:</b> 2.75 oz./A	Provides suppression of whiteflies. <sup>2</sup> Apply when adult whiteflies first appear, before populations build to damaging levels.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 2 gals./A when applied by air and a minimum of 10 gals./A when applied by ground. To provide optimum coverage and penetration, add a penetrating type spray adjuvant at the manufacturer's specified rate.

**Do not** apply more than 2.75 oz./A per application. **Do not** exceed a total of 5.5 oz./A per crop per season.

Allow a minimum of 7 days between applications. Allow a minimum of 21 days (PHI) between the last application and harvest.

<sup>1</sup> Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

<sup>2</sup> Fulfill Insecticide aids in the suppression of whitefly (banded winged, silverleaf, and sweet potato) populations. Suppression means either erratic control ranging from good to poor or consistent control at a level below that which is considered acceptable for commercial control.

Crop	Pests <sup>1</sup>	Rate Per Acre Per Application	Remarks
<b>Potatoes (and other Tuberous Root and Corm Vegetables)</b> Arracacha, Arrowroot, Bean yam, Cassava: bitter and sweet, Chayote root, Chinese artichoke, Chufa, Dasheen (taro), Edible canna, Ginger, Jerusalem artichoke, Leren, Potato, Sweet potato, Tanier, True yam, Turmeric	Buckthorn aphid Green peach aphid Melon aphid Potato aphid	<b>Foliar application:</b> 2.75 – 5.5 oz./A	Apply when aphids first appear, before populations build to damaging levels. Two applications may be needed to control persistent aphid populations.
	Potato psyllid <sup>2</sup>	5.5 oz./A	

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 5 gals./A when applied by air and a minimum of 10 gals./A when applied by ground. To provide optimum coverage and penetration, add a penetrating type spray adjuvant at the manufacturer's specified rate.

**Do not** apply more than 5.5 oz./A per application. **Do not** exceed a total of 11.0 oz./A per crop per season.

Allow a minimum of 7 days between applications. Allow a minimum of 14 days (PHI) between the last application and harvest.

<sup>1</sup> Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

<sup>2</sup> Suppression only.

Crop	Pests <sup>1</sup>	Rate Per Acre Per Application	Remarks
Tobacco	Green peach aphid Tobacco aphid	<b>Foliar application:</b> 2.75 oz./A	Apply when aphids first appear, before populations build to damaging levels. Two applications may be needed to control persistent aphid populations.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 20 gals./A when applied by ground. **Do not** apply by air. To provide optimum coverage and penetration, add a penetrating type spray adjuvant at the manufacturer's specified rate.

**Do not** apply more than 2.75 oz./A per application. **Do not** exceed a total of 5.5 oz./A per crop per season.

Allow a minimum of 7 days between applications. Allow a minimum of 14 days (PHI) between the last application and harvest.

<sup>1</sup> Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

## VEGETABLE CROPS

Crop	Pests <sup>1</sup>	Rate Per Acre Per Application	Remarks
Asparagus	Asparagus aphid Bean aphid Green peach aphid Melon aphid Potato Aphid	<b>Fern application:</b> 2.75 oz./A	For control of aphids, apply to asparagus ferns after harvest has been completed. Allow a minimum of 30 days between applications.  Apply when aphids first appear, before populations build to damaging levels.  Additional applications may be needed to control persistent aphid populations, however do not apply more than the maximum amount permitted per season.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 5 gals./A when applied by air and 10 gals./A when applied by ground. To provide optimum coverage and penetration, add a penetrating type spray adjuvant at the manufacturer's specified rate.

**Do not** apply more than 2.75 oz./A per application. **Do not** exceed a total of 16.5 oz./A per season.

Allow a minimum of 30 days between applications. Allow a minimum of 170 days (PHI) between the last application and harvest.

<sup>1</sup>Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

Crop	Pests <sup>1</sup>	Rate Per Acre Per Application	Remarks
<b>Cole Crops</b> Broccoli, Broccoli raab, Brussels sprouts, Cabbage, Cauliflower, Cavalo broccolo, Chinese broccoli, Chinese cabbage (bok choy, napa), Chinese mustard cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip greens	Cabbage aphid Green peach aphid Turnip aphid	<b>Foliar application:</b> 2.75 oz./A	Apply when aphids first appear, before populations build to damaging levels.  Two applications may be needed to control persistent aphid populations.
	Whiteflies	<b>Foliar application:</b> 2.75 oz./A	Provides suppression of whiteflies. <sup>2</sup> Apply when adult whiteflies first appear, before populations build to damaging levels.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 5 gals./A when applied by air and a minimum of 10 gals./A when applied by ground. To provide optimum coverage and penetration, add a penetrating type spray adjuvant at the manufacturer's specified rate.

**Do not** apply more than 2.75 oz./A per application. **Do not** exceed a total of 5.5 oz./A per crop per season.

Allow a minimum of 7 days between applications. Allow a minimum of 7 days (PHI) between the last application and harvest.

<sup>1</sup> Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

<sup>2</sup> Fulfill Insecticide aids in the suppression of whitefly (banded winged, silverleaf, and sweet potato) populations. Suppression means either erratic control ranging from good to poor or consistent control at a level below that which is considered acceptable for commercial control.

Crop	Pests <sup>1</sup>	Rate Per Acre Per Application	Remarks
<b>Cucurbit Vegetables</b> Chayote , Chinese waxgourd, Citron melon, Cucumber, Edible gourd, Gherkin, <i>Momordica</i> spp., Muskmelon, Pumpkin, Squash: summer, winter, Watermelon	Green peach aphid Melon aphid	<b>Foliar application:</b> 2.75 oz./A	Apply when aphids first appear, before populations build to damaging levels. Two applications may be needed to control persistent aphid populations.
	Whiteflies	<b>Foliar application:</b> 2.75 oz./A	Provides suppression of whiteflies. <sup>2</sup> Apply when adult whiteflies first appear, before populations build to damaging levels.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 5 gals./A when applied by air and 10 gals./A when applied by ground. To provide optimum coverage and penetration, add a penetrating type spray adjuvant at the manufacturer's specified rate

**Do not** apply more than 2.75 oz./A per application. **Do not** exceed a total of 5.5 oz./A per crop per season.

Allow a minimum of 7 days between applications. Applications can be made up to and including the day of harvest (0 day PHI).

<sup>1</sup> Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

<sup>2</sup> Fulfill Insecticide aids in the suppression of whitefly (banded winged, silverleaf, and sweet potato) populations. Suppression means either erratic control ranging from good to poor or consistent control at a level below that which is considered acceptable for commercial control.

Crop	Pests <sup>1</sup>	Rate Per Acre Per Application	Remarks
<b>Fruiting Vegetables</b> Eggplant, Ground cherry, Pepino, Peppers: bell, chili, cooking, pimento, and sweet, Tomatillo, Tomato	Green peach aphid Potato aphid	<b>Foliar application:</b> 2.75 oz./A	Apply when aphids first appear, before populations build to damaging levels.  Two applications may be needed to control persistent aphid populations.
	Whiteflies	<b>Foliar application:</b> 2.75 oz./A	Provides suppression of whiteflies. <sup>2</sup> Apply when adult whiteflies first appear, before populations build to damaging levels.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 5 gals./A when applied by air and 10 gals./A when applied by ground. To provide optimum coverage and penetration, add a penetrating type spray adjuvant at the manufacturer's specified rate.

**Do not** apply more than 2.75 oz./A per application. **Do not** exceed a total of 5.5 oz./A per crop per season.

Allow a minimum of 7 days between applications. Applications can be made up to and including the day of harvest (0 day PHI).

<sup>1</sup> Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

<sup>2</sup> Fulfill Insecticide aids in the suppression of whitefly (banded winged, silverleaf, and sweet potato) populations. Suppression means either erratic control ranging from good to poor or consistent control at a level below that which is considered acceptable for commercial control.

Crop	Pests <sup>1</sup>	Rate Per Acre Per Application	Remarks
<b>Leafy Vegetables</b> Amaranth, Arugula, Cardoon, Celery, Celtuce, Chervil, Chinese celery, Corn salad, Dandelion, Dock (sorrel), Edible-leaved chrysanthemum, Endive (escarole), Fennel, Florence, Garden/Upland cress, Garden/Winter purslane, Garland chrysanthemum, Head lettuce, Leaf lettuce, Orach, Parsley, Radicchio, Rhubarb, Spinach, Swiss chard	Bean aphid Green peach aphid Lettuce aphid Potato aphid Red lettuce aphid	<b>Foliar application:</b> 2.75 oz./A	Apply when aphids first appear, before populations build to damaging levels.  Two applications may be needed to control persistent aphid populations.
	Whiteflies	<b>Foliar application:</b> 2.75 oz./A	Provides suppression of whiteflies. <sup>2</sup> Apply when adult whiteflies first appear, before populations build to damaging levels.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 5 gals./A when applied by air and 10 gals./A when applied by ground. To provide optimum coverage and penetration, add a penetrating type spray adjuvant at the manufacturer's specified rate.

**Do not** apply more than 2.75 oz./A per application. **Do not** exceed a total of 5.5 oz./A per crop per season.

Allow a minimum of 7 days between applications. Allow a minimum of 7 days (PHI) between the last application and harvest.

<sup>1</sup>Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

<sup>2</sup>Fulfill Insecticide aids in the suppression of whitefly (banded winged, silverleaf and sweet potato) populations. Suppression means either erratic control ranging from good to poor or consistent control at a level below that which is considered acceptable for commercial control.

## Hops

Crop	Pest <sup>1</sup>	Rate Per Acre Per Application	Remarks
Hops	Hop aphid	<b>Foliar application:</b> 4.0-6.0 oz./A	Apply when aphids first appear, before populations build to damaging levels. Apply higher rates for heavy infestations. Two applications may be needed to control persistent aphid populations.

**Do not** apply at rates lower than those specified on this label. Two applications may be needed to control heavy aphid infestations.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 120 gals./A. **Do not** apply by air. To provide optimum coverage and insect control, add a nonionic surfactant or organosilicone-based surfactant at the manufacturer's specified rate.

**Do not** apply more than 6.0 oz./A per application. **Do not** make more than three applications per crop per season; do not exceed a total of 18.0 oz./A per crop per season.

Allow a minimum of 14 days between applications. Allow a minimum of 14 (PHI) days between the last application and harvest.

**Note:** Fulfill Insecticide causes cessation of insect feeding shortly after application. However, aphids may remain on the plant for 2-4 days before they die.

<sup>1</sup> Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

## Tree Crops

Crop	Pests <sup>1</sup>	Rate Per Acre Per Application	Remarks
Pecan	Black pecan aphid Blackmargined aphid Yellow pecan aphid	<b>Foliar application:</b> 4.0 oz./A	Apply when aphids first appear, before populations build to damaging levels.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 50 gals./A when applied by ground and 20 gals./A when applied by air. To provide optimum coverage and penetration, add a penetrating type spray adjuvant at the manufacturer's specified rate.

**Do not** apply more than 4.0 oz./A per application. **Do not** exceed a total of 8.0 oz./A per crop per season.

Allow a minimum of 7 days between applications. Allow a minimum of 14 days (PHI) between the last application and harvest.

<sup>1</sup> Aphid pests listed in the individual crop sections are the species that most commonly infest that crop. However, Fulfill Insecticide will control all aphid species listed in the **Product Information** section of this label.

## **STORAGE AND DISPOSAL**

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

### **Pesticide Storage**

Store in original container, in a cool, dry place, inaccessible to children and pets. Product is hygroscopic. Keep the container tightly closed.

### **Pesticide Disposal**

Pesticide wastes are 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 instruction, 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.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

### **Container Handling**

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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration.

## LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES and LIMITATIONS OF LIABILITY.**

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of ADAMA. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ADAMA makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of ADAMA is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, ADAMA disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at ADAMA's election, the replacement of product.

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Dithane® Rainshield™ is a trademark of Dow Agrosiences LLC.  
Viton® is a registered trademark of E.I. DuPont de Nemours and Company.  
Weather Stik® is a registered trademark of a Syngenta Group company.

Manufactured for:

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604

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# Fulfill®

**GROUP 9B INSECTICIDE**

## Insecticide

For control of listed aphids in cotton, hops, pecans, potatoes (and other tuberous root and corm vegetables), tobacco, and vegetables

### ACTIVE INGREDIENT:

Pymetrozine<sup>1</sup> . . . . . 50.0%

**OTHER INGREDIENTS:** . . . . . 50.0%

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

<sup>1</sup> CAS No. 123312-89-0

(Fulfill Insecticide is a water-dispersible granule containing 50% active ingredient by weight.)

EPA Reg. No. 66222-274 EPA Est. No. 67545-AZ-01

**KEEP OUT OF REACH OF CHILDREN**  
**[CAUTION]**

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

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

**How can we help? 1-866-406-6262**

Manufactured for:

Makhteshim Agan of North America, Inc.  
(d/b/a ADAMA)

3120 Highwoods Blvd. Net Contents  
Raleigh, NC 27604 **27.5 ounces**



INSECTICIDE

ADAMA

### FIRST AID

**If on skin or clothing** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. **If in eyes** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **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 treatment advice. **If swallowed** Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency medical treatment information, call ProPharma 24 hours a day at 1-877-250-9291.

**In case of spills, fire, leaks or accident call INFOTRAC at 1-800-535-5053.**

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Pesticide Storage** Store in original container, in a cool, dry place, inaccessible to children and pets. Product is hydroscopic. Keep the container tightly closed. **Pesticide Disposal** Pesticide wastes are 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 instruction, 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. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night. **Container Handling** Non-refillable container. Do not reuse or refill this container. See inside the booklet for complete instruction.

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PEEL BACK BOOK HERE