

228-588

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

APR 03 2009

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Ms. Lizbeth Rea  
Nufarm Americas, Inc.  
150 Harvester Drive, Suite 200  
Burr Ridge, IL 60527

Subject: Notification of the Alternate Brand Name Change

Dear Ms.Rea:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated March 2, 2009 for:

**EPA Registration 228-588**

**Mallet 75 WP Insecticide**

The Registration Division (RD) has conducted a review of this request for applicability under PRN 98-10 finds that the label change(s) requested falls within the scope of PRN- 98-10. The label has been date-stamped "Notification" and will be placed in our records.

If you have any questions, at 703 305-5409 or electronically at [daniel.dani@epa.gov](mailto:daniel.dani@epa.gov)

Sincerely,

A handwritten signature, appearing to be "Dani Daniel", written in black ink.

Dani Daniel  
Registration Division (7505P)  
Insecticide/Rodenticide Branch

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## NOTIFICATION

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 2-28-95



United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

## Application for Pesticide - Section I

1. Company/Product Number 228-588	2. EPA Product Manager Venus Eagle	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Mallet 75 WP Insecticide	PM# 1	
5. Name and Address of Applicant (Include ZIP Code) Nufarm Americas, Inc 150 Harvester Drive, Suite 200 Burr Ridge, IL 60527  <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

## Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of an alternate brand name per PRN 98-10. This notification is consistent with the provisions of PRN 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PRN 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 FIFRA.

## Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container	5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____	

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name Lizbeth Rea	Title Registration Manager	Telephone No. (Include Area Code) 919/655-0701	
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received (Stamped)
2. Signature 	3. Title Registration Manager		
4. Typed Name Lizbeth Rea	5. Date 3/2/2009		



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Nufarm Americas, Inc.  
Lizbeth Rea  
Registration Manager  
150 Harvester Drive, Suite 200  
Burr Ridge, IL 60527  
Phone: 919.655.0701 Fax: 919.342.5176  
liz.rea@us.nufarm.com

March 2, 2009

COURIER DELIVERY

Venus Eagle (PM 1)  
Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202-4501

RE: Mallet 75 WP Insecticide (EPA Reg. No. 228-588)  
Alternate Brand Name per PRN 98-10

Dear Ms. Eagle,

Enclosed with this letter are the following documents in support of our request to add Mallet 75 WSP Insecticide as an alternate brand name to the Mallet 75 WP Insecticide registration under PR Notice 98-10.

- Completed Application for Registration (EPA Form 8570-1)
- One (1) copy of the Mallet 75 WSP Insecticide label with changes tracked.
- One (1) copy of the Mallet 75 WSP Insecticide label with changes incorporated.

The alternate brand name is the only change made to the label. No other changes to the label were made.

Please contact me at 919/655-0701 if you have questions and/or comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lizbeth Rea', with a long horizontal flourish extending to the right.

Lizbeth Rea  
Registration Manager

Enclosures

# MALLET 75 WSP INSECTICIDE

Insecticide for use in turfgrass and sod farms, listed crops including fruit and nut trees, and for landscape ornamentals, and interior plantscapes.

**ACTIVE INGREDIENT:**

Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine ..... 75.0%

**OTHER INGREDIENTS:** ..... 25.0%

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

## KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice</li> <li>• Have person sip a glass of water if able to swallow</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor</li> <li>• Do not do anything by mouth an unconscious person</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	
NOTE TO PHYSICIAN	
No specific antidote is available. Treat the patient symptomatically.	

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed, inhaled, or absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Keep children or pets off treated area until spray is dry.

EPA Reg. No. 228-588

EPA Est. No.

**Manufactured for:**

Nufarm Americas, Inc.  
150 Harvester Drive, Suite 200  
Burr Ridge, IL 60527

Net Weight: 4 x 4 x 1.6 oz.; 48 x 1.6 oz.

### PERSONAL PROTECTIVE EQUIPMENT (PPE):

**WPS USES:** Applicators and other handlers who handle this product for any use covered by the Worker Protection Standard (40 CFR Part 170) – in general, agricultural plant uses e.g., crops, sod farms, must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton.
- Protective eyewear
- Shoes plus socks

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

**NON-WPS USES:** Applicators and other handlers who handle this product for any use NOT covered by the Worker Protection Standard (40 CFR part 170) – in general, only agricultural plant uses are covered by the WPS, must wear:

- Shirt and pants
- Gloves
- Protective eyewear
- Shoes plus socks

### ENGINEERING CONTROLS 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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. 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 washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

### 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 pesticide. 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 the 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.

Exception: If the product is applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Protective eyewear
- Shoes plus socks

### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.

- Keep children and pets off treated areas until dry.

### **RUNOFF MANAGEMENT**

Do not cultivate within 10 feet of the aquatic areas to allow growth of vegetative filter strip. When used on erodible soils, use best management practices for minimizing runoff. Consult your local Natural Resources Conservation Service for recommendations in your use area.

### **ENDANGERED SPECIES NOTICE**

Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

### **RESISTANCE MANAGEMENT**

Certain insects may develop resistance to insecticides after repeated use. Use different resistance management practices such as rotating classes of insecticides to help delay or minimize insect resistance.

This product contains the active ingredient imidacloprid, which is a Group A insecticide. Repeated use of Group A insecticides may lead to insects that become resistant to imidacloprid or other neonicotinoids (Group 4A) insecticides.

To reduce the chances of development of resistance to Group 4A insecticides, do not make more than three consecutive foliar applications of this product and/or other Group 4A insecticides with similar modes of action. In addition, Nufarm strongly recommends the use of other insecticides with a different mode of action prior to or after application of this product. This strategy of insecticide rotation in concert with other IPM practices is considered an effective way to delay or minimize an insect's ability to develop resistance to this class of chemistry.

Some Group 4A neonicotinoid products used as foliar treatments include the active ingredients thiamethoxam (found in Actara® and Centric®), acetamiprid (found in Assail® and Intruder™), thiacloprid (found in Calypso®), and imidacloprid (found in Leverage®, Provado®, and Trimax™). Some 4A Group neonicotinoid products used as soil treatment include thiamethoxam (found in Platinum®) and imidacloprid (found in Admire®).

Additional information on insect resistance management may be obtained from your local extension specialist, certified crop advisor and/or product manufacturer, or from the Insecticide Resistance Action Committee (IRAC) on the web at <http://irac-online.org/>.

### **STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE [For product packaged in plastic containers]:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

**PESTICIDE STORAGE [For product packaged in Water-soluble Packaging]:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Exposure to moisture or excessive handling of water-soluble packets may cause breakage.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL [For product packaged in plastic container]:** Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank. Fill the container half 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.

**CONTAINER DISPOSAL [For product packaged in Water-soluble Packaging]:** Completely empty bag into application equipment. Then dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

### **WARRANTY DISCLAIMER**

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND, TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

### **LIMITATION OF LIABILITY**

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR

DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

**If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.**

Actara<sup>®</sup>, Centric<sup>®</sup>, and Platinum<sup>®</sup> are trademarks of a Syngenta Group Company.

Assail<sup>®</sup> is a trademark of Nippon Soda Co., Ltd.

Admire<sup>®</sup>, Merit<sup>®</sup>, Provado<sup>®</sup>, Calypso<sup>®</sup>, Leverage<sup>®</sup> and Trimax<sup>™</sup> are trademarks of Bayer.

Bidrin<sup>®</sup> is a trademark of Amvac Chemical Corporation.

Intruder<sup>™</sup> is a trademark of Nippon Soda Co., Ltd. and licensed for distribution by E.I. duPont de Nemours and Company.

Nufarm<sup>™</sup> is a trademark of Nufarm.

MALLET 75 WSP INSECTICIDE is not manufactured or distributed by Bayer CropScience, seller of Provado<sup>®</sup>.

MALLET 75 WSP INSECTICIDE is not manufactured or distributed by Bayer Environmental Science, seller of Merit<sup>®</sup>.



## CROP USE LABEL PRODUCT PACKAGED IN WSP

**OBSERVE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES, RESERVOIRS, PERMANENT STREAMS, MARSHES OR NATURAL PONDS, ESTUARIES AND COMMERCIAL FISH FARM PONDS.**

### **SPRAY DRIFT MANAGEMENT**

The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

#### **Mixing and Loading Requirements**

To avoid potential contamination of groundwater, use a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading areas and potential surface to groundwater conduits such as field sumps, uncased well heads, sinkholes, or field drains.

#### **For Aerial Applications**

Mount the spray boom on the aircraft so as to minimize the drift caused by wing tip vortices. Use the minimum practical boom length and do not exceed 75% of the wing span or rotor diameter.

#### **Importance of Droplet Size**

An important factor influencing drift is droplet size. Small droplets (<150-200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, make applications to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may 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.

Release the spray at the lowest possible height consistent with good pest control and flight safety. Do not make applications more than 10 feet above the crop canopy.

#### **Wind Speed Restrictions**

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

#### **Restrictions During Temperature Inversions**

*Because the potential for spray drift is high during temperature inversions, do NOT make aerial or ground applications during temperature inversions.* Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however if fog is not present, inversions can also be identified by the movement of smoke from a ground source. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

#### **Airblast (Air Assist)**

Airblast sprayers carry droplets into the canopy of trees/vines via a radially, or laterally directed air stream. Follow the specified drift management practices:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy;
- Block off upward pointed nozzles when there is no overhanging canopy;

- Use only enough air volume to penetrate the canopy and provide good coverage;
- Do not allow the spray to go beyond the edge of the cultivated area (i.e. turn off sprayer when turning at end rows);
- Only spray inward, toward the orchard or vineyard, for applications to the outside rows.

#### **No-Spray Zone Requirements for Foliar Applications**

Do not apply by ground within 25 feet, or by air with 150 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.

#### **RESTRICTIONS**

- Do NOT apply through any type of irrigation system.
- Do not allow livestock to graze in treated areas or use clippings from treated areas for feed or forage unless specified otherwise on this label.
- Do NOT apply this product to soils that are waterlogged or saturated. Avoid runoff or puddling of irrigation water following application.
- Do NOT allow leachate to run off for the first 10 days after application or reduced efficacy may result.
- Do NOT exceed the total oz. of this product/Acre per year specified for the crop or non-crop uses indicated on this label.

#### **PREPARATION OF TANK MIXES**

**Handling PVA pouches:** The enclosed packets containing this product are water-soluble and will completely dissolve in water. To prevent the packets from dissolving before they are added to the spray tank, do not get the packets wet from handling with wet hands or wet gloves. The packets can break open if handled roughly. Remove the packets from the outer bag but do not open the packets. Keep unused packets sealed in the outer bag. To prepare a tank mix of this product, follow the steps below. If tank-mixing this product with other components, read the section on **Compatibility**, below.

1. Fill the spray tank with  $\frac{1}{4}$  to  $\frac{1}{2}$  of the required amount of water and begin agitation.
2. Add the specified amount of this product in PVA packets and allow packets to fully dissolve.
3. Fill the tank with the remaining water needed. Maintain sufficient agitation during mixing and application.

If this product is to be tank-mixed with other pesticides and/or fertilizer solutions, check the compatibility (refer to the Compatibility section below) before preparing tank mixes. To prepare tank-mixes of this product with other pesticides, use the following order of mixing: 1) MALLET 75 WSP INSECTICIDE PVA packets; 2) other wettable powders or wettable granules; 3) flowables or suspension concentrates; 4) emulsifiable concentrates. Agitate the solution as each component is added. Add the next component only after the previous one is thoroughly mixed. If needed, add a compatibility agent when adding a fertilizer solution to the mix. To ensure a uniform spray mixture, maintain constant agitation during both mixing and application.

### Compatibility

PVA packets that are tank-mixed with products that contain boron or that release free chlorine will react to form a plastic that is insoluble in water or solvents such as alcohol, kerosene, diesel oils or gasoline. Further information is available from your local Nufarm representative. Conduct the following test for compatibility of the intended tank mix partner product(s) before adding this product to the spray or mix tank:

1. In a pint or quart jar, add proportionate amounts of each tank mix component in the order provided in the directions above.
2. Replace the cap, shake for 5 minutes, and allow the mixture to settle for 5 minutes.
3. Observe the jar for signs indicating an incompatible mixture. If the contents can be re-mixed by shaking and readily re-suspends, it is considered compatible. If the mixture separates out, foams, or forms a gel or lumps, then the mixture is not compatible.

### ROTATION CROPS RESTRICTIONS

Crops which are listed on imidacloprid labels or crops that have existing tolerances for imidacloprid may be planted in treated areas as soon as practical after the last imidacloprid application. Crop that are not found on an imidacloprid label, or crops that do not have existing tolerances for imidacloprid, may not be planted in treated areas for 12-months after the last application. Refer to the table below for plantback intervals for different crops. Note that if cover crops are planted any time after an application of this product, those crops may not be grazed or harvested for food or feed.

Crops	Plantback Interval
All crops on this label, plus the following crops not on this label: barley, canola, corn (field, sweet and pop), rapeseed, sorghum, sugar beet, and wheat	No restrictions
Cereals, including buckwheat, millet, oats, rice, rye, and triticale, and soybeans and safflower	30 days
Onion and bulb vegetables	10 months
All other crops	12 months

### APPLICATION INSTRUCTIONS TO CROPS

This product may be applied as a broadcast or directed foliar spray. Time applications to begin as the pest populations start to build. To obtain optimum results, ensure that the foliage and crop receive a thorough, uniform coverage of the spray solution. Use adequate spray volumes and calibrated application equipment. To improve coverage, a spray adjuvant may be added to the tank mix. Apply using ground equipment in a minimum spray volume of 10 gallons per acre. Apply using either ground equipment in a minimum of 10 gallons per acre or with aerial equipment in a minimum of 5 gallons of water per acre.

This product may not be effective in controlling established insect infestations or heavy insect populations. Monitor fields for insect presence and level of infestations before making a second application to ensure control. Tank mixes of this product with other registered insecticides will improve knockdown of listed pests and control of other pests.

Refer to the table below for the specified use rates, instructions and restrictions. The listed crops that are part of Crop Groups may change. EPA maintains the latest crops within these groupings on their website at [www.epa.gov](http://www.epa.gov).

Ground applications provide a more thorough coverage of foliage and fruit than do aerial applications. Ground applications will control target pest while aerial applications may only provide suppression, or

reduced control as compared with ground applications. The specified application rates for tree and vine crops are based on trees and vines which are full in size and mature.

CROPS	USE RATE AND PESTS	RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS
COTTON	<b>Pests Controlled at 0.7 to 1.3 oz. of Product per Acre</b> Banded-winged whitefly Bollworm/Budworm (ovicidal effect) Cotton aphid Cotton fleahopper Green stink bug Plant bugs (except <i>Lygus hesperus</i> ) Southern Green stink bug	<b>Application Instructions:</b> When tank-mixing this product with other products, always read the label of the tank mix product for use directions, precautions and restrictions.  Apply using either ground or air application.  <b>Restrictions:</b> Do not make repeat applications at intervals shorter than 7 days.  Do not apply more than 6.5 oz. of this product per A per season (equivalent to 0.31 lb AI/A).  Do not harvest until at least 14 days after the last application.  Do not allow livestock to graze in treated fields.
	<b>Pests Suppressed at 1.0 to 1.3 oz. of Product per Acre</b> Lygus bug ( <i>Lygus Hesperus</i> ) Other Whiteflies besides banded-winged whitefly	
	<b>Pests Controlled at 0.7 to 1.0 oz. of Product per Acre plus 1.6 to 3.2 oz. Bidrin® 8 per Acre</b> Banded-winged whitefly and other whiteflies Bollworm/Budworm (ovicidal effect) Cotton aphid Cotton fleahopper Green stink bug Southern Green stink bug Lygus bug ( <i>Lygus Hesperus</i> ) Early season control: Thrips	
	<b>Pests Controlled at 0.7 to 1.0 oz. of Product per Acre plus 4.0 to 8.0 oz. Bidrin® 8 per Acre</b> Banded-winged whitefly and other whiteflies Bollworm/Budworm (ovicidal effect) Cotton aphid Cotton fleahopper Green stink bug Southern Green stink bug Lygus bug ( <i>Lygus Hesperus</i> )  <b>Mid- to late-season control of:</b> Cotton Leafperforator Grasshoppers Plant Bugs Saltmarsh Caterpillar Stink Bugs (Including Brown Stink Bug)	

<b>CROPS</b>	<b>USE RATE AND PESTS</b>	<b>RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS</b>
<b>POTATO</b>	<b>Pests Controlled at 1.0 oz of Product per Acre</b> Aphids Colorado potato beetle Flea beetles Leafhoppers Psyllids	<b>Restrictions:</b> Do not make repeat applications at intervals shorter than 7 days.  Do not apply more than 4.0 oz. of this product per A per season (equivalent to 0.19 lb AI/A).  Do not harvest until at least 7 days after the last application.
<b>TOBACCO</b>	<b>Pests Controlled at 0.5 to 1.1 oz. of Product per Acre</b> Aphids	<b>Restrictions:</b> Do not make repeat applications at intervals shorter than 7 days.  Do not apply more than 6.0 oz. of this product per A per season (equivalent to 0.28 lb AI/A).  Do not harvest until at least 14 days after the last application.
	<b>Pests Controlled at 1.1 oz. of Product per Acre</b> Flea beetles Japanese beetle	
<b>ARTICHOKES (GLOBE)</b>	<b>Pests Controlled at 1.1 to 2.7 oz. of Product per Acre</b> Aphids Leafhoppers	<b>Restrictions:</b> Do not make repeat applications at intervals shorter than 14 days.  Do not apply more than 10.7 oz. of this product per A per season (equivalent to 0.5 lb AI/A).  Do not harvest until at least 7 days after the last application.
<b>STRAWBERRY</b>	<b>Pests Controlled at 1.0 oz of Product per Acre</b> Aphids Spittlebugs Whiteflies	<b>Restrictions:</b> Do not apply during bloom or within 10 days of bloom. Do not apply if bees are actively foraging.  Do not make repeat applications at intervals shorter than 5 days.  Do not apply more than 3.0 oz. of this product per A per season (equivalent to 0.14 lb AI/A).  Do not harvest until at least 7 days after the last application.

CROPS	USE RATE AND PESTS	RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS
<b>HEAD AND STEM BRASSICA VEGETABLES</b>  <b>AND</b>  <b>LEAFY VEGETABLES</b>	<b>Pests Controlled at 1.0 oz. of Product per Acre</b> Aphids Flea beetles Leafhoppers Whiteflies	<p><b>Crops included in the Head and Stem Brassica Vegetable Crop Group:</b> Broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (gai lon) broccoli, Chinese (bok choy) cabbage, Chinese (napa) cabbage, Chinese mustard (gai choy) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rage greens, Turnip (tops or leaves)</p> <p><b>Crops included in the Leafy Vegetable Crop Group:</b> Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (roquette), Chervil, Chrysanthemum (edible leaved and garland), Cilantro, Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chickory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)), Watercress (commercial production only – Applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)</p> <p><b>Application Instructions:</b>  <b>Watercress:</b> Apply to fully leafed-up canopies only. Drain production fields of water at least 24 hours before application. Do not reapply water to the field for at least 24 hours after application.</p> <p><b>Restrictions:</b>  Do not use on crops grown for seed unless states have approved supplemental labels for these uses.</p> <p>Do not make repeat applications at intervals shorter than 5 days.</p> <p>Do not apply more than 5.0 oz. of this product per A per season (equivalent to 0.23 lb AI/A).</p> <p>Do not harvest until at least 7 days after the last application.</p> <p><b>California:</b> Do not use of this product in this state unless approved supplemental labeling is available.</p>
<b>SUCCULENT AND DRIED LEGUME VEGETABLES</b>	<b>Pests Controlled at 0.9 oz. of Product per Acre</b> Aphids Leafhoppers Whiteflies	<p><b>Crops included in the Legume Vegetable Crop Group:</b> Bean (<i>Lupinus</i> spp.): grain, sweet, white and white sweet lupins; Bean (<i>Phaseolus</i> spp.): field, kidney, lima, navy, pinto, runner, snap, tepary, and wax beans; Bean (<i>Vigna</i> spp.): adzuki, asparagus, moth, mung, rice, urn, yardlong beans; blackeyed, Crowder and Southern peas; catjang, Chinese longbean and cowpea; Pea (<i>Pisum</i> spp.): dwarf, edible, edible-pod, English, field, garden, green, snow, and sugar snap peas; Other Beans and Peas: Broad bean (fava), chickpea (garbanzo bean), Guar, Jackbean, Lablab bean, hyacinth bean, lentil, pigeon pea, soybean (immature seed), sword bean</p> <p><b>Restrictions:</b>  Do not use on crops grown for seed unless states have approved supplemental labels for these uses.</p> <p>Do not make repeat applications at intervals shorter than 7 days.</p> <p>Do not apply more than 2.8 oz. of this product per A per season (equivalent to 0.13 lb AI/A).</p> <p>Do not harvest until at least 7 days after the last application.</p>

<b>CROPS</b>	<b>USE RATE AND PESTS</b>	<b>RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS</b>
<b>ROOT, TUBEROUS AND CORM VEGETABLES</b>	<b>Pests Controlled at 0.9 oz. of Product per Acre</b> Aphids Flea beetles Leafhoppers Whiteflies	<b>Crops included in the Root, Tuberous and Corm Vegetable Crop Group:</b> Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden)*, Burdock (edible)*, Canna (edible, Queensland arrowroot), carrot*, Cassava (bitter and sweet)*, Celeriac*, Chayote (root), Chervil (turnip-rooted)*, Chickory*, Chufa, Dasheen (taro)*, Ginger, Ginseng, Horseradish, Leren, Parsley (turnip-rooted), Parsnip*, Radish*, Oriental radish (diakon)*, Rutabaga*, Salsify (black)*, Salsify (oyster plant), Salsify (Spanish), Skirret, Sweetpotato*, Tanier (cocoyam)*, Tumeric, Turnip*, Yam bean (jicama, manioc pea), Yam (true)*  <b>Restrictions:</b> Do not use on crops grown for seed unless states have approved supplemental labels for these uses.  Do not make repeat applications at intervals shorter than 5 days.  Do not make more than 1 application of this product per season to radishes or more than 3 applications to all other crops.  Do not apply more than 0.9 oz. of this product per A per season (equivalent to 0.044 lb AI/A) to radishes or more than 2.8 oz. this product per A per season (equivalent to 0.13 lb AI/A) to all other crops.  Do not harvest until at least 7 days after the last application. Tops and greens from treated crops below (indicated with an *) may be used for food and feed.
<b>FRUITING VEGETABLES</b>	<b>Pests Controlled at 1.0 oz. of Product per Acre</b> Aphids Colorado Potato Beetle Leafhoppers Whiteflies  <b>Pests Controlled at 1.6 oz. of Product per Acre</b> Pepper weevil in Peppers only (ground application only)	<b>Crops included in the Fruiting Vegetable Crop Group:</b> Eggplant, Ground Cherry, Okra, Pepper (including bell, chili, cooking, pimento and sweet), Tomato, Pepinos, Tomatillo  <b>Application Instructions:</b> <b>Pepper weevil:</b> Time application for control of this pest to occur before insect population reaches thresholds that can lead to fruit damage. For best results, fruit and foliage must receive a thorough uniform coverage of spray solution. This product must be included in a full-season treatment program that uses insecticides from different classes of chemistry and with different modes of action that are applied in a blocked or windowed approach. Additional information is available from your Nufarm representative, Extension Specialist or crop advisor.  <b>Restrictions:</b> Do not use on crops grown for seed unless states have approved supplemental labels for these uses.  Do not make repeat applications at intervals shorter than 5 days.  Do not apply more than 5.0 oz. of this product per A per season (equivalent to 0.24 lb AI/A).  Crops may be harvested on the same day as the last application.
<b>GRAPES</b>	<b>Pests Controlled at 0.8 to 1.0 oz. of Product per Acre</b> Leafhoppers/Sharpshooters Mealybugs	<b>Crops included:</b> American bunch, Muscadine, and Vinifera grapes  <b>Application Instructions:</b> <b>Grapeleaf skeletonizer:</b> Ground applications provide a more thorough coverage of foliage



<b>CROPS</b>	<b>USE RATE AND PESTS</b>	<b>RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS</b>
	<b>Pests Controlled at 1.0 oz. of Product per Acre</b> Grapeleaf skeletonizer	and fruit than do aerial applications. Ground applications will control this pest while aerial applications may only provide suppression.  <b>Restrictions:</b> Do not make repeat applications at intervals shorter than 14 days.  Do not apply more than 2 oz. of this product per A per season (equivalent to 0.1 lb AI/A).  Crops may be harvested on the same day as the last application.
<b>HOPS</b>	<b>Pests Controlled at 2.1 oz. of Product per Acre</b> Aphids	<b>Restrictions:</b> Do not make repeat applications at intervals shorter than 21 days.  Do not apply more than 6.4 oz. of this product per A per season (equivalent to 0.3 lb AI/A).  Do not harvest until at least 28 days after the last application.
<b>PECANS</b>	<b>Pests Controlled at 0.9 to 1.9 oz. of Product per Acre</b> Aphids <i>Phylloxera</i> Spittlebugs	<b>Application Instructions:</b>  <b>Black pecan aphid:</b> Use the higher rate to control this pest.  <b>Restrictions:</b> Do not apply after shuck split.  <b>California:</b> Do not use this product in this state unless approved supplemental labeling is available.  Do not make repeat applications at intervals shorter than 10 days.  Do not apply more than 7.5 oz. of this product per A per season (equivalent to 0.35 lb AI/A).
<b>CITRUS</b>	<b>Pests Controlled at 2.7 to 5.3 oz. of Product per Acre</b> Aphids Asian citrus psyllid Black fly Leafhoppers/Sharpshooters Leafminers Mealybugs Scales Whiteflies Thrips (suppression only)	<b>Crops included in the Citrus Crop Group:</b> Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Tangelo, Satsuma mandarin, White sapote ( <i>Casimiroa</i> spp.), and other cultivars and/or hybrids of these crops  <b>Application Instructions:</b> The rate to use depends on the size of the trees, the severity of pest infestation and the target pest.  <b>Scales:</b> Begin applications at the crawler stage and treat subsequent generations.  <b>Restrictions:</b> Do not apply during bloom or within 10 days of bloom. Do not apply if bees are actively foraging.  Do not make repeat applications at intervals shorter than 10 days.  Do not apply more than 10.7 oz. of this product per A per season (equivalent to 0.5 lb AI/A).  Crops may be harvested on the same day as the last application.

<b>CROPS</b>	<b>USE RATE AND PESTS</b>	<b>RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS</b>
<b>POME FRUIT</b>	<b>Pests Controlled at 1.2 to 2.1 oz of Product per Acre</b> Leafhoppers	<p><b>Crops included in the Pome Fruit Crop Group:</b> Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince</p> <p><b>Application Instructions:</b>  <b>Leafhopper:</b> Use the low rate for low to moderate populations of white apple leafhoppers. Use the high rate for high populations or for other leafhopper species. Apply this product while most leafhoppers are in the nymph stage.</p> <p><b>Leafminer: First generation--</b>Apply as soon as pollination is complete and bees are removed from the orchard. For optimal control, apply as early as possible. <b>Second and succeeding generations:</b> Make applications early in the adult flight against eff and early instar larvae. For continued and severe pest pressure or overlapping generations, make a second application 10 days later. One application may only result in suppression. This product will not control late instar larvae.</p> <p><b>Mealybug:</b> For best results be sure to thoroughly spray and cover the trunk and scaffolding limbs or other nesting sites.</p> <p><b>Rosy apple aphid:</b> Begin applications before leafrolling.</p> <p><b>San Jose scale:</b> Begin applications at the crawler stage and treat subsequent generations.</p> <p><b>Restrictions:</b>  Do not apply during pre-bloom or during bloom. Do not apply if bees are actively foraging.</p> <p>Do not make repeat applications at intervals shorter than 10 days.</p> <p>Do not apply more than 10.7 oz. of this product per A per season (equivalent to 0.5 lb AI/A).</p> <p>Do not harvest until at least 7 days after the last application.</p>
	<b>Pests Controlled at 2.1 oz. of Product per Acre</b> Aphids (excluding wooly apple aphid) Leafminers San Jose	
	<b>Pests Controlled at 5.3 oz. of Product per Acre</b> Mealybugs in Pears only Pear psylla in Pears only	
<b>STONE FRUIT</b>	<b>Pests Controlled at 1.1 to 2.1 oz. of Product per Acre</b> Aphids Green June beetle Japanese beetle Leafhoppers/Sharpshooters Plant bugs Rose chafer San Jose scale	<p><b>Crops included in the Stone Fruit Crop Group:</b> Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried)</p> <p><b>Restrictions:</b>  Do not apply during pre-bloom or during bloom. Do not apply if bees are actively foraging.</p> <p>Do not apply in less than 50.0 gallons of water per acre by ground application or in less than 25.0 gallons of water per acre by air.</p> <p><b>Apricots, Nectarines, Peaches:</b> Crops may be harvested on the same day as the last application. <b>Cherries, Plums, Plumcot, Prunes:</b> Do not harvest until at least 7 days after the last application.</p>
	<b>Pests Controlled at 1.6 to 2.1 oz. of Product per Acre</b> Cherry fruit fly (maggot of Eastern and Western)	<p><b>Restrictions:</b>  <b>Apricots, Nectarines, Peaches:</b> Do not make repeat applications at intervals shorter than 7 days. <b>Cherries, Plums, Plumcot, Prunes:</b> Do not make repeat applications at intervals shorter than 10 days.</p>

<b>CROPS</b>	<b>USE RATE AND PESTS</b>	<b>RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS</b>
	<b>Pests Controlled at 2.1 oz. of Product per Acre</b> Plum curculio (suppression only) Stink bugs (suppression only)	<b>Restrictions:</b> <b>Apricots, Nectarines, Peaches:</b> Do not apply more than 6.4 oz. of this product per A per season (equivalent to 0.3 lb AI/A). <b>Cherries, Plums, Plumcot, Prunes:</b> Do not apply more than 10.7 oz. of this product per A per season (equivalent to 0.5 lb AI/A).
<b>BERRY CROPS</b>	<b>Pests Controlled at 0.8 to 1.1 oz of Product per Acre</b> Aphids Leafhoppers/Sharpshooters	<b>Crops included in the Berry Crop Group:</b> Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, Salal  <b>Restrictions:</b> Do not apply during pre-bloom or during. Do not apply if bees are actively foraging.  Do not make repeat applications at intervals shorter than 7 days. Do not make more than 5 applications of this product per season.  Do not apply more than 10.7 oz. of this product per A per season (equivalent to 0.5 lb AI/A).  Do not harvest until at least 3 days after the last application.  Do not apply in more than 20.0 gallons of water per acre by ground application or in more than 5.0 gallons of water per acre by air.
	<b>Pests Controlled at 1.6 to 2.1 oz. of Product per Acre</b> Blueberry maggot Japanese beetles (adults) Thrips	
<b>TROPICAL FRUITS</b>	<b>Pests Controlled at 2.1 oz. of Product per Acre</b> Aphids Leafhoppers/Sharpshooters Thrips Whiteflies Scales (suppression only)	<b>Tropical Fruits include:</b> Acerola, Avocado, Black sapote, Canistel, Feijoa, Jaboticaba, Guava, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Pulasan, Rambutan, Sapodilla, Spanish lime, Star apple, Starfruit, Wax jambu  <b>Restrictions:</b> Do not apply during pre-bloom or during bloom. Do not apply if bees are actively foraging.  Do not make repeat applications at intervals shorter than 10 days.  Do not apply more than 10.7 oz. of this product per A per season (equivalent to 0.5 lb AI/A).  Do not harvest until at least 7 days after the last application
<b>POPLAR/ COTTONWOOD</b>	<b>Pests Controlled at 1.1 to 2.1 oz of Product per Acre</b> Aphids Leaf beetles	<b>Poplar/Cottonwood includes:</b> plants in the genus <i>Populus</i> which are grown for pulp and timber  <b>Restrictions:</b> Do not apply during pre-bloom or during bloom. Do not apply if bees are actively foraging.  Do not make repeat applications at intervals shorter than 10 days.  Do not apply more than 10.7 oz. of this product per A per season (equivalent to 0.5 lb AI/A).  <b>California:</b> Do not use this product in this state unless approved supplemental labeling is available.

<b>CROPS</b>	<b>USE RATE AND PESTS</b>	<b>RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS</b>
<b>CHRISTMAS TREES</b>	<b>Pests Controlled at 1.1 to 2.1 oz of Product per Acre</b> Aphids Adelgids Sawflies	<b>Application Instructions:</b> <b>Gall-forming adelgids:</b> For effective control, spray before galls form. Time application to occur at full bud-swell or first bud-break of earliest bud-breaking trees.  <b>Restrictions:</b> Do not make repeat applications at intervals shorter than 7 days.  Do not apply more than 10.7 oz. of this product per A per season (equivalent to 0.5 lb A/A).

# TURF AND ORNAMENTALS FOR PRODUCT PACKAGED IN WSP

## PREPARATION OF SPRAY MIXES

This product is packaged in clear, water-soluble packets. Follow the instructions on handling these packets and for preparing spray solutions.

### Handling Water Soluble Packets

The enclosed packets containing this product are water-soluble and will completely dissolve in water. To prevent the packets from dissolving before they are added to the spray tank, do not get the packets wet from handling with wet hands or wet gloves. The packets can break open if handled roughly. Remove the packets from the outer foil bag but do not open the packets. Keep unused packets sealed in the outer bag.

### How to Prepare Spray Solutions

1. Fill the spray tank with  $\frac{1}{4}$  to  $\frac{1}{3}$  of the required amount of clear water and begin agitation.
2. Add the specified number of product packets. The packets should fully dissolve in 5-10 minutes. If water temperatures are cooler than normal, a longer amount of time may be required for the inner packets to completely dissolve.
3. Fill the tank with the remaining water needed. Maintain sufficient agitation during mixing and application.

If this product is to be tank-mixed with other pesticides and/or fertilizer solutions, check the compatibility (refer to the Tank Mix Compatibility section below) before adding to the spray tank. Use the following order of addition: 1) Product packets; 2) other wettable powders or wettable granules; 3) flowables (suspension concentrates); 4) emulsifiable concentrates. Run agitator as each component is added. Add the next component only after the previous one is thoroughly mixed. Then add the remaining amount of water to the spray tank. To ensure a uniform spray mixture, maintain constant agitation during both mixing and application.

### Tank Mix Compatibility

This product has been found to be compatible with commonly used liquid fertilizers, fungicides and insecticides. Before preparing tank mixtures with this product, especially if compatibility is not known, carry out the following small jar test using the desired tank mix partners.

1. Add proportionate amount of each component in the appropriate order to a pint or a quart jar;
2. Replace the cap, shake for 5 minutes, and allow the mixture to settle for 5 minutes.
3. Observe the jar for signs indicating an incompatible mixture. If the contents can be re-mixed by shaking and readily re-suspends, it is considered compatible. If the mixture separates out, foams, or forms a gel or lumps, then the mixture is not compatible.

PVA packets that are tank-mixed with products that contain boron or that release free chlorine will react to form a plastic that is insoluble in water or solvents (such as diesel oils, kerosene, gasoline or alcohol). NOTE: Chlorinated water may be used. Because the water-soluble packets are not soluble in petroleum-based liquids (such as kerosene, gasoline or alcohol), Do NOT attempt to use this product water-soluble packets directly in diesel oils or summer spray type oils such as those used in ULV or LV applications. Further information is available from your local Nufarm representative.

### Restrictions

- Do NOT apply through any type of irrigation system.
- Keep children and pets off treated areas until dry.

- Do not allow livestock to graze in treated areas or use clippings from treated areas for feed or forage.
- Avoid runoff of irrigation water. Do not allow puddling of irrigation water.
- **Rotation Crops:** Crops which are listed on imidacloprid labels or crops that have existing tolerances for imidacloprid may be planted in treated areas as soon as practical after the last imidacloprid application. Crop that are not found on an imidacloprid label, or crops that do not have existing tolerances for imidacloprid, may not be planted in treated areas for 12-months after the last application. Note that if cover crops are planted any time after an application of this product for soil building or erosion control those crops may not be grazed or harvested for food or feed.

### **Insect Resistance**

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area. Consult your Cooperative Extension Service for resistance management strategies and recommended pest management practices for your area.

## TURF

This product will control or suppress insect pests that live in soil under lawns or grassy areas in residential and non-residential areas and sod farms (refer to table below for sites). Best control is obtained when applications are made before or during the egg laying period. Irrigation is required after application to ensure residues of this product are moved through the thatch and into the soil layer. Refer to the table below for additional application instructions. Additional information on when to apply can be obtained from your local Agricultural Experiment Station, State Extension Turf Specialist, or Nufarm representative.

SITES	AREA TREATED WITH 1 PACKET (1.6 oz) OF PRODUCT	PESTS	RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS
Turfgrasses around airports, athletic fields, cemeteries, golf courses, homes and multi-family residential buildings, office buildings or office parks, parks and playgrounds, shopping centers, and sod farms	8,250 - 11,000 sq. ft.	<b>Larvae of:</b> Annual bluegrass weevil Asiatic garden beetle Billbugs Black turfgrass ataenius Cutworms (suppression only) European Chafer European Crane Fly Green June beetle Japanese beetle Northern masked chafer Oriental beetle <i>Phyllophaga</i> spp. Southern masked chafer	<b>Application Instructions:</b> Apply this product in sufficient water to ensure the turf receives an even uniform distribution of spray. Accurately calibrated equipment normally used for soil application of insecticides must be used and calibration must be checked often to ensure equipment works properly. Equipment that produces uniform, coarse droplet sprays with a low pressure setting will help to eliminate drift to non-target sites. In order for this product to be adequately distributed, do not apply the product to waterlogged grassy areas or to water-saturated soils. Rainfall or irrigation must occur within 24 hours of application to move this product vertically through the thatch and into the soil. Wait until after sufficient rainfall or irrigation has occurred to mow the grass. <b>Annual Bluegrass weevil, Billbugs, European Crane Fly, and Grubs:</b> For best results, make applications before egg hatch. <b>Chinchbugs:</b> Make applications before hatching of first instar nymphs. <b>Mole Crickets:</b> Make applications before or during the peak egg hatching period. this product may be applied with a curative insecticide when adults or large nymphs are present and actively tunneling. <b>Restrictions:</b> Do not apply more than 8.6 oz. (0.4 lb of active ingredient) per acre per year.
	8,250 sq. ft	Chinchbugs (suppression only) Mole Crickets	

## TREES, ORNAMENTALS, GROUNDCOVERS AND INTERIOR PLANTSCAPES

This product may be applied by broadcast or foliar application to evergreens, flowers, foliage plants, groundcovers, interior plantscapes, non-bearing fruit and nut trees, ornamentals, shrubs, trees, vegetable plants intended for resale, and state, national, and private wooded forested areas (refer to table below for sites) to control or suppress insects. This product is a systemic insecticide that is absorbed by the roots and moves upward into the plant. For this product to control insects, it must come in contact with growing parts of the plant. Plant absorption of this product

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may be increased in some cases if it is applied with a fertilizer that contains nitrogen. Plants absorb this product from either foliar or soil applications. Refer to the table below for further instructions.

**Woody Perennials:** Protection in woody perennials is slower than in herbaceous species. Expect a delay of 2 or more weeks with longer delays for larger plants. Because of this, make applications to woody perennials well in advance of expected insect activity.

**Bark Media:** Treatments of this product to media with 30 - 50% or more bark content may confer a shorter period of protection.

SITES	APPLICATION METHOD AND NUMBER OF PACKETS OF PRODUCT (1.6 oz PRODUCT) TO USE	PESTS	RESTRICTIONS AND OTHER INSTRUCTIONS
Evergreens, Flowers, Foliage plants, Groundcovers, Interior plantscapes, Ornamentals, Shrubs, and Trees in and around residential, industrial, and commercial buildings and state, national, and private wooded and forested areas	Foliar application: 1 packet in 300 gal. of water	Adelgids Aphids Japanese beetle (adult) Lacebugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Sawfly larvae Thrips (suppression only) Whiteflies	<b>Application Instructions:</b> <b>Foliar Application:</b> Apply this product in a sufficient volume of water to uniformly cover the treatment area. Foliar applications will provide systemic activity against target pests.  If plants (such as holly, pine or ivy) have foliage that is difficult to wet, Nufarm recommends this product be applied with a spreader/sticker.  Time applications to occur before heavy pest populations arise; make repeat applications as necessary.
	Broadcast application: 1 packet for 8,250 to 11,000 sq. ft.	White grub larvae (including Asiatic garden beetle, chafers, <i>Phyllophaga</i> spp., Japanese beetle larvae, and Oriental beetle)	<b>Application Instructions:</b> <b>Broadcast Application:</b> Mix the specified amount of this product in a sufficient volume of water to uniformly cover the treatment area. Apply in a minimum of 2 gallons of water per 1,000 sq. ft. After application, irrigate the treated areas to incorporate this product into the soil.  <b>Restrictions:</b> <b>Outdoor ornamentals:</b> Do not apply by broadcast application more than 8.6 oz. (0.4 lb active ingredient) per acre per year.

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SITES	APPLICATION METHOD AND NUMBER OF PACKETS OF PRODUCT (1.6 oz PRODUCT) TO USE	PESTS	RESTRICTIONS AND OTHER INSTRUCTIONS
Trees in and around residential, industrial, and commercial buildings, interior plantscapes, and state, national, and private wooded and forested areas	<b>Soil Injection and Soil Drench:</b> 1 packet per 24 – 48 inches of cumulative trunk diameter (DBH)	Adelgids Aphids Armored Scale (suppression only) Black vine weevil larvae Emerald Ash Borer Eucalyptus Longhorned Borers Flatheaded Borers (including bronze birch and alder borers) Japanese Beetles (adults) Lacebugs Leaf Beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Pine Tip Moth larvae Psyllids Royal Palm Bugs Sawfly larvae Soft Scales Thrips (suppression only) White grub larvae Whiteflies	<p><b>Application Instructions:</b>  <b>SOIL INJECTION:</b> Use at least 4 holes per tree.  <b>GRID SYSTEM:</b> Space injection holes on 2.5 ft. centers that extend to the drip line of the tree. <b>CIRCLE SYSTEM:</b> Evenly space injection holes in circles from the drip line in toward the trunk. More than one circle may be needed depending on the tree size. <b>BASAL SYSTEM:</b> Place injection holes evenly around the base of the tree trunk that extends only 6 to 12 inches from the base.</p> <p>Prepare this product in a sufficient volume of water so an equal amount of solution is injected into each hole using a low pressure. Use enough solution so that it reaches the root zone. Irrigation or rainfall for 7-10 days after application will provide optimum control.</p> <p><b>Restrictions:</b>  Do not apply this product by soil injection in Nassau or Suffolk Counties in the state of New York.</p> <p><b>Application Instructions:</b>  <b>SOIL DRENCH:</b> Before application, be sure there are no physical barriers (such as plastic tarp) present that may prevent the solution from reaching the root zone. Apply in a minimum of 10 gallons of water per 1,000 sq. ft. Apply the spray solution uniformly around the base of the tree ensuring the drench is directed at the root zone.</p> <p><b>Borers:</b> If trees are heavily infested, an application of this product may not prevent the loss of the trees from existing pest damage and tree stress.</p> <p><b>Restrictions:</b>  Do not apply more than 8.6 oz. (0.4 lb of active ingredient) per acre per year.</p>

SITES	APPLICATION METHOD AND NUMBER OF PACKETS OF PRODUCT (1.6 oz PRODUCT) TO USE	PESTS	RESTRICTIONS AND OTHER INSTRUCTIONS
Shrubs in and around residential, industrial, and commercial buildings and state, national, and private wooded and forested areas	<b>Soil Injection and Soil Drench:</b> 1 packet per 24 – 48 inches of cumulative shrub height)		<p><b>Application Instructions:</b>  <b>SOIL INJECTION:</b> Use at least 4 holes per shrub.            Prepare this product in a sufficient volume of water so an equal amount of            solution is injected into each hole using a low pressure. Use enough            solution so that it reaches the root zone of the individual shrubs.            Irrigation or rainfall for 7-10 days after application will provide optimum            control.</p> <p><b>Restrictions:</b>            Do not apply this product by soil injection in Nassau or Suffolk Counties in            the state of New York.</p> <p><b>Application Instructions:</b>  <b>SOIL DRENCH:</b> Before application, be sure there are no physical            barriers (such as plastic tarp) present that may prevent the solution from            reaching the root zone. Apply in a minimum of 10 gallons of water per            1,000 sq. ft. Apply the spray solution uniformly around the base of the            tree ensuring the drench is directed at the root zone.</p> <p><b>Restrictions:</b>            Do not apply more than 8.6 oz. (0.4 lb of active ingredient) per acre per            year.</p>
Flowers and Ground covers in and around residential, industrial, and commercial buildings and state, national, and private wooded and forested areas	<b>Broadcast application:</b> 1 packet for 8,250 to 11,000 sq. ft.		<p><b>Application Instructions:</b>  <b>Applications Prior to Planting Plants or to Established Plants:</b> After            application, this product must be incorporated into the soil. Irrigation to            established plants after application will provide best results.</p> <p><b>Restrictions:</b>            Do not apply more than 8.6 oz. (0.4 lb of active ingredient) per acre per            year.</p>
To Manage Ants in the Ornamentals listed above	See above	Aphids Scale Mealy Bugs Other Sucking Insects	<p><b>Restrictions:</b>            When this product is used to control these target insects, ants are also            controlled by limiting the honeydew available as a food source for the            ants. This product may be used as a supplement to other commonly            used methods (bait traps, residual sprays, etc.) that help eliminate            unwanted ants in ornamentals.</p>

<b>CROPS</b>	<b>USE RATE AND PESTS</b>	<b>RESTRICTIONS AND OTHER INSTRUCTIONS</b>
Pome Fruit in and around Residential Areas	<p>1 Packet of product in 300 gallons of water (equivalent to 2.1 oz. product per acre)</p> <p>Aphids (except Woolly apple aphid)  Leafhoppers (including glassy-winged sharpshooter)  Leafminer  Mealybugs  San Jose Scale</p>	<p><b>Pome fruit include:</b> apple, crabapple, loquat, mayhaw, pear (including Oriental pear), quince</p> <p><b>Application Instructions:</b>  <b>Foliar Application:</b> Apply as needed after petal-fall. The use rate per acre is based on a standard of 400 gallons, therefore, adjust the amount of this product depending on the tree size and amount of foliage present.</p> <p><b>Rosy Apple Aphid:</b> Apply prior to leaf rolling.</p> <p><b>Leafhopper:</b> For late season (preharvest) control, apply while most leafhoppers are in the nymph stage.</p> <p><b>Leafminer: First generation--</b>Apply as soon as pollination is complete and bees are removed from the orchard. For optimal control, apply as early as possible. <b>Second and succeeding generations:</b> Make applications early in the adult flight against egg and early instar larvae. For continued and severe pest pressure or overlapping generations, make a second application 10 days later. One application may only result in suppression. This product will not control late instar larvae.</p> <p><b>Mealybug:</b> For best results be sure to thoroughly spray and cover the trunk and scaffolding limbs or other nesting sites.</p> <p><b>San Jose Scale:</b> Time applications to the crawler stage and treat each generation. Do not use this product on this pest in pears in the state of California.</p> <p><b>Restrictions:</b>  <b>California:</b> Do not apply this product to control mealybugs and San Jose Scale on pears.</p> <p>Wait at least 10 days in between applications.</p> <p>Do not apply more than 2.1 oz. per A per application.</p> <p>Make only 5 applications per year.</p> <p>Harvest fruit 7 days or longer after the last application.</p>

<b>CROPS</b>	<b>USE RATE AND PESTS</b>	<b>RESTRICTIONS AND OTHER INSTRUCTIONS</b>
Pecans in and around Residential Areas	<p>1 Packet of product in 300 gallons of water (equivalent to 2.1 oz. product per acre)</p> <p>Yellow pecan aphid Black margined aphid Pecan leaf phylloxera Pecan spittlebug Pecan stem phylloxera</p>	<p><b>Application Instructions:</b></p> <p><b>Foliar Application:</b> Apply as needed as pest pressure builds but before infestation is extremely heavy. The use rate per acre is based on a standard of 400 gallons, therefore, adjust the amount of this product depending on the tree size and amount of foliage present.</p> <p>Adequate control may be achieved only with two applications at 10 – 14 day intervals. For best results, a thorough and uniform spray coverage of foliage is necessary. To improve coverage, use an organosilicone-based spray adjuvant.</p> <p><b>Restrictions:</b></p> <p><b>Do not apply in the state of California unless otherwise directed by a supplemental label.</b></p> <p>Wait at least 10 days in between applications.</p> <p>Make only 3 applications per year.</p> <p><i>Do not apply more than 6.3 oz. of this product per acre per year.</i></p>
Ornamental Grapes in and around Industrial, and Commercial Buildings, and Residential areas	<p>Apply 1 Packet of product in 300 gallons of water (equivalent to 1.0 oz. product per acre)</p> <p>Leafhoppers (including glassy-winged sharpshooter) Mealybugs</p>	<p><b>Application Instructions:</b></p> <p>Apply as a foliar spray using 200 gallons of water per acre.</p> <p><b>Restrictions:</b></p> <p>Wait at least 14 days in between applications.</p> <p>Do not apply more than 2.0 oz. of this product per acre per year.</p> <p>Fruit may be harvested on the last day of application.</p>

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## TURF AND ORNAMENTALS FOR PRODUCT PACKAGED IN NON-WSP

### PREPARATION OF SPRAY MIXES

This product is a wettable powder formulation that contains imidacloprid, a systemic insecticide and readily dissolves in water.

#### How to Prepare Spray Solutions

1. Fill the spray tank with  $\frac{1}{4}$  to  $\frac{1}{3}$  of the required amount of clear water and begin agitation.
2. Add the specified amount of this product. Allow this product to be mixed thoroughly to provide a uniform spray solution.
3. Fill the tank with the remaining water needed. Maintain sufficient agitation during mixing and application.

If this product is to be tank-mixed with other pesticides and/or fertilizer solutions, check the compatibility (refer to the Tank Mix Compatibility section below) before adding to the spray tank. Use the following order of addition: 1) MALLET 75 WSP INSECTICIDE wettable powder; 2) other wettable powders or wettable granules; 3) flowables or suspension concentrates; 4) emulsifiable concentrates. Run agitator as each component is added. Add the next component only after the previous one is thoroughly mixed. Then add the remaining amount of water to the spray tank. To ensure a uniform spray mixture, maintain constant agitation during both mixing and application.

#### Tank Mix Compatibility

This product has been found to be compatible with commonly used liquid fertilizers, fungicides and insecticides. Before preparing tank mixtures with this product, especially if compatibility is not known, carry out the following small jar test using the desired tank mix partners.

1. Add proportionate amount of each component in the appropriate order to a pint or a quart jar;
2. Replace the cap, shake for 5 minutes, and allow the mixture to settle for 5 minutes.
3. Observe the jar for signs indicating an incompatible mixture. If the contents can be re-mixed by shaking and readily re-suspends, it is considered compatible. If the mixture separates out, foams, or forms a gel or lumps, then the mixture is not compatible.

#### Restrictions

- Do NOT apply through any type of irrigation system.
- Keep children and pets off treated areas until dry.
- Do not allow livestock to graze in treated areas or use clippings from treated areas for feed or forage.
- Avoid runoff of irrigation water. Do not allow puddling of irrigation water.
- **Rotation Crops:** Crops which are listed on imidacloprid labels or crops that have existing tolerances for imidacloprid may be planted in treated areas as soon as practical after the last imidacloprid application. Crop that are not found on an imidacloprid label, or crops that do not have existing tolerances for imidacloprid, may not be planted in treated areas for 12-months after the last application. Note that if cover crops are planted any time after an application of this product for soil building or erosion control those crops may not be grazed or harvested for food or feed.

**Insect Resistance**

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product must conform to resistance management strategies established for the use area. Consult your Cooperative Extension Service for resistance management strategies and specified pest management practices for your area.

## TURF

This product will control or suppress soil-inhabiting pests in lawns or grassy areas in residential and non-residential areas and sod farms (refer to table below for sites). Best control is obtained when applications are made before or during the egg laying period. Irrigation is required after application to ensure residues of this product are moved through the thatch and into the soil layer. Refer to the table below for additional application instructions. Additional information on when to apply can be obtained from your local Agricultural Experiment Station, State Extension Turf Specialist, or Nufarm representative.

SITES	NUMBER OF TEASPOONS OF PRODUCT TO TREAT 1,000 SQ. FT. (OZ. PER ACRE)	PESTS	RESTRICTIONS AND OTHER APPLICATION INSTRUCTIONS
Turfgrasses around airports, athletic fields, cemeteries, golf courses, homes and multi-family residential buildings, office buildings or office parks, parks and playgrounds, shopping centers, and sod farms	2.5 – 4.0 tsp. (5.4 – 8.6 oz. per A)  OR  3 – 4 tsp. (6.4 – 8.6 oz./A)	<b>Larvae of:</b> Annual bluegrass weevil Asiatic garden beetle Billbugs Black turfgrass ataenius Cutworms (suppression only) European Chafer European Crane Fly Green June beetle Japanese beetle Northern masked chafer Oriental beetle <i>Phyllophaga</i> spp. Southern masked chafer	<b>Application Instructions:</b>  Apply this product in sufficient water to ensure the turf receives an even uniform distribution of spray. Accurately calibrated equipment normally used for soil application of insecticides must be used and calibration must be checked often to ensure equipment works properly. Equipment that produces uniform, coarse droplet sprays with a low pressure setting will help to eliminate drift to non-target sites.  In order for this product to be adequately distributed, do not apply the product to waterlogged grassy areas or to water-saturated soils.  Rainfall or irrigation must occur within 24 hours of application to move this product vertically through the thatch and into the soil.  Wait until after sufficient rainfall or irrigation has occurred to mow the grass.  <b>Annual Bluegrass weevil, Billbugs, European Crane Fly, and Grubs:</b> For best results make applications before egg hatch.  <b>Chinchbugs:</b> Make applications before hatching of first instar nymphs.  <b>Mole Crickets:</b> Make applications before or during the peak egg hatching period. This product may be applied with a remedial insecticide when adults or large nymphs are present and actively tunneling,  <b>Restrictions:</b>  Do not apply more than 8.6 oz. (0.4 lb of active ingredient) per acre per year.  Do not apply through any irrigation system.
	4.0 tsp. (8.6 oz. per A)	Chinchbugs (suppression only) Mole Crickets	
<b>Equivalents:</b> 3 level teaspoons = 1 level tablespoon 1 level teaspoon = 1.4 grams of this product			

## TREES, ORNAMENTALS, GROUNDCOVERS AND INTERIOR PLANTSCAPES

This product may be applied by broadcast or foliar application to evergreens, flowers, foliage plants, groundcovers, interior plantscapes, non-bearing fruit and nut trees, ornamentals, shrubs, trees, vegetable plants intended for resale, and state, national, and private wooded forested areas (refer to table below for sites) to control or suppress insects. This product is a systemic insecticide that is absorbed by the roots and moves upward into the plant. For this product to control insects, it must come in contact with growing parts of the plant. Plant absorption of this product may be increased in some cases if it is applied with a fertilizer that contains nitrogen. Plants absorb this product from either foliar or soil applications. Refer to the table below for further instructions.

**Woody Perennials:** Protection in woody perennials is slower than in herbaceous species. Expect a delay of 2 or more weeks with longer delays for larger plants. Because of this, make applications to woody perennials well in advance of expected insect activity.

**Bark Media:** This product treatments to media with 30 - 50% or more bark content may confer a shorter period of protection.

SITES	NUMBER OF TEASPOONS OF PRODUCT TO TREAT 1,000 SQ. FT. (OZ. PER ACRE)	PESTS	RESTRICTIONS AND OTHER INSTRUCTIONS
Trees and Shrubs, Evergreens, Flowers, Ornamentals, Groundcovers, and Interior Plantscapes in and around residential, industrial, and commercial buildings and state, national, and private wooded and forested areas	<b>Foliar application:</b>  0.25 tsp. in 2.5 gal water  0.50 tsp. in 5.0 gal water  1.0 tsp. in 10.0 gal water  2.5 tsp. in 25.0 gal water  5.0 tsp. in 50.0 gal water  3 Tbs. + 1 tsp. in 100 gal water	Adelgids Aphids Japanese beetle (adult) Lacebugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Sawfly larvae Thrips (suppression only) Whiteflies	<b>Application Instructions:</b> <b>Foliar Application:</b> Apply this product in a sufficient volume of water to uniformly cover the treatment area. Foliar applications will provide systemic activity against target pests.  If plants (such as holly, pine or ivy) have foliage that is difficult to wet, Nufarm recommends this product be applied with a spreader/sticker.  Time applications to occur before heavy pest populations arise; make repeat applications as necessary.
	<b>Broadcast application:</b> 3 - 4 level teaspoons per 1000 sq. ft.	White grub larvae (including Asiatic garden beetle, chafers, <i>Phyllophaga</i> spp., Japanese beetle larvae, and Oriental beetle)	<b>Application Instructions:</b> <b>Broadcast Application:</b> Mix the specified amount of this product in a sufficient volume of water to uniformly cover the treatment area. Apply in a minimum of 2 gallons of water per 1,000 sq. ft. After application, irrigate the treated areas to incorporate this product into the upper soil.  <b>Restrictions:</b> <b>Outdoor ornamentals:</b> Do not apply by broadcast application more than 8.6 oz. (0.4 lb active ingredient) per acre per year.

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SITES	NUMBER OF TEASPOONS OF PRODUCT TO TREAT 1,000 SQ. FT. (OZ. PER ACRE)	PESTS	RESTRICTIONS AND OTHER INSTRUCTIONS
<p>Trees in and around residential, industrial, and commercial buildings, interior plantscapes, and state, national, and private wooded and forested areas</p>	<p><b>Soil Injection and Soil Drench:</b> 0.7 – 1.4 level teaspoons per inch of trunk diameter (DBH)  or  1 – 2 oz. per 30 cumulative inches of trunk diameter (DBH)</p>	<p>Adelgids Aphids Armored Scale (suppression only) Black vine weevil larvae Emerald Ash Borer Eucalyptus Longhorned Borers Flatheaded Borers (including bronze birch and alder borers) Japanese Beetles (adults) Lacebugs Leaf Beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Pine Tip Moth larvae Psyllids Royal Palm Bugs Sawfly larvae Soft Scales Thrips (suppression only) White grub larvae Whiteflies</p>	<p><b>Application Instructions:</b> <b>SOIL INJECTION:</b> Use at least 4 holes per tree. <b>GRID SYSTEM:</b> Space injection holes on 2.5 ft. centers that extend to the drip line of the tree. <b>CIRCLE SYSTEM:</b> Evenly space injection holes in circles from the drip line in toward the trunk. More than one circle may be needed depending on the tree size. <b>BASAL SYSTEM:</b> Place injection holes evenly around the base of the tree trunk that extends only 6 to 12 inches from the base.  Prepare this product in a sufficient volume of water so an equal amount of solution is injected into each hole using a low pressure. Use enough solution so that it reaches the root zone. Irrigation or rainfall for 7-10 days after application will provide optimum control.</p> <p><b>Restrictions:</b> Do not apply this product by soil injection in Nassau or Suffolk Counties in the state of New York.</p> <p><b>Application Instructions:</b> <b>SOIL DRENCH:</b> Before application, be sure there are no physical barriers (such as plastic tarp) present that may prevent the solution from reaching the root zone. Apply in a minimum of 10 gallons of water per 1,000 sq. ft. Apply the spray solution uniformly around the base of the tree ensuring the drench is directed at the root zone.</p> <p><b>Borers:</b> If trees are heavily infested, an application of this product may not prevent the loss of the trees from existing pest damage and tree stress.</p> <p><b>Restrictions:</b> Do not apply more than 8.6 oz. (0.4 lb of active ingredient) per acre per year.</p>

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SITES	NUMBER OF TEASPOONS OF PRODUCT TO TREAT 1,000 SQ. FT. (OZ. PER ACRE)	PESTS	RESTRICTIONS AND OTHER INSTRUCTIONS
Shrubs in and around residential, industrial, and commercial buildings and state, national, and private wooded	<p><b>Soil Injection and Soil Drench:</b> 0.7 – 1.4 level teaspoons per foot of shrub height</p> <p>or</p> <p>1 – 2 oz. per 30 cumulative feet of shrub height</p>		<p><b>Application Instructions:</b> <b>SOIL INJECTION:</b> Use at least 4 holes per shrub. Prepare this product in a sufficient volume of water so an equal amount of solution is injected into each hole using a low pressure. Use enough solution so that it reaches the root zone of the individual shrubs. Irrigation or rainfall for 7-10 days after application will provide optimum control.</p> <p><b>Restrictions:</b> Do not apply this product by soil injection in Nassau or Suffolk Counties in the state of New York.</p> <p><b>Application Instructions:</b> <b>SOIL DRENCH:</b> Before application, be sure there are no physical barriers (such as plastic tarp) present that may prevent the solution from reaching the root zone. Apply in a minimum of 10 gallons of water per 1,000 sq. ft. Apply the spray solution uniformly around the base of the tree ensuring the drench is directed at the root zone.</p> <p><b>Restrictions:</b> Do not apply more than 8.6 oz. (0.4 lb of active ingredient) per acre per year.</p>
Flowers and Ground covers in and around residential, industrial, and commercial buildings and state, national, and private wooded	<p><b>Broadcast application:</b> 3 – 4 level teaspoons per 1000 sq. ft.</p>		<p><b>Application Instructions:</b> <b>Applications Prior to Planting Plants or to Established Plants:</b> After application, this product must be incorporated into the soil. Irrigation to established plants after application will provide best results.</p> <p><b>Restrictions:</b> Do not apply more than 8.6 oz. (0.4 lb of active ingredient) per acre per year.</p>
To Manage Ants in the Ornamentals listed above	See above	Aphids Scale Mealy Bugs Other Sucking Insects	<p><b>Application Instructions:</b> When this product is used to control these insects, ants are also controlled by limiting the honeydew available as a food source for the ants. This product may be used as a supplement to other commonly used methods (bait traps, residual sprays, etc.) that help eliminate unwanted ants in ornamentals.</p>
<b>Equivalents:</b>	3 level teaspoons = 1 level tablespoon 1 level teaspoon = 1.4 grams of this product		

CROP	USE RATE AND PESTS	RESTRICTIONS AND OTHER INSTRUCTIONS
<p>Pome Fruit in an around Residential Areas</p>	<p>3 Tbsp. + 1 tsp. (0.5 oz.) per 100 gal (equivalent to 2 oz. product per acre)</p> <p>Aphids (except Wooly apple aphid) Leafhoppers (including glassy-winged sharpshooter) Leafminer Mealybugs San Jose Scale</p>	<p><b>Pome fruit include:</b> apple, crabapple, loquat, mayhaw, pear (including Oriental pear), quince</p> <p><b>Application Instructions:</b></p> <p><b>Foliar Application:</b> Apply as needed after petal-fall. The use rate per acre is based on a standard of 400 gallons of dilute spray per acre for large trees, therefore, adjust the amount of this product depending on the tree size and amount of foliage present.</p> <p><b>Rosy Apple Aphid:</b> Apply prior to leaf rolling.</p> <p><b>Leafhopper:</b> For late season (preharvest) control, apply while most leafhoppers are in the nymph stage.</p> <p><b>Leafminer: First generation--</b>Apply as soon as pollination is complete and bees are removed from the orchard. For optimal control, apply as early as possible. <b>Second and succeeding generations:</b> Make applications early in the adult flight against eff and early instar larvae. For continued and severe pest pressure or overlapping generations, make a second application 10 days later. One application may only result in suppression. This product will not control late instar larvae.<b>Mealybug:</b> For best results be sure to thoroughly spray and cover the trunk and scaffolding limbs or other nesting sites.</p> <p><b>San Jose Scale:</b> Time applications to the crawler stage and treat each generation. Do not use this product on this pest in pears in the state of California.</p> <p><b>Restrictions:</b></p> <p><b>California:</b> Do not apply this product to control mealybugs and San Jose Scale on pears.</p> <p>Wait at least 10 days in between applications.</p> <p>Do not apply more than 2.1 oz. per A per application.</p> <p>Make only 5 applications per year.</p> <p>Harvest fruit 7 days or longer after the last application.</p>

<b>CROP</b>	<b>USE RATE AND PESTS</b>	<b>RESTRICTIONS AND OTHER INSTRUCTIONS</b>
Pecans in and around Residential Areas	<p>3 Tbsp. + 1 tsp. (0.5 oz.) per 100 gal (equivalent to 2 oz. product per acre)</p> <p>Yellow pecan aphid Black margined aphid Pecan leaf phylloxera Pecan spittlebug Pecan stem phylloxera</p>	<p><b>Application Instructions:</b></p> <p><b>Foliar Application:</b> Apply as needed as pest pressure builds but before infestation is extremely heavy. The use rate per acre is based on a standard of 400 gallons of dilute spray per acre for large trees, therefore, adjust the amount of this product depending on the tree size and amount of foliage present.</p> <p>Adequate control may be achieved only with two applications at 10 – 14 day intervals. For best results, a thorough and uniform spray coverage of foliage is necessary. To improve coverage, use an organosilicone-based spray adjuvant.</p> <p><b>Restrictions:</b> Do not apply in the state of California unless otherwise directed by a supplemental label.</p> <p>Wait at least 10 days in between applications.</p> <p>Make only 3 applications per year.</p> <p>Do not apply more than 6.3 oz. of this product per acre per year.</p>
Ornamental Grapes in and Around Industrial, and Commercial Buildings, and Residential areas	<p>3 Tbsp. + 1 tsp. (0.5 oz.) per 100 gal (equivalent to 1 oz. product per acre)</p> <p>Leafhoppers (including glassy-winged sharpshooter) Mealybugs</p>	<p><b>Application Instructions:</b></p> <p>Apply as a foliar spray using 200 gallons of water per acre.</p> <p><b>Restrictions:</b> Wait at least 14 days in between applications.</p> <p>Do not apply more than 2.0 oz. of this product per acre per year.</p> <p>Fruit may be harvested on the day of the last application.</p>
<p><b>Equivalents:</b></p> <p>3 level teaspoons = 1 level tablespoon 1 level teaspoon = 1.4 grams of this product</p>		