

# OpteraPro®

Not registered for Sale, Sale Into, Distribution and/or Use in Nassau, Suffolk, Kings, Queens Counties of New York State unless permitted under FIFRA Section 24(c) Special Local Need Registration

**For foliar and systemic control of listed insect pests in commercial ornamental nurseries and greenhouses and commercial sod farms**

**For foliar and systemic control of listed insect pests in or on golf courses; sports and recreational turf; lawns and landscaped areas on and around residential, commercial and institutional properties; and interior plantscapes**

## ACTIVE INGREDIENTS:

Chlorantraniliprole\* ..... **By Wt.** 18.40%

**OTHER INGREDIENTS:** ..... 81.60%

**TOTAL:** ..... 100.00%

\*CAS No. 500008-45-7

Contains 1.69 lb. Chlorantraniliprole per gallon.

Chlorantraniliprole belongs to the anthranilic diamide chemical class.

## KEEP OUT OF REACH OF CHILDREN

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

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE

For Medical Emergencies,  
Call (877) 325-1840

For Chemical Spill, Leak, Fire,  
or Exposure, Call CHEMTREC  
(800) 424-9300

## FIRST AID

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have 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. **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 immediately for treatment advice.

**HOTLINE NUMBER:** Have the product container or label with you when calling Poison Control (1-800-222-1222) or a doctor or going for treatment. For information on this pesticide product (including general health concerns or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, Monday through Friday, 8:00 AM to 12:00 PM Pacific Standard Time.

EPA Reg. No. 228-768



**Net Contents**  
**1 Gal. (3.78 L)**  
**Non-refillable container**

Manufactured for  
Nufarm Americas Inc.  
11901 S. Austin Avenue  
Alsip, IL 60803

**nufarm**

# PRECAUTIONARY STATEMENTS

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

## Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Chemical-resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, polyvinyl chloride (PVC)  $\geq$  14 mils, or Viton  $\geq$  14 mils

## User Safety Requirements

After the product has been diluted in accordance with label directions for use, shirt, pants, socks, and shoes are sufficient Personal Protective Equipment (PPE). Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## User Safety Recommendations

### Users Should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Wash thoroughly with soap and water after handling.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## Environmental Hazards

This pesticide is toxic to aquatic invertebrates, oysters and shrimp. Do not apply directly to water. Drift and runoff may be hazardous to aquatic organisms in water adjacent to use sites.

## SURFACE WATER ADVISORY

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of chlorantraniliprole from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

## **GROUNDWATER ADVISORY**

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

## **DIRECTIONS FOR USE**

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

Read all label directions before use. All applications must be made according to the use directions that follow or exemptions under FIFRA (Supplemental Labels, Special Local Need Registration, FIFRA Section 18 exemptions).

For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

Notify state and/or Federal authorities and Nufarm immediately if you observe any adverse effects due to use of this product.

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

This product can be applied to use sites that are within the scope of the Worker Protection Standard for agricultural practice, 40 CFR part 170, and use sites that are outside of its scope. Refer to the following boxes containing additional guidance regarding **Agricultural Use Requirements** and **Non-Agricultural Use Requirements**. Consult the respective sections for site-specific Use Restrictions.

### **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 (sod farms included), 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), restricted-entry interval, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

Exception: If product is drenched or soil incorporated, 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. No REI is required following a soil-incorporated or a soil-drench application.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soils, or water, wear:

- \*long-sleeved shirt and long pants

- \*shoes plus socks

- \*chemical-resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, polyvinyl chloride (PVC)  $\geq$  14 mils, or Viton  $\geq$  14 mils

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

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

Professional applications to golf courses, residential, industrial and commercial lawns and sports fields are not within the scope of the Worker Protection Standard.

Do not enter or allow others to enter the treated area until sprays have dried.

## **PRODUCT INFORMATION**

### **Use Sites**

This product may be applied to control the insect pests that infest turfgrass and ornamental plants listed on the label. This product may be applied to the following:

### **Uses Subject to Worker Protection Standards**

- The following crops grown for production: Ornamental plants, vines, shrubs and trees; ornamental bulb, corn and tuber crops; conifers (including conifer nurseries) and Christmas trees; and non-bearing fruit and nut trees commercially produced in indoor nurseries; greenhouses; outdoor nurseries (both field-grown and containerized plants); shade houses, lath houses, and hoop houses; and retail nurseries.
- Turfgrass grown on commercial sod farms.

### **Uses NOT Subject to Worker Protection Standards**

- Outdoor landscape ornamentals and interior plantscapes in or around residential, commercial, recreational and institutional properties.
- For use on plants and turfgrasses intended for aesthetic or recreational purposes or climatic modification in or around home lawns, residential dwellings, business and office complexes, shopping complexes, multi-family residential complexes, institutional buildings, airports, cemeteries, wildlife plantings, parks, playgrounds, schools, day-care facilities, golf courses, athletic fields, and other landscaped areas. Not for use on plants or turfgrass being grown for sale or other commercial use; commercial seed production; or for research purposes.

### **Plant Safety**

Certain plant species or cultivars may be sensitive to the final spray solution. If local experience is not available, treat a small number of plants and observe for phytotoxicity for at least one week before treating the entire planting to ensure plant safety.

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

This product is recommended for IPM programs as it does not directly impact natural arthropod predator and parasitoid populations, including ladybird beetles, lacewings, minute pirate bugs and predatory mites. The feeding behavior of predatory beneficial arthropods will aid in extending natural control of other insect and mite pests and will reduce the possibility of secondary pest outbreaks. If this product is tank-mixed with an insect control product that negatively impacts beneficial arthropods, the full benefit of this product to the IPM program may not be realized.

## Resistance Management

For resistance management, this product contains a Group 28 insecticide. Any insect population may contain individuals naturally resistant to this product and other Group 28 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of this product or other Group 28 insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classifications are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological, and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

## USE RESTRICTIONS

- **DO NOT** use for commercial grass seed production.
- **DO NOT** formulate this product into other end-use products without written permission from Nufarm.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply this product with aerial application equipment.
- **DO NOT** apply more than 37.9 fluid ounces (equivalent to 0.5 lb of active ingredient) of this product per acre per year to plants produced or grown outdoors.
- **DO NOT** apply more than 37.9 fluid ounces (equivalent to 0.5 lb of active ingredient) of this product per acre per crop to plants produced or grown indoors and outdoors in containers.
- **DO NOT** let people and pets enter the treated area until treatment has dried.
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The following restrictions are required to permit use of this product by the State of New York:

- **Golf course greens and tee boxes: DO NOT** apply this product within 25 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).
- **Golf course fairways: DO NOT** apply this product within 50 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).
- **Other Use Sites: DO NOT** apply this product within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).

## APPLICATION DIRECTIONS

### Methods of Application

Apply this product to foliage or to the soil by ground equipment only.

Foliar applications offer locally systemic activity against listed insect pests and can be made with ground application equipment: boom sprayers, and hand-wand and hand-gun sprayers.

Soil applications can be made by soil injection, soil and container drenches, and broadcast, banded and directed sprays using boom sprayers, and hand-wand and hand-gun sprayers. This product is a systemic product that is translocated upward into the plant from root uptake when applied to the soil. To be effective, apply this product where the root system of the target plant can readily absorb the active ingredient.

## **Application Equipment**

### **Cleaning of Application Equipment**

Prior to application, start with clean, well maintained application equipment. Immediately following application, thoroughly clean all application equipment to reduce the risk of forming hardened deposits that can become difficult to remove. Drain application equipment. Thoroughly rinse application equipment and flush hoses, boom and nozzles with clean water. Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. **DO NOT** clean equipment near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

### **Calibration of Application Equipment**

Proper maintenance and calibration of spraying equipment are essential for optimal insect pest control. If you have questions about calibration, contact a State Extension Service specialist, the equipment manufacturer or other experts.

### **Application Volume and Spray Coverage**

This product must be diluted with water before application. Apply in a volume of water that provides good coverage of the foliage or soil, but does not result in run-off or leaching, as specified in the Directions for Use.

### **Mixing Directions**

1. Fill sprayer tank 1/4 to 1/2 full of water.
2. Always shake container well before use.
3. Add the required amount of this product directly to the sprayer tank.
4. Mix thoroughly to fully disperse and continue agitation to keep the insecticide in suspension. Use mechanical or hydraulic agitation. Do not use air agitation.
5. It is recommended that the mixture is not stored in the spray or mix tank overnight.

### **Tank-Mix Precautions**

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

### **Tank-Mix Compatibility**

The physical compatibility of this product will vary with different sources of pesticide products and local cultural practices. To ensure the physical compatibility of the mixture, prepare a mix on a small scale (such as a pint or quart jar) using the proper proportions of pesticides and water.

## **THIS PRODUCT IN TANK MIXTURES**

Always shake each product container well before use. Add different formulation types in the sequence indicated below. Allow time for complete mixing and dispersion after the addition of each product.

1. Water-soluble bags
2. Water-dispersible granules
3. Wettable powders
4. This product and other water-based suspension concentrates
5. Water-soluble concentrates
6. Emulsifiable concentrates
7. Adjuvants, surfactants, oils
8. Soluble fertilizers
9. Drift retardants

## **SPRAY ADDITIVES**

When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Council of Producers and Distributors of Agrotechnology (CPDA) adjuvant certification is recommended.

When making foliar applications to hard-to-wet foliage such as holly, pine, or ivy, the addition of a spreader/sticker is recommended.

## **COMMERCIAL ORNAMENTAL PLANT NURSERIES, GREENHOUSES AND SOD FARMS**

Apply this product to control insect pests on: ornamental plants grown in commercial ornamental nurseries and greenhouses; and on turfgrass produced on sod farms. Consult your local Nufarm representative, Cooperative Extension Service specialist, or pest control advisor for regionally specific information regarding application timing.

### **Commercial Nurseries and Greenhouses**

- Apply this product as a foliar, bark or soil treatment.
- For maximum residual control, apply at highest listed application rate.
- Apply in a volume of water sufficient to uniformly cover the area being treated (a minimum of 1 gallon per 1,000 square feet).
- For soil applications, apply in a volume of water sufficient to reach the root zone where soil pests are feeding and for systemic uptake (apply this product to moist soil to achieve even distribution throughout the soil profile).
- Use properly calibrated application equipment that will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off-target drift.
- Refer to the **AGRICULTURAL USE REQUIREMENTS** box for compliance with the Worker Protection standard.

## Foliar Applications

**Ornamentals commercially produced in indoor nurseries, outdoor nurseries (both field-grown and containerized plants), greenhouses, shade houses, lath houses, and hoop houses.**

Breeding crops	Foliage plants	Pot and bedding plants
Bulb, corm and tuber crops (such as tulips, calla lilies)	Ground covers	Shrubs
Evergreens, including conifers	Non-bearing fruit and nut trees <sup>1</sup>	Succulents
Flowering plants	Ornamental grasses	Vines (non-bearing) <sup>1</sup>
Flowers grown for seed production	Ornamental trees	
	Palms	
	Perennial plants	

Target Pests	Product Dilution	Application Timing	Use Directions
Fall Webworm Gypsy Moth Caterpillar	1 - 8 fl oz per 100 gallons  (0.013 - 0.106 lb ai per 100 gallons)	Apply preventatively or after caterpillars have been observed.  Repeat treatment to maintain control using the higher listed application rates as pest pressure and foliage area increases.	Mix this product with the required amount of water and apply as a full-coverage foliar spray.  When applying to hard-to-wet foliage, such as holly, pine, or ivy, the addition of a spreader/sticker is recommended.  If concentrate or mist-type spray equipment is used, apply an equivalent amount of product as would be used in a dilute application.
Sawfly Larvae	2 - 4 fl oz per 100 gallons  (0.026 - 0.053 lb ai per 100 gallons)		
Japanese Beetle Adults	4 - 8 fl oz per 100 gallons  (0.053 - 0.106 lb ai per 100 gallons)		
Leaf-feeding caterpillars, such as bagworms and tussock moth caterpillars, including whitemarked tussock moth	2 - 16 fl oz per 100 gallons  (0.026 - 0.211 lb ai per 100 gallons)		
Zimmerman Pine Moth	16 fl oz per 100 gallons  (0.211 lb ai per 100 gallons)		

## Foliar Applications *(continued)*

**Ornamentals commercially produced in indoor nurseries, outdoor nurseries (both field-grown and containerized plants), greenhouses, shade houses, lath houses, and hoop houses. *(continued)***

### USE RESTRICTIONS

- 1) **Maximum Single Application Rate:**
  - **Do not** apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft).
- 2) **Maximum Annual Application Rate:**
  - For indoor ornamental production and outdoor containerized production, **do not** apply more than 37.9 fl oz of this product per acre (0.87 fl oz of this product per 1000 sq ft) per crop or 0.5 lb ai per acre per crop from any chlorantraniliprole-containing products. **Do not** apply to more than 6 crops per year.
  - For outdoor, field-grown production, **do not** apply more than 37.9 fl oz of this product per acre (or 0.5 lb ai per acre from any chlorantraniliprole-containing products) per calendar year.
- 3) **Do not** apply more than once every 7 days.
- 4) **Do not** apply aerially.
- 5) **Do not** enter or allow worker entry into treated areas during the restricted entry interval of 4 hr.

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

## Soil Applications for White Grubs

**Ornamentals commercially produced in indoor nurseries, outdoor nurseries (both field-grown and containerized plants), greenhouses, shade houses, lath houses, and hoop houses.**

Breeding crops	Foliage plants	Perennial plants
Bulb, corm and tuber crops (such as tulips, calla lilies)	Ground covers	Pot and bedding plants
Evergreens, including conifers	Non-bearing fruit and nut trees <sup>1</sup>	Shrubs
Flowering plants	Ornamental grasses	Succulents
Flowers grown for seed production	Ornamental trees	Vines (non-bearing) <sup>1</sup>
	Palms	

Target Pests	Product Use Rate	Application Timing	Use Directions
White grubs, including Asiatic garden beetle, European chafer, green June beetle, Japanese beetle, May/June beetles ( <i>Phyllophaga</i> spp.), northern masked chafer, oriental beetle and southern masked chafer	0.18 - 0.37 fl oz per 1000 sq ft 8 -16 fl oz per acre (0.106 - 0.211 lb ai per acre)	Apply immediately prior to egg hatch.  The need for an application may be based on historical monitoring of the site, previous records or experiences, current season adult trapping, or other methods.	Apply using 1-2 pts water or greater per sq ft of soil surface.  Irrigate immediately after application or allow rainfall to move the product into the soil.

### USE RESTRICTIONS

- 1) **Maximum Single Application Rate:**
  - **Do not** apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft)
- 2) **Maximum Annual Application Rate:**
  - **Do not** apply more than 37.9 fl oz of this product per acre (0.5 lb ai per acre from any chlorantraniliprole-containing products) per calendar year.
- 3) **Do not** apply more than once every 7 days.
- 4) **Do not** apply aerially.
- 5) **Do not** enter or allow worker entry into treated areas during the restricted entry interval of 4 hr.

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

## Systemic Soil Treatments

**Ornamentals commercially produced in indoor nurseries, outdoor nurseries (both field-grown and containerized plants), greenhouses, shade houses, lath houses, and hoop houses.**

Evergreens, including conifers    Non-bearing fruit and nut trees<sup>1</sup>    Palms  
 Foliage plants    Ornamental trees    Shrubs

Target Pests	Product Use Rate <sup>2</sup>	Application Timing	Use Directions
Lace bugs Aphids, including apple aphid	0.0625 - 0.25 fl oz (0.00083 to 0.0033 lb ai)  per inch DBH of tree or per foot of height of shrub	When making soil applications to plants with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant. This delay could be 60 days or longer.	Application can be made by soil injection, soil drenches, and broadcast sprays.
Birch leafminer	0.25 fl oz (0.0033 lb ai)  per inch DBH of tree or per foot of height of shrub	Applications should be made prior to pest infestation to achieve best control.	Apply this product within 1-3 feet of the root flare of trees and shrubs. Apply product in sufficient water volume to reach the root zone for optimal systemic uptake.  Refer to <b>Mixing Charts for Soil Application</b> for additional information on soil injection and soil drench applications.

*(continued)*

## Systemic Soil Treatments *(continued)*

**Ornamentals commercially produced in indoor nurseries, outdoor nurseries (both field-grown and containerized plants), greenhouses, shade houses, lath houses, and hoop houses.** *(continued)*

### USE RESTRICTIONS

- 1) **Maximum Single Application Rate:**
  - **Do not** apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft).
- 2) **Maximum Annual Application Rate:**
  - For indoor production and outdoor containerized production, **do not** apply more than 37.9 fl oz of this product per acre (0.87 fl oz per 1000 sq ft) per crop or 0.5 lb ai per acre per crop from any chlorantraniliprole-containing products. **Do not** apply to more than 6 crops per year.
  - For outdoor, field-grown production, **do not** apply more than 37.9 fl oz of this product per acre (or 0.5 lb ai per acre from any chlorantraniliprole-containing products) per calendar year.
- 3) **Do not** apply more than once every 7 days.
- 4) **Do not** apply aerially.
- 5) **Do not** enter or allow worker entry into treated areas during the restricted entry interval of 4 hr.

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

<sup>2</sup>Amount of this product per inch of diameter at breast height (DBH) for trees or per foot of height for shrubs. See restrictions regarding the number of tree or shrubs that can be treated per acre in the following tables.

#### Maximum number of trees that can be treated per acre at the listed rates.

Amount of this product to be applied per inch DBH <sup>1</sup>	Diameter at breast height (DBH) of tree <sup>1</sup>					
	1 inch	2 inches	3 inches	4 inches	5 inches	6 inches
0.0625 fl oz	256	128	85	64	51	42
0.25 fl oz	64	32	21	16	12	10

<sup>1</sup>For trees with a DBH greater than 6 inches, **do not** apply more than 1.5 fl oz per plant. Dilute the required amount of this product in a volume of water that ensures coverage (see APPLICATION DIRECTIONS for additional application instructions).

Maximum number of shrubs that can be treated per acre at the listed rates.						
Amount of this product to be applied per foot height of shrub <sup>1</sup>	Height of Shrub <sup>1</sup>					
	1 foot	2 feet	3 feet	4 feet	5 feet	6 feet
0.0625 fl oz	256	128	85	64	51	42
0.25 fl oz	64	32	21	16	12	10

<sup>1</sup>For shrubs with a height greater than 6 feet, **do not** apply more than 1.5 fl oz per plant. Dilute the required amount of this product in a volume of water that ensures coverage (see Section 5.0 for additional application instructions).

## Bark Applications

Ornamentals commercially produced in indoor nurseries, outdoor nurseries (both field-grown and containerized plants), greenhouses, shade houses, lath houses, and hoop houses.			
Evergreens, including conifers	Non-bearing fruit and nut trees <sup>1</sup>	Palms	
Foliage plants	Ornamental trees	Shrubs	
Target Pests	Product Dilution	Application Timing	Application Information
Clearwing moth borer larvae, including peachtree borer	4 fl oz - 32 fl oz per 100 gallons  (0.053 - 0.422 lb ai per 100 gallons)	Make applications after the emergence of adult moths and before their eggs hatch.  Adult emergence varies according to pest species, host tree, environmental conditions and geographic location.  Consult local Cooperative Extension Service specialist or pest control advisor for regionally specific information regarding application timing.	Apply this product to the trunks and lower branches of trees and shrubs to control clearwing moth borer larvae.  Thorough surface spray coverage of the bark is required for control.  Apply until bark is soaked thoroughly, but not to the point of runoff.

## Bark Applications *(continued)*

**Ornamentals commercially produced in indoor nurseries, outdoor nurseries (both field-grown and containerized plants), greenhouses, shade houses, lath houses, and hoop houses. *(continued)***

### USE RESTRICTIONS

- 1) **Maximum Single Application Rate:**
  - **Do not** apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft).
- 2) **Maximum Annual Application Rate:**
  - **Do not** apply more than 37.9 fl oz of this product per acre (or 0.5 lb ai per acre from any chlorantraniliprole-containing products) per calendar year.
- 3) **Do not** apply more than once every 7 days.
- 4) **Do not** apply aerially.
- 5) **Do not** enter or allow worker entry into treated areas during the restricted entry interval of 4 hr.

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

## Container Drench Applications

**Ornamentals commercially produced in indoor nurseries, outdoor nurseries (both field-grown and containerized plants), greenhouses, shade houses, lath houses, and hoop houses.**

Evergreens, including conifers Foliage plants	Non-bearing fruit and nut trees <sup>1</sup> Ornamental trees	Palms Shrubs
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Target Pests	Product Dilution	Application Timing	Application Information
White grubs, including Asiatic garden beetle European chafer Green June beetle Japanese beetle May/June beetles ( <i>Phyllophaga</i> spp.) Northern masked chafer Oriental beetle Southern masked chafer	8 -16 fl oz per 100 gallons  (0.106 - 0.211 lb ai per 100 gallons)	For best control, apply immediately prior to egg hatch.  The need for an application may be based on historical monitoring of the site, previous records or experiences, current season adult trapping, or other methods.	Mix required dose in water and uniformly apply the drench solution to the container surface. Apply the solution to wet the entire container without leaching.

*(continued)*

## Container Drench Applications *(continued)*

**Ornamentals commercially produced in indoor nurseries, outdoor nurseries (both field-grown and containerized plants), greenhouses, shade houses, lath houses, and hoop houses.** *(continued)*

Target Pests	Product Dilution	Application Timing	Application Information
Lace bugs Aphids, including apple aphid	8 - 32 fl oz per 100 gallons (0.106 - 0.422 lb ai per 100 gallons)	To control above-ground pests, especially those with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant. This delay could be 60 days or longer. Applications should be made prior to anticipated pest infestation to achieve best control	Apply the drench solution uniformly to the soil to wet the entire container without leaching.

### USE RESTRICTIONS

- 1) **Maximum Single Application Rate:**
  - **Do not** apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft).
- 2) **Maximum Annual Application Rate:**
  - For indoor production, **do not** apply more than 37.9 fl oz of this product per acre (0.87 fl oz of this product per 1000 sq ft) per crop or 0.5 lb ai per acre per crop from any chlorantraniliprole-containing products. **Do not** apply to more than 6 crops per year.
  - For outdoor production, **do not** apply more than 37.9 fl oz of this product per acre (or 0.5 lb ai per acre from any chlorantraniliprole-containing products) per calendar year.
- 3) **Do not** apply more than once every 7 days.
- 4) **Do not** apply aerially.
- 5) **Do not** enter or allow worker entry into treated areas during the restricted entry interval of 4 hr.

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

## Production of Turfgrass Sod on Commercial Sod Farms

- For maximum residual control or heavy pest pressure, apply up to 20 fl oz per acre.
- Apply in a volume of water sufficient to uniformly cover the area being treated (a minimum of 1 gallon per 1,000 square feet).
- Use properly calibrated application equipment that will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off-target drift.
- Refer to the **Broadcast Application Dilution Chart**.
- Refer to the **AGRICULTURAL USE REQUIREMENTS** box for compliance with the Worker Protection standard.

### Broadcast Applications

Turfgrass sod produced on commercial sod farms		
Target Pests	Product Use Rate	Application Information
Annual bluegrass weevil	12 - 20 fl oz per acre (0.158 - 0.264 lb ai per acre)	Apply when overwintered adult annual bluegrass weevils are observed in late April or early May to prevent damage from first-generation larvae in late May and June. The higher rates listed may be required for applications made after mid-May.  An application at this time will also provide white grub control.
Billbugs	8 - 20 fl oz per acre (0.106 - 0.264 lb ai per acre)	Apply when overwintered adult billbugs are first observed. This will usually occur in late April or early May in regions with cool-season turfgrass. The higher rates listed may be required for applications made after early May or when billbug species other than bluegrass billbug are present.  An application at this time will also provide white grub control.
European crane fly (larvae)	8 - 16 fl oz per acre (0.106 - 0.211 lb ai per acre)	Apply between September and November. The higher rate listed may be required to achieve control when applications are made in November.

*(continued)*

## Broadcast Applications *(continued)*

<b>Turfgrass sod produced on commercial sod farms <i>(continued)</i></b>		
<b>Target Pests</b>	<b>Product Use Rate</b>	<b>Application Information</b>
Spittlebugs (two-lined)	12 - 20 fl oz per acre (0.158 - 0.264 lb ai per acre)	Apply in spring or summer.
Turf caterpillars, including armyworms, cutworms, and sod webworms	2 - 4 fl oz per acre (0.026 - 0.053 lb ai per acre)	Apply preventatively or after caterpillars have been observed.  To ensure best control, delay water (irrigation) or mowing for 24 hours after application.  If the area being treated is maintained at a mowing height greater than one inch, the higher rate listed may be required during periods of high pest pressure.
White Grubs, including <i>Aphodius</i> spp., Asiatic garden beetle, black turfgrass ataenius, European chafer, green June beetle, Japanese beetle, May/June beetles ( <i>Phyllophaga</i> spp.), northern masked chafer, oriental beetle and southern masked chafer)	8 - 16 fl oz per acre (0.106 - 0.211 lb ai per acre)	Apply from early April to early September for preventative control. The higher rate listed may be required for early-season (April and May) applications where a long residual is required or in late August or early September when less-sensitive mid-instar grubs are present at the time of application.  Irrigate turf immediately after application or allow rainfall to move the product into the soil.  The need for an application may be based on historical monitoring of the site, previous records or experiences, current season adult trapping, or other methods.
<b>Suppression:</b>	8 - 20 fl oz per acre	Apply before eggs hatch.
Chinch bugs	(0.106 - 0.264 lb ai per acre)	

*(continued)*

## Broadcast Applications *(continued)*

### Turfgrass sod produced on commercial sod farms *(continued)*

#### USE RESTRICTIONS

- 1) **Maximum Single Application Rate:**
  - **Do not** apply more than 20 fl oz of this product per acre (0.46 fl oz of this product per 1000 sq ft).
- 2) **Maximum Annual Application Rate:**
  - **Do not** apply more than 37.9 fl oz of this product per acre (0.5 lb ai per acre per calendar year of chlorantraniliprole-containing products) per calendar year.
- 3) **Do not** apply more than once every 7 days.
- 4) **Do not** apply aerially.
- 5) **Do not** enter or allow worker entry into treated areas during the restricted entry interval of 4 hr.

## GOLF COURSES, LAWNS AND LANDSCAPES, AND INTERIOR PLANTSCAPES

Apply this product to control listed insect pests of turf and ornamental plants grown in, on or around golf courses, lawns and landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas, athletic fields and interior plantscapes.

### Golf Course, Lawn, and Recreational Area Turf

Apply this product to control listed insect pests of turf and ornamental plants grown in, on or around golf courses, lawns and landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas, athletic fields and interior plantscapes.

- For maximum residual control or heavy pest pressure, apply at rates up to 20 fl oz per acre.
- Apply as a broadcast spray using a boom sprayer, hand-gun sprayer or similar ground equipment.
- Apply in a volume of water sufficient to uniformly cover the area being treated (a minimum of 2 gallons per 1,000 square feet).
- Use properly calibrated application equipment that will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off-target drift.
- Refer to **Broadcast Application Dilution Chart** and **Section** for soil application directions.

## Broadcast Applications

<b>Turfgrass in golf courses, lawns on residential or commercial properties, and other recreational areas</b>		
<b>Target Pests</b>	<b>Product Use Rate</b>	<b>Application Information</b>
Annual bluegrass weevil	0.28 - 0.46 fl oz per 1000 sq ft  12 - 20 fl oz per acre  (0.158 - 0.264 lb ai per acre)	Apply when overwintered adult annual bluegrass weevils are observed in late April or early May to prevent damage from first-generation larvae in late May and June. The higher rates listed may be required for applications made after mid-May.  An application at this time will also provide white grub control.
Billbugs	0.18 - 0.46 fl oz per 1000 sq ft  8 - 20 fl oz per acre (0.106 - 0.264 lb ai per acre)	Apply when overwintered adult billbugs are observed in late April or early May in regions with cool-season turfgrass. The higher rates listed may be required for applications made after early May or when billbug species other than bluegrass billbug are present.  An application at this time will also provide white grub control.
European crane fly (larvae)	0.18 - 0.37 fl oz per 1000 sq ft  8 - 16 fl oz per acre (0.106 - 0.211 lb ai per acre)	Apply between September and November. The higher rate listed may be required to achieve control when applications are made in November.
Spittlebugs (two-lined)	0.28 - 0.46 fl oz per 1000 sq ft  12 - 20 fl oz per acre  (0.158 - 0.264 lb ai per acre)	Apply in spring or summer.

*(continued)*

## Broadcast Applications *(continued)*

### Turfgrass in golf courses, lawns on residential or commercial properties, and other recreational areas *(continued)*

Target Pests	Product Use Rate	Application Information
Turf caterpillars, including armyworms, cutworms, and sod webworms	0.05 - 0.09 fl oz per 1000 sq ft 2 - 4 fl oz per acre (0.026 - 0.053 lb ai per acre)	Apply preventatively or after caterpillars have been observed.  To ensure best control, delay water (irrigation) or mowing for 24 hours after application.  If the area being treated is maintained at a mowing height greater than one inch, the higher rate listed may be required during periods of high pest pressure.
White Grubs, including <i>Aphodius</i> spp., Asiatic garden beetle, black turfgrass ataenius, European chafer, green June beetle, Japanese beetle, May/June beetles ( <i>Phyllophaga</i> spp.), northern masked chafer, oriental beetle and southern masked chafer)	0.18 - 0.37 fl oz per 1000 sq ft 8 - 16 fl oz per acre (0.106 - 0.211 lb ai per acre)	Apply from early April to early September for preventative control. The higher rate listed may be required for early-season (April and May) applications where a long residual is required or in late August or early September when less-sensitive mid-instar grubs are present at the time of application.  The need for an application may be based on historical monitoring of the site, previous records or experiences, current season adult trapping, or other methods.  Irrigate turf immediately after application or allow rainfall to move the product into the soil.
<b>Suppression:</b>	0.18 - 0.46 fl oz per 1000 sq ft	Apply before eggs hatch.
Chinch bugs	8 - 20 fl oz per acre (0.106 - 0.264 lb ai per acre)	

*(continued)*

## Broadcast Applications *(continued)*

**Turfgrass in golf courses, lawns on residential or commercial properties, and other recreational areas *(continued)***

### USE RESTRICTIONS

- 1) **Maximum Single Application Rate:**
  - **Do not** apply more than 20 fl oz of this product per acre (0.46 fl oz of this product per 1000 sq ft)
- 2) **Maximum Annual Application Rate:**
  - **Do not** apply more than 37.9 fl oz of this product per acre per calendar year (0.5 lb ai per acre per calendar year of chlorantraniliprole-containing products).
- 3) **Do not** apply more than once every 7 days.
- 4) **Do not** enter or allow others to enter treated areas until sprays have dried.

### Ornamentals in Outdoor Landscapes and Interior Plantscapes

- Apply this product as a foliar, bark or soil treatment to control listed insect pests.
- For maximum residual control, apply at highest listed rate.
- Apply in a volume of water sufficient to cover the area being treated (a minimum of 1 gallon per 1,000 square feet).
- Use properly calibrated application equipment that will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off-target drift.

## Foliar Applications

Ornamentals in outdoor landscapes and interior plantscapes			
Bulb, corm and tuber crops (such as tulips, calla lilies)	Ground covers	Perennial plants	
Evergreens, including conifers	Non-bearing fruit and nut trees <sup>1</sup>	Shrubs	
Flowering plants	Ornamental grasses	Succulents	
Foliage plants	Ornamental trees	Vines (non-bearing) <sup>1</sup>	
Palms			
Target Pests	Product Dilution	Application Timing	Application Information
Leaf-feeding caterpillars, such as bagworms and tussock moth caterpillars, including whitemarked tussock moth	2 - 16 fl oz per 100 gallons (0.026 - 0.211 lb ai per 100 gallons)	Apply preventatively or after caterpillars have been observed. Repeat treatment to maintain control using the higher listed application rates as pest pressure and foliage area increases.	Apply in a minimum spray volume of 1 gallon 1000 sq ft as a full coverage foliar spray to control the target pests.  If concentrate or mist-type spray equipment is used, apply an equivalent amount of product on the treated area as would be used in a dilute application.  For hard-to-wet foliage such as holly, pine, or ivy, the addition of a spreader/sticker is recommended.
USE RESTRICTIONS			
<p>1) <b>Maximum Single Application Rate:</b></p> <ul style="list-style-type: none"> <li><b>Do not</b> apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft)</li> </ul> <p>2) <b>Maximum Annual Application Rate:</b></p> <ul style="list-style-type: none"> <li><b>Do not</b> apply more than 37.9 fl oz of this product per acre per calendar year (0.5 lb ai per acre per calendar year of any chlorantraniliprole-containing products).</li> </ul> <p>3) <b>Do not</b> apply more than once every 7 days.</p> <p>4) <b>Do not</b> enter or allow others to enter the treated area until sprays have dried.</p>			

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

## Soil Applications for White Grubs

<b>Ornamentals in outdoor landscapes and interior plantscapes</b>			
Bulb, corm and tuber crops (such as tulips, calla lilies)	Ground covers	Perennial plants	
Evergreens, including conifers	Non-bearing fruit and nut trees <sup>1</sup>	Shrubs	
Flowering plants	Ornamental grasses	Succulents	
Foliage plants	Ornamental trees	Vines (non-bearing) <sup>1</sup>	
	Palms		
<b>Target Pests</b>	<b>Product Use Rate</b>	<b>Application Timing</b>	<b>Application Information</b>
White grubs, including Asiatic garden beetle, European chafer, green June beetle, Japanese beetle, May/June beetles ( <i>Phyllophaga</i> spp.), northern masked chafer, oriental beetle and southern masked chafer	0.18 - 0.37 fl oz per 1000 sq ft  8 - 16 fl oz per acre  (0.106 - 0.211 lb ai per acre)	For best control, apply immediately prior to egg hatch.  The need for an application may be based on historical monitoring of the site, previous records or experiences, current season adult trapping, or other methods.	Apply in sufficient water to uniformly cover the area being treated as a broadcast or banded treatment (a minimum of 2 gal per 1,000 sq ft).  Irrigate immediately after application or allow rainfall to move the product into the soil.
<b>USE RESTRICTIONS</b>			
<ol style="list-style-type: none"> <li>1) <b>Maximum Single Application Rate:</b> <ul style="list-style-type: none"> <li>• <b>Do not</b> apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft)</li> </ul> </li> <li>2) <b>Maximum Annual Application Rate:</b> <ul style="list-style-type: none"> <li>• <b>Do not</b> apply more than 37.9 fl oz of this product per acre per calendar year (0.5 lb ai per acre per calendar year of chlorantraniliprole-containing products).</li> </ul> </li> <li>3) <b>Do not</b> apply more than once every 7 days.</li> <li>4) <b>Do not</b> enter or allow others to enter the treated area until sprays have dried.</li> </ol>			

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

## Systemic Soil Treatments

<b>Ornamentals in outdoor landscapes and interior plantscapes</b>			
Evergreens, including conifers		Non-bearing fruit and nut trees <sup>1</sup> Ornamental trees	Palms Shrubs
<b>Target Pests</b>	<b>Product Use Rate<sup>2</sup></b>	<b>Application Timing</b>	<b>Use Directions</b>
Lace bugs Aphids, including apple aphid	0.0625 - 0.25 fl oz (0.00083 to 0.0033 lb ai)  per inch DBH of tree or foot of height of shrub	When making soil applications to plants with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant. This delay could be 60 days or longer. Make applications prior to pest infestation to achieve best control.	Application can be made by soil injection, soil drenches, and broadcast sprays.  To be effective, this product must be placed within 1-3 feet of the root flare of trees and shrubs with sufficient solution volume to reach the root zone for optimal systemic uptake.
Birch leafminer Hemlock woolly adelgid Magnolia scale False Oleander scale Rhododendron lace bug	0.25 fl oz (0.0033 lb ai)  per inch DBH of tree or foot of height of shrub		
<b>USE RESTRICTIONS</b>			
<ol style="list-style-type: none"> <li>1) <b>Maximum Single Application Rate:</b> <ul style="list-style-type: none"> <li>• <b>Do not</b> apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft)</li> </ul> </li> <li>2) <b>Maximum Annual Application Rate:</b> <ul style="list-style-type: none"> <li>• <b>Do not</b> apply more than 37.9 fl oz of this product per acre per calendar year (0.5 lb ai per acre per calendar year of chlorantraniliprole-containing products).</li> </ul> </li> <li>3) <b>Do not</b> apply more than once every 7 days.</li> <li>4) <b>Do not</b> enter or allow others to enter the treated area until sprays have dried.</li> </ol>			

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

<sup>2</sup>Amount of this product per inch of diameter at breast height (DBH) for trees or per foot of height for shrubs

<b>Maximum number of trees that can be treated per acre at the listed rates.</b>						
<b>Amount of this product to be applied per inch DBH<sup>1</sup></b>	<b>Diameter at breast height (DBH) of tree<sup>1</sup></b>					
	<b>1 inch</b>	<b>2 inches</b>	<b>3 inches</b>	<b>4 inches</b>	<b>5 inches</b>	<b>6 inches</b>
0.0625 fl oz	256	128	85	64	51	42
0.25 fl oz	64	32	21	16	12	10

<sup>1</sup>For trees with a DBH greater than 6 inches, **do not** apply more than 1.5 fl oz of this product per plant. Dilute the required amount of this product in a volume of water that ensures adequate coverage (see Section 5.0 for additional application instructions).

<b>Maximum number of shrubs that can be treated per acre at the listed rates.</b>						
<b>Amount of this product to be applied per foot height of shrub<sup>1</sup></b>	<b>Shrub Height<sup>1</sup></b>					
	<b>1 foot</b>	<b>2 feet</b>	<b>3 feet</b>	<b>4 feet</b>	<b>5 feet</b>	<b>6 feet</b>
0.0625 fl oz	256	128	85	64	51	42
0.25 fl oz	64	32	21	16	12	10

<sup>1</sup>For shrubs with a height greater than 6 feet, **do not** apply more than 1.5 fl oz of this product per plant. Dilute the required amount of this product in a volume of water that ensures coverage (see Section 5.0 for additional application instructions).

## Bark Applications

<b>Ornamentals in outdoor landscapes and interior plantscapes</b>			
Evergreens, including conifers	Non-bearing fruit and nut trees <sup>1</sup> Ornamental trees	Palms Shrubs	
<b>Target Pests</b>	<b>Product Dilution</b>	<b>Application Timing</b>	<b>Application Information</b>
Clearwing moth borer larvae, including peachtree borer	4 fl oz - 32 fl oz per 100 gallons (0.053 - 0.422 lb ai per 100 gallons)	Make applications after the emergence of adult moths and before their eggs hatch.  Consult local Cooperative Extension Service specialist or pest control advisor for information regarding application timing in your area.	Apply this product to the trunks and lower branches of trees and shrubs to control clearwing moth borer larvae.  Thorough surface spray coverage of the bark is required for control. Apply until bark is soaked thoroughly, but not to the point of runoff.
<b>USE RESTRICTIONS</b>			
<p>1) <b>Maximum Single Application Rate:</b></p> <ul style="list-style-type: none"> <li>• <b>Do not</b> apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft)</li> </ul> <p>2) <b>Maximum Annual Application Rate:</b></p> <ul style="list-style-type: none"> <li>• <b>Do not</b> apply more than 37.9 fl oz of this product per acre per calendar year (0.5 lb ai per acre per calendar year of chlorantraniliprole-containing products)</li> </ul> <p>3) <b>Do not</b> apply more than once every 7 days.</p> <p>4) <b>Do not</b> enter or allow others to enter the treated area until sprays have dried.</p>			

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

## Container Drench Applications

<b>Ornamentals in outdoor landscapes and interior plantscapes</b>			
Evergreens, including conifers Foliage plants	Non-bearing fruit and nut trees <sup>1</sup> Ornamental trees	Palms Shrubs	
<b>Target Pests</b>	<b>Product Dilution</b>	<b>Application Timing</b>	<b>Application Information</b>
White grubs, including Asiatic garden beetle European chafer Green June beetle Japanese beetle May/June beetles ( <i>Phyllophaga</i> spp.) Northern masked chafer Oriental beetle Southern masked chafer	8 - 16 fl oz per 100 gallons (0.106 - 0.211 lb ai per 100 gallons)	For optimal control, apply immediately prior to egg hatch.  The need for an application may be based on historical monitoring of the site, previous records or experiences, current season adult trapping, or other methods.	Mix required dose in water and uniformly apply the drench solution to the soil surface.  Apply a sufficient quantity of solution to drench the entire root zone.
Lace bugs Aphids, including apple aphid	8 - 32 fl oz per 100 gallons (0.106 - 0.422 lb ai per 100 gallons)	When making drench applications to plants, especially those with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant.  This delay could be 60 days or longer. Make applications prior to pest infestation to achieve best control.	Mix required dose in water and uniformly apply the drench solution to the soil surface.  Apply a sufficient quantity of solution to drench the entire root zone.

*(continued)*

## Container Drench Applications *(continued)*

### Ornamentals in outdoor landscapes and interior plantscapes *(continued)*

#### USE RESTRICTIONS

- 1) **Maximum Single Application Rate:**
  - **Do not** apply more than 16 fl oz of this product per acre (0.37 fl oz of this product per 1000 sq ft)
- 2) **Maximum Annual Application Rate:**
  - **Do not** apply more than 37.9 fl oz of this product per acre per calendar year (0.5 lb ai per acre per calendar year of chlorantraniliprole-containing products).
- 3) **Do not** apply more than once every 7 days.
- 4) **Do not** enter or allow others to enter the treated area until sprays have dried.

<sup>1</sup>Non-bearing fruit and nut trees and vines are those trees and vines that will not bear edible fruit or nuts for one year after application.

## ADDITIONAL RATE TABLES

### Broadcast Application Dilution Chart

This table provides mixing instructions to produce 1, 5, 10, and 100 gallons of finished (diluted this product) spray solution on both a per acre and per 1000 sq ft basis. For example, if you want to apply this product at the 4 fl oz per acre rate in a spray volume of 1 gallon of finished spray per 1000 sq ft, add 0.92 fl oz of this product to 10 gallons of water and mix thoroughly according to the mixing directions in Section 5.4 (10 gallons of finished spray will cover 10,000 sq ft).

Note: 1 gallon per 1,000 sq ft = 44 gallons per acre.

Application Spray Volume (gallons per 1,000 sq ft)	Product Application Rates			Fluid ounces of this product diluted to these volumes of finished spray			
	fl oz of this product per acre	fl oz of this product per 1,000 sq ft	lb ai per acre	1 gallon	5 gallons	10 gallons	100 gallons
1	1	0.02	0.013	0.02	0.12	0.23	2.3
	2	0.05	0.026	0.05	0.23	0.46	4.6
	4	0.09	0.053	0.09	0.46	0.92	9.2
	8	0.18	0.106	0.18	0.92	1.84	18.4
	16	0.37	0.211	0.37	1.84	3.67	36.7
	20	0.46	0.264	0.46	2.30	4.60	46.0

## Broadcast Application Dilution Chart *(continued)*

Application Spray Volume (gallons per 1,000 sq ft)	Product Application Rates			Fluid ounces of this product diluted to these volumes of finished spray			
	fl oz of this product per acre	fl oz of this product per 1,000 sq ft	lb ai per acre	1 gallon	5 gallons	10 gallons	100 gallons
2	1	0.02	0.013	0.01	0.06	0.12	1.15
	2	0.05	0.026	0.02	0.12	0.23	2.30
	4	0.09	0.053	0.05	0.23	0.46	4.60
	8	0.18	0.106	0.09	0.46	0.92	9.20
	16	0.37	0.211	0.18	0.92	1.84	18.4
	20	0.46	0.264	0.23	1.15	2.30	23.0
3	1	0.02	0.013	0.01	0.04	0.08	0.77
	2	0.05	0.026	0.02	0.08	0.15	1.50
	4	0.09	0.053	0.03	0.15	0.30	3.00
	8	0.18	0.106	0.06	0.31	0.60	6.00
	16	0.37	0.211	0.12	0.62	1.23	12.3
	20	0.46	0.264	0.15	0.77	1.53	15.3
4	1	0.02	0.013	0.006	0.03	0.06	0.58
	2	0.05	0.026	0.01	0.06	0.12	1.15
	4	0.09	0.053	0.02	0.12	0.23	2.30
	8	0.18	0.106	0.05	0.23	0.46	4.60
	16	0.37	0.211	0.09	0.46	0.92	9.20
	20	0.46	0.264	0.12	0.58	1.15	11.5

*(continued)*

## Broadcast Application Dilution Chart *(continued)*

Application Spray Volume (gallons per 1,000 sq ft)	Product Application Rates			Fluid ounces of this product diluted to these volumes of finished spray			
	fl oz of this product per acre	fl oz of this product per 1,000 sq ft	lb ai per acre	1 gallon	5 gallons	10 gallons	100 gallons
5	1	0.02	0.013	0.005	0.02	0.05	0.46
	2	0.05	0.026	0.009	0.05	0.09	0.92
	4	0.09	0.053	0.018	0.09	0.18	1.84
	8	0.18	0.106	0.037	0.18	0.37	3.70
	16	0.37	0.211	0.074	0.37	0.74	7.40
	20	0.46	0.264	0.092	0.46	0.92	9.20
10	1	0.02	0.013	0.002	0.01	0.02	0.23
	2	0.05	0.026	0.005	0.02	0.05	0.46
	4	0.09	0.053	0.009	0.05	0.09	0.92
	8	0.18	0.106	0.018	0.09	0.18	1.84
	16	0.37	0.211	0.037	0.18	0.37	3.67
	20	0.46	0.264	0.046	0.23	0.46	4.60

- To convert from fluid ounces to milliliters, multiply by 29.57.
- 1 fluid ounce = 29.57 ml = 2 tablespoons = 6 teaspoons
- Do not use household utensils to measure this product.

## Soil Application Methods (Injection/Drench)

The calculations for soil injection/drench applications of this product to trees and shrubs involve the following steps:

**Step 1:** Calibrate the application equipment to determine the specified flow rate in gallons per minute.

**Step 2:** Select an injection/drench volume per inch of tree diameter at breast height (DBH) or foot of shrub height.

**Step 3:** Determine the amount of time that is required to deliver the specified volume per injection/drench

**Step 4:** Determine how much solution to mix.

**Step 5:** Determine the amount of this product that must be mixed in the desired volume of water based on the injection/drench volume identified above.

## Calibration Chart for Soil Application (Injection/Drench)

Volume per Tree or Shrub	Flow Rate (Gallons per minute) and Time to Apply (Seconds)					
	0.5 gallon	0.75 gallon	1 gallon	1.5 gallons	2 gallons	3 gallons
1 pint	15.0 sec	10.0 sec	7.5 sec	5.0 sec	3.75 sec	2.5 sec.
1 quart	30.0 sec	20.0 sec	15.0 sec	10.0 sec	7.5 sec	5.0 sec
2 quarts	1.0 min	40.0 sec	30.0 sec	20.0 sec	15.0 sec	10.0 sec
1 gallon	2.0 min	1 min 20 sec	1.0 min	40.0 sec	30.0 sec	20.0 sec

- To convert from fluid ounces to milliliters, multiply by 29.57.
- 1 fluid ounce = 29.57 ml = 2 tablespoons = 6 teaspoons
- Do not use household utensils to measure this product.

## Mixing Chart for Soil Application (Injection/Drench)

Volume per Tree or Shrub	Application Rate* (fl oz)	fl oz Product per 100 Gallons	fl oz Product per 50 Gallons	fl oz Product per 25 Gallons	fl oz Product per 10 Gallons	fl oz Product per 1 Gallon
1 pint	0.0625	50	25	12.5	5	0.5
	0.25	200	100	50	20	2
1 quart	0.0625	25	12.5	6.25	2.5	0.25
	0.25	100	50	25	10	1
2 quarts	0.0625	12.5	6.25	3.125	1.25	0.125
	0.25	50	25	12.5	5	0.5
1 gallon	0.0625	6.25	3.125	1.56	0.625	0.0625
	0.25	25	12.5	6.25	2.5	0.25

\*Amount of this product per inch of diameter at breast height (DBH) for trees or per foot of height for shrubs

- To convert from fluid ounces to milliliters, multiply by 29.57.
- 1 fluid ounce= 29.57 ml= 2 tablespoons= 6 teaspoons
- Do not use household utensils to measure this product.

## **STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Do not subject temperatures below 32 degrees F. Store product in original container only in a location inaccessible to children and pets. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Not for use or storage in or around the home.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### **CONTAINER HANDLING:**

**Non-refillable Containers 5 Gallons or Less:** 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 a mix tank and drain for 10 seconds after the flow begins to drip. 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

## **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 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.

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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 ARISING 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 the 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.

RV103025[1]

# OpteraPro<sup>®</sup>

Not registered for Sale, Sale Into, Distribution and/or Use in Nassau, Suffolk, Kings, Queens Counties of New York State unless permitted under FIFRA Section 24(c) Special Local Need Registration

**For foliar and systemic control of listed insect pests in commercial ornamental nurseries and greenhouses and commercial sod farms**

**For foliar and systemic control of listed insect pests in or on golf courses; sports and recreational turf; lawns and landscaped areas on and around residential, commercial and institutional properties; and interior plantscapes**

<b>ACTIVE INGREDIENTS:</b>	<b>By Wt.</b>
Chlorantraniliprole*.....	18.40%
<b>OTHER INGREDIENTS:</b> .....	81.60%
<b>TOTAL:</b> .....	100.00%

\*CAS No. 500008-45-7

Contains 1.69 lb. Chlorantraniliprole per gallon.

Chlorantraniliprole belongs to the anthranilic diamide chemical class.

## KEEP OUT OF REACH OF CHILDREN

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

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE

For Medical Emergencies, Call (877) 325-1840  
For Chemical Spill, Leak, Fire, or Exposure,  
Call CHEMTREC (800) 424-9300

**FIRST AID: IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have 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. **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 immediately for treatment advice. **HOTLINE NUMBER:** Have the product container or label with you when calling Poison Control (1-800-222-1222) or a doctor or going for treatment. For information on this pesticide product (including general health concerns or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, Monday through Friday, 8:00 AM to 12:00 PM Pacific Standard Time.

## PRECAUTIONARY STATEMENTS

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

## STORAGE AND DISPOSAL

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**Net Contents**  
**1 Gal. (3.78 L)**  
**Non-refillable container**

EPA Reg. No. 228-768

Manufactured for  
Nufarm Americas Inc.  
1901 S. Austin Avenue, Alsip, IL 60803

18996000

RV103025[1]

PULL HERE TO OPEN