



U.S. ENVIRONMENTAL PROTECTION AGENCY
 Office of Pesticide Programs
 Registration Division (7505T)
 1200 Pennsylvania Ave., N.W.
 Washington, D.C. 20460

EPA Reg. Number:

279-9674

Date of Issuance:

1/5/24

NOTICE OF PESTICIDE:

Registration
 Reregistration
 (under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

E2Y45 T&O Insecticide

Name and Address of Registrant (include ZIP Code):

Catherine Rice
 Product Registration Manager
 FMC Corporation
 2929 Walnut Street
 Philadelphia, PA 19104

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

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

Continues page 2

Signature of Approving Official:

Venus Eagle, Product Manager 01
 Invertebrate and Vertebrate Branch 3
 Registration Division

Date:

1/5/24

2. You are required to comply with the data requirements described in the DCI order identified below:
 - a. Chlorantraniliprole GDCl-090100-1895

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Re-Evaluation Division:

<http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, “EPA Reg. No. 279-9674.”
4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF(s):

- Basic CSF dated 01/02/2024

The alternate brand names “Durentis Insecticide” and “Durentis T&O Insecticide” have been added to the product record. If you have any questions, please contact Jasmin Jackson at 202-566-2797 or at jasmin.jasmin@epa.gov.

Enclosure: Stamped Label

NOTE to EPA Product Manager: Text in brackets [] is optional.

CHLORANTRANILIPROLE GROUP 28 INSECTICIDE

E2Y45 T&O INSECTICIDE

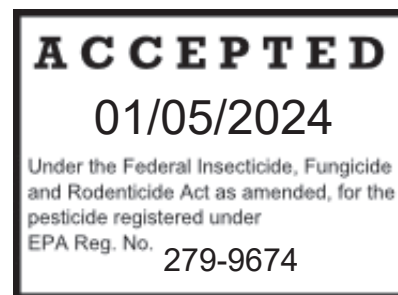
**Alternate Brands Names:
Durentis Insecticide
Durentis T&O Insecticide**

[For foliar and systemic control of insect pests in or on golf courses; sports and recreation turf; lawns and landscaped areas on and around residential, commercial and institutional properties and interior plantscapes.]

[For foliar and systemic control of insect pests in commercial ornamental nurseries and greenhouses; and commercial sod farms.]

Active Ingredient:	By Wt.
Chlorantraniliprole* (3-Bromo-N-[4-chloro-2-methyl-6-[(methylamino) carbonyl]phenyl]-1-(3-chloro-2-pyridinyl) -1H-pyrazole-5-carboxamide)	47.85%
Other Ingredients:	<u>52.15%</u>
Total:	100.0%

*CAS No 500008-45-7. Contains 5.00 lb of chlorantraniliprole per gallon of product.



E2Y45 T&O insecticide is a suspension concentrate that is in the anthranilic diamide chemical class.

EPA Reg. No. 279-XXXX

EPA Est. XXX

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.)

{Note to Reviewer: the following is only required if the product is to be sold in NY}
 [Not for sale, sale into, distribution and/or in Nassau, Suffolk, Kings, Queens Counties of New York State unless permitted under FIFRA Section 24(c) Special Local Need Registration.]



**FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104**

Nonrefillable Container
Net:
Batch Code -OR- Lot Number

or Refillable Container
Net:

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NOTE to EPA Product Manager: Text in brackets [] is optional.

FIRST AID

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

For Technical Support or information regarding the use of this product, call 1-800-321-1FMC (1362)

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

When used as directed, this product does not present a hazard to humans or domestic animals.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long sleeved shirt and long pants
- Shoes plus socks.

User Safety Requirements

After the product has been diluted in accordance with label direction for use, shirt, pants, socks, and shoes are sufficient Personal Protection 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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on 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 rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having 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 ground water. 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.

E2Y45 T&O insecticide must be used only in accordance with the directions on this label, or as otherwise permitted by FIFRA. Always read the entire label, including the Limitation of Warranty and Liability.

Notify state and/or Federal authorities and FMC 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 AND POOR INSECT CONTROL.

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 internal, notification to workers (as applicable). The requirements in this box 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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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

Exceptions:

- The Worker Protection Standard does not apply when any pesticide is applied on an agricultural establishment or involving the production of plants that are in ornamental gardens, parks, golf courses and public or private lawns and grounds, and that are intended only for aesthetic purposes or climatic modification.
- 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.

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:

- Long-sleeved shirt and long pants
- 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 (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. WPS applicable uses include:

- Commercial or research nurseries or greenhouses.
- Turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

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

Re-entry Statement: Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment area until spray has dried.

RESISTANCE MANAGEMENT

For resistance management, E2Y45 T&O insecticide contains a Group 28 insecticide. Any insect population may contain individuals naturally resistant to E2Y45 T&O insecticide and other Group 28 herbicides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same area. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of E2Y45 T&O insecticide or other Group 28 insecticides within a growing season, or among growing seasons with different insecticide 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

NOTE to EPA Product Manager: Text in brackets [] is optional.

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 classification 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, 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 pest control advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific types of turf and weed biotypes.

For further information or to report suspected resistance, contact your FMC Corporation at 800-321-1FMC (1362).

INTEGRATED PEST MANAGEMENT

FMC supports the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an IPM program, which can include biological, cultural, and genetic practices, aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, rotation of insecticides with different modes-of-action and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants, or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

GENERAL INFORMATION

E2Y45 T&O insecticide is a suspension concentrate that contains 5.00 lb of chlorantraniliprole per gallon of product.

E2Y45 T&O insecticide is a member of the anthranilic diamide class of insecticides with a mode of action acting on insect ryanodine receptors. E2Y45 T&O insecticide is effective through ingestion of treated plant material. After exposure to E2Y45 T&O insecticide affected insects will rapidly stop feeding, become paralyzed, and typically die within 1 - 3 days. Time applications to the most susceptible insect pest stage, typically at egg lay, egg hatch and/or newly hatched larvae, before populations reach damaging levels. When pest populations are high, use the highest listed application rate for that pest.

This product will control the following listed pests. Specific information on how to control these pests can be found in the use specific sections of this label.

<p>Annual Bluegrass Weevil (<i>Hyperodes</i>) Aphids Armyworms Bagworms Billbugs Birch leafminer Chinch Bugs* Clearwing moth borer larvae Cutworms European Crane Fly (larvae) Lace bugs Leaf feeding caterpillars Spittlebugs (two-lined) Sod Webworm</p>	<p>White Grubs including</p> <ul style="list-style-type: none"> ● Asian Garden Beetle ● Black Turfgrass Ataenius (Adult) ● Japanese Beetle ● European Masked Chafer ● Northern Masked Chafer ● Southern Masked Chafer ● Oriental Beetle ● Green June Beetle ● May/ June Beetle
<p>*Suppression only</p>	

USE RESTRICTIONS

- **DO NOT** let people and pets enter the treated area until treatment has dried.
- **DO NOT** use for commercial grass seed production.
- **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 12.8 fl oz E2Y45 T&O insecticide (equivalent to 0.5 lb of any chlorantraniliprole-containing products) per acre per calendar year to plants produced or grown outdoors.
- **DO NOT** apply more than 12.8 fluid ounces of this product (equivalent to 0.5 lb of any chlorantraniliprole-containing products) per acre per crop to plants produced or grown indoors and outdoors in containers.
- **DO NOT** formulate this product into other end-use products without the written permission of FMC.
- **DO NOT** use household utensils to measure E2Y45 T&O insecticide.

APPLICATION DIRECTIONS

Methods of Application

- Apply E2Y45 T&O insecticide to foliage or to the soil by ground equipment only.
- Foliar applications offer locally systemic activity against listed pests and can be made with the following ground equipment: boom sprayers, 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. To be effective, apply E2Y45 T&O insecticide where the root system of the target plant can readily absorb the active ingredient.
- E2Y45 T&O insecticide is a systemic insecticide and is most effective when it is applied so that the roots are at, or near, the site of application.
- Maintaining adequate soil moisture will ensure that E2Y45 T&O insecticide is available for plant root uptake and translocation for improved efficacy against listed pests.

Use of Adjuvants

An adjuvant may be used with E2Y45 T&O insecticide unless otherwise specified in the use directions. E2Y45 T&O insecticide is compatible with most products, however not all have been tested. Use the compatibility jar test to ensure physical compatibility.

Spray Tank Preparation

It is important that spray equipment is clean and free of existing pesticide deposits before using this product. Follow the spray tank clean out procedures specified on the label of product previously applied before adding E2Y45 T&O insecticide to the tank.

Use E2Y45 T&O insecticide spray mixture immediately after mixing. Do not store the mixture.

E2Y45 T&O Insecticide Alone

This product must be diluted with water before application. Fill spray tank 1/4 to 1/2 full of water. Add E2Y45 T&O insecticide directly to spray tank. Mix thoroughly to fully disperse the insecticide, once dispersed continued agitation is required. Use mechanical or hydraulic means; do not use air agitation.

E2Y45 T&O Insecticide Alone + Tank-Mix Partners

This product can be mixed with pesticide products that are labeled for use on the same crops as E2Y45 T&O insecticide. Do not exceed labeled dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

E2Y45 T&O insecticide may be mixed with certain liquid fertilizers for at-plant soil applications. Do not mix E2Y45 T&O insecticide directly with pure liquid fertilizers.

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. Before using a tank mix for the first time, always determine the compatibility of E2Y45 T&O insecticide with the tank mixtures by using a jar test.

E2Y45 T&O insecticide is a water-soluble liquid formulation and has been found to be compatible with most herbicides, fungicides, insecticides and growth regulators commonly used in turf and ornamental plant management. However, the physical compatibility of E2Y45 T&O insecticide with tank-mix partners should be tested before use. To determine the physical compatibility of E2Y45 T&O insecticide with other product, use a jar test, as described below.

NOTE to EPA Product Manager: Text in brackets [] is optional.

Jar Test Procedure: Using a quart jar, add the proportionate amount of the products to ½ quart of water. Add wettable powders and water dispersible granular product first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, add the remaining ½ quart of water, shake and let stand for at least 5 minutes. If the combination remains mixed or can be remixed easily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients into the spray tank.

Provided the jar test indicates the mixture to be compatible, prepare the tank mixture as follows: Fill the tank 1/4 full with water. With the agitator operating, add the amount of ingredients using the sequence indicated below. Allow time for complete mixing and dispersion after addition of each product before adding the next product.

1. Water soluble bag (WSB)
2. Water soluble granules (SG)
3. Water dispersible granules (WG, XP, DF)
4. Wettable powders (WP)
5. E2Y45 T&O insecticide and other water-based suspension concentrates (SC)
6. Water soluble concentrates (SL)
7. Suspoemulsions (SE)
8. Oil based suspension concentrates (OD)
9. Emulsifiable concentrates (EC)
10. Surfactants, oils, adjuvants
11. Soluble fertilizers
12. Drift retardants

Read and observe mixing instructions of all tank mix partners. Also read each product label for Directions for Use, Precautionary Statements and Restrictions and Limitations. The most restrictive labeling applies in all tank mixtures. No label dosage rate should be exceeded. Tank mixture recommendations are for use only in states where the companion products and application site are registered. In addition, certain states or geographical regions may have established dosage rate limitations. Consult your state Pesticide Control Agency for additional information regarding the maximum use rates.

Sprayer Equipment Clean-Out

Immediately after spraying E2Y45 T&O insecticide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned using the following procedure:

1. Drain sprayer tank, hoses, and spray boom and thoroughly rinse the inside of the sprayer tank with clean water to remove sediment and residues. In addition, thoroughly flush sprayer hoses, boom, and nozzles with clean water.
2. Fill the tank 1/2 full with clean water, and add appropriate detergent or ammonia (follow manufacturer's directions for use). Fill the tank to capacity and operate the sprayer for 15 minutes to flush hoses, boom, and nozzles.
3. Drain the sprayer system. Rinse the tank with clean water and flush through the hoses, boom, and nozzles. Remove and clean spray tips and screens separately.
4. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State and local regulations and guidelines.

DO NOT drain or flush equipment on or near wells, water sources or flush equipment on or near desirable trees or plants. Do not contaminate any body of water including irrigation water that may be used on other plants.

SPECIFIC USE DIRECTIONS

Non-Agricultural Uses: Golf courses, sports and recreation turf, lawns and landscaped areas on and around residential, commercial and institutional properties and interior plantscapes

[For foliar and systemic control of insect pests in or on golf courses; sports and recreation turf; lawns and landscaped areas on and around residential, commercial and institutional properties and interior plantscapes.]

USE RESTRICTIONS

- **DO NOT** let people and pets enter the treated area until treatment has dried.
- **DO NOT** use for commercial grass seed production.
- **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 12.8 fl oz E2Y45 T&O insecticide (equivalent to 0.5 lb of any chlorantraniliprole-containing products) per acre per calendar year to plants produced or grown outdoors.
- **DO NOT** apply more than 12.8 fluid ounces of this product (equivalent to 0.5 lb of any chlorantraniliprole-containing products) per acre per crop to plants produced or grown indoors and outdoors in containers.

The following restrictions are required to permit use of this product in 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).

TURFGRASS				
Use Sites: Residential, institutional, public, commercial, and industrial buildings, golf courses, parks, and recreational areas and athletic fields.				
Use Rate Conversion				
fl oz (mL) product/ 1000 sq ft	lb total ai/acre		fl oz (mL) product/acre	
0.016 fl oz (0.5 mL)	0.026		0.68 fl oz (20 mL)	
0.031 fl oz (0.9 mL)	0.052		1.33 fl oz (39 mL)	
0.062 fl oz (1.8 mL)	0.104		2.68 fl oz (79 mL)	
0.093 fl oz (2.8 mL)	0.158		4.06 fl oz (120 mL)	
0.123 fl oz (3.6 mL)	0.209		5.37 fl oz (159 mL)	
0.153 fl oz (4.5 mL)	0.260		6.68 fl oz (198 mL)	
0.29 fl oz (8.57 mL)	0.500		12.8 fl oz (379 mL)	
Target Pest	Product Application Rate			Application Instructions
	fl oz product/ 1000 sq ft	lb ai/ acre	fl oz product/ acre	
Annual bluegrass weevil (<i>Hyperodes</i>)	0.093 – 0.153	0.158 – 0.260	4.06 – 6.68	Applications should be made in 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. Higher rates may be required for later applications. Applications made at this time will also provide preventative white grub control.
Armyworms Cutworms Sod Webworm	0.016 – 0.031	0.026 – 0.052	0.68-1.33	To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the grass area is being maintained at a mowing height of greater than 1 inch, then the higher of the listed application rates 0.031 fl oz per 1000 sq. ft. (1.33 fl oz per acre) may be required during periods of high pest pressure.
Billbugs	0.062 – 0.153	0.104 – 0.260	2.68 – 6.68	Apply when overwintered adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide preventative control of white grubs.
Chinch bugs (Suppression only)	0.062 – 0.153	0.104 – 0.260	2.68 – 6.68	Chinch Bugs can be one of the most difficult pests to control in grasses – apply before eggs hatch.
European crane fly (larvae)	0.062 – 0.123	0.104 – 0.209	2.68 – 5.3	Apply between September and November. The higher rate listed may be required to achieve control when applications are made in November.
Spittlebugs (two lined)	0.093 – 0.153	0.158 – 0.260	4.06 – 6.68	Apply in spring or summer.

NOTE to EPA Product Manager: Text in brackets [] is optional.

Target Pest	Product Application Rate			Application Instructions
	fl oz product/ 1000 sq ft	lb ai/ acre	fl oz product/ acre	
White Grubs including: <ul style="list-style-type: none"> • Asian garden beetle • Black Turfgrass Ataenius • Japanese Beetle • European Masked Chafer • Northern Masked Chafer • Southern Masked Chafer • Oriental Beetle • Green June Beetle • May/ June Beetle 	0.062 – 0.123	0.104 – 0.209	2.68 – 5.37	Irrigation of at least 0.1-0.2" is recommended to help move the active ingredient into the soil. Best results will be achieved from preventative applications made just prior to peak activity when grubs are nearest the soil surface. Treatment should be applied in April through early September, with suggested application before June. 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. Exact application timing should be confirmed by the local Agricultural Extension Service in your geographic area. Confirmation of the need for treatment may be based on historical records of the site, current adult trap counts or scouting, or other applicable methods.
USE RESTRICTIONS				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 6.68 fl oz of product per acre (0.26 lb ai per acre). • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. • Do not apply more than once per 7 days. • Do not enter or allow others to enter treated areas until spray has dried. 				

NOTE to EPA Product Manager: Text in brackets [] is optional.

FOLIAR APPLICATIONS				
Use Sites: Ornamentals in outdoor landscapes and interiorscapes. Applications can be made to plants growing in containers, benches, flats, plugs and beds in shadehouses, outdoor nurseries, field plantings, retail nurseries, interiorscapes, residential, public and commercial landscape areas.				
Bulb, corm and tubers (such as tulips, calla lilies)	Ground covers	Non-bearing fruit and nut trees [^]		Perennial plants
Evergreens, including conifers	Ornamental grasses	Ornamental trees		Shrubs
Flowering plants	Palms	Vines (non-bearing) [^]		Succulents
Foliage Plants				
[^] 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.				
Use Rate Conversion				
fl oz (mL) product / 100 gallons			lb ai/ 100 gallons	
0.7 fl oz (21 mL)			0.026	
5.3 fl oz (157 mL)			0.208	
12.8 fl oz (377 mL)			0.50	
Target Pests	Product Dilution		Application Timing	Application Instructions
	fl oz product/ 100 gallons	lb ai/ 100 gallons		
Leaf-feeding caterpillars, such as bagworms and tussock moth caterpillars, including whitemarked tussock moth	0.7 - 5.3	0.026 - 0.208	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	For maximum control, apply at the highest rate listed. Apply in a minimum spray volume of 1 gallon per 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				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.3 fl oz of product per acre. • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. • Do not apply more than once per 7 days. • Do not enter or allow others to enter treated area until sprays have dried. 				

NOTE to EPA Product Manager: Text in brackets [] is optional.

SOIL APPLICATION for control of white grubs					
Use Sites: Ornamentals in outdoor landscapes and interior plantscapes					
Bulb, corm and tuber (such as tulips, calla lilies)	Ground covers	Non-bearing fruit and nut trees [^]		Perennial plants	
Evergreens, including conifers	Ornamental grasses	Ornamental trees		Shrubs	
Flowering plants	Palms	Vines (non-bearing)		Succulents	
Foliage Plants				Vines (non-bearing)	
[^] 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.					
Use Rate Conversion					
fl oz (mL) product/ 1000 sq ft		lb total ai/acre		fl oz (mL) product/acre	
0.062 fl oz (2 mL)		0.104		2.68 fl oz (79 mL)	
0.123 fl oz (4 mL)		0.209		5.37 fl oz (159 mL)	
0.29 fl oz (9 mL)		0.500		12.8 fl oz (379 mL)	
Target Pests	Product Application Rate			Application Timing	Application Instructions
	fl oz product/ 1000 sq ft	lb ai/ acre	fl oz product/ acre		
White grubs, including Asiatic garden beetle, European chafer, green June beetle, Japanese beetle, May/June beetles (<i>Phyllophaga spp.</i>), northern masked chafer, oriental beetle and southern masked chafer	0.062 – 0.123	0.104 – 0.209	2.68 – 5.37	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.
USE RESTRICTIONS					
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.37 fl oz of product per acre (0.123 fl oz per 1,000 sq ft). • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year • Do not apply more than once per 7 days. • Do not enter or allow others to enter treated area until sprays have dried. 					

NOTE to EPA Product Manager: Text in brackets [] is optional.

SYSTEMIC SOIL TREATMENTS				
Use Sites: Ornamental plants in outdoor landscaped areas and in interior plantscapes				
Evergreens including conifers			Palms	
Non-bearing fruit and nut trees [^]			Shrubs	
Ornamental Trees				
[^] Non-bearing fruit and nut trees are those trees that will not bear edible fruit or nuts for one year after application.				
Use Rate Conversion				
fl oz (mL)			lb ai	
0.021 fl oz (1 mL)			0.0008	
0.084 fl oz (3 mL)			0.0033	
Target Pests	Product Use Rates*		Application Timing	Application Instructions
	fl oz product	lb ai per DBH of tree or foot of height of shrub		
Lace bugs, Aphids, including apple aphid	0.021 – 0.084	0.0008 – 0.0033	Application to soil to protect woody plants should be made up to 60 days prior to pest infestation to allow for the insecticide to be adequately taken up by the plant.	Applications can be made through soil injection, soil drenches and broadcast sprays. For effective control apply product within 1-3 feet of the root flare of trees and shrubs. Use sufficient volume to reach the root zone to maximum systemic uptake.
Birch leafminer	0.084	0.0033		
* Amount of E2Y45 T&O Insecticide 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.				
USE RESTRICTIONS				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.37 fl oz of product per acre (0.123 fl oz per 1,000 sq ft). • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ Do Not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. • Do Not apply more than once per 7 days. • Do Not enter or allow others to enter treated area until sprays have dried. 				

Maximum number of trees/shrubs that can be treated per acre at the listed rates						
Amount of product to be applied per inch DBH¹ or foot height of shrub	Diameter of tree in inches at breast height (DBH) or Height of shrubs in feet					
	1	2	3	4	5	6
0.021 fl oz (1 ml)	256	128	85	64	51	42
0.084 fl oz (3 ml)	64	32	21	16	12	10
¹ When trees have DBH greater than 6-inches and shrubs have a height greater than 6 feet, do not apply more than 0.5 fl oz of E2Y45 T&O insecticide per tree or shrub. Dilute the correct amount of E2Y45 T&O insecticide in a water volume that will ensure adequate coverage.						

NOTE to EPA Product Manager: Text in brackets [] is optional.

- Do not use household utensils to measure E2Y45 T&O Insecticide
- 1 fluid ounce = 29.57 ml = 2 tablespoons = 6 teaspoons
- To convert from fluid ounces to milliliters, multiply by 29.57.

When determining the amount of E2Y45 T&O insecticide to use in soil injections/drench application, the following must be addressed:

1. Calibrate the application equipment to determine the specified flow rate in gallons per minute.
2. Select an injection/drench volume per inch of tree diameter at breast height (DBH) or foot of shrub height.
3. Use the following table to determine the amount of time that is required to deliver the specified volume per injection/drench site.

Volume Selected per Tree or Shrub	Flow Rate (Gallons per Minute) and Time to Apply (Seconds)					
	0.5 gallon	0.75 gallon	1 gallon	1.5 gallon	2 gallons	3 gallons
1-Pint	15 sec	10 sec	7.5 sec	5 sec	3.75 sec	2.5 sec
1-Quart	30 sec	20 sec	15.0 sec	10 sec	7.5 sec	5 sec
2-Quarts	1 min	40 sec	30.0 sec	20 sec	15 sec	10 sec

4. Determine how much solution to mix.
5. Use the following table to determine the amount of product that must be mixed in the desired volume of water based on the injection/drench volume identified above.

Mixing Chart for Selected Application Volumes for Soil Injection/Drench Applications						
Volume Selected per Tree or Shrub	Application rate* (fl oz)	fl oz Product per 1-Gallon	fl oz Product per 10-Gallons	fl oz Product per 25-Gallons	fl oz Product per 50-Gallons	fl oz Product per 100-Gallons
1-Pint	0.021	0.168	1.68	4.20	8.40	16.8
	0.084	0.670	6.70	16.75	33.5	67.0
1-Quart	0.021	0.084	0.84	2.10	4.20	8.4
	0.084	0.335	3.35	8.375	16.75	33.5
2-Quarts	0.021	0.042	0.42	1.05	2.10	4.2
	0.084	0.168	1.675	4.188	8.38	16.75
1-Gallon	0.021	0.021	0.210	0.525	1.05	2.10
	0.084	0.084	0.838	2.094	4.188	8.375

*Amount of E2Y45 T&O Insecticide per inch of diameter at breast height (DBH) for trees or per foot of height for shrubs.

NOTE to EPA Product Manager: Text in brackets [] is optional.

BARK APPLICATIONS				
Use Sites: Ornamentals plants in outdoor landscaped areas and in interior plantscapes				
Evergreens including conifers		Palms		
Non-bearing fruit and nut trees^		Shrubs		
Ornamental trees				
^Non-bearing fruit and nut trees are those trees that will not produce edible fruit or nuts for one year after application.				
Use Rate Conversion				
fl oz (mL) product / 100 gallons			lb ai/ 100 gallons	
1.3 fl oz (38.3 mL)			0.052	
10.7 fl oz (316.4 mL)			0.416	
Target Pests	Product Dilution		Application Timing	Application Instructions
	fl oz product/ 100 gallons	lb ai/ 100 gallons		
Clearwing moth borer larvae, including peachtree borer	1.3 - 10.7	0.052 -0.416	Applications should be made after adult emergence and before their eggs hatch. Consult local Cooperative Extension Agent or local pest control advisor for specific timing in your area	Apply E2Y45 T&O insecticide to trunks and lower branches of trees and shrubs to control clearwing moth borer larvae. Thorough bark surface coverage is needed for control. Apply to the bark until it is thoroughly covered, but not yet to the point of runoff.
USE RESTRICTIONS				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.37 fl oz of product per acre (0.123 fl oz per 1,000 sq ft). • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ Do Not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantranilprole-containing products) per acre per calendar year. • Do Not apply more than once per 7 days. • Do Not enter or allow others to enter treated area until sprays have dried. 				

NOTE to EPA Product Manager: Text in brackets [] is optional.

CONTAINER DRENCH APPLICATIONS				
Use Sites: Ornamental plants in outdoor landscaped areas and in interior plantscapes				
Evergreens, including conifers			Ornamental Trees	
Foliage plants			Palms	
Non-bearing fruit and nut trees [^]			Shrubs	
^Non-bearing fruit and nut trees are those trees that will not produce edible fruit or nuts for one year after application.				
Use Rate Conversion				
fl oz (mL) product / 100 gallons			lb ai/ 100 gallons	
2.7 fl oz (80 mL)			0.104	
5.3 fl oz (157mL)			0.208	
10.7 fl oz (316mL)			0.416	
Target Pests	Product Dilution		Application Timing	Application Instructions
	fl oz product/ 100 gallons	lb ai/ 100 gallons		
White Grubs, including Asiatic garden beetle European chafer Green June beetles Japanese beetle May/June beetles (<i>Phyllophaga spp.</i>) Northern masked shafer Oriental beetle Southern masked chafer	2.7 – 5.3	0.104 – 0.208	Apply just before egg hatch. Historical site data or site monitoring may indicate the need for treatment.	Mix the required dose and apply it uniformly to the soil surface. Ensure to use sufficient volume to drench the entire root zone.
Lace bugs, Aphids, including apple aphid	2.7 - 10.7	0.104 - 0.416	Drench applications to woody plants may take up to 60 for the active ingredient to be translocated throughout the plant.	
USE RESTRICTIONS				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.37 fl oz of product per acre (0.123 fl oz per 1,000 sq ft). • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ Do Not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. • Do Not apply more than once per 7 days. • Do Not enter or allow others to enter treated area until sprays have dried. 				

Agricultural uses: Sod farms, Commercial ornamental nurseries, and Greenhouses

[For foliar and systemic control of insect pests in commercial ornamental nurseries and greenhouses; and commercial sod farms.]

Refer to the AGRICULTURAL USE REQUIREMENTS box for compliance with the Worker Protection standard for the following crops grown for agricultural production: Turfgrass grown on sod farms; ornamental non-food plants, vines, shrubs and trees; ornamental bulb, corm and tuber crops; conifers (including conifer nurseries) and Christmas trees; and non-bearing fruit and nut trees commercially produced in nurseries; greenhouses; outdoor nurseries (both field-grown and containerized plants); shade houses, lath houses and hoop houses; and retail nurseries.

USE RESTRICTIONS

- **DO NOT** let people and pets enter the treated area until treatment has dried.
- **DO NOT** use for commercial grass seed production.
- **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 12.8 fl oz E2Y45 T&O insecticide (equivalent to 0.5 lb of any chlorantraniliprole-containing products) per acre per calendar year to plants produced or grown outdoors.
- **DO NOT** apply more than 12.8 fluid ounces of this product (equivalent to 0.5 lb of any chlorantraniliprole-containing products) per acre per crop to plants produced or grown indoors and outdoors in containers.

NOTE to EPA Product Manager: Text in brackets [] is optional.

SOD FARMS				
Use Rate Conversion				
fl oz (mL) product/ 1000 sq ft	lb total ai/ acre		fl oz (mL) product/ acre	
0.016 fl oz (0.5 mL)	0.026		0.68 fl oz (20 mL)	
0.031 fl oz (0.9 mL)	0.052		1.33 fl oz (39 mL)	
0.062 fl oz (1.8 mL)	0.104		2.68 fl oz (79 mL)	
0.093 fl oz (2.8 mL)	0.158		4.06 fl oz (120 mL)	
0.123 fl oz (3.6 mL)	0.209		5.37 fl oz (159 mL)	
0.153 fl oz (4.5 mL)	0.260		6.68 fl oz (198 mL)	
0.29 fl oz (8.57 mL)	0.500		12.8 fl oz (379 mL)	
Target Pest	Broadcast Product Application Rate			Application Instructions
	Uniform application is necessary to provide good pest control.			
	Fl oz product/ 1000 sq ft	lb ai/ acre	fl oz product / acre	
Annual bluegrass weevil (<i>Hyperodes</i>)	0.093 – 0.153	0.158 – 0.260	4.06 – 6.68	Applications should be made in 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. Higher rates may be required for later applications. Applications made at this time will also provide preventative white grub control.
Armyworms Cutworms Sod Webworm	0.016 – 0.031	0.026 – 0.052	0.68-1.33	To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the grass area is being maintained at a mowing height of greater than 1 inch, then the higher rate. (1.33 fl oz per acre) may be required during periods of high pest pressure.
Billbugs	0.062 – 0.153	0.104 – 0.260	2.68 – 6.68	Apply when overwintered adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide preventative control of white grubs.
Chinch bugs (Suppression only)	0.062 – 0.153	0.104 – 0.260	2.68 – 6.68	Chinch Bugs can be one of the most difficult pests to control in grasses - apply before eggs hatch.
European crane fly (larvae)	0.062 – 0.123	0.104 – 0.209	2.68 – 5.37	Apply between September and November. The higher rate listed may be required to achieve control when applications are made in November.

NOTE to EPA Product Manager: Text in brackets [] is optional.

Target Pest	Broadcast Product Application Rate			Application Instructions
	Uniform application is necessary to provide good pest control.			
	fl oz product/ 1000 sq ft	lb ai/ acre	fl oz product / acre	
Spittlebugs (two lined)	0.093 – 0.153	0.158 – 0.260	4.06 – 6.68	Apply in spring or summer.
White Grubs including <ul style="list-style-type: none"> • Asian garden beetle • Black Turfgrass Ataenius • Japanese Beetle • European Masked Chafer • Northern Masked Chafer • Southern Masked Chafer • Oriental Beetle • Green June Beetle • May/ June Beetle 	0.062 – 0.123	0.104 – 0.209	2.68 – 5.37	Irrigation of at least 0.1-0.2” is recommended to help move the active ingredient into the soil. Best results will be achieved from preventative applications made just prior to peak activity when grubs are nearest the soil surface. Treatment should be applied in April through early September, with suggested application before June. 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. Exact application timing should be confirmed by the local Agricultural Extension Service in your geographic area. Confirmation of the need for treatment may be based on historical records of the site, current adult trap counts or scouting, or other applicable methods.
USE RESTRICTIONS				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 6.68 fl oz of product per acre (0.26 lb ai per acre). • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. • Do not apply more than once per 7 days. • Do not apply aerially. • Do not enter or allow worker entry into treated areas during the restricted entry interval of 4 hr. 				

FOLIAR APPLICATIONS				
Use Sites: Ornamentals commercially produced in indoor nurseries, outdoor nurseries (including both containerized and field-grown plants), greenhouses, shade house, lath houses, and hoop houses				
Bulb, corm and tuber crops (such as tulips, calla lilies)	Ground covers			Perennial plants
Evergreens, including conifers	Non-bearing fruit and nut trees [^]			Shrubs
Flowering plants	Ornamental grasses			Succulents
Foliage Plants	Ornamental trees			Vines (non-bearing) [^]
	Palms			
[^] 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.				
Use Rate Conversion				
fl oz (mL) product / 100 gallons			lb ai/ 100 gallons	
0.7 fl oz (21mL)			0.026	
5.3 fl oz (157 mL)			0.208	
12.8 fl oz (378 mL)			0.50	
Target Pests	Product Dilution		Application Timing	Application Instructions
	fl oz product/ 100 gallons	lb ai/ 100 gallons		
Leaf-feeding caterpillars, such as bagworms and tussock moth caterpillars, including whitemarked tussock moth	0.7 - 5.3	0.026 - 0.208	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	For maximum control, apply at the highest rate. Apply in a minimum spray volume of 1 gallon per 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				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.3 fl oz product per acre • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ For indoor ornamental product and outdoor containerized product, do not apply more than 12.8 fl oz of product (or 0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. Do not apply more than 6 times per year. ○ For outdoor, field-grown production, do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. • Do not apply more than once per 7 days. • Do not apply aerially. • Do not enter or allow worker entry into treated areas during the restricted entry interval of 4 hr. 				

NOTE to EPA Product Manager: Text in brackets [] is optional.

SOIL APPLICATION for control of white grubs					
Use Sites: Ornamentals commercially produced in indoor nurseries, outdoor nurseries (including both containerized and field-grown plants), greenhouses, shade house, lath houses, and hoop houses					
Bulb, corm and tuber crops (such as tulips, calla lilies)	Ground covers	Non-bearing fruit and nut trees^		Perennial plants	
Evergreens, including conifers	Ornamental grasses	Ornamental trees		Shrubs	
Flowering plants	Palms	Vines (non-bearing)		Succulents	
Foliage Plants					
^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.					
Use Rate Conversion					
fl oz (mL) product/ 1000 sq ft		lb total ai/acre		fl oz (mL) product/acre	
0.062 fl oz (2 mL)		0.104		2.68 fl oz (79mL)	
0.123 fl oz (4mL)		0.209		5.37 fl oz (159mL)	
0.29 fl oz (9 mL)		0.500		12.8 fl oz (379mL)	
Target Pests	Product Application Rate			Application Timing	Application Instructions
	fl oz product/ 1000 sq ft	lb ai/ acre	fl oz product/ acre		
White grubs, including Asiatic garden beetle, European chafer, green June beetle, Japanese beetle, May/June beetles (<i>Phyllophaga spp.</i>), northern masked chafer, oriental beetle and southern masked chafer	0.062 – 0.123	0.104 – 0.209	2.68 – 5.37	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. Of 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					
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.37 fl oz of product per acre (0.123 fl oz per 1,000 sq ft). • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year • Do not apply more than once per 7 days. • Do not apply aerially. • Do not enter or allow worker entry into treated areas during the restricted entry interval of 4 hr. 					

SYSTEMIC SOIL TREATMENTS				
Use Sites: Ornamentals commercially produced in indoor nurseries, outdoor nurseries (including both containerized and field-grown plants), greenhouses, shade house, lath houses, and hoop houses				
Evergreens including conifers			Palms	
Non-bearing fruit and nut trees [^]			Shrubs	
Ornamental Trees				
[^] Non-bearing fruit and nut trees are those trees that will not bear edible fruit or nuts for one year after application.				
Use Rate Conversion				
fl oz (mL)			lb ai	
0.021 fl oz (1 mL)			0.0008	
0.084 fl oz (3 mL)			0.0033	
Target Pests	Product Use Rates*		Application Timing	Application Instructions
	fl oz product	lb ai per DBH of tree or foot of height of shrub		
Lace bugs, Aphids, including apple aphid	0.021 – 0.084	0.0008 – 0.0033	Application to soil to protect woody plants should be made up to 60 days prior to pest infestation to allow for the insecticide to be adequately taken up by the plant.	Applications can be made through soil injection, soil drenches and broadcast sprays. For effective control apply product within 1-3 feet of the root flare of trees and shrubs. Use sufficient volume to reach the root zone to maximum systemic uptake.
Birch leafminer	0.084	0.0033		
* Amount of E2Y45 T&O Insecticide 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.				
Use Restriction				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.37 fl oz of product per acre (0.123 fl oz per 1,000 sq ft) • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ For indoor ornamental product and outdoor containerized product, do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. Do not apply more than 6 times per year. ○ For outdoor, field-grown production, do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. • Do not apply more than once per 7 days. • Do not apply aerially. • Do not enter or allow others to enter treated area until sprays have dried. 				

Maximum number of trees/shrubs that can be treated per acre at the listed rates						
Amount of product to be applied per inch DBH¹ or foot height of shrub	Diameter of tree in inches at breast height (DBH) or Height of shrubs in feet					
	1	2	3	4	5	6
0.021 fl oz (1ml)	256	128	85	64	51	42
0.084 fl oz (3ml)	64	32	21	16	12	10
¹ When trees have DBH greater than 6-inches and shrubs have a height greater than 6 feet, do not apply more than 0.5 fl oz of E2Y45 T&O insecticide per tree or shrub. Dilute the correct amount of E2Y45 T&O insecticide in a water volume that will ensure adequate coverage.						

NOTE to EPA Product Manager: Text in brackets [] is optional.

- Do not use household utensils to measure E2Y45 T&O Insecticide
- 1 fluid ounce = 29.57 ml = 2 tablespoons = 6 teaspoons
- To convert from fluid ounces to milliliters, multiply by 29.57.

When determining the amount of E2Y45 T&O insecticide to use in soil injections/drench application, the following must be addressed:

1. Calibrate the application equipment to determine the specified flow rate in gallons per minute.
2. Select an injection/drench volume per inch of tree diameter at breast height (DBH) or foot of shrub height.
3. Use the following table to determine the amount of time that is required to deliver the specified volume per injection/drench site.

Volume Selected per Tree or Shrub	Flow Rate (Gallons per Minute) and Time to Apply (Seconds)					
	0.5 gallon	0.75 gallon	1 gallon	1.5 gallon	2 gallons	3 gallons
1-Pint	15 sec	10 sec	7.5 sec	5 sec	3.75 sec	2.5 sec
1-Quart	30 sec	20 sec	15.0 sec	10 sec	7.5 sec	5 sec
2-Quarts	1 min	40 sec	30.0 sec	20 sec	15 sec	10 sec

4. Determine how much solution to mix.
5. Use the following table to determine the amount of product that must be mixed in the desired volume of water based on the injection/drench volume identified above.

Mixing Chart for Selected Application Volumes for Soil Injection/Drench Applications						
Volume Selected per Tree or Shrub	Application rate* (fl oz)	fl oz Product per 1-Gallon	fl oz Product per 10-Gallons	fl oz Product per 25-Gallons	fl oz Product per 50-Gallons	fl oz Product per 100-Gallons
1-Pint	0.021	0.168	1.68	4.20	8.40	16.8
	0.084	0.670	6.70	16.75	33.5	67.0
1-Quart	0.021	0.084	0.84	2.10	4.20	8.4
	0.084	0.335	3.35	8.375	16.75	33.5
2-Quarts	0.021	0.042	0.42	1.05	2.10	4.2
	0.084	0.168	1.675	4.188	8.38	16.75
1-Gallon	0.021	0.021	0.210	0.525	1.05	2.10
	0.084	0.084	0.838	2.094	4.188	8.375

*Amount of E2Y45 T&O Insecticide per inch of diameter at breast height (DBH) for trees or per foot of height for shrubs.

NOTE to EPA Product Manager: Text in brackets [] is optional.

BARK APPLICATIONS				
Use Sites: Ornamentals commercially produced in indoor nurseries, outdoor nurseries (including both containerized and field-grown plants), greenhouses, shade house, lath houses, and hoop houses				
Evergreens including conifers		Palms		
Non-bearing fruit and nut trees^		Shrubs		
Ornamental trees				
^Non-bearing fruit and nut trees are those trees that will not produce edible fruit or nuts for one year after application.				
Use Rate Conversion				
fl oz (mL) product / 100 gallons			lb ai/ 100 gallons	
1.3 fl oz (38 mL)			0.052	
10.7 fl oz (316 mL)			0.416	
Target Pests	Product Dilution		Application Timing	Application Instructions
	fl oz product/ 100 gallons	lb ai/ 100 gallons		
Clearwing moth borer larvae, including peachtree borer	1.3 - 10.7	0.052 -0.416	Applications should be made after adult emergence and before their eggs hatch. Consult local Cooperative Extension Agent or local pest control advisor for specific timing in your area	Apply E2Y45 T&O insecticide to trunks and lower branches of trees and shrubs to control clearwing moth borer larvae. Thorough bark surface coverage is needed for control. Apply to the bark until it is thoroughly covered, but not yet to the point of runoff.
USE RESTRICTIONS				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.37 fl oz of product per acre (0.123 fl oz per 1,000 sq ft). • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year • Do not apply more than once per 7 days. • Do not apply aerially. • Do not enter or allow worker entry into treated areas during the restricted entry interval of 4 hr. 				

CONTAINER DRENCH APPLICATIONS				
Use Sites: Ornamentals commercially produced in indoor nurseries, outdoor nurseries (including both containerized and field-grown plants), greenhouses, shade house, lath houses, and hoop houses				
Evergreens, including conifers		Ornamental Trees		
Foliage plants		Palms		
Non-bearing fruit and nut trees [^]		Shrubs		
[^] Non-bearing fruit and nut trees are those trees that will not produce edible fruit or nuts for one year after application.				
Use Rate Conversion				
fl oz (mL) product / 100 gallons		lb ai/ 100 gallons		
2.7 fl oz (80 mL)		0.104		
5.3 fl oz (157 mL)		0.208		
10.7 fl oz (316mL)		0.416		
Target Pests	Product Dilution		Application Timing	Application Instructions
	fl oz product/ 100 gallons	lb ai/ 100 gallons		
White Grubs, including Asiatic garden beetle European chafer Green June beetles Japanese beetle May/June beetles (<i>Phyllophaga spp.</i>) Northern masked chafer Oriental beetle Southern masked chafer	2.7 – 5.3	0.104 – 0.208	Apply just before egg hatch. Historical site data or site monitoring may indicate the need for treatment.	Mix the required dose in water and apply it uniformly to the container soil surface. Apply the solution to wet the entire container without leaching.
Lace bugs, Aphids, including apple aphid	2.7 - 10.7	0.104 - 0.416	Drench applications to woody plants may take up to 60 for the active ingredient to be translocated throughout the plant.	
USE RESTRICTIONS				
<ul style="list-style-type: none"> • Maximum Single Application Rate: <ul style="list-style-type: none"> ○ Do not apply more than 5.37 fl oz of product per acre (0.123 fl oz per 1,000 sq ft) • Maximum Annual Application Rate: <ul style="list-style-type: none"> ○ For indoor ornamental production, do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. Do not apply more than 6 times per year. ○ For outdoor production (containerized and field-grown plants), do not apply more than 12.8 fl oz of product (0.5 lb ai of any chlorantraniliprole-containing products) per acre per calendar year. • Do not apply more than once per 7 days. • Do not apply aerially. • Do not enter or allow others to enter treated area until sprays have dried. 				

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not subject to 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: Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Refer to the Net Contents section of this product's labeling for the applicable "Refillable Container" or "Nonrefillable Container" designation.

For Small (Capacity Equal to or Less Than 5 Gallons) Nonrefillable HPDE Plastic Containers: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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 if available or puncture and dispose of in a sanitary landfill, or by incineration.

For Large (Capacity Greater Than 5 Gallons) Nonrefillable HPDE Plastic Containers: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

For All Refillable Containers: Refillable HPDE plastic container. Refill this container with chlorantraniliprole only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact CHEMTREC (Transportation and Spills) at 1-800-424-9300, day or night.

Conditions of Sale and Limitation of Warranty and Liability:

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and buyer assumes the risk of any such use.

NOTE to EPA Product Manager: Text in brackets [] is optional.

To the extent consistent with applicable law, FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.