

100-1170

2/26/2014

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



OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

February 26, 2014

Ronald Hampton  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, NC 27419

Subject: Amended label to add pollinator protection language  
Product Name: Optigard ZT  
EPA Reg. No. 100-1170  
EPA Decision No. 488029  
Submission dated February 5, 2014; resubmission dated February 26, 2014

Dear Mr. Hampton:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act is acceptable. A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. See 40 CFR 156.10(a)(6).

Under 40 CFR 152.130(d), EPA may establish dates by which all product distributed or sold by the registrant must bear revised labeling. The following paragraphs set forth the schedule for ensuring that that your product bears revised labeling within a reasonable time period:

- Any product released for shipment after 2/28/14 must bear the new label.

If these conditions are not complied with, EPA will take appropriate action against this registration. If you have any questions please contact Julie Chao at 703-308-8735 or [chao.julie@epa.gov](mailto:chao.julie@epa.gov).

Regards,

A handwritten signature in cursive script, appearing to read "Venus Eagle".

*for* Venus Eagle, Product Manager (01)  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

[Master Label]

GROUP 4A INSECTICIDE

# OPTIGARD® ZT

## Insecticide

Intended for application only by or under the supervision of commercial applicators responsible for pest control programs.

- For control of listed pests [optional: including cockroaches, ants (except carpenter ants and Pharaoh ants), fire ants and beetles].
- For control of localized infestations of drywood termites, carpenter bees, and wood-destroying beetles and borers.

Active Ingredient:

Thiamethoxam <sup>1</sup> (CAS No. 153719-23-4).....	21.6%
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Other Ingredients	78.4%
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Total:	100.0%
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<sup>1</sup> a thianicotinyl neonicotinoid insecticide

Optigard ZT is a suspension concentrate.

Optigard ZT contains 2 lb thiamethoxam per gallon of formulated product (244 grams thiamethoxam per liter formulated product).

### KEEP OUT OF REACH OF CHILDREN

## CAUTION

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

See additional precautionary statements and directions for use in booklet.

EPA Reg. No. 100-1170

EPA Est. [placeholder]

[Net Contents placeholder]

Net Contents

[Refillable/Non-refillable Container]

ACCEPTED  
**FEB 26 2014**  
 Under the Federal Insecticide, Fungicide,  
 and Rodenticide Act, as amended, for the  
 pesticide registered under:

EPA. Reg. No: 100-1170

000100-01170.20140128D.OPTIGARD ZT AMEND

**FIRST AID**

<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p style="text-align: center;"><b>HOT LINE NUMBER</b>  For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance  (Spill, Leak, Fire, or Accident),  Call  <b>1-800-888-8372</b></p>	

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**PRECAUTIONARY STATEMENTS**

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**HAZARDS TO HUMANS AND DOMESTIC ANIMALS****CAUTION**

Harmful if inhaled or absorbed through skin. Do not breathe vapor or spray mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material - Category A (e.g., barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or viton)
- Shoes plus socks

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

**USER SAFETY RECOMMENDATIONS**

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**Users should:** 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.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to wildlife and highly toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash water.

This pesticide is highly toxic to bees exposed to direct treatment on blooming plants or weeds. Do not apply this product, or allow it to drift, to blooming plants or weeds while bees are foraging in or adjacent to the treatment area.

**PHYSICAL AND CHEMICAL HAZARDS**

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

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## PROTECTION OF POLLINATORS



**APPLICATION RESTRICTIONS** EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

**This product can kill bees and other insect pollinators.**

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to:

[www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

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

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

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

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



## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read entire label before using this product.



**Do not apply Optigard ZT Liquid while bees are foraging. Do not apply Optigard ZT Liquid to plants that are flowering. Only apply after all flower petals have fallen off.**

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## USE RESTRICTIONS

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- Use in all indoor permitted sites, including food handling establishments, must be restricted to areas which eliminate exposure to food handling surfaces and areas that are not easily accessible to occupants.
- Use of Optigard ZT in food/feed areas of food handling establishments must be restricted to structural voids which eliminate exposure to food handling surfaces.
- Do not apply this product in a way that will contact any other person. Only protected applicators may be in the area during application. Keep people or pets away from treated area until dry.
- In living areas, do not apply Optigard ZT as a broadcast spray. In these areas use only as a void application, or as a spot treatment (e.g. under and/or behind appliances) or crack and crevice application in areas where occupants will not be exposed to direct contact.
- When applying Optigard ZT as a crack and crevice or spot treatment in living areas, do not exceed 0.5 gallons/1,000 sq ft of a 0.1% finished dilution.
- For void applications, do not apply until location of heat pipes, ducts, water and sewer lines, and electrical conduits are known. Caution must be taken to avoid puncturing and injection into these structural elements. Do not apply into electrical switches or receptacles or other wiring where electrical shock hazards exist.

### Resistance Management

Optigard ZT belongs to the neonicotinoid class of chemistry (Group 4A Insecticide). Pests which are resistant to insecticides in other chemical classes are not known to be cross-resistant to Optigard ZT. However, insect pests are known to develop resistance to products used repeatedly. Because resistance development cannot be predicted, the use of Optigard ZT should conform to sound resistance management strategies established for the crop and use area. Strategies should include rotation of chemicals

with different modes of action, limitation of the number of successive generations of the target pest being treated with the same compound and adherence to labeled directions.

Consult your local pest control advisor or extension office for additional methods for preventing resistance development. SYNGENTA encourages responsible product stewardship to ensure effective long-term control of the insect pests on this label.

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## APPLICATION PROCEDURES

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Optigard ZT must be applied as a diluted finished application using mixing directions contained in this label. Treatment techniques used should provide placement of the product in the infested areas or as near as possible. Optigard ZT may be applied to structural voids, in cracks, crevices, corners or other out of the way places, such as under and behind kitchen appliances and baseboards, under sinks, around window and door frames, pipes and water heaters and in the attic, crawl space and garage. Acceptable locations for treatment also include non-living space areas including, but not limited to, crawl spaces, attics and unfinished basements. Applications may be made as a crack and crevice spray, a coarse, low-pressure spot spray, a surface spray or as a structural void application. Application to structural voids such as wall voids may be done by drilling a small hole into the void area or using a self-puncturing tip and injecting diluted product so that surfaces inside the void area are treated. Existing holes created by construction features may also be used to gain access to void treatment areas.

As described in the section on **Control of pests in Voids**, closed, in-wall delivery systems may be used to apply product to the surfaces inside void areas.

Optigard ZT may also be used as a banded, spot treatment or crack and crevice application to perimeter exterior areas of structures for control of listed pests.

For remedial control of wood-destroying insects including drywood termites, wood-destroying beetles, and carpenter bees, Optigard ZT may be used as a spot treatment (including bait stations), wood surface application, or void application.

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**MIXING PROCEDURES**

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**MIXING**

Refer to **Application Dilution Table** for proper amount of Optigard ZT to be used to achieve the correct dilution. Refer to **Use Directions** of specific pest for application procedure and use rates.

To prepare the application mixture, fill the application tank  $\frac{1}{4}$ – $\frac{1}{3}$  of desired volume with water before adding Optigard ZT. Then slowly add the required amount of Optigard ZT. Add the remaining amount of water and agitate until product is thoroughly mixed.

**Application Dilution Table**

Gallons of Finished Solution Desired	Amount in fl oz (or ml) of Optigard ZT Needed to Obtain the Following % Dilutions of Active Ingredient:	
	0.05%	0.1%
1	0.27 fl oz (8 ml)	0.54 fl oz (16 ml)
3	0.81 fl oz (24 ml)	1.62 fl oz (48 ml)
5	1.35 fl oz (40 ml)	2.71 fl oz (80 ml)
10	2.71 fl oz (80 ml)	5.41 fl oz (160 ml)

**DELIVERY OF OPTIGARD ZT WITH FOAM**

The diluted finished product may be converted to foam and applied to control pest infestations. Depending on the circumstances, foam applications may be used alone or in combination with liquid applications.

**Foam Mixing Procedures and Application**

Using the following table, mix the appropriate amount of Optigard ZT in water with the foaming manufacturer's specified volume of foaming agent for application by foaming equipment.

**Mixing Table for Optigard ZT Foam**

Amount of Optigard ZT	Gal. of Water	Foam Expansion Ratio	Finished Foam (gallons)	Finished Dilution (% active ingredient)
1.35 fl oz (40 ml)	1.0	5:1	5	0.05
2.71 fl oz (80 ml)	1.0	10:1	10	
4.0 fl oz (120 ml)	1.0	15:1	15	
6.76 fl oz (200 ml)	1.0	25:1	25	
2.71 fl oz (80 ml)	1.0	5:1	5	0.1
5.41 fl oz (160 ml)	1.0	10:1	10	
8.0 fl oz (240 ml)	1.0	15:1	15	
13.53 fl oz (400 ml)	1.0	25:1	25	

## CONTROL OF WOOD DESTROYING INSECTS

Use Optigard ZT to control the following wood destroying insects. For specific application instructions refer to label text.

Pest	Application Method	Finished Dilution (% active ingredient)	Comments
Drywood Termites (Remedial Control)	Foam- Galleries Liquid – Galleries	0.1%	Retreat as needed.
Carpenter Bees	Liquid or Foam – Gallery treatment	0.1%	
Wood-Destroying Beetles and Borers	Liquid or Foam- Gallery or Wood Surface Treatment	0.1%	

\*Finished dilution of foam applications based on concentration in finished foam (see Mixing Table for Optigard ZT Foam in **MIXING PROCEDURES**)

### Control of Drywood Termites

When used as specified in this label, Optigard ZT provides effective remedial control of localized infestations of drywood termites, including species of *Incisitermes*, *Cryptotermes* and *Marginitermes*. Knowledge of the biology and behavior of the drywood termite species involved, the locations and the extent of the infestation(s) will help to ensure successful control.

Treatment requirements for drywood termite control may vary due to state and local regulations. For advice concerning current drywood termite control regulations under local conditions, consult your State structural pest control regulatory agency.

#### *Directions for Remedial Control of Drywood Termites in Infested Wood*

To control drywood termites in localized areas of infested wood in structures, apply 0.1% Optigard ZT as a liquid or foam to voids and galleries in damaged wood, in spaces between wooden structural members or between wood and foundations. Locate galleries by using visual signs (e.g. fresh fecal pellets, or blistered wood), the presence of live pests, mechanical sounding techniques (tapping on the wood surface and listening for changes in sound to indicate changes in wood density), listening devices, motion detection devices or other technologies that help pinpoint drywood termite activity.

### *Wood Injection Method*

Drill small diameter holes of appropriate size for the injection tip, or use a self-puncturing tip, positioned to intersect termite galleries within infested wood. Drywood termite emergence or pellet kick-out holes connect directly to galleries and are indicators of potential sites to drill and inject Optigard ZT. Care should be taken to avoid electrical wiring, plumbing, etc., when drilling and injecting. Do not drill or puncture completely through wood. Spacing of the holes will depend on the distribution of insect activity and galleries. Injection holes may be clustered in areas with insect activity as indicated by damage, live insects, or other indicators previously described. Injection holes on opposite sides of large (4"x10" or larger) structural beams may be necessary to effectively penetrate galleries.

Apply up to 50 ml (1.7 fl oz) of finished Optigard ZT liquid solution at each injection hole. If using Optigard ZT as a foam preparation, inject a sufficient amount to fill galleries without allowing runoff.

Re-treatment guidelines: Reapply if insect activity within treated areas is detected 4 or more weeks following treatment. For best results in treating galleries, inject Optigard ZT into new injection holes positioned between previous injection sites.

### **Control of Carpenter Bees (localized treatment)**

Apply a 0.1% dilution of Optigard ZT into carpenter bee galleries as a spray, mist or foam application. Apply up to 50 ml (1.7 fl oz) of finished Optigard ZT liquid solution at each injection hole. If using Optigard ZT as a foam preparation, inject a sufficient amount to fill galleries without allowing runoff.

### **Control of Wood-Destroying Beetles and Borers**

For control of wood-destroying beetles or borers, such as but not limited to: old house borers, powderpost beetles, false powderpost beetles, death-watch beetles, ambrosia or bark beetles. Apply Optigard ZT diluted to 0.1% as a spray, mist or foam to galleries, structural voids and or as wood surface treatments. For old house borers, or other beetles that form large galleries, treat the gallery system by drilling and injecting product with sufficient volume to cover the galleries. For beetles or borers that do not form galleries which can be readily injected (e.g. powderpost beetles) apply product as a liquid, mist or foam to exposed wooden surfaces in non-living space areas in crawlspaces, basements, attics, to structural voids, to spaces between wood elements of a structure or at joints between wood and foundations. Apply as a coarse liquid spray with low pressure (<25 psi), as a foam or mist application or by brushing diluted product onto the surface. Applications should be made in sufficient volumes to coat the target surface but less than the volume that creates runoff. Retreat as needed to maintain protection. Allow treated surfaces to dry before contacting them.

Surface applications may also be used to supplement spot treatment for termites, as a means to prevent re-infestation by swarming adult termites. Apply a 0.05%–0.1% dilution as a surface spray or mist to exposed wood surfaces in areas not used as living spaces, such as attics, crawlspaces, unfinished basements or structural voids.

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## CONTROL OF PESTS IN VOIDS

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Arthropod pests may occasionally invade structures through wall voids or other structural voids by entering cracks or other openings to the exterior. In conjunction with other appropriate methods such as exclusion or perimeter insecticide applications, Optigard ZT can control nuisance arthropods that move through or harbor in wall void areas. For best results, use Optigard ZT as part of an Integrated Pest Management (IPM) approach, in conjunction with other appropriate control methods such as perimeter insecticide applications, use of baits and the use of exclusion or other non-chemical control methods.

### Method of Injection into Voids

To control (listed) pests, apply Optigard ZT at 0.05%–0.1% finished solution/foam to surfaces inside structural voids. Application to structural voids such as wall voids should be done by drilling a small hole into the void area, or using a self-puncturing tip, and injecting product as liquid or foam so that wood surfaces inside the void area are treated. Existing openings such as those around door or window frames may also be used as entry points to inject product. Apply enough volume to lightly coat the target surface. Do not exceed liquid volume that would allow runoff (e.g. for wood, runoff is about 0.05–0.1 ml/sq inch). For example, a 2"x4"x16" wall void with wood frame should be treated with 2–4 ml finished liquid solution per linear foot; other surfaces or wall void sizes may need more or less to achieve a light coating. For foam preparations, see instructions for use provided in the **MIXING PROCEDURES** section of this label. Apply approximately 60–120 ml (2–4 fl oz) finished foam preparation per application point. Alternatively, closed, in-wall delivery systems may be used as described below to apply product to the surfaces inside void areas (see specific instructions in next section.)

Use Optigard ZT for control of the following pests in voids and around structures.

Target Pests	Dosage of Optigard ZT Insecticide	Remarks
Ants*(except carpenter ants and Pharaoh ants) Beetles Boxelder bugs Cockroaches Crickets Earwigs Firebrats Lady beetles Millipedes Pillbugs Silverfish Sowbugs	0.05–0.1%  (0.27 fl oz [8 ml]–0.54 fl oz [16 ml] Optigard ZT/gal water or finished foam)	Use 0.1% rate for heavy pest infestations.  * Optigard ZT may be used as a liquid or foam treatment to control ants (except carpenter ants and Pharaoh ants) in termite monitoring stations (see <b>Treatment of In-Ground Outdoor Monitoring Stations</b> section for instructions.)  Ant (except carpenter ants and Pharaoh ants) mounds may also be spot treated with 0.05–0.1% finished liquid or foam.

For optimal results, use foam application.

**Fixed In-Wall Delivery Systems**

Closed, in-wall insecticidal delivery systems such as permanently installed piping or flexible tubing may also be used to deliver diluted product to inaccessible areas. Generally, about one ounce of finished liquid product is needed per 35-40 ft of tubing (based on 1/8"-diameter tubes). For these systems, use 0.05%-0.1% dilution rates as listed in the **Application Dilution Table**. Prepare the finished product at the appropriate dilution, inject into system as specified by delivery system manufacturer.



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## INTERIOR PEST CONTROL

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In addition to void applications (see section **Control of Pests in Voids**), crack and crevice or spot applications may be made to control listed pests in areas not easily accessible to humans. Treatment areas include points or cracks between different elements of construction, spaces between equipment and floor or wall, openings leading to voids in walls, spaces beneath equipment or cabinets or spaces between trim and floors or walls.

Apply 0.1% Optigard ZT dilution as a spot or crack and crevice treatment directly into cracks and crevices or other non-exposure areas as a low pressure spray using equipment capable of delivering a pin stream of insecticide. Applications may also be made as a foam preparation. Do not make surface applications to living spaces.

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## FOOD/FEED HANDLING ESTABLISHMENT USE

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Food/feed areas include areas for receiving, storage, packing (canning, bottling, wrapping, boxing), preparing foods, edible waste storage, and enclosed processing systems (mills, dairies, edible oils, syrups). Serving areas are also considered a food/feed area when food is exposed and facility is in operation.

***Application within food/feed areas of food/feed handling establishments is limited to structural void treatments only. Do not apply Optigard ZT to areas where food/feed utensils or processing surfaces may become contaminated. If insecticide contacts an exposed surface where food is handled, wash exposed surface with an effective cleaning compound followed by a potable water rinse prior to use.***

Apply Optigard ZT as a 0.05%–0.1% finished foam directly into structural voids between different elements of construction (e.g. voids and hollow spaces in walls, floors and ceilings, around plumbing pipes, doors and windows, cabinets and closets). Target places where target pests may enter the structure.

*[Begin optional language]*

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## **EXTERIOR PEST CONTROL**

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For control of (listed) pests, use a 0.1% dilution of Optigard ZT as a void application, as an outdoor surface spray, a spot application or crack and crevice treatment. Refer to table in the section **Control of Pests in Voids** for a list of target pests. Apply to surfaces of structures where pests are likely to enter including but not limited to: utility entry points, soffit areas, eaves and attic vents, around doors or windows, weep or ventilation holes. Apply up to 2 gallons/1,000 sq ft as a liquid. Optigard ZT may also be applied as a mist or foam. For ants (except carpenter ants and Pharaoh ants), treat along sidewalks or landscape edging or other areas where ants (except carpenter ants and Pharaoh ants) are likely to trail. Ant (except carpenter ants and Pharaoh ants) mounds may also be treated with a spot application or with a subsurface injection tool. Retreat as necessary to maintain control. For perimeter applications, do not exceed 17.0 fl oz (502 ml) of Optigard ZT product per acre per year. When using a banded spray around the perimeter of the structure, a swath extending 2 feet up the structure exterior from the ground and 3 feet away from the foundation may be used.

Do allow product to contact plants in bloom if bees are foraging in the treatment area.

*[End optional language]*

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## **INDIVIDUAL MOUND TREATMENTS (FIRE ANTS)**

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For ants (*Solenopsis* spp.) prepare a drench solution at a concentration rate of 1 to 3 ounces per ten gallons of water. Thoroughly mix solution and apply directly to mounds. For control of small fire ant mounds (<6 inches in diameter at the surface) apply one gallon of drench solution per mound. For control of larger mounds, apply 2 to 3 gallons of the drench solution per mound. Direct the drench solution to the center of the mound. Do not apply less than 0.5 gallons or more than 3 gallons of drench solution per mound. Not for broadcast application.

*[Begin optional language]*

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**APPLICATION TO LANDSCAPE ORNAMENTAL PLANTS**

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Optigard ZT may be used on landscape ornamental plants to reduce populations of aphids, whiteflies and mealybugs which produce honeydew which serves as a food source for some ant species. Use a 0.1% liquid dilution of Optigard ZT as a foliar or banded application and apply up to 2 gallons/1,000 sq ft. Retreat as necessary to maintain control. Do not exceed 17.0 fl oz (502 ml) of Optigard ZT product per acre per year.

Do not apply while bees are foraging. Do not apply to plants that flowering. Only apply after all flower petals have fallen off.

*[End optional language]*

[Begin Unit Dose language]

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## APPLICATION PROCEDURES

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Optigard ZT must be applied as a diluted finished application using mixing directions contained in this label. Treatment techniques used should provide placement of the diluted product in the infested areas or as near as possible. Optigard ZT may be applied to structural voids, in cracks, crevices, corners or other out of the way places, such as under and behind kitchen appliances and baseboards, under sinks, around window and door frames, pipes and water heaters and in the attic, crawl space and garage. Acceptable locations for treatment also include non-living space areas including, but not limited to, crawl spaces, attics and unfinished basements. Application to structural voids such as wall voids may be done by drilling a small hole into the void area or using a self-puncturing tip and injecting diluted product so that surfaces inside the void area are treated. Existing holes created by construction features may also be used to gain access to void treatment areas.

As described in the section on **Control of PESTS in Voids**, closed, in-wall delivery systems may be used to apply product to the surfaces inside void areas provided the delivery system is suitable for foam application.

Optigard ZT may also be used as a spot treatment or crack and crevice application to perimeter exterior areas of structures for control of listed pests.

For remedial control of wood-destroying insects including drywood termites, wood destroying beetles, and carpenter bees, Optigard ZT may be used as a spot treatment (including bait stations), wood surface application, or void application.

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## MIXING PROCEDURES

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[Begin optional language]

### Mixing Procedures and Application Using Foamer Equipment

Each Optigard ZT Unit Dose is pre-measured to add to 650 ml (22 fl oz) water and deliver approximately 3 gal of finished foam at a 15:1 expansion ratio at a concentration of 0.1% thiamethoxam. To use in a foam generating system other than the Optigard ZT Foamer, follow these steps:

- 1) Calibrate applicator to deliver a 15:1 foam expansion ratio.
- 2) Fill tank with water to desired level.

- 3) Dispense contents of Unit Dose package (both syringes) into foamer tank. Use one Unit Dose package for each 650 ml (22 fl oz) water in tank.
- 4) Seal tank and swirl container to mix for 20–30 seconds.
- 5) Pressurize system and make application. Assure application equipment is used and maintained as per manufacturer's instructions.

[End optional language]

*[Begin optional language]*

**Mixing Procedures and Application Using Optigard ZT Foamer Equipment**

Each Optigard ZT Unit Dose is pre-measured to deliver approximately 3 gal of finished foam at a concentration of 0.1% thiamethoxam. To use in the Optigard ZT Foamer, follow these steps:

- 1) Fill tank with water to "fill to" line.
- 2) Dispense contents of one Unit Dose package (both syringes) into foamer tank.
- 3) Seal tank and swirl container to mix for 20–30 seconds.
- 4) pressurize system and make application. Assure application equipment is used and maintained as per manufacturer's instructions.

*[End optional language]*

*[Begin optional language—Unit Dose 5.6 fl oz]*

### **Mixing Procedures and Application Using Foamer Equipment**

Each Optigard ZT Unit Dose is pre-measured to add to 165 ml (5.6 fl oz) water and deliver approximately 0.75 gal of finished foam at a 15:1 expansion ratio at a concentration of 0.1% thiamethoxam. To use in a foam generating system, follow these steps:

- 1) Calibrate applicator to deliver a 15:1 foam expansion ratio. The Optigard ZT Foamer is precalibrated to deliver the appropriate expansion ratio.
- 2) Fill tank with water to desired level.
- 3) Dispense contents of Unit Dose package (both syringes) into foamer tank. Use one Unit Dose package for each 165 ml (5.6 fl oz) water in tank.
- 4) Seal tank and swirl container to mix for 20–30 seconds.
- 5) Pressurize system and make application. Assure application equipment is used and maintained as per manufacturer instructions.

*[End optional language—Unit Dose 5.6 fl oz]*

*[Begin optional language—Unit Dose 11 fl oz]*

### **Mixing Procedures and Application Using Foamer Equipment**

Each Optigard ZT Unit Dose is pre-measured to add to 325 ml (11 fl oz) water and deliver approximately 1.5 gal of finished foam at a 15:1 expansion ratio at a concentration of 0.1% thiamethoxam. To use in a foam generating system, follow these steps:

- 1) Calibrate applicator to deliver a 15:1 foam expansion ratio. The Optigard ZT Foamer is precalibrated to deliver the appropriate expansion ratio.
- 2) Fill tank with water to desired level.
- 3) Dispense contents of Unit Dose package (both syringes) into foamer tank. Use one Unit Dose package for each 235 ml (11 fl oz) water in tank.
- 4) Seal tank and swirl container to mix for 20–30 seconds.

*[End optional language—Unit Dose 11 fl oz]*

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**CONTROL OF WOOD DESTROYING INSECTS**


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Use Optigard ZT to control the following wood destroying insects. For specific application instructions refer to label text.

Pest	Application Method	Comments
Drywood Termites Remedial Control	Foam- Galleries Liquid – Galleries	Retreat as needed.
Carpenter Bees	Liquid or Foam – Gallery treatment	
Wood-Destroying Beetles and Borers	Liquid or Foam- Gallery or Wood Surface Treatment	

\*Finished dilution of foam applications based on concentration in finished foam (refer to section on **MIXING PROCEDURES**)

#### Control of Drywood Termites

When used as specified in this label, Optigard ZT provides effective remedial control of localized infestations of drywood termites, including species of *Incisitermes*, *Cryptotermes* and *Marginitermes*. Knowledge of the biology and behavior of the drywood termite species involved, the locations and the extent of the infestation(s) will help to ensure successful control.

Treatment requirements for drywood termite control may vary due to state and local regulations. For advice concerning current drywood termite control regulations under local conditions, consult your State structural pest control regulatory agency.

Optigard ZT has not been approved for application to soil for control of subterranean termites.

#### *Directions for Remedial Control of Drywood Termites in Infested Wood*

To control drywood termites in localized areas of infested wood in structures, apply 0.1% Optigard ZT foam preparation to voids and galleries in damaged wood, in spaces between wooden structural members or between wood and foundations. Locate galleries by using visual signs (e.g. fresh fecal pellets, or blistered wood), the presence of live pests, mechanical sounding techniques (tapping on the wood surface and listening for changes in sound to indicate changes in wood density), listening devices, motion detection devices or other technologies that help pinpoint drywood termite activity.

### *Wood Injection Method*

Drill small diameter holes of appropriate size for the injection tip, or use a self-puncturing, tip positioned to intersect termite galleries within infested wood. Drywood termite emergence or pellet kick-out holes connect directly to galleries and are indicators of potential sites to drill and inject Optigard ZT. Care should be taken to avoid electrical wiring, plumbing, etc., when drilling and injecting. Do not drill or puncture completely through wood. Spacing of the holes will depend on the distribution of insect activity and galleries. Injection holes may be clustered in areas with insect activity as indicated by damage, live insects, or other indicators previously described. Injection holes on opposite sides of large (4"x10" or larger) structural beams may be necessary to effectively penetrate galleries.

Apply sufficient volume of Optigard ZT foam preparation at each injection hole to coat termite galleries.

Re-treatment guidelines: Reapply if insect activity within treated areas is detected 4 or more weeks following treatment. For best results in treating galleries, inject Optigard ZT into new injection holes positioned between previous injection sites.

### **Control of Carpenter Bees (localized treatment)**

Apply 0.1% Optigard ZT foam preparation into carpenter bee galleries. Inject a sufficient amount of foam to fill galleries without allowing runoff.

### **Control of Wood-Destroying Beetles and Borers**

For control of wood-destroying beetles or borers, such as but not limited to: old house borers, powderpost beetles, false powderpost beetles, death-watch beetles, ambrosia or bark beetles. Apply Optigard ZT diluted to 0.1% as a foam to galleries, structural voids and or as wood surface treatments. For old house borers, or other beetles that form large galleries, treat the gallery system by drilling and injecting product with sufficient volume to cover the galleries. For beetles or borers that do not form galleries which can be readily injected (e.g. powderpost beetles) apply product as a foam to exposed wooden surfaces in non-living space areas in crawlspaces, basements, attics, to structural voids, to spaces between wood elements of a structure or at joints between wood and foundations. Applications should be made in sufficient volumes to coat the target surface but less than the volume that creates runoff. Retreat as needed to maintain protection. Allow treated surfaces to dry before contacting them.

Surface applications may also be used to supplement spot treatment for termites, as a means to prevent re-infestation by swarming adult termites. Apply 0.1% Optigard ZT foam preparation to exposed wood surfaces in areas not used as living spaces, such as attics, crawlspaces, unfinished basements or structural voids.



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**CONTROL OF PESTS IN VOIDS**

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Arthropod pests may occasionally invade structures through wall voids or other structural voids by entering cracks or other openings to the exterior. In conjunction with other appropriate methods such as exclusion or perimeter insecticide applications, Optigard ZT can control nuisance arthropods that move through or are harbored in wall void areas. For best results, use Optigard ZT as part of an Integrated Pest Management (IPM) approach, in conjunction with other appropriate control methods such as perimeter insecticide applications, use of baits and the use of exclusion or other non-chemical control methods.

**Method of Injection into Voids**

To control (listed) pests, apply Optigard ZT as a 0.1% finished foam to surfaces inside structural voids. Application to structural voids such as wall voids should be done by drilling a small hole into the void area, or using a self-puncturing tip, and injecting product as a foam so that wood surfaces inside the void area are treated. Existing openings such as those around door or window frames may also be used as entry points to inject product. Apply enough volume to lightly coat the target surface (approximately 60–120 ml (2–4 fl oz) finished foam preparation per application point).

Use Optigard ZT for control of the following pests in voids and around structures.

Target Pests	Comments
Ants* (except carpenter ants and Pharaoh ants) Beetles Boxelder bugs Cockroaches Crickets Earwigs Firebrats* Lady beetles Millipedes Pillbugs Silverfish Sowbugs	* Optigard ZT may be used as a foam treatment to control ants (except carpenter ants and Pharaoh ants) in termite monitoring stations (see <b>Treatment of In-Ground Outdoor Monitoring Stations</b> section for instructions.)  Ant (except carpenter ants and Pharaoh ants) mounds may also be spot treated with 0.1% finished foam.

*[Begin optional language]*

**Fixed In-Wall Delivery Systems**

Closed, in-wall insecticidal delivery systems such as permanently installed piping or flexible tubing may also be used to deliver product to inaccessible areas. For delivery systems that allow foam injection, use Optigard ZT at 0.1% foam, prepared according to the **Mixing Procedures and Application Using Foamer Equipment** section. Prepare the finished product for application with an appropriate foaming device and inject into system as specified by delivery system manufacturer.

*[End optional language]*

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**INTERIOR PEST CONTROL**

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In addition to void applications (see section **Control of Pests in Voids**), crack and crevice or spot applications may be made in areas not easily accessible to humans to control listed pests. Treatment areas include points or cracks between different elements of construction, spaces between equipment and floor or wall, openings leading to voids in walls, spaces beneath equipment or cabinets or spaces between trim and floors or walls.

Apply 0.1% Optigard ZT dilution as a spot or crack and crevice treatment directly into cracks and crevices or other non-exposure areas. Do not make surface applications to living spaces.

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**FOOD/FEED HANDLING ESTABLISHMENT USE**

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Food/feed areas include areas for receiving, storage, packing (canning, bottling, wrapping, boxing), preparing foods, edible waste storage, and enclosed processing systems (mills, dairies, edible oils, syrups). Serving areas are also considered a food/feed area when food is exposed and facility is in operation.

***Application within food/feed areas of food/feed handling establishments is limited to structural void treatments only. Do not apply Optigard ZT to areas where food/feed utensils or processing surfaces may become contaminated. If insecticide contacts an exposed surface where food is handled, wash exposed surface with an effective cleaning compound followed by a potable water rinse prior to use.***

Apply Optigard ZT as a 0.1% finished foam directly into structural voids between different elements of construction (e.g., voids and hollow spaces in walls, floors and ceilings, around plumbing pipes, doors and windows, cabinets and closets). Target places where target pests may enter the structure.

*[Begin optional language]*

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**EXTERIOR PEST CONTROL**

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For control of (listed) pests, including ants (except carpenter ants and Pharaoh ants), use a 0.1% foam preparation of Optigard ZT as an outdoor spot application, crack and crevice or void application. Apply to surfaces of structures where pests are likely to enter including but not limited to: utility entry points, soffit areas, eaves and attic vents, around doors or windows, weep or ventilation holes. For ants (except carpenter ants and Pharaoh ants), treat along sidewalks or landscape edging or other areas where ants (except carpenter ants and Pharaoh ants) are likely to trail. Ant mounds may also be treated with a spot application or with a subsurface injection tool. Retreat as necessary to maintain control.

Do not allow product to contact plants in bloom if bees are foraging in the treatment area.

*[End optional language]*

*[End Unit Dose language]*

**STORAGE AND DISPOSAL**

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

**Storage**

Store unused product in original container only. Store out of reach of children and animals and in a cool dry place.

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

**Pesticide Disposal**

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

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

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  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, or by other procedures approved by state and local authorities.

**Container Handling [greater than 5 gallons - bulk]**

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

or by other procedures approved by state and local authorities.

**Container Handling [Unit Dose packaging]**

Non-refillable container. Do not reuse empty container. Dispose of in a sanitary landfill or by other procedures allowed by state and local authorities.

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