100-1170 03/28/2008 1/30

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

MAR 28 2008

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Mr. Thomas J. Parshley
Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419

Subject: Additional Pest and Use Sites
Optigard® ZT,
EPA Reg. No. 100-1170
Your Submission date, October 3, 2007

Dear Mr. Parshley:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable provided the following conditions are met:

2. On pages 5, 6 and 18 delete the word "General" from "General Information, General Application Information and General Procedures". The section may be renamed what anything of you prefer what the word "General". The Agency is requiring all label to have specific directions.

3. Based upon the submitted efficacy data the following changes must be made:
   - Delete all reference to carpenter ants. Both laboratory and field data are required to support a claim for control of carpenter ants.
   - Delete reference to subterranean termites, everywhere the term and directions for use occurs on the label. If you wish to market a product with a "kills" only claim with appropriate disclaimers, then a separate label/registration must be submitted.
   - Delete reference to control of bees in wall voids. No efficacy data has been submitted to support this claim.
   - Delete all reference to centipedes. This is a public health pest, it was overlooked in previous efficacy reviews.

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- Delete all reference to drywood termites – **Preventatives Control.** A remedial control claim was deemed acceptable, not preventative treatment..

- Fire ant directions for use are acceptable provided the submitted data cited for the Flagship product is being used. Revise the directions for use to read as follows: (see enclosed efficacy review)

INDIVIDUAL MOUND TREATMENTS (FIRE ANTS) For ants (Solenopis spp.) prepare a drench solution at a concentration rate of 1-3 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 1 gallon of drench solution per mound. For control of larger mounds, apply 2-3 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 per mound. Not for broadcast application.

- Every where the term "ants" appears, state ants (except carpenter ants and pharaoh ants).

4. Submit two copies of your final printed label before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitute acceptance of these conditions.

A stamped copy of the label is enclosed for your records. If you have any questions regarding this notice, please contact me (703) 305-5409.

Sincerely,

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

Enclosure: Label
Efficacy Review

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{Label language for all Optigard ZT labels}

(Booklet)

Optigard™ ZT
Insecticide

To be applied only by or under the supervision of commercial applicators responsible for pest control programs.

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

Active Ingredient:	
Thiamethoxam[1] (CAS No. 153719-23-4).....	21.6%
Other Ingredients:	78.4%
Total:	100.0%

[1] a thianicotinyl neonicotinoid insecticide

Optigard ZT is a suspension concentrate formulation that contains 2 lbs. thiamethoxam per gal. 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. XXX
Product of XXXXX

Formulated in the USA
SCP 1170A-M(draft)

[Optional language: For use of optional Optigard ZT Unit Dose Dispenser, see instructions under Mixing Procedures.]

Net Contents

ACCEPTED
with COMMENTS
In EPA Letter Dated:
MAR 28 2008
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 100-1170

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FIRST AID	
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for treatment advice.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call **1-800-888-8372**	

PRECAUTIONARY STATEMENTS

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.

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Personal Protection Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material - Category A (e.g., barrier laminate, butyl rubber, 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:

- Wash hands thoroughly 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 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.

Physical and Chemical Hazards

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

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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. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. 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 the 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.

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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.

GENERAL INFORMATION

Use Restrictions

- **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/1000 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.

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GENERAL APPLICATION INFORMATION

General Procedures

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 general 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 subterranean and drywood termites, wood-destroying beetles, carpenter bees and carpenter ants, Optigard ZT may be used as a spot treatment (including bait stations), wood surface application, or void application.

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MIXING PROCEDURES

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 $^1/_4$ - $^1/_3$ 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.)

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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 recommended 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	

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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
• Preventive Control	Liquid- Wood surfaces in non-living spaces	0.1%	(treatment for swarming adults)
Carpenter Bees	Liquid or Foam – Gallery treatment	0.1%	
Carpenter Ants	Liquid or Foam – Void or Wood Treatment	0.1%	
Wood-Destroying Beetles and Borers	Liquid or Foam- Gallery or Wood Surface Treatment	0.1%	
Subterranean Termites	Liquid or Foam • Above-ground voids, wood surfaces, non-living areas • Supplemental Soil Spot Treatment • Outdoor Termite Monitoring Station	0.05%-0.1%	

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

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Control of Drywood Termites

When used as recommended 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.

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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 Carpenter Ants

For control of carpenter ants in structures, apply a 0.1% finished solution of Optigard ZT as a void application or to infested wood portions of structures. Void areas may also be treated using foam. Apply through small holes drilled into voids, or using a self-puncturing tip, where ants or their nests are present. Existing holes created by construction features may also be used to gain access to void treatment areas. Retreat as needed to maintain control.

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.

CONTROL OF SUBTERRANEAN TERMITES (SPOT TREATMENT)

Above-Ground Subterranean Termites

Optigard ZT may be used to control subterranean termites in above-ground locations such as voids, galleries in damaged wood, or spaces between wood members of a structure. Apply 0.05%-0.1% dilution in sufficient volume using foam or liquid application. Carton nests in void areas may also be treated. Surface applications using

a coarse spray or mist to exposed wood in areas not used as living spaces, such as attics, crawlspaces, unfinished basements or structural voids, may be made to control winged termite reproductives or exposed workers.

Supplemental Termite Spot Treatments

Optigard ZT may be used as a supplemental spot application when applied in conjunction with another registered termite control product or system, including bait systems or borate applications, provided the primary system or treatment is approved for use by the state structural pest control regulatory authority as a termite treatment, and the primary treatment is applied according to label directions. Spot applications of Optigard ZT may be used as a supplemental treatment with pre-construction or post-construction timing to critical areas of the structure such as plumbing and utility entry sites, bath traps, expansion joints, or outside foundation walls. Use Optigard ZT as a 0.05-0.1% dilution as a secondary treatment to control infestations of termites or to provide supplemental control of termites in critical areas of structures. When applied to listed critical areas, use a volume of finished product appropriate to the treated area. For vertical treatment zones, such as plumbing penetrations or along foundation walls, use 4 gallons finished product per 10 linear feet of treated area. For horizontal treatment zones, use 1 gallon per 10 square feet of treated area. Do not exceed 17.0 fl. oz. (502 ml.) of Optigard ZT product per acre per year.

Application of Optigard ZT as a spot treatment for subterranean termites is not intended as a substitute for soil-applied termiticides, baiting programs, wood treatments, mechanical alterations or other termite control strategies. The product can be used to control infestations of termites but should not be used solely to provide structural protection from termite damage.

Treatment of In-Ground Outdoor Monitoring Stations

For control of subterranean termites or ants found in monitoring stations, apply Optigard ZT as a 0.05-0.1% dilution to provide localized reduction in subterranean termite or ant populations. Monitoring stations may include any unit designed for interception of subterranean termites or ants installing in-ground around structures. For in-ground monitors, apply 1-4 pints of finished solution in and around the monitoring station. Application should be made directly to the inside of the monitoring station, and where possible, in soil within 12 inches around the station. A rodding tool may be used to inject solution into the soil around the station but application should not be made more than 3 inches below the depth of the monitoring unit. If applying Optigard ZT as a foam, use sufficient volume to fill station, but not to excess.

Treatment of monitoring stations has not been shown to provide structural protection from subterranean termites, and is not considered a stand-alone treatment. Application of Optigard ZT to kill termites in and around monitoring stations should be used only as a supplement to a state-approved subterranean termite control program.

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CONTROL OF PESTS IN VOIDS

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)

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

Target Pests	Dosage of Optigard ZT Insecticide	Remarks
Ants* Bees Beetles Boxelder bugs Centipedes 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 in termite monitoring stations (see **Treatment of In-Ground Outdoor Monitoring Stations** section for instructions) 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 recommended by delivery system manufacturer.

INTERIOR PEST CONTROL

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

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equipment capable of delivering a pin stream of insecticide. Applications may also be made as a foam preparation. Do not make general surface applications to living spaces.

FOOD/FEED HANDLING ESTABLISHMENT USE

Food/feed areas include areas for receiving, storage, packing (canning, bottling, wrapping, boxing), preparing, 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.

[optional language:

EXTERIOR PEST CONTROL

For control of (listed) pests, use a 0.1% dilution of Optigard ZT as a void application, as an outdoor general 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/1000 sq. ft. as a liquid. Optigard ZT may also be applied as a mist or foam. For ants, treat along sidewalks or landscape edging or other areas where 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. 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.*]*

INDIVIDUAL MOUND TREATMENTS (FIRE ANTS)

For control of fire ants (*Solenopsis* spp.) prepare a drench solution at a concentration of 0.1 to 0.3 ounces of Optigard ZT per gallon of water. Thoroughly mix solution and apply directly to mounds. For optimum control of small ant mounds (<6 inches in diameter at the surface) apply one-half to one gallon of the drench solution per mound. For

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optimum control of larger ant mounds, apply 2 to 3 gallons of the drench solution per mound. The drench application should be directed at the center of the mound and include a 6 inch diameter circle around the center of the mound. Do not apply less than 0.5 gallons or more than 3 gallons of drench solution per mound. Do not exceed 17.0 fl. oz. (502 ml.) of Optigard ZT product per acre per year.

[optional language:

APPLICATION TO LANDSCAPE ORNAMENTAL PLANTS

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/1000 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.*]*

STORAGE AND DISPOSAL

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

Storage

Store unused product in original container only, 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 Disposal

Triple rinse (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state or local authorities.

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Optigard™ ZT, the Syngenta logo and the CP FRAME are trademarks of a Syngenta Group Company.

For non-emergency (e.g., current product information), call
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:
Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, North Carolina 27419-8300
www.syngenta-us.com

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GENERAL APPLICATION INFORMATION

General Procedures

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 subterranean and drywood termites, wood destroying beetles, carpenter bees and carpenter ants, Optigard ZT may be used as a spot treatment (including bait stations), wood surface application, or void application.

MIXING PROCEDURES

[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.]

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[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. *]*

[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 manufacturers instructions.]

[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.*]*

[optional language:
Use of Optigard ZT Unit Dose Dispenser
For use of the Optigard ZT Unit Dose Dispenser, please refer to the supplemental sheet **Optigard ZT Unit Dose Dispenser Instructions**, as packed with this container, or

available from your distributor, or by calling Syngenta Crop Protection, Inc. at 1-800-344-9481.*]*

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	Comments
Drywood Termites • Remedial Control • Preventive Control	Foam- Galleries Liquid – Galleries Liquid- Wood surfaces in non-living spaces	Retreat as needed (treatment for swarming adults)
Carpenter Bees	Liquid or Foam – Gallery treatment	
Carpenter Ants	Liquid or Foam – Void or Wood Treatment	
Wood-Destroying Beetles and Borers	Liquid or Foam- Gallery or Wood Surface Treatment	
Subterranean Termites	Liquid or Foam • Above-ground voids, wood surfaces, non-living areas • Supplemental Soil Spot Treatment • Outdoor Termite Monitoring Station	

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

Control of Drywood Termites

When used as recommended 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 Carpenter Ants

For control of carpenter ants in structures, apply 0.1% Optigard ZT foam preparation as a wall void application or to infested wood portions of structures. Apply through small holes drilled into voids, or using a self-puncturing tip, where ants or their nests are present. Existing holes created by construction features may also be used to gain access to void treatment areas. Retreat as needed to maintain control.

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.

CONTROL OF SUBTERRANEAN TERMITES (SPOT TREATMENT)

Above-Ground Subterranean Termites

Optigard ZT may be used to control subterranean termites in above-ground locations such as voids, galleries in damaged wood, spaces between wood members of a structure. Carton nests in void areas may also be treated. Inject sufficient quantity of 0.1% Optigard ZT foam preparation to lightly coat target surfaces but do not allow runoff.

Supplemental Termite Spot Treatments

Optigard ZT 0.1% foam preparation may be used as a supplemental spot application when applied in conjunction with another registered termite control product or system, including bait systems or borate applications, provided the primary system or treatment is approved for use by the state structural pest control regulatory authority as a termite treatment, and the primary treatment is applied according to label directions. Use Optigard ZT foam as a secondary treatment to control known or suspected infestations of termites or to critical areas of the structure.

Application of Optigard ZT as a spot treatment for subterranean termites is not intended as a substitute for soil-applied termiticides, baiting programs, wood treatments, mechanical alterations or other termite control strategies. The product can be used to control infestations of termites but should not be used solely to provide structural protection from termite damage.

Treatment of In-Ground Outdoor Monitoring Stations

For control of subterranean termites or ants found in monitoring stations, apply 0.1% Optigard ZT foam preparation to provide localized reduction in subterranean termite or ant populations. Monitoring stations may include any unit designed for interception of subterranean termites or ants installing in-ground around structures. For in-ground monitors, apply 1 pint to 1 quart of finished foam in and around the monitoring station. Application should be made directly to the inside of the monitoring station, and where possible, in soil within 12 inches around the station. Foam may be injected in and around the station but the application should not be made more than 3 inches below the depth of the monitoring unit.

Treatment of monitoring stations has not been shown to provide structural protection from subterranean termites, and is not considered a stand-alone treatment. Application of Optigard ZT to kill termites in and around monitoring stations should be used only as a supplement to a state-approved subterranean termite control program.

CONTROL OF PESTS IN VOIDS

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.

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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*	
Bees	* Optigard ZT may be used as a foam treatment to control ants in termite monitoring stations (see **Treatment of In-Ground Outdoor Monitoring Stations** section for instructions)
Beetles	
Boxelder bugs	
Centipedes	
Cockroaches	
Crickets	
Earwigs	
Firebrats	Ants mounds may also be spot treated with 0.1% finished foam.
Lady beetles	
Millipedes	
Pillbugs	
Silverfish	
Sowbugs	

[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 recommended by delivery system manufacturer.*]*

INTERIOR PEST CONTROL

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 general surface applications to living spaces.

FOOD/FEED HANDLING ESTABLISHMENT USE

Food/feed areas include areas for receiving, storage, packing (canning, bottling, wrapping, boxing), preparing, 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.

[optional language:

EXTERIOR PEST CONTROL

For control of (listed) pests, including ants, use a 0.1% foam preparation of Optigard ZT as a 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, treat along sidewalks or landscape edging or other areas where 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.*]*

STORAGE AND DISPOSAL

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

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Storage

Store unused product in original container only, 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 Disposal

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

For non-emergency (e.g., current product information), call Syngenta Crop Protection at 1-800-334-9481.

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SCP 1170-M(draft)

OPT ZT 1170A-M(draft)-lg-10-1-07 000100-01170.20071001.optigardzt.pdf

(Non-Detachable Container Label- For Non-Unit Dose and Unit Dose Containers)

Optigard™ ZT
Insecticide

To be applied only by or under the supervision of commercial applicators responsible for pest control programs.

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

Active Ingredient:	
Thiamethoxam[1] (CAS No. 153719-23-4).....	21.6%
Other Ingredients:	78.4%
Total:	100.0%

[1] a thianicotinyl neonicotinoid insecticide

Optigard ZT is a suspension concentrate formulation that contains 2 lbs. thiamethoxam per gal. formulated product (244 grams thiamethoxam per liter formulated product).

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements, directions for use and complete storage and disposal statements in booklet.

EPA Reg. No. 100-1170

EPA Est. XXX

SCP 1170-M(draft)

Net Contents

PRECAUTIONARY STATEMENTS

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.

Refer to FIRST AID, Environmental Hazards, Physical and Chemical Hazards, and complete Storage and Disposal sections in booklet.

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SCP 1170A-M(draft)

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