10182-413 7-24-96

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
x Registration
___ Reregistration

(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
10182-413	24 JUL 1996

Term of Issuance: Conditional

Name of Pesticide Product: Lambda-Cyhalothrin CS Insecticide

Name and Address of Registrant (include ZIP Code):

Zeneca Ag Products
1800 Concord Pike
P.O. Box 15458
Wilmington, DE 19850-5458

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

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

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

This product is unconditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the following label changes:

   a. Revise the EPA Registration Number to read, "EPA Reg. No. 10182-413".

   b. Move the "Spray Dilutions" chart from the back of the label to the beginning of the Subterranean Termite Control section.

   c. Under Preconstruction, Horizontal Barriers add the following: "If the fill is washed gravel or other coarse material, it is important that a sufficient amount of dilution be use to reach the soil substrate beneath the coarse fill."

CONCURRENCES

SYMBOL	Signature of Approving Official:				Date:		
SURNAME	Blackwell						
DATE	7/23/96						

EPA Form 8570-6

d. Under Foam Applications, provide more specific information on how much concentrate must be applied either as an emulsion, foam or combination of both, etc.

e. Under directions for use for bath traps replace "cellular" with "cellulose".

f. Add the following statement to the label under the General Restrictions/Precautions section:

"Do not use in the food/feed areas of food/feed handling establishments, restaurants or other areas where food/feed is commercially prepared/processed."

3. Submit two copies of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

George T. LaRocca
Product Manager 13
Insecticide & Rodenticide Branch
Registration Division (H7505C)

LAMBDA-CYHALOTHRIN CS Insecticide

For Sale to, Use and Storage Only by Professional Pest Control Operators

ACTIVE INGREDIENT:

Lambda-cyhalothrin[1] [1α(*S**),3α(*Z*)]-(±)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate	9.7%
INERT INGREDIENTS:	90.3%
Total	100.0%

[1]Synthetic pyrethroid

EPA Reg. No. 10182
EPA Est. No.

Net Contents:

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Side Panel for Statement of Practical Treatment and Precautionary Statements

Made in U.S.A.
ZENECA Professional Products
ZENECA Inc.
Wilmington, DE 19850-5458

ACCEPTED
with COMMENTS
In EPA Letter Dated

24 JUL 1996

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.
10182-413

STATEMENT OF PRACTICAL TREATMENT

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF SWALLOWED: If victim is alert and not convulsing, rinse mouth out and give 200-300 mL (1 cup) of water to dilute material. **IMMEDIATELY** contact local Poison Control Center. Vomiting should only be induced under the direction of a physician or a Poison Control Center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. **IMMEDIATELY** transport victim to an emergency facility.

IF IN EYES: Flush with plenty of water for a minimum of 15 minutes. Get medical attention if irritation persists.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D (327-8633).

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN OR INHALED. CAUSES EYE IRRITATION. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist or vapors. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to fish. Do not contaminate water when disposing of equipment washwaters. Do not apply directly to any body of water. Apply this product only as specified on this label. Care should be used, when making applications, to avoid household pets, particularly fish and reptile pets.

PHYSICAL AND CHEMICAL HAZARDS

Do not use this product in or on electrical equipment due to the possibility of shock hazard.

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

The Directions for Use of this product should 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, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ZENECA or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ZENECA and Seller harmless for any claims relating to such factors.

ZENECA 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. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ZENECA, and Buyer and User assume the risk of any such use. ZENECA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall ZENECA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ZENECA 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 ZENECA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

ZENECA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ZENECA.

DIRECTIONS FOR USE

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

GENERAL INFORMATION ON THE USE OF THIS PRODUCT FOR TERMITE CONTROL

Chemicals for soil treatment are used to establish a barrier against termite attack. The chemical emulsion [solution] must be adequately dispersed in the soil to provide a barrier between the wood in the structure and the termite colonies in the soil.

For the effective use of this product, it is necessary that the service technician be familiar with current control practices including trenching, rodding, subslab injection, and low-pressure spray applications. These techniques must be correctly employed to prevent or control infestations by subterranean termite species of *Reticulitermes, Zootermopsis, Heterotermes* and *Coptotermes*. Choice of appropriate procedures should include consideration of such variable factors as the design of the structure, water table, soil type, soil compaction, grade conditions, location and type of domestic water supplies and drainage systems. The biology and behavior of the termite species involved are important factors to be known as well as suspected location of the colony and severity of the infestation within the structure to be protected.

Effective termite control also includes elimination of termite access to moisture by recommending repair of faulty construction grade and/or plumbing. It is recommended to remove all wood and cellulose containing debris in contact with soil from crawl spaces, porches, and around foundations.

For advice concerning current control practices with relation to the specific local conditions, consult resources in structural pest control and the State regulatory agency.

SUBTERRANEAN TERMITE CONTROL

USE DIRECTIONS

Apply to establish subsurface termite control barriers as specified on product labeling. Avoid contamination of public and private water supplies by following these precautions:

- Use anti-backflow equipment or procedures.
- Do not treat soil beneath structures that contain wells or cisterns.
- Care must be taken to avoid runoff. Do not treat soil that is water-saturated or frozen.
- Care should be taken that the treatment solution is not introduced into the gravel and/or pipe drainage system which may be located on the exterior of the foundation in close proximity to the footing of the structure.

Consult State and local specifications for recommended distance of treatment areas from wells. Refer to Federal Housing Administration Specifications for guidance on preconstruction treatments.

After Treatment: Securely plug all holes drilled in construction elements of commonly occupied areas of structures, including unfinished basements, enclosed porches, garages, and workshops.

APPLICATION VOLUMES

To ensure thorough coverage in different soil types, it may become necessary to adjust the volume being applied, provided there is a corresponding rate adjustment so that the amount of active ingredient applied to the soil remains the same. In situations which will not accept large amounts of water, such as clay-rich soils, reduced volumes of emulsion [solution] can be used which will deliver the appropriate concentration of termiticide to the soil. This may also apply to sensitive areas and/or applications where less volume may be desirable.

Where soil conditions will not accept application of specified volume (gallons) of emulsion [solution], the 0.25% emulsion [solution] may be applied at one-half the labeled application volume or a 0.5% emulsion [solution] may be applied at one-half the labeled application volume. Distribute the treatment evenly.

NOTE: When volume is reduced, the hole spacing for subslab injection and soil rodding may require similar adjustments to account for lower volume dispersal of the termiticide in the soil.

VOLUME ADJUSTMENT CHART		
Volume Allowed	Rate (% Emulsion [solution])	
	0.25%	0.5%
Horizontal (gallons emulsion [solution]/10 ft^2)	1 gallon	½ to 1 gallon
Vertical (gallons emulsion [solution]/10 linear ft)	4 gallons	2 to 4 gallons

PRECONSTRUCTION SUBTERRANEAN TERMITE TREATMENT

Effective preconstruction subterranean termite control requires the establishment of an unbroken vertical and/or horizontal chemical barrier between wood in the structure and the termite colonies in the soil.

To meet F.H.A. termite-proofing requirements, follow the latest edition of the Housing and Urban Development (H.U.D.) Minimum Property Standards.
Use a 0.25% emulsion [solution] for subterranean termites. For a 0.25% emulsion [solution] mix 2½ gallons of LAMBDA-CYHALOTHRIN CS in 99 gallons of water.

After grading is completed and prior to pouring of the slab, slab-supported or constructed porches, and other critical areas, make the following treatments:

HORIZONTAL BARRIERS: Horizontal barriers may be established in areas intended for covering such as floors, porches, and other critical areas, application shall be made by a low-pressure spray (less than 50 p.s.i. at the nozzle).

Apply the emulsion [solution] at the rate of 1 gallon per 10 square feet to fill dirt. If fill is washed gravel or other coarse material, apply a 0.125 - 0.25% emulsion [solution] at the rate of 1½ to 2 gallons per 10 square feet. If concrete slabs cannot be poured over soil the same day it has been treated, a waterproof cover, such as polyethylene sheeting, should be placed over the soil. This is not necessary if foundation walls have been installed around the treated soil.

VERTICAL BARRIERS: Vertical barriers may be established around the base of foundations, plumbing, back-filled soil against foundation walls, and other critical areas: applications may be made by rodding and/or trenching. Apply the emulsion [solution] at the rate of 4 gallons per 10 linear feet per foot of depth. For example, a footing 3 feet deep would require 12 gallons of emulsion [solution] per 10 linear feet.

Outside and inside perimeter applications may be made by rodding and/or trenching. When rodding from grade or from the bottom of a shallow trench, rod holes should be spaced in a manner that will allow for application of a continuous chemical barrier. Rod holes should not extend beneath the top of the footings.

A trench need not be wider than 6 inches. Rod from the base of a shallow trench to the top of the footings. Low-pressure spray (less than 50 p.s.i. at the nozzle) may be used to treat soil which will be replaced in the trench. Mix the emulsion [solution] with the soil as it is being replaced in the trench.

When the footer is more than 4 feet below grade, the applicator may trench and/or rod along foundation wall at 2 to 4 feet of depth. The actual depth of treatment should vary depending on soil type and degree of compaction.

Soil should be treated around sewer lines, plumbing, or around any other utility extending from the soil through a slab.

HOLLOW MASONRY UNITS OF THE FOUNDATION: In preconstruction situations in which horizontal barrier application is not made to soil prior to pouring the footing, treatment may be made through masonry voids to establish a continuous chemical barrier at the top of the footing. Apply at the rate of 2 gallons per 10 linear feet. Apply the emulsion [solution] so it will reach the footing.

CRAWL SPACES: For crawl spaces apply at the rate of 4 gallons of emulsion [solution] per 10 linear feet per foot of depth from grade to the top of the footing. When the footer is more than 4 feet below grade, the applicator may trench and/or rod along foundation wall at 2 to 4 feet of depth. The actual depth of treatment should vary depending on soil type and degree of compaction. Application may be made by rodding and/or trenching. Treatment should include both sides of foundation and around all piers and pipes.

- Rod holes should be spaced to provide a continuous chemical barrier.
- Trench need not be wider than 6 inches nor below the foundation or top of footing.

POSTCONSTRUCTION TREATMENTS

Use a 0.25% emulsion [solution] for subterranean termites. For a 0.25% emulsion [solution] mix 2½ gallons of LAMBDA-CYHALOTHRIN CS in 99 gallons of water.

Postconstruction applications may be made by subslab injection, rodding, and/or trenching using low-pressure spray not exceeding 25 p.s.i. at the nozzle.

Do not apply emulsion [solution] until location of heat or air-conditioning ducts, vents, and water and sewer (or plumbing) lines are known and identified. Caution must be taken to avoid contamination of these structural elements and airways.

SLAB-ON-GROUND: Apply the emulsion [solution] at the rate of 4 gallons per 10 linear feet per foot of depth. Application shall be made by sub-slab injection, trenching, and/or rodding. Injectors should not extend below the tops of the footings.

Treat the soil from grade to the top of the footing along the outside and, where necessary, along the inside of the foundation perimeter. Treatment may also be required along one side of a partition wall (especially where the wall is connected to the floor by fixtures inserted in the slab) and along cracks, expansion joints, and other critical areas.

Drill holes should be spaced about 10 to 18 inches apart, or close as necessary, to provide a continuous chemical barrier.

Where necessary, treatment may be made by drilling through the foundation walls from the outside and injecting the chemical just beneath the slab or along the inside of the foundation.

Along the outside of the foundation walls where shallow foundations exist (1 foot or less), dig a narrow trench approximately 6 inches wide and not below the top of the footing. Apply the emulsion [solution] at the rate of 2 gallons per 10 linear feet. As the soil is being replaced into the trench, apply another 2 gallons per 10 linear feet to the backfill.

When making soil applications to the foundations extending deeper than I foot, follow instructions under **BASEMENTS - Outside Perimeter.** (See exception for monolithic slabs immediately following.) **Note: For monolithic slab construction a vertical barrier** may be established along the outside of foundation walls from grade to the bottom of the monolithic poured concrete foundation. Where the foundation extends deeper than one foot, rod holes should not extend beneath the bottom of the monolithic poured concrete foundation.

HOLLOW MASONRY UNITS OF FOUNDATION WALLS: Treatment may be made through masonry voids to establish a continuous chemical barrier at the top of the footing. Apply at the rate of 2 gallons per 10 linear feet of footing. Where this treatment is necessary, access holes must be drilled below the sill plate and should be through a lower mortar joint as close as possible to the footing.

When treating behind veneer, care should be taken not to drill beyond the veneer. If concrete blocks are behind the veneer, both the blocks and the veneer may be drilled and treated at the same time.

BASEMENTS: Apply the emulsion [solution] at the rate of 4 gallons per 10 linear feet per foot of depth from the grade to the top of the footing. For example a footing 3 feet deep would require 12 gallons of emulsion [solution] per 10 linear feet. Application shall be made by subslab injection, trenching, and/or rodding.

Inside: Treatment may be required along inside of foundation walls and along one side of interior partition walls especially where the wall is connected by fixtures inserted in the floor. Application may also be necessary around sewer pipes, floor drains, conduits, or any cracks in the basement floor. Drill holes should be spaced about 10 to 18 inches apart, or as close as necessary, to provide a continuous chemical barrier. **Note:** Sandy soils will tend to give less lateral dispersion than clay soils. Spacing should be determined by soil type.

Outside Perimeter: Applications must be made by rodding and/or trenching. When rodding from grade or from the bottom of a shallow trench, rod holes should be spaced in a manner that will allow for application of a continuous chemical barrier. Rod holes should not extend beneath the top of the footings.

A trench need not be wider than 6 inches. Rod from the base of a shallow trench to the top of the footings. Low-pressure spray (not exceeding 25 p.s.i.) may be used to treat soil which will be replaced in the trench. Mix the emulsion [solution] with the soil as it is being replaced in the trench.

When the footer is more than 4 feet below grade, the applicator may trench and/or rod along foundation wall at 2 to 4 feet of depth. The actual depth of treatment should vary depending on soil type, degree of compaction, and location of termite activity.

HOLLOW MASONRY UNITS OF THE FOUNDATION AND/OR BASEMENT WALL (BELOW GRADE): Treat so as to make a continuous chemical barrier in the voids. Apply the emulsion [solution] at the rate of 2 gallons per 10 linear feet. Apply the emulsion [solution] so it will reach the footing.

ACCESSIBLE CRAWL SPACES: Apply the emulsion [solution] at the rate of 4 gallons per 10 linear feet per foot of depth from the grade to the top of the footing. For example, a footing 3 feet deep would require 12 gallons of emulsion [solution] per 10 linear feet. For best results application should be made by rodding and/or trenching.

- Treat both sides of foundation and around all piers and pipes. When rodding from grade or from the bottom of a shallow trench, rod holes should be spaced in a manner that will allow for application of a continuous chemical barrier. Rod holes should not extend beneath the top of the footings.

- A trench need not be wider than 6 inches. Rod from the base of a shallow trench to the top of the footings. Low-pressure spray (not exceeding 25 p.s.i.) may be used to treat soil which will be replaced in the trench. Mix the emulsion [solution] with the soil as it is being replaced in the trench.

- When the footer is more than 4 feet below grade, the applicator may trench and/or rod along foundation wall at 2 to 4 feet of depth. The actual depth of treatment should vary depending on soil type, degree of compaction, and location of termite activity.

- To prevent subterranean termites from constructing tubes from soil to crawl space wood members above, an overall soil treatment of this product may be applied. Remove all cellulose debris before application of 1 gallon per 10 square feet overall. Use fans to exhaust crawl space air when working in a confined space. Wear appropriate protective clothing and equipment including, gloves, and unvented goggles. Keep children and pets out of treated area in crawl space until surface is dry.

- When treating plenums or crawl spaces, turn off the air circulation system of the structure until application-generated dust or spray mist has settled and treated surface is dry.

INACCESSIBLE CRAWL SPACES: Inaccessible crawl spaces are those in which the interior clearance prohibits entry and treatment by the applicator. The following methods of treatment may be used:

- Excavation of the crawl space to make it accessible, then treat as an accessible space.
- Drill through the foundation wall and treat the soil perimeter at a rate of 4 gallons of emulsion [solution] per 10 linear feet per foot of soil depth.*
- It may be necessary to create access by cutting through the floor above the crawl space.
- Apply to the soil surface of the crawl space with a coarse fan spray with pressures not exceeding 25 p.s.i. at the nozzle. Apply at the rate of 1 gallon of emulsion [solution] per 10 square feet.*

***NOTE:** Children and pets should be kept out of treated area until surface is dry.

If adequate ventilation is not available in the crawl space wear a respirator approved by the Mine Safety and Health Administration during treatment.
It is recommended that inadequately ventilated crawl spaces be brought into compliance with FHA Minimum Property Standards specifying 1 square foot of ventilator opening per 150 square feet of crawl space area.

BATH TRAPS: Where there is exposed soil beneath and around plumbing/waste pipe entrances through a concrete slab, this soil may be treated with 0.25% emulsion [solution] of this product.

An access door for inspection and treatment should be cut and installed if not already present. After inspection and removal of any wood (form board materials) or cellular debris, treat the soil by rodding and/or flooding with 0.25% emulsion [solution] of this product.

FOAM APPLICATIONS

LAMBDA-CYHALOTHRIN CS insecticide emulsion [solution] may be converted to a foam and the foam used to treat voids to control or prevent termite, ant, bee, wasp infestations or other arthropods harboring under slabs and in other void areas.

Rates: Use a 0.25% to 0.5% emulsion [solution] converted to a foam with expansion characteristics from 2 to 20 times.

Note: When using a foaming product be sure that it is compatible with LAMBDA-CYHALOTHRIN CS insecticide.

Applications Under Slabs or to Soil in Crawl Spaces:

- Applications should be made using LAMBDA-CYHALOTHRIN CS foam in combination with liquid emulsion [solution] applications.
- The total amount of product applied with the combination of foam and liquid emulsion [solution] should be equivalent to that of an application using a liquid emulsion [solution] only.

Applications to Other Areas:

- Applications may be made using either LAMBDA-CYHALOTHRIN CS foam alone or in combination with a liquid emulsion [solution].
- Applications may be made behind veneers, piers (concrete or wood), chimney bases, into rubble foundations, into block voids, structural voids (i.e., between stud walls), poles, stumps, and wood in crawl spaces.
- Applications may be made in other areas, which include but are not limited to:
  - Foundations penetrated by utility services,
  - Cracks and expansion joints.
  - Bath traps.
  - Areas where cement constructions have been poured adjacent to the foundation such as stairs, patios and slab additions.

POSTS, POLES AND OTHER CONSTRUCTIONS

Application may be made to create a chemical barrier in the soil around wooden construction such as signs and landscape ornamentation by applying a 0.25-0.5% emulsion [solution]. Treat on all sides to create a continuous barrier around posts and poles.

Use 1 gallon of emulsion [solution] per foot of depth for poles and posts less than six inches in diameter. For larger poles, use 1-1½ gallons of emulsion [solution] per foot of depth. For larger constructions, use 4 gallons per 10 linear feet per foot of depth.

For treatments made during installation, the emulsion [solution] may be applied to the soil as it is replaced around the pole or post. Previously installed poles and posts may be treated by subsurface injection or treated by gravity-flow through holes made from the bottom of a trench around the pole or post. Treat on all sides to create a continuous chemical barrier. Apply to a depth of six inches below the bottom of the wood.

EXCAVATION TECHNIQUE: If treatment must be made in difficult situations such as near wells, cisterns along fieldstone or rubble walls along faulty foundation walls and around pipes and utility lines which lead downward from the structure to a well or pond, application may be made in the following manner:

1. Trench and remove soil to be treated onto heavy plastic sheeting or similar material.

2. Treat the soil at the rate of 4 gallons of emulsion [solution] per 10 linear feet per foot of depth of the trench. Mix the emulsion [solution] thoroughly into the soil taking care to prevent liquid from running off the liner.

3. After the treated soil has adequately dried, place the treated soil in the trench.

Prior to using this technique near wells or cisterns consult State, local or Federal agencies for information regarding approved treatment practices in your area.

UNDERGROUND SERVICES

Examples of underground services are wires, cables, utility lines, pipes and conduits. Services may be within structures or located outside structures, in right-of-ways or to protect long range (miles) or installations of services.

Soil treatment may be made using a 0.25% to 0.5% LAMBDA-CYHALOTHRIN CS emulsion [solution] to prevent attack by termites and ants.

Apply 2 to 4 gallons of emulsion [solution] per 10 linear feet to the bottom of the trench and allow to soak into the soil. Lay services on the treated soil and cover with approximately 2 inches of fill soil. Apply another 2 to 4 gallons per 10 linear feet over the soil surface to complete the treatment barrier. In wide trenches, only treat the soil in the area near the service. It is important to establish a continuous barrier of treated soil surrounding the services.

Where soil conditions will not accept application of specified volume of 0.25% emulsion [solution], the 0.5% emulsion [solution] may be applied at one-half the application rate or 2 gallons per 10 linear feet.

Finish filling the trench with untreated fill soil. The soil where each service protrudes from the ground may be treated by trenching/rodding of no more than 1 to 2 gallons of emulsion [solution] into the soil.

Precaution: Do not treat electrically-active underground services.

RETREATMENT

Retreatment for subterranean termites should be made when there is evidence of reinfestation subsequent to the initial treatment, or there has been a disruption of the chemical barrier in the soil due to construction, excavations, landscaping, etc. Retreatment should be made as a spot application to these areas.

Retreatments may be made to vulnerable areas in accordance with the application techniques described above. This application should be made as a spot treatment to these areas. Routine or annual retreatment of the entire premises should be avoided.

TREATMENT OF WOOD IN PLACE FOR CONTROL OF TERMITES, CARPENTER ANTS, CARPENTER BEES AND WOOD INFESTING BEETLES

In addition to subsurface applications, this product may be used for treating infested wood in place. It can be applied to wood by crack and crevice tool, coarse fan spray or injection. Overall broadcast spray applications must be limited to attics, crawl spaces, unfinished basements and similar generally unoccupied areas. In occupied indoor areas, treat wood trim and exposed beams by brush or coarse spray directed only onto the wood to be treated.

Mixing Information: For wood in place and above-ground treatments, use a 0.1% concentration. To prepare a 0.1% emulsion [solution], add 1.3 fluid ounces of LAMBDA-CYHALOTHRIN CS to 1 gallon of water. To prepare 50 gallons of emulsion [solution], add 0.2 gallons (65.2 fluid oz) of LAMBDA-CYHALOTHRIN CS to 49.50 gallons of water. To prepare 100 gallons of emulsion [solution], add 1 gallon (128 fluid oz) of LAMBDA-CYHALOTHRIN CS to 99 gallons of water Use this spray at a rate of 1 gallon of diluted spray per 1,000 square feet of surface area.

IMPORTANT: Do not apply emulsion [solution] until location of heat pipes, ducts, water and sewer lines and electrical conduits are known and identified. Caution must be taken to avoid puncturing and injection into these structural elements. Do not apply into electrical fixtures, switches, or sockets.

Remove pets, birds, and cover aquariums before spraying indoors. Do not permit humans or pets to contact treated surfaces until the spray has dried.

In the home, all food processing surfaces and utensils in the treatment area should be covered during treatment or thoroughly washed before reuse.

During any applications to overhead interior areas of structures, cover surfaces below with plastic sheeting or similar material.

CONTROL OF WOOD INFESTING BEETLES: To control wood infesting insects such as powderpost beetle (*Lyctidae*), false powderpost beetles (*Bostrichidae*), deathwatch beetles (*Anobiidae*), old house borers (*Cerambycidae*) and ambrosia beetles (*Scolytidae*) in homes and other structures, apply as an emulsion [solution] containing 0.25% LAMBDA-CYHALOTHRIN CS. For treatment of small areas, apply by brushing the emulsion [solution] evenly on wood surfaces. For large or overhead areas, apply as a coarse spray. When spraying overhead interior areas of homes, apartment buildings, etc., cover all surfaces below the area being sprayed with plastic sheeting or other material which could be disposed of by placing in trash if contamination from dripping occurs. Sprayed surfaces should be avoided until spray has totally dried. Do not use in structures occupied by animals to be used for food purposes or which produce products for human consumption.

TERMITES ABOVE GROUND: For control of termites, subterranean aerial colonies, Formosan aerial colonies or drywood termites in localized areas of infested wood in

structures, apply a 0.1% emulsion [solution] to voids and galleries in damaged wood and in spaces between wooden members of a structure and between wood and foundations where wood is vulnerable. Application may be made to inaccessible areas by drilling, and then injecting the emulsion [solution] with a crack and crevice injector into the damaged wood or void spaces. Application to attics, crawl spaces unfinished basements, or man-made voids may be made with a coarse fan spray of 0.1% emulsion [solution] to control workers and winged reproductive forms of termites in mud shelter tubes. This type of application is not intended to be a substitute for soil treatment for extensive infestation of drywood termites or other wood-infesting insects.

For termites active inside trees, utility poles and/or fence posts, drill to find the interior infested cavity and inject 0.1% emulsion [solution] using treatment tool with a splashback guard.

Termite carton nests in trees or building voids may be injected with 0.25%-0.50% emulsion [solution] using a pointed injection tool. Multiple injection points to varying depths may be necessary. It is desirable to physically remove carton nest material from building voids when such nests are found.

CARPENTER ANTS: For control of carpenter ants in houses and other structures, apply around doors and windows and other places where carpenter ants enter the premises and where they crawl. Spray into cracks and crevices or through openings or small drilled holes into voids where these ants or their nests are present. Use no more than a sufficient amount of coarse spray to cover the area to the point of runoff. Do not exceed 1 gallon of dilute emulsion [solution] per 1000 square feet of treated surface.

For carpenter ants active inside trees, utility poles and/or fence posts, drill to find the interior infested cavity and inject 0.25% emulsion [solution], for protection up to 1 week, using a treatment tool with a splashback guard. Reapply under heavy reinfestation pressure.

FIREWOOD PROTECTION FROM CARPENTER ANTS: Prior to laying in firewood, soil beneath the cord(s) may be treated with a 0.25% emulsion [solution] at 1 gallon per 10 square feet to prevent carpenter ant infestation.

CARPENTER BEES: Use a 0.1% emulsion [solution] for control of carpenter bees. Liquid may be sprayed directly into gallery entrance holes. Following treatment, the entrance holes may be left open 24 hours to be certain that returning adult bees are killed. When there is no activity, the hole may be closed with wood putty.

GENERAL RESTRICTIONS AND PRECAUTIONS

Not for use in USDA meat and poultry plants.

DO NOT APPLY THIS PRODUCT TO EDIBLE CROPS.

Do not use in warehouses where raw or cured tobacco is stored.

Do not use in warehouses while raw agricultural commodities for food or feed are being stored.

Do not use in greenhouses where crops for food or feed are grown.

Do not apply to pets, crops or sources of electricity.

Do not allow people or pets on treated surfaces until the spray has dried.

Do not use concentrate or emulsion [solution] in fogging equipment.

During indoor surface application, do not allow dripping or run-off to occur.

Do not apply this product in any rooms being used as living, eating, sleeping or recovery area by patients, the elderly, or infirm when they are in the room.

Do not apply to classrooms when in use.

Do not touch treated surface until dry.

When applying LAMBDA-CYHALOTHRIN CS in a confined area, the user should wear protective clothing, unvented goggles, rubber gloves, and a respirator approved by the Mine Safety and Health Administration during application.

SPRAY DILUTIONS*

CONCENTRATION OF A.I.	AMOUNT OF LAMBDA-CYHALOTHRIN CS	AMOUNT OF WATER
0.1%	1.3 fl. oz.	1 gal.
0.1%	65.2 fl. oz.	49.5 gals.
0.1%	1 gal.	99 gals.
0.25%	3.3 fl. oz.	1 gal.
0.25%	2.5 gal.	99 gals.
0.50%	5 gal.	98 gals.

*Fill sprayer with the desired volume of water and add LAMBDA-CYHALOTHRIN CS Insecticide. Close spray container and shake or agitate before use to ensure proper mixing. Make up diluted material only as required.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

STORAGE: Keep container closed when not in use. Do not store near food or feed. Shake well before use. Protect from freezing. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste storage area until proper disposal can be made.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your local State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Completely empty container into application equipment, then offer for recycling or reconditioning; or puncture and dispose of empty container in a sanitary landfill, by incineration, or by other procedures approved by state and local authorities.