

79676-2

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

MAY 31 2007

Mr. Michael Kellogg
Pyxis Regulatory Consulting, Inc.
4110 136th St. NW
Gig Harbor, WA 98332

Subject: Label Amendment and New Alternate Confidential Statement of Formula (CSF)
EPA Registration No. 79676-2
Permethrin E-PRO Termiticide/Insecticide

Your submission dated January 9, 2007

Dear Mr. Kellogg:

The labeling referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable subject to the comments listed below.

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. Delete the last 2 sentences of the paragraph immediately under the Directions for Use heading, "*Do not apply...during application.*" These statements are already elsewhere on the label.
3. Under "Post-Construction Subterranean Termite Control" (p. 9), modify the first sentence as follows: "*Make post-construction soil applications by injections, trenching, and/or rodding into the trench ~~or coarse fan spray~~ with pressures not to exceed 25 psi at the nozzle.*"
4. Under Masonry or Hollow Block Voids (p.11), add the following sentence as indicated: "*Drill and treat voids...as close as possible to the footing as is practical. Care must be exercised not to drill entirely through the masonry or block walls and into the structure. Treatment of voids in block...*"

5. In the table on page 18, under Recommended Application Rates/Specific Instructions revise the 2nd statement as follows: "*Use higher label rate for moderate to high infestations.*"
6. On the front panel, the references to other brands must reflect the me-too product(s) cited in the application. In addition this reference must be followed by the disclaimer, "Brand name(s) are not manufactured or distributed by Etigra. Either delete this reference or revise accordingly.
7. Under "Conditions of Sale and Limitation of Warranty..." revise "*should*" to read *must*" in the sentence: "*The directions for use of this product ~~should~~ must be followed carefully.*"
8. Under "Conditions of Sale and Limitation of Warranty..." add "*To the extent consistent with applicable law*" in front of:
 - o "*Etigra makes no warranties...*"
 - o "*The exclusive remedy of the user or buyer for...*"

The CSF for alternate formulation #2 dated 12/14/06 is acceptable. A copy of the CSF has been placed in the file for the subject product.

Product Chemistry data requirements for the 830 Series Subgroup A and Subgroup B guidelines are satisfied, except for the one year storage stability and the corrosion characteristic studies. Storage stability (830.6317) and corrosion characteristics (830.6320) data are outstanding and must be submitted to satisfy the requirements of 40CFR 158.190. Please refer to the Product Chemistry Review Memo for details concerning conduct of the studies.

The acute toxicity data submitted to support this amendment have been reviewed and classified as acceptable. A copy of the review memo is enclosed for your records. The acute toxicity profile of the alternate formulation has been determined to be as follows:

Acute Oral ----- III	Primary Eye Irritation ----- III
Acute Dermal --- IV	Primary Dermal Irritation --- III
Acute Inhalation --- IV	Skin Sensitization ----- Negative

Please note that this acute profile indicates lower toxicity and less restrictive label language than the current formulation for this product. Since you have indicated that the alternate formulation is not meant to replace previously approved formulations, the label must bear the current, more restrictive language.

Please note that a notice of availability of EPA's reregistration eligibility document (RED) for products containing permethrin was published in the FR on June 28, 2006 (Vol. 71 No. 124 pg. 36788). Additional data and/or labeling changes may be required for products containing permethrin.

Please submit two (2) copies of your final printed labeling before releasing 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

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bearing amended labeling constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

If you have any questions regarding this action, please contact Olga Odiott of my team at (703) 308-9369.

Sincerely,



George T. LaRocca
Product Manager 13
Insecticide Branch
Registration Division (7505P)

Enclosure

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Permethrin E-Pro Termiticide/Insecticide

For control of subterranean termites: For use by individuals/firms licensed or registered by the State to apply termiticide products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the structural pest control regulatory agency of your State prior to use of this product.

For use by commercial applicators as an insecticide to control insect pests on lawns, ornamental trees and shrubs, and around buildings for perimeter insect control including turf and landscaped areas around institutional, public, residential, commercial and industrial buildings, parks, recreation areas and athletic fields, and applications to agricultural structures and livestock.

ACTIVE INGREDIENT:	By Wt.
Permethrin*.....	36.8%
OTHER INGREDIENTS**:	<u>63.2%</u>
TOTAL:	100.0%

*Cis/trans ratio: Max. 42% (±) cis and min. 58% (±) trans

**Contains petroleum distillates.

This product contains 3.2 pounds permethrin per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
If swallowed:	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
If on skin or clothing:	<ul style="list-style-type: none"> • 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 in eyes:	<ul style="list-style-type: none"> • 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 inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	
NOTE TO PHYSICIAN	
Contains petroleum distillate – vomiting may cause aspiration pneumonia.	

See inside label booklet for additional PRECAUTIONARY STATEMENTS

EPA Reg. No. 79676-2

**ACCEPTED
with COMMENTS**

EPA Est. No.

Manufactured for:
Etigra™
501 Cascade Pointe Lane, Suite 100
Cary, NC 27513
www.etigra.com

**In EPA Letter Dated
MAY 31 2007**
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
79676-2
Net Contents:

Permethrin E-Pro
Termiticide/Insecticide contains
permethrin, the active ingredient
used in Astro® and Dragnet®.

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

Harmful if swallowed, inhaled, or absorbed through the skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

All pesticide handlers (mixers, loaders, and applicators) must wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves. After the product is diluted in accordance with label directions for use and/or when mixing and loading using a closed spray tank transfer system, or an in-line injector system, shirt, pants, socks, shoes and waterproof gloves are sufficient. In addition, all pesticide handlers must wear a respiratory protection device[†] when working in a non-ventilated space and all pesticide handlers must wear protective eyewear^{††} when working in a non-ventilated space or when applying termiticide by rodding or sub-slab injection.

[†]Use one of the following:

A MSHA/NIOSH approved air purifying respirator with approval number prefixes such as: dust/mist filtering respirator TC-21C or a NIOSH approved respirator with any R, P or HE filter; or respirator with an organic-vapor removing cartridge and a prefilter approved for pesticides with MSHA/NIOSH approval number prefix TC-14G; or a supplied air respirator with MSHA/NIOSH approval number prefix TC-19G or self-contained breathing apparatus (SCBA) with MSHA/NIOSH approval number TC-13F.

^{††}Protective eyewear is goggles, a face shield, or safety glasses with front, brow, and temple protection.

ENVIRONMENTAL HAZARDS

This product is highly toxic to bees exposed to direct treatment or residues on crop or weeds. Do not apply this product or allow it to drift to crops or weeds on which bees are actively foraging. Additional information may be obtained from your Cooperative Extension Service.

This product is extremely toxic to fish and 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 by cleaning of equipment or disposal of equipment washwaters. Do not apply when weather conditions favor drift from treated areas.

For Treatment of Preconstruction Lumber and Logs: Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

COMBUSTIBLE: Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

States may have more restrictive requirements regarding qualifications of persons using this product. Consult your State Pest Control Regulatory Agency prior to use of this product.

AGRICULTURAL USE REQUIREMENTS

Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application. Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate or butyl rubber
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

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

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

GENERAL INFORMATION

Use Permethrin E-Pro Termiticide/Insecticide for subterranean termite control and on plants intended for aesthetic purposes or climatic modification and being grown in interior plantscapes, greenhouses, ornamental gardens or parks, or lawns and grounds.

Note: When applying to or around vinyl siding, treat a small test area in a non-obtrusive area and allow to dry. Some types of vinyl siding, particularly if aged or weathered or during periods of high temperature or high humidity may show some staining after application of an emulsifiable concentrate product.

Staining may also occur on certain surfaces such as brick, cinder block, stucco and wood. Immediately remove spray deposits on painted or stained surfaces or finishes by washing with soap and water to prevent discoloration. Do not apply to surface where visible spray residues are objectionable.

Attention:

- Use only in well ventilated areas.
- Do not touch treated surface until dry.
- Do not apply to sources of electricity.
- Do not apply by air.
- Do not allow people or pets on treated surfaces, such as carpets until the spray has dried.
- Do not apply to classrooms when in use.

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- Do not apply this product in patient rooms or in any rooms while occupied by the elderly or infirm.
- Do not apply when occupants are present in the immediate areas in institutions such as libraries, sport facilities, etc.
- Do not use concentrated or emulsion fogging equipment.
- Do not use in aircraft cabins. For use in cargo areas only.
- Do not treat firewood.
- During indoor surface applications, do not allow dripping or runoff to occur.
- Do not treat areas where food is exposed.
- Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product.
- Do not allow spray to contact food, feedstuffs, food contacting surfaces, food utensils or water supplies.
- During any application to overhead areas of structure, cover surfaces below with plastic sheeting or similar material (except where exempt).

Spray Drift Precautions:

All ground application equipment must be properly maintained and calibrated using appropriate carriers.

Do not make ground applications during temperature inversions.

Make ground applications when the wind velocity favors on target product dispersion (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph.

Do not apply by ground equipment within 25 feet of lakes, marshes or natural ponds, reservoirs, rivers, permanent streams, estuaries, and commercial fish farm ponds.

CHEMIGATION USE DIRECTIONS

Apply this product only through the following types of sprinkler irrigation: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water. Contact your State Extension Service specialists, equipment manufacturers, or other experts if you have questions about calibration. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Permethrin E-Pro Termiticide/Insecticide should be applied continuously for the duration of the water application. Dilute Permethrin E-Pro Termiticide/Insecticide in sufficient volume to ensure accurate application over the area to be treated. When using chemigation, a minimum of 0.5 inch per acre of irrigation water is recommended. Agitation generally is not required when a suitable carrier is used.

SUBTERRANEAN TERMITE CONTROL

Permethrin E-Pro Termiticide/Insecticide prevents and controls termite infestations in and around structures and constructions.

The dilute insecticidal emulsion must be adequately dispersed in the soil to establish a barrier between the wood and the termites in the soil. As a good practice:

1. Remove all non-essential wood and cellulose containing material from around crawlspaces, foundation walls, and porches.
2. Repair faulty plumbing and/or construction grade to eliminate termite access to moisture. Treat soil around untreated structural wood in contact with soil as described below.

To establish an effective insecticidal barrier with this product, the service technician must be familiar with current termite control practices such as: trenching, rodding, sub-slab injections, coarse fan spraying of soil surfaces, crack and crevice (void) injection, excavated soil treatment, and brush or spray applications to infested or susceptible wood. These techniques must be correctly employed to prevent or control infestations by subterranean termites such as: *Coptotermes*, *Heterotermes*, *Reticulitermes* and *Zootermopsis*. The biology and behavior of the species involved should be considered by the service technician in determining which control practices to use to eliminate or prevent the termite infestation.

The choice of appropriate procedures should include consideration of such variable factors as the design of the structure, location of heating, ventilation, and air conditioning (HVAC) systems, water table, soil type, grade conditions, soil compaction, and location and type of domestic water supplies and utilities.

When treating adjacent to an existing structure, the applicator must check the area to be treated, and immediately adjacent areas of the structure, for visible and accessible cracks and holes to prevent any leaks or significant exposures to persons occupying the structure. People present or residing in the structure during application must be advised to remove their pets and themselves from the structure if they see any signs of leakage. After application, the applicator is required to check for leaks. All leaks resulting in the deposition of termiticide in locations other than those prescribed on this label must be cleaned up prior to leaving the application site. Do not allow people or pets to contact contaminated areas or to reoccupy contaminated areas of the structure until the clean up is completed.

Consult resources in structural pest control and State Cooperative Extension and regulatory agencies for advice concerning current control practices with relation to specific local conditions.

Critical Areas: Critical areas include areas where the foundation is penetrated by utility services, cracks and expansion joints, bath traps and areas where cement constructions have been poured adjacent to the foundation as stairs, patios and slab additions.

Note: Crawlspaces are to be considered inside of the structure.

Important: Contamination of public and private water supplies must be avoided by following these precautions: Use anti-backflow equipment or procedures to prevent siphonage of insecticides into water supplies. Do not contaminate cisterns or wells. Do not treat soil that is water saturated or frozen or in any conditions where runoff or movement from the treatment

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area (site) is likely to occur. Consult state and local specifications for recommended distances of wells from treated areas, or if such regulations do not exist, refer to Federal Housing Administration Specifications (H.U.D.) for guidance.

Structures with Wells/Cisterns Inside Foundations

Structures that contain wells or cisterns within the foundation of a structure can only be treated using the following techniques:

1. Do not treat soil while it is beneath or within the foundation or along the exterior perimeter of a structure that contains a well or cistern. The treated backfill method must be used if soil is removed and treated outside/away from the foundation. The treated backfill technique is described as follows:
 - (a) Trench and remove soil to be treated onto heavy plastic sheeting or similar material or into a wheelbarrow.
 - (b) Treat the soil at the rate of 4 gallons of dilute emulsion per 10 linear feet per foot of depth of the trench, or 1 gallon per 1.0 cubic feet of soil. Refer to the "Mixing Directions" section of this label. Mix thoroughly into the soil taking care to contain the liquid and prevent runoff or spillage.
 - (c) After the treated soil has absorbed the diluted emulsion, replace the soil into the trench.
2. Treat infested and/or damaged wood in place using an injection technique such as described in the "Control of Wood Infesting Insects" section of this label.

Structures with Adjacent Wells/Cisterns and/or Other Water Bodies

Applicators must inspect all structures with nearby water sources such as wells, cisterns, surface ponds, streams, and other bodies of water and evaluate, at a minimum, the treatment recommendations listed below prior to making an application.

1. Prior to treatment, if feasible, expose the water pipe(s) coming from the well to the structure, if the pipe(s) enter the structure within 3 feet of grade.
2. Prior to treatment, applicators are advised to take precautions to limit the risk of applying the termiticide into subsurface drains that could empty into any bodies of water. These precautions include evaluating whether application of the termiticide to the top of the footer may result in contamination of the subsurface drain. Factors such as depth to the drain system and soil type and degree of compaction should be taken into account in determining the depth of treatment.
3. When appropriate (i.e., on the water side of the structure), the treated backfill technique (described above) can also be used to minimize offsite movement of termiticide.

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

Application Rate: For subterranean termites, use a 0.5% emulsion. For other pests on the label, use the specific listed rates.

MIXING DIRECTIONS

Mix the termiticide use dilution in the following manner: Fill tank $\frac{1}{4}$ to $\frac{1}{3}$ full. Start pump to begin by-pass agitation and place end of treating tool in tank to allow circulation through hose. Add appropriate amount of Permethrin E-Pro Termiticide/Insecticide. Add remaining amount of water. Let pump run and allow recirculation through the hose for 2 to 3 minutes.

Permethrin E-Pro Termiticide/Insecticide may also be mixed into full tanks of water but requires substantial agitation to ensure uniformity of the emulsion.

To prepare a 0.5% water emulsion, ready to use, dilute 1.25 gallons of Permethrin E-Pro Termiticide/Insecticide with 94.75 gallons of water.

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Mixing:

Use the chart below to determine the amount of Permethrin E-Pro Termiticide/Insecticide for a given volume of finished emulsion for the desired application rate:

Permethrin E-Pro Termiticide/Insecticide Rate/Volume Conversion Chart			
Emulsion Concentration	Amount of Permethrin E-Pro Termiticide/Insecticide	Amount of Water	Desired Gallons of Finished Emulsion
0.5%	1 2/3 fl. oz.	7.9 pts.	1
	6 2/3 fl. oz.	31.6 pts.	4
	8 1/3 fl. oz.	39.5 pts.	5
	16 2/3 fl. oz.	9.9 gals.	10
	0.25 gal.	18.75 gals.	19
	0.50 gal.	37.5 gals.	38
	0.75 gal.	57.25 gals.	58
	1.25 gals.	94.75 gals.	96
	2.50 gals.	189.5 gals.	192
1.0%*	1 2/3 fl. oz.	62 1/3 fl. oz.	0.5
	3 1/3 fl. oz.	7.8 pts.	1
	6 2/3 fl. oz.	15.6 pts.	2
	16 2/3 fl. oz.	4.9 gals.	5
	33 1/3 fl. oz.	9.7 gals.	10
	0.5 gal.	18.5 gals.	19
	1 gal.	37 gals.	38
	1.5 gals.	56.5 gals.	58
	2.5 gals.	91 gals.	96
5 gals.	187 gals.	192	
2.0%*	1 2/3 fl. oz.	30 1/3 fl. oz.	0.25
	6 2/3 fl. oz.	7.6 pts.	1
	33 1/3 fl. oz.	4.74 gals.	5
	66 2/3 fl. oz.	9.5 gals.	10
	1	18 gals.	19
	2	36 gals.	38
	3	55 gals.	58
	5	91 gals.	96
	10	182 gals.	192

*For termite applications, only use these rates in conjunction with the application volume adjustments as listed in the section below or in the foam or underground service application sections.

Common units of measure:

1 pint = 16 fluid ounces (oz.)

1 gallon = 4 quarts = 8 pints = 128 fluid ounces (oz.)

Application Volume: To provide maximum control and protection against termite infestation, apply the specified volume of the finished water emulsion and active ingredient as set forth in the directions for use section of this label. If soil will not accept the labeled application volume, the volume may be reduced provided there is a corresponding increase in concentration so that the amount of active ingredient applied to the soil remains the same.

Note: Large reductions of application volume reduce the ability to obtain a continuous barrier. Variance is allowed when volume and concentration are consistent with label directed rates and a continuous barrier can still be achieved.

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[Note to Reviewer: The following text (denoted by italics) is optional language and may appear on the final product label]

Pre- and Post Construction Applications

Application Volume Considerations: Adjustments to application volumes are often needed to ensure thorough and complete coverage in different soil types while keeping the application rate as close as possible to the recommended label use rate. Certain types of soils, such as clay, require lower volumes of water due to their low permeability characteristics. In such cases, reduced volumes of emulsion can be used while still delivering the recommended concentration of termiticide to the soil (see Permethrin E-Pro Termiticide/Insecticide Rate/Volume Conversion Chart on this label).

Application Volume Adjustments: Where necessary to reduce the application volume for pre- and post-construction treatments, the volume of a 1.0% emulsion may be reduced by 1/2 the labeled volume or a 2.0% emulsion may be applied at 1/4 the labeled volume (refer to the Volume Adjustment Chart below). Volume adjustments at 2.0% are not recommended for subslab injection.

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

[Note to Reviewer: The table below is optional text and may appear on the final label]

Rate (% emulsion)	Volume Adjustment Chart		
	0.5%	1.0%	2.0%
Volume allowed:			
Horizontal (gallons emulsion/10 ft ²)	1.0 gallon	0.5 gallon	0.25 gallon*
Vertical (gallons emulsion/10 lin. ft.)	4.0 gallons	2.0 gallons	1.0 gallon*

*Not recommended for subslab injection.

PRE-CONSTRUCTION SUBTERRANEAN TERMITE CONTROL

(Do not use as a preventive treatment for new construction in Florida)

Pre-Construction Treatment: Do not apply at a lower dosage and/or concentration than specified on this label for applications prior to the installation of the finished grade.

When treating foundations deeper than 4 feet, apply the termiticide as the backfill is being replaced, or if the construction contractor fails to notify the applicator to permit this, treat the foundation to a minimum depth of 4 feet after the backfill has been installed. The applicator must trench and rod into the trench or trench along the foundation walls and around pillars and other foundation elements, at the rate prescribed from grade to a minimum depth of 4 feet. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. However, in no case should a structure be treated below the footing.

The establishment of vertical and/or horizontal insecticidal barriers using a 0.5% emulsion of Permethrin E-Pro Termiticide/Insecticide achieves effective pre-construction subterranean termite control. Follow the procedures in the latest edition of the Housing and Urban Development Minimum Property Standards (refer to USDA Home and Garden Bulletin No. 64) to meet termite proofing requirements.

Horizontal Barriers: Create a horizontal barrier wherever treated soil will be covered, such as footing trenches, slab floors, carports, and the soil beneath stairs and crawlspaces.

Applications shall be made by a low-pressure spray (less than 50 psi) using a coarse spray nozzle. If slab will not be poured the same day as treatment, cover treated soil with a *waterproof barrier such as polyethylene sheeting*. This is not necessary if foundation walls have been installed around the treated soil.

For a 0.5% rate, apply 1 gallon of dilution per 10 square feet, or use 1.6 fluid ounces of this product per 10 square feet in sufficient water (no less than ½ gallon or more than 2 gallons) to provide thorough and continuous coverage of the area being treated.

If the fill is washed gravel or other coarse material, it is important that a sufficient amount of dilution be used to reach the soil substrate beneath the coarse fill.

Vertical Barriers: Vertical barriers must be established in areas such as around the base of foundations, utility entrances, plumbing, back-filled soil against foundation walls and other critical areas.

For a 0.5% rate, apply 4 gallons of dilution per 10 linear feet per foot of depth or 1.6 fluid ounces of Permethrin E-Pro Termiticide/Insecticide per 10 linear feet per foot of depth from grade to top of footing in sufficient water (not less than 2 gallons or more than 8 gallons) to ensure complete coverage.

- a. When trenching and rodding into the trench, or trenching, it is important that emulsion reaches the top of the footing. Rod holes must be spaced so as to achieve a continuous termiticide barrier, but in no case be more than 12 inches apart.
- b. Avoid soil washout around the footing.
- c. Trenches need not be wider than 6 inches. Emulsion should be mixed with the soil as it is being replaced in the trench.
- d. For a monolithic slab, an inside vertical barrier may not be required.

Hollow block voids may be treated at a rate of 2 gallons of emulsion per 10 linear feet so that the emulsion will reach the top of the footing.

Prior to each application, applicators must notify the general contractor, construction superintendent, or similar responsible party of the intended termiticide application and intended sites of application and instruct the responsible person to notify construction workers and other individuals to leave the area to be treated during application and until the termiticide is absorbed into the soil.

POST-CONSTRUCTION SUBTERRANEAN TERMITE CONTROL

Make post-construction soil applications by injection, trenching, rodding into the trench or coarse fan spray with pressures not to exceed 25 psi at the nozzle. Avoid soil washout around the footing.

Locate and identify wells, radiant heat pipes, water and sewer lines and electrical conduits before applying emulsion. Avoid puncturing and injection into these elements.

After treatment: Plug all holes in commonly occupied areas into which Permethrin E-Pro Termiticide/Insecticide has been applied. Plugs must be of a non-cellulose material or covered

Foundations: For applications made after the final grade is installed, the applicator must trench and rod into the trench or trench along the foundation walls and around pillars and other foundation elements at the rate prescribed from grade to the top of the footing. When the footing is more than four (4) feet below grade, the applicator must trench and rod into the trench or trench along the foundation walls at the rate prescribed to a minimum depth of four feet. The actual depth of treatment will vary depending on the location of termite activity, soil type and

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degree of compaction. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. In no case should a structure be treated below the footing.

Slabs: Vertical barrier applications may be established by sub-slab injection within the structure and rodding and trenching/ or trenching outside at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth. If necessary, adjust the spacing of the drill holes, or volume required (see Volume Adjustment Chart) for adequate dispersal of the emulsion in the slab sub-soil.

Note: Sub-slab volume adjustments greater than 1% are not recommended. Special care must be taken to distribute the treatment evenly. Treatment should not extend below the bottom of the footing. Treat along the outside of the foundation and where necessary beneath the slab on the inside of foundation walls. Treatment may also be required beneath the slab along both sides of interior-supported walls, one side of interior partitions and along all cracks and expansion joints. Horizontal barriers may be established where necessary by long-rodding or by grid pattern injection vertically through the slab. Plug all holes in the interior structure after injection.

- a. Drill holes in the slab and/or foundation to allow for the application of a continuous insecticidal barrier no more than 12 inches apart.
- b. For shallow foundations (1 foot or less), dig a narrow trench approximately 6 inches wide along the outside of the foundation walls. Do not dig below the bottom of the footing. The emulsion should be applied to the trench and soil at 4 gallons per 10 linear feet per foot of depth as the soil is replaced in the trench.
- c. For foundations deeper than 1 foot, follow rates for basement.
- d. Exposed soil in bath traps may be treated with a 0.5% emulsion.

Basements and Crawl Spaces

Basements: Where the footing is greater than 1 foot of depth from grade to the bottom of the foundation, application must be made by trenching and rodding into this trench, or injecting at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth. When the footing is more than four feet below grade, the applicator may trench and rod into the trench, or trench along foundation walls at the rate prescribed for four feet of depth. Rod holes must be spaced so as to achieve a continuous termiticide barrier, but in no case be more than 12 inches apart. The actual depth of treatment will vary depending on soil type, degree of compaction, and location of termite activity. However, in no case should a structure be treated below the footing. Sub-slab injection may be necessary along the inside of foundation walls, along cracks and partition walls, around pipes, piers, conduits, and along both sides of interior footing-supported walls.

Accessible Crawlspaces: For crawlspaces, apply vertical termiticide barriers at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth from grade to the top of the footing, or if the footing is more than 4 feet below grade, to a minimum depth of 4 feet. Apply by trenching and rodding into the trench, or trenching. Treat both sides of foundation and around all piers and pipes. Where physical obstructions such as concrete walkways adjacent to foundation elements prevent trenching, treatment may be made by rodding alone. When soil type and/or conditions make trenching prohibitive, rodding may be used. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. Read and follow the mixing and use direction sections of this label if situations are encountered where the soil will not accept the full application volume:

1. Rod holes and trenches must not extend below the bottom of the footing.
2. Rod holes must be spaced so as to achieve a continuous termiticide barrier but in no case be more than 12 inches apart.
3. Trenches must be a minimum of 6 inches deep or to the bottom of the footing, whichever is less, and need not be wider than 6 inches. When trenching in sloping (tiered) soil, the

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trench must be stepped to ensure adequate distribution and to prevent termiticide from running off. The emulsion must be mixed with the soil as it is replaced in the trench.

4. When treating plenums and crawlspaces, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil.

Inaccessible Crawlspaces: For inaccessible interior areas, such as areas where there is insufficient clearance between floor joists and ground surfaces to allow operator access, excavate if possible, and treat according to the instructions for accessible crawlspaces. Otherwise, apply one or a combination of the following two methods:

1. To establish a horizontal barrier, apply to the soil surface, 1 gallon of emulsion per 10 square feet overall using a nozzle pressure of less than 25 psi and a coarse application nozzle (e.g., Delavan Type RD Raindrop, RD-7 or larger, or Spraying Systems Co. 8010LP TeeJet or comparable nozzle). Use one or more extension rods to make the application to the soil for areas that cannot be reached with the application wand. Do not broadcast or powerspray with higher pressures.
2. To establish a horizontal barrier, drill through the foundation wall or through the floor above and treat the soil perimeter at a rate of 1 gallon of emulsion per 10 square feet. Drill spacing must be at intervals not to exceed 16 inches. Many States have smaller intervals; check State regulations that may apply.

Turn off the air circulation systems of the structure until application has been completed and all termiticide has been absorbed by the soil when treating crawlspaces.

It is highly recommended that prior to treatment, 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.

When treating crawlspaces with plenums, turn off all air circulation systems for the structure until application has been completed and all termiticide has been absorbed by the soil.

Wear respiratory protection when treating crawlspaces.

Masonry or Hollow Block Voids: Drill and treat voids in multiple masonry elements of the structure extending from the structure to the soil in order to create a continuous treatment barrier in the area to be treated. Apply at the rate of 2 gallons of emulsion per 10 linear feet of footing, using a nozzle pressure of less than 25 psi. When using this treatment, access holes must be drilled below the sill plate and should be as close as possible to the footing as is practical. Treatment of voids in block or rubble foundation walls must be closely examined. Applicators must inspect areas of possible runoff as a precaution against application leakage in the treated areas. Some areas may not be treatable or may require mechanical alteration prior to treatment. All leaks resulting in the deposition of termiticide in locations other than those prescribed on this label must be cleaned up prior to leaving the application site. Do not allow people or pets to contact contaminated areas or to reoccupy the contaminated areas of the structure until the cleanup is completed.

In treating voids containing rigid foam insulation, holes must be drilled through the sillplate and through the foam to the base of the footing before the emulsion is applied.

Use low pressure to ensure penetration of the emulsion into the void area between the base of the foam and footer. Slowly remove the spray rod as the emulsion is being delivered, avoiding excess buildup in the foam insulation.

Note: When treating behind veneer, do not 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.

Excavation Technique: If treatment must be made in difficult situations, such as near wells, cisterns, along fieldstone or rubble walls, along faulty foundation walls, or around pipes and

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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 per 10 linear feet per foot of depth of the trench. Mix the emulsion thoroughly into the soil taking care to prevent liquid from running off the liner.
3. After the treated soil has absorbed the liquid emulsion, replace the 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.

FOAM APPLICATIONS

Permethrin E-Pro Termiticide/Insecticide may be converted to a foam, and the foam used to control and prevent termite infestation. When applying the product as either a foam application alone, or in combination with an emulsion treatment, do not exceed the maximum-labeled application rate. Exercise care and safety around electrical utilities. Note location of electrical sources prior to foaming voids to avoid possible shock hazards.

Localized Application:

Foam may be used to treat voids to control or prevent localized infestations of: termites, ants, bees, wasps or other arthropods harboring in voids. Application may be made to voids such as: behind veneers, piers (concrete or wood), chimneys, into rubble and stone foundations, into block voids or structural voids (i.e., between stud walls), poles, stumps, and wood in crawlspaces using either the foam alone or in combination with liquid emulsion.

Note location of electrical sources prior to foaming voids to avoid possible shock hazard.

Application Under Slabs or to Soil in Crawlspaces to Prevent or Control Termites:

Application may be made using Permethrin E-Pro Termiticide/Insecticide foam alone or in combination with liquid emulsion applications. The equivalent of at least 4 gallons (6.4 ounces of Permethrin E-Pro Termiticide/Insecticide) of 0.5% emulsion per 10 linear feet (vertical barrier), or at least 1 gallon (1.6 ounces of Permethrin E-Pro Termiticide/Insecticide) of 0.5% emulsion per 10 square feet (horizontal barrier) must be applied either as emulsion, foam, or a combination of both. For a foam only application, apply Permethrin E-Pro Termiticide/Insecticide in sufficient foam concentration and foam volume to deposit 6.4 ounces of concentrate per 10 linear feet or 1.6 ounces of concentrate per 10 square feet. For example, 1 gallon of 2% emulsion generated as foam to cover 10 linear feet is equal to the application of 4 gallons of 0.5% emulsion per 10 linear feet.

Foam and liquid application must be consistent with volume and active ingredient instructions in order to ensure proper application has been made. The volume and amount of active ingredient are essential to an effective treatment. At least 75% of the labeled liquid emulsion volume of product must be applied, with the remaining percent delivered to appropriate areas using foam application. Refer to label and use recommendations of the foam manufacturer and the foaming equipment manufacturer.

Foam applications are generally a good supplement to liquid treatments in difficult areas, but may be used alone in difficult spots.

Sand Barrier Installation and Treatment:

Termites can build mud tubes over treated surfaces as long as they have access to untreated soil and do not have to move Permethrin E-Pro Termiticide/Insecticide treated soil. Fill in cracks and spaces with builder's or play box sand and treat the sand with Permethrin E-Pro Termiticide/Insecticide. The sand should be treated as soil following the termiticide rate listed on this label.

RETREATMENTS

Retreatment for subterranean termites can only be performed if there is clear evidence of reinfestation or disruption of the barrier due to construction, excavation, or landscaping and/or evidence of the breakdown of the termiticide in the soil. These vulnerable or reinfested areas may be retreated in accordance with application techniques described in this labeling. The timing and type of retreatments will vary depending on factors such as soil types, soil conditions, termite pressure and other factors that may reduce the effectiveness of the barrier.

Annual retreatment of the structure is prohibited unless there is clear evidence that reinfestation or barrier disruption has occurred.

APPLICATION IN CONJUNCTION WITH THE USE OF BAITING SYSTEMS

As part of the integrated pest management (IPM) program for termite control, Permethrin E-Pro Termiticide/Insecticide may be applied to critical areas of the structure including utility and plumbing entry sites, bath traps, expansion joints, foundation cracks and areas with known or suspected infestations at a rate of 0.5% as a spot treatment or complete barrier treatment. Applications may be made as described in the Post-Construction treatment section of this label.

SPECIFIC PEST CONTROL APPLICATIONS

Underground Services such as wires, cables, utility lines, pipes, conduits, etc. Services may be within structures or located outside structures, in rights-of-way or to protect long range (miles) of installation of services.

Soil treatment may be made using 0.5% to 1.0% Permethrin E-Pro Termiticide/Insecticide emulsion to prevent attack by termites and ants.

Apply 2 to 4 gallons of emulsion 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 services. It is important to establish a continuous barrier of treated soil surrounding the services.

Use 1 to 2 gallons of 1.0% Permethrin E-Pro Termiticide/Insecticide per 10 linear feet of trench both to the bottom of the trench and over the soil on top of the services for those applications where soil will not accept the above labeled volume.

Finish filling the trench with treated 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 into the soil.

Precautions:

Do not treat electrically active underground services.

**Treatment of Wood-In-Place for the Control of Wood Infesting Insects
(Localized Areas in Structure)**

For the control of insects such as termites, ants (including carpenter ants), and wood-infesting beetles such as Old House Borer and Powder Post in localized areas of infested wood in and around structures, apply a 0.5% emulsion 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. Fan spray or paint on application may also be used. Plastic sheeting must be placed immediately below overhead areas that are spot treated except for soil surfaces in crawlspaces. Application may be made to inaccessible areas by drilling and then injecting emulsion with a crack and crevice injector into the damaged wood or void spaces. Spot applications may be made to control visible workers and reproductive forms. This type of

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application is not intended to be a substitute for soil treatment, mechanical alteration or fumigation to control extensive infestation of wood-infesting insects.

To control wood-infesting insects active inside trees, utility poles and/or fence posts, drill to find the interior infested cavity and inject a 0.5% emulsion.

Termite carton nests in trees or building voids may be injected with 0.5% to 1.0% emulsion. Multiple injection points to varying depths may be necessary. It is desirable to physically remove carton nest material from building voids when such pests are found.

Control of Bees and Wasps Indoors: To control bees, wasps, hornets, and yellow jackets, apply a 0.5% emulsion. Application should be made in the late evening when insects are at rest. Spray liberally into hiding and breeding places, especially under attic rafters, contacting as many insects as possible.

Important: Do not apply emulsion until location of heat pipes, ducts, water and sewer lines and electrical conduits are known and identified. Do not puncture or inject into these structural elements. Do not apply into electrical fixtures, switches, or sockets.

Posts, Poles, and Other Constructions

Create an insecticidal barrier in the soil surrounding wooden constructions such as signs, fences and landscape ornamentation by applying a 0.5% emulsion.

Previously installed poles and posts may be treated by sub-surface 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 insecticidal barrier around the pole. Use 1 gallon of emulsion per foot of depth for poles and posts less than 6 inches in diameter. For large poles, use 1.5 gallons of emulsion per foot of depth. Apply to a depth of 6 inches below the bottom of the wood. For larger constructions, use 4 gallons of emulsion per 10 linear feet per foot of depth.

RESIDENTIAL PEST CONTROL

Use Permethrin E-Pro Termiticide/Insecticide for residential pest control in and on buildings and structures and their immediate surroundings and on modes of transport. Permitted areas of use include, but are not limited to apartment buildings, houses, industrial buildings, laboratories, buses, greenhouses, and the non-food/feed areas of stores, vessels, warehouses, railcars, trailers, trucks, aircraft (do not use in aircraft cabins), schools, nursing homes, hospitals, (non-patient areas), restaurants, hotels, and food manufacturing, processing and servicing establishments.

Do not tank-mix this product with dichlorvos (DDVP) containing products. This product can be tank-mixed with Insect Growth Regulators (IGR's) or pyrethrin containing products. When mixing Permethrin E-Pro Termiticide/Insecticide with other products, observe all precautions and limitations of the labels of each product. To prepare the emulsion, dilute Permethrin E-Pro Termiticide/Insecticide with water only. To prepare a 0.5% emulsion, mix 1.6 oz. (50 ml) in 1 gallon of water.

Permethrin E-Pro Termiticide/Insecticide is an emulsifiable concentrate to be diluted with water and used to control pests in and around homes and other structures. The pests controlled are listed in the accompanying tables.

Permethrin E-Pro Termiticide/Insecticide may be used as a broadcast or spot application to carpeting, lawns and soil (crawlspaces and perimeter), wood, and as a crack and crevice injection, or paint-on treatment. Crawlspaces are considered inside the structure. Consult the applicable tables in this label for specific use instructions.

Broadcast Treatment of Wood for the Control of Wood-Infesting Insects and Nuisance Pests Outside of Structure

Apply a 0.5% emulsion with a fan spray using a maximum of 25 psi. Do not allow runoff to occur.

To control wood-infesting insects active inside trees, utility poles and/or fence posts, drill the interior infested cavity and inject a 0.5% emulsion. To control bees, hornets, wasps, and yellow-jackets, apply this product in late evening when insects are at rest. Aim spray at nest openings in ground, bushes and in the cracks and crevices that may harbor nests, saturating nest openings and contacting as many insects as possible.

Pests Under Slabs

Arthropod infestations, such as ants, inhabiting under slab area may be controlled by drilling and injecting or horizontal rodding and then injecting 1 gallon of a 0.5% to 1.0% emulsion per 10 square feet or 2 gallons per 10 linear feet.

Pest Control in Crawlspace

Apply a 0.5% broadcast treatment of Permethrin E-Pro Termiticide/Insecticide to all surfaces in crawlspaces to control ants, fleas, roaches, scorpions, or other arthropods. Product may also be applied through under structure insecticidal delivery systems such as piping or flexible tubing mounted under the structure. This treatment is not intended as a substitute for termite control. Treat surface, do not allow run-off to occur. Keep children and pets off the treated surface until product has dried.

Pest Control on Outside Surfaces and Around Buildings

Apply Permethrin E-Pro Termiticide/Insecticide using a 0.5% emulsion as a residual spray to outside surfaces of buildings including, but not limited to, foundations, exterior siding, window frames, porches, patios, eaves, garages, refuse dumps, lawns adjacent or around private homes, townhouses, condominiums, duplexes, house trailers, apartment complexes, carports, garages, storage sheds, fence lines, barns, and other residential structures, commercial, industrial and institutional buildings, soil, trunks of woody ornamentals and other areas where pests congregate or have been seen.

Perimeter Treatment: Apply to band of soil and vegetation 6 to 10 feet wide around and adjacent to the structure. Also, treat the foundation of the structure to a height of 2 to 3 feet. Use a spray volume of 2 to 10 gallons of emulsion per 1000 square feet. Higher volumes of water may be needed if mulch or leaf litter is present or foliage is dense. House siding may be treated if pests such as Gypsy moth adults and caterpillars, boxelder bugs, elm leaf beetles, earwigs or silverfish are present.

PEST	SPECIFIC APPLICATION INSTRUCTIONS
Ants ⁴ Ant Mounds ^{1,4} Armyworms ⁴ Fire Ants ⁴ Bees Wasps Carpenter Bees Bark Beetles ³ Borers ⁴ Boxelder Bugs ^{2,4} Centipedes Cockroaches ⁴ Asian Cockroaches	Apply as a pinstream, as a fine/coarse spray, as a spot treatment or with a paintbrush. Treat where pests are found or entry points of the structure such as window and doorframes and along the foundation. Do not apply to structures with high-pressure sprayers such as air blast sprayers. ¹ Mound Drench Method: Apply 1-2 gallons of emulsion to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mounds. Use the higher volume for mounds larger than 12". For best results, apply in cool weather, such as in the early morning or late evening hours, but not in the

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PEST	SPECIFIC APPLICATION INSTRUCTIONS
Crickets ⁴ Mole Crickets ⁴ Earwigs Elm Leaf Beetles ² Firebrats Fleas ⁴ Ground Beetles ⁴ Gypsy Moths (adults and caterpillars) ² Millipedes Scorpions Sod Webworms ⁴ Silverfish Sowbugs Spiders ⁴ Ticks ^{4,5} Flies Carpenter Ants Chinchbugs ⁴ Pill Bugs	heat of the day. ² Boxelder Bugs, Elm Leaf Beetles, Gypsy Moth Caterpillars: Spray tree trunks, building siding or wherever pests congregate thoroughly, but do not allow runoff to occur. ³ Borers and Bark Beetles: To prevent infestation of trees and woody ornamentals, spray the bark thoroughly, but do not allow runoff to occur. ⁴ Apply Permethrin E-Pro Termiticide/Insecticide at the rate of 0.4 to 0.8 fluid ounces per 1000 square feet in a volume of water sufficient for uniform coverage such as 4 to 25 gallons. Use the lower rate to knock down existing pests and the higher rate where faster knockdown or greater residual control is desired. Lawn should not be longer than 3 inches at the time of application. Application in combination with compatible surfactants may enhance penetration. Arid climates generally require higher volumes. ⁵ Residual treatment for control of Deer tick, western black-legged tick and other ticks (important vectors for Lyme Disease, Rocky Mountain Spotted Fever).

PEST CONTROL INDOORS

Food Handling Establishments: Places other than private residences in which food is held, processed, prepared or served.

Food/Feed Areas: Do not use in food/feed areas of food/feed handling establishments, restaurants or other areas where food/feed is commercially prepared or processed. Do not use in serving areas while food is exposed or facility is in operation. Serving areas are areas where prepared foods are served such as dining rooms, but excluding areas where foods may be prepared or held. In the home, cover all food processing surfaces and utensils during treatment or thoroughly wash before use. Exposed food should be covered or removed. Do not use this product in federally inspected meat and poultry plants.

Non-Food/Feed Areas: Includes offices, locker rooms, machine rooms, garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, boiler rooms, garages, mop closets and storage (after canning or bottling). All areas where insects hide or through which insects may enter should be treated.

PEST	SPECIFIC APPLICATION INSTRUCTIONS
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PEST	SPECIFIC APPLICATION INSTRUCTIONS
Fleas	Prior to treatment, vacuum carpets and furniture thoroughly and discard vacuum cleaner bag in an outdoor trash container. Apply a broadcast spray evenly at a rate of 1 gallon/per 800 to 1600 square feet to infested areas such as crawlspaces, rugs, carpets, pet beds and other pet resting areas. Avoid wetting or soaking. For crawlspace applications, the applicator must wear a respirator recommended by NIOSH for filtering spray mists and organic vapors. When treating upholstered furniture, treat between and under cushions. Pay particular attention to areas that are frequented by pets. Old pet bedding should be replaced with clean, fresh bedding after treatment. To control the source of flea infestations, pets inhabiting the treated premises should be treated with a flea-control product registered for application to animals.
Ants* Carpenter Ants* Fire Ants Bat Bugs Bed Bugs Bees Wasps Carpenter Bees Boxelder Bugs Cockroaches Crickets Flies (such as Drain Cluster, House) Earwigs Firebrats Ground Beetles Leaf Beetles Millipedes Pantry Pests** such as: (Flour Beetles, Indian Meal Moths, Larder Beetles) Pillbugs Scorpions Silverfish Sowbugs Spiders	Apply crack and crevice, as a pinstream, as a fine/coarse, low-pressure spray (20 psi or less), spot application or with a paintbrush. Treat where pests are found or normally occur, such as crack and crevices in walls, in and around kitchen cabinets and drawers, along baseboards, behind sinks and around plumbing and other utility installations. *Ant infested wood may be drilled and injected with Permethrin E-Pro Termiticide/Insecticide. **Remove all utensils, uncovered foodstuffs (or any having original package opened), shelf paper and other objects before spraying. Allow treated surfaces to dry and cover shelves with clean paper before replacing any utensils, foodstuff or other items. Any foodstuff accidentally contaminated with spray solution should be discarded.
Carpet Beetles	For the control of carpet beetles, evenly apply the spray to rugs, carpets, along baseboards and edges of carpeting, under carpeting, rugs and furniture, in closets, on shelving, and wherever else these insects are seen or suspected. Avoid wetting or soaking.

PEST	SPECIFIC APPLICATION INSTRUCTIONS
Brown Dog Ticks	For the control of Brown Dog Ticks, evenly apply the spray to infested areas, such as pet beds and resting quarters, nearby cracks and crevices, along baseboards, windows and door frames, and areas of floor and floor coverings where these pests may be present. Avoid wetting or soaking. Remove old bedding and replace with clean, fresh bedding after treatment.

TURF AND ORNAMENTAL USE

Permethrin E-Pro Termiticide/Insecticide has demonstrated excellent plant safety; however, not all cultivars have been tested. Before treating large numbers of plants of a particular cultivar, treat a few plants and observe prior to full- scale application.

Permethrin E-Pro Termiticide/Insecticide may be used to control insect pests on turf, ornamentals and lawns in landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Permethrin E-Pro Termiticide/Insecticide may also be used on plants intended for aesthetic purposes or climatic modification and being grown in interior plant-scapes, field and container grown nursery stock, greenhouses, trees and shrubs, ornamental gardens or parks, or lawns and grounds.

General Application Instructions

Make applications of Permethrin E-Pro Termiticide/Insecticide when insects appear or feeding is noticed. The higher rate should be used as pest populations increase. Permethrin E-Pro Termiticide/Insecticide may be applied by ground equipment only. Use sufficient water to obtain full coverage.

Do not apply more than 2.0 lbs. a.i./acre/year.

Resistance: Some insects are known to develop resistance to products used repeatedly for control. Because this development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the areas of use. Consult your local or State pest management authorities for details.

If resistance to this product develops in your area, this product or other products with similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and suspect that resistance is a reasonable cause, immediately consult your local company representative or pest management advisor for the best alternative method of control for your area.

Recommended Application Rates

CROP	PEST	RECOMMENDED RATE	SPECIFIC INSTRUCTIONS
Ornamentals in interiorscapes, in residential landscaped areas and landscaped areas around institutional, public,	Ants Aphids Bagworms	4 to 8 fl. oz. per 100 gals.	Apply sufficient volume of water to adequately cover foliage.
	Beet Armyworm Birch Leafminer Cabbage Looper Cankerworms	or Broadcast 4 to 8 fl. oz. per acre	

CROP	PEST	RECOMMENDED RATE	SPECIFIC INSTRUCTIONS
commercial and industrial buildings, parks, recreational areas and athletic fields, greenhouses (including foliage and flowering plants, woody and herbaceous non-edible ornamentals and non-bearing plants of fruiting species)	Citrus Thrips Fungus Gnat Gypsy Moth Caterpillars Heliothis spp. Japanese Beetles Lace Bug Leaf Feeding Caterpillars Leafminers Leafhoppers Leaf rollers Lygus Bugs Mealybugs Pine Sawflies Plant Bugs Root Weevils (Adult) Tent Caterpillars Webworms Whiteflies Zimmerman Pine Moths		Direct application to blooms may cause browning of petals. Marginal leaf burn may occur on Salvia, Dieffenbachia and Pteris Fern.
Ornamental Trees	Clearwing Moth Borers Ash Borer Banded Ash Clearwing Dogwood Borer Lesser Peachtree Borer Lilac Borer Oak Borer Peachtree Borer Rhododendron Borer	1 to 2 quarts per 100 gals.	Apply to the lower branches and trunk directly prior to adult emergence. Emergence varies according to host tree, environmental conditions and geography of the country. Complete heavy, uniform coverage of bark on scaffold limbs to the ground level of the trunk is recommended for best control.
	Bark Beetles Dendroctonus spp. Ips spp. Elm Bark Beetles Mountain Pine Beetle Pine Engravers Turpentine Beetles Western Pine Beetle	2 to 5 quarts per 100 gals.	
	Coleopteran Borers Bronze Borer Flathead Appletree Borer	2 to 5 quarts per 100 gals.	
	For maximum residual control of the above listed pests – Use 2 to 5 quarts per 100 gals.		
Conifers	Nantucket Pine Tip Moth Coneworms*	4 to 8 fl. oz. per 100 gals. or Broadcast 4 to 8 fl. oz. per acre	Begin application when adults appear. Repeat applications may be made on 5-7 day intervals as needed.

CROP	PEST	RECOMMENDED RATE	SPECIFIC INSTRUCTIONS
Lawns around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields	Chinchbugs Pillbugs Sod Webworm (See also list of pests under "Pest Control on Outside Surfaces and Around Buildings")	0.4 to 0.8 fl. oz. per 1000 sq. ft.	Apply using sufficient water to provide adequate coverage.

*To control Coneworm – apply Permethrin E-Pro Termiticide/Insecticide at the following rates:

- For high volume sprayers: Use 8 ounces in 100 gallons of water. Apply 5 to 10 gallons of finished spray per tree.
- For low volume sprayers: Use 42 ounces in 100 gallons of water. Apply 100 gallons per acre.
- To control Webbing Coneworm: Make 1st application within 1 week of female flower closure or peak pollen flight.
- To control other Coneworms: Make 1st application within 30 days following flower closure.

APPLICATIONS TO AGRICULTURAL STRUCTURES For Agricultural use only

General Application Instructions

Permethrin E-Pro Termiticide/Insecticide can be used for residual pest control in and on buildings and structures used for agricultural purposes and their immediate surroundings.

Permethrin E-Pro Termiticide/Insecticide is an emulsifiable concentrate to be diluted with water and applied as an emulsion to control pests in and around agricultural structures. Pests controlled are listed in the accompanying tables.

Agricultural Structures

Spray directly or apply by spot treatment to walls and ceiling as a residual surface treatment only. Do not treat manure or litter. Avoid contamination of feed and water.

FOR APPLICATION IN	TARGET INSECTS	METHOD OF APPLICATION	DILUTE	APPLICATION RATE
Dairies Barns Feedlots Stables Poultry Houses Swine and Livestock Houses	Lesser mealworms Darkling beetles House flies Stable flies and other manure breeding flies. Also aids in the reduction of cockroaches, mosquitoes and spiders.	Sprayer	4 ounces to 12.5 gallons of water	1 gallon per 750 square feet of surface
		Fog or Mist	1.5 to 2.0 ounces per 1 gallon of water	2 ounces per 1000 cubic feet of surface

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AS A LIVESTOCK SPRAY

ANIMALS	INSECT	DILUTE & USE	APPLICATION RATE
Lactating and Non-Lactating Dairy Cattle and Goats, Beef Cattle and Sheep	Horn Flies Only	4 fl. oz. ounces to 50 gallons water (treats 200 head) 0.025% active ingredient (a.i.) High-pressure spray	1 quart of coarse spray per animal.
	Horn flies Pace flies Stable flies House flies Horse flies Deer flies Black flies Eye gnats Mange mites Scabies mites Ticks Lice Sheep keds	4 fl. ounces to 25 gallons water (treats 50-100 head) 0.05% a.i. High-pressure spray	1-2 quarts of coarse spray per animal over whole body surface. For mange, scabies, ticks and lice, thoroughly wet animal. Repeat application 10-14 days for mites and lice.
	Horn flies Face flies Stable flies Ear ticks Lice	4 fl. ounces to 2 ½ gallons water (treats 64-80 head) 0.5% a.i. Low-pressure spray (hand pump sprayer)	For fly and lice control, thoroughly spray mid-line from face to tailhead, but do not allow runoff to occur. For ear tick control spray directly into each ear (1/2 fl. oz. each).
	Horn flies Face flies Stable flies	4 fl. ounces to 10 gallons diesel oil or suitable mineral oil. 0.125% a.i. Back rubber, self oiler	Keep rubbing device charged. Results improve by daily forced use.
Poultry	Northern fowl mites Lice	1-4 fl. ounces to 3 ¾ gallons water (treats 1500 head) 0.08-0.33% a.i. High-pressure spray	1 gallon of coarse spray per 100 birds paying particular attention to vent area.
Swine (Allow 5 days between last treatment and slaughter)	Lice and Mange	4 fl. ounces to 25 gallons water (treats 50-100 head) 0.05% a.i. Sprayer or dip	Thoroughly wet or dip animals including ears. For mange, spray pen floors, sides and bedding. Repeat at 14 days.

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ANIMALS	INSECT	DILUTE & USE	APPLICATION RATE
Horses	Horn flies	¼ fl. ounce to 1 pint water	1-2 fl. ounces spray per animal.
	Face flies		
	Stable flies	0.6257% a.i.	Spot treat back, face, legs, tail and ears.
	House flies		
	Horse flies		
	Black flies	Low-pressure spray	Thoroughly wet animal skin with sponge or rag. Let drip-dry.
	Eye gnats	¼ fl. ounce to 1 ¼ gallons water	
	Mange mites	0.0626% a.i.	
	Scabies mites		
Ticks			
Lice	Dip wash		
Fleas			

Companion Animals (Dogs Only)

USE PRECAUTIONS:

- Do not use on dogs under twelve (12) weeks old.
- Consult a veterinarian before using this product on medicated, debilitated, aged, pregnant or nursing animals.
- Sensitivities may occur after using any pesticide product on pets. If signs of sensitivity occur, bathe your pet with mild soap and rinse with large amounts of water. If signs continue, consult a veterinarian immediately.
- Avoid contact with face, eyes, and genitalia. Repeat applications every 2 weeks, if necessary.

ANIMALS	PEST	DILUTE & USE APPLICATION RATE	APPLICATION RATE INSTRUCTIONS
Dogs (NOTE: Do NOT use on cats)	Fleas Ticks	¼ fl. oz. to 1 pt. water, (0.6257% a.i.), Low pressure spray	Apply 1-2 fl. oz. per animal as a low-pressure spray. Spot treat back, face, legs, tail and ears.
		¼ fl. oz. to 1 ¼ gallons water, (0.0626% a.i.), Dip wash	Dip wash the animal, thoroughly wetting animal to the skin with a sponge or rag. Let drip dry.
		4 fl. oz. to 20 gallons water, (0.0625% a.i.), Dip	Dip the animal in the solution making sure all areas are soaked to skin. Let drip dry on animal. (Do not rinse off).

NOTE: Applications may be repeated every two-weeks as necessary.

APPLICATIONS FOR FRUIT AND NUT TREES AROUND RESIDENTIAL SITES ONLY

IMPORTANT: Permethrin E-Pro Termiteicide/Insecticide is NOT for use on commercial fruit and nut trees.

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Permethrin E-Pro Termiticide/Insecticide may be applied to the crops in the table below by mixing the recommended amount in 100 gallons of water per acre (1 gallon per 436 sq. ft.). Provided the maximum application rates listed below are not exceeded on a per acre basis, Permethrin E-Pro Termiticide/Insecticide may be diluted and applied in greater volumes of water. For example: When attempting to control Navel Orangeworm on almonds using an application volume of 200 gallons per acre (2 gallons per 436 sq. ft.), the maximum legal dilution of Permethrin E-Pro Termiticide/Insecticide is 8 fluid ounces per 100 gallons (1/2 teaspoon per gallon).

**Residential Fruit and Nut Trees Pests Controlled by Permethrin E-Pro
Termiticide/Insecticide**

TREE	PEST	APPLICATION RATE	SPECIFIC INSTRUCTIONS
Almond	Navel Orangeworm Peach Twig Borer	8 - 16 fl. oz. per 100 gal./A or ½ - 1 tsp. per 1 gal./436 sq. ft.	Do not harvest nuts within 7 days after application. Do not apply more than 32 fluid ounces per acre during hull split. Do not apply more than 80 fluid ounces per acre per year.
Apples	Green Fruitworm Leafminer Oblique Banded Leafroller Plum Curculio Redbanded Leafroller Rosy Apply Aphid Spotted Tentiform Tarnished Plant Bug White Apple Leafhopper	4 - 8 fl. oz. per 100 gal./A or ¼ - ½ tsp. per 1 gal./436 sq. ft.	Do not apply more than 24 fl. oz. per acre per year.
Cherries	Green Fruitworm Lesser Peachtree Borer Plum Curculio Redbanded Leafroller Rose Chafer Tarnished Plant Bug	4 - 8 fl. oz. per 100 gal./A or ¼ - ½ tsp. per 1 gal./436 sq. ft.	Do not harvest fruit within 3 days after application. Do not make more than 4 applications per year. Do not make more than 3 applications after petal fall.
Filberts	Filbertworm Oblique Banded Leafroller	8 - 16 fl. oz. per 100 gal./A or ½ - 1 tsp. per 1 gal./436 sq. ft.	Do not harvest nuts within 14 days after application. Do not apply more than 64 fluid ounces per acre per year.
Peaches	Green Fruitworm Lesser Peachtree Borer	4 - 12 fl. oz. per 100 gal./A or	Do not harvest fruit within 14 days after

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TREE	PEST	APPLICATION RATE	SPECIFIC INSTRUCTIONS
	Oriental Fruit Moth Peach Twig Borer Plum Curculio Rose Chafer Tarnished Plant Bug	¼ - ¾ tsp. per 1 gal./436 sq. ft.	application. Do not apply more than 60 fluid ounces per acre per year.
Pears	Pear Psylla	8 - 16 fl. oz. per 100 gal./A or ½ - 1 tsp. per 1 gal./436 sq. ft.	Apply only during dormant through delayed dormant growth periods. Do not apply more than 32 fluid ounces per acre per year.
Pistachios	Leaffooted Bugs Navel Orangeworm Peach Twig Borer Plant Bugs Stinkbugs	8 - 16 fl. oz. per 100 gal./A or ½ - 1 tsp. per 1 gal./436 sq. ft.	Nuts may be harvested on the day of application. Do not apply after 10 percent hull split. Do not apply more than 32 fluid ounces per acre per year.

Unit Conversions:

1 fl. oz. = 2 tablespoons = 6 teaspoons

NOTE: Do not use household utensils to measure Permethrin E-Pro Termiticide/Insecticide.

PRECONSTRUCTION LUMBER AND LOG APPLICATIONS

Dilute Permethrin E-Pro Termiticide/Insecticide before using the rates in the chart below:

Gallons of Spray Mixture Desired	Gallons of Permethrin E-Pro Termiticide/Insecticide to Use		
	0.5% solution	0.75% solution	1.0% solution
40	-	-	1
80	1	1	2
200	2	3	5
400	5	7	10
800	10	15	20

Treatment Instructions

Treat wood completely with a 0.5% to 1.0% solution of Permethrin E-Pro Termiticide/Insecticide to protect unseasoned lumber and logs from wood destroying insects such as, but not limited to, ambrosia beetles, powder-post beetles, old house borers, carpenter ants and termites. Apply by brushing, dipping, spraying or pressure treating. To ensure the proper level of Permethrin E-Pro Termiticide/Insecticide is maintained, it is necessary to constantly monitor dip and pressure systems. Treated wood may be handled when dry.

Brush Treatments

Thoroughly treat all wood surfaces.

Spray Treatments

Thoroughly spray wood, including back and ends.

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Pressure Treatments

Place the wood in the treatment chamber and then add the Permethrin E-Pro Termiticide/Insecticide solution to the system. Pressurize up to 250 psi for up to one hour depending on the wood density and type of wood treatment. The ideal Permethrin retention is:

- 500 to 1,000 ppm in the outer 0.5 inch of wood or,
- a loading of 0.0175 to 0.035 lbs. Permethrin per cubic foot of wood.

Transfer the treated wood to an appropriate place to dry after the pressure is released and the system is drained.

Dip Treatments

Completely submerge the wood in the Permethrin solution until the wood is thoroughly wet. Transfer the treated wood to an appropriate location and allow to dry. Agitation may be necessary for dipping solutions that have been left unused for long periods of time. Check tanks periodically for sediment, debris and other deposits, and remove if necessary.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original containers only. Store in a cool, dry place and avoid excess heat. Do not store below 40°F. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers.

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

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

CONDITION 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.

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