

7401-455

06/04/2009

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

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Leslie Oliver  
Agent for Voluntary Purchasing  
Groups, Inc.  
MANDAVA Associates, LLC  
6860 N. Dallas Parkway, Suite 200  
Plano, TX 75034

JUN 4 2009

Subject: Notification(s) for Label Revisions under PRN 2008-1 and 2007-4

Dear Ms. Oliver:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notices (PRN) 2008-1 and 2007-4 dated January 14, 2009 for:

**EPA Registration 7401-455**

**Hi-Yield 10% Permethrin Concentrate**

The Registration Division (RD) has conducted a review of the request(s) for applicability under PRN 2008-1 and 2007-4 and finds that the label changes requested fall within the scope of PRN 2008-1 and 2007-4. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identify the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact me directly at 703-305-6249 or Nicole Williams of my staff at 703-308-5551.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Arrington".

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs



Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060

	United States	<input type="checkbox"/> Registration	OPP Identifier Number
	Environmental Protection Agency	<input type="checkbox"/> Amendment	
	Washington, DC 20460	<input checked="" type="checkbox"/> Other	

Application for Pesticide - Section I

1. Company/Product Number 7401-455	2. EPA Product Manager George LaRocca	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Hi-Yeld 10% Permethrin Concentrate	PM# 13	
5. Name and Address of Applicant (Include ZIP Code) Voluntary Purchasing Groups, Inc. 230 N. FM 87 Bonham, Texas 75418 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: <input checked="" type="checkbox"/> EPA Reg. No. <u>NOTIFICATION</u> Product Name <u>JUN 04 2009</u>	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of label change relative to PR Notices 2008-1 and 2007-4 and the requirements of EPA's regulations at 40 CFR 156.10, 156.140, 156.144, 156.146 and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to wilfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR 156.10, 156.140, 156.144, 156.146 and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container 8 oz., pint & Quart	5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Madhu Mandava	Title Agent for Voluntary Purchasing Groups, Inc.	Telephone No. (Include Area Code) 972-265-7924
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Agent for Voluntary Purchasing Groups, Inc.	
4. Typed Name Madhu Mandava	5. Date April 30, 2009	

OK 3/34

# MANDAVA ASSOCIATES, LLC

CONSULTANTS IN SCIENCE, TECHNOLOGY AND REGULATORY AFFAIRS

6860 N Dallas Parkway, Suite 200, Plano, TX 75034

Telephone: (972) 265-7924 / Fax: (972)-265-7942 / E-MAIL: [Madhu@Mandava.com](mailto:Madhu@Mandava.com) / [www.Mandava.com](http://www.Mandava.com)

January 26, 2009

Mr. George LaRocca  
US EPA  
Office of Pesticide Programs  
Registration Division (7504P)  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

SUBJECT: EPA Registration Number: 7401-455; Hi-Yield 10% Permethrin Concentrate  
Notification Per PR Notices 2008-1 and 2007-4

Dear Mr. LaRocca:

On behalf of Voluntary Purchasing Groups, Inc. (VPG), we are submitting notification for change in Storage and Disposal Statements per PR Notice 2007-4 and Environmental Hazards Statements per PR Notice 2008-1 for Hi-Yield 10% Permethrin Concentrate (EPA Registration Number: 7401-455).


Enclosed with this submission, please find the following:

- 1) Application for Pesticide Registration Notification
- 2) Two amended labels clearly marked
- 3) One original label

Please update the agency records in consideration of this notification.

If you have any questions regarding this submission, please contact me at (972) 265-7925.

Sincerely,



Leslie Oliver  
Agent for Voluntary Purchasing Groups, Inc.

Hi-Yield Kill-A-Bug II  
EPA Registration No. 7401-457

Attachment for Section II of form 8570-1

"Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA."

"Notification of label change relative to PR Notice 2008-1. This notification is consistent with the guidance in PR Notice 2008-1 and the requirements of EPA's regulations at 40 CFR 156.10, 40 CFR 156.80 and 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the guidance of PR Notice 2008-1 and the requirements of 40 CFR 156.10, 40 CFR 156.80 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA."

*Messie Oliver*

\_\_\_\_\_  
Signature

Agent for Voluntary Purchasing Groups, Inc.  
Title

April 23, 2009  
Date

[FRONT LABEL PANEL]

## **Hi-Yield® 10% Permethrin Concentrate**

For Use by Licensed Pest Control Operators or Commercial Applicators Only

For control of 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.

**[Optional proposed text appears in brackets - the final label may include some or all of the optional text]**

- [Contains 10% Permethrin]
- [Kills Fleas & Ticks on Dogs]
- [Use on Cattle, Horses, Goats, Sheep & Poultry]
- [Use on Cattle, Horses, Goats, Sheep & Poultry to Control Faceflies, Hornflies, Mosquitoes, Ticks, Lice, Mites and Other Listed Insects]
- [Kills Aphids, Borers, Armyworms, Caterpillars, Japanese Beetles, Leafminers, Cutworms, Crickets, Grasshoppers, Ants, Thrips, Mites, Whiteflies, Mealybugs, Scales, Bagworms, Sowbugs (Pillbugs), Fleas, Ticks and Other Insects as Listed for Vegetables, Fruit Trees, Turf & Ornamentals]
- [For Use Outdoors Around Homes to Control Ants, Crickets, Earwigs, Cockroaches, Mosquitoes, Biting Midges, Flies and Other Listed Insects] Kills Termites including Dry-Wood Termites]
- [Controls Subterranean Termites]
- [Controls Wood Infesting Insects Including Termites, Carpenter Ants, Carpenter Bees and Other Listed Insects]
- [Use on Turf, Ornamentals, Vegetables, Fruit and Nut Trees]
- [A Long Lasting Pet & Livestock Spray]
- [Residually Controls Fleas and Ticks on Dogs for 35 Days]
- [Economical, 8oz. Makes Up To 48 Gallons (or, 16 oz Makes Up To 96 Gallons)(or, 32 oz. Makes Up To 192 Gallons)(or, 1/2 Gallon Makes Up To 384 Gallons)(or, 1 Gallon Makes Up to 768 Gallons)] Kills Fire Ants]  
Controls Flat Headed Borers, Round Headed Borers, Bark Beetles, Wood Boring Beetles, Dogwood Borers, Rhododendron Borers & Lilac Borers]

**NOTIFICATION**

JUN 04 2009

[FRONT LABEL PANEL CONT'D]

**ACTIVE INGREDIENT:**

\*Permethrin ..... 10.0%

**OTHER INGREDIENTS:** ..... 90.0%

**TOTAL:** ..... 100.0%

\*Cis/trans isomers ratio: min. 35%(±) cis and max. 65%(±) trans.

\*\*Contains petroleum distillates.

**KEEP OUT OF REACH OF CHILDREN**

**WARNING**

**See Back/Side Label Panel for Additional Precautionary Statements**

**Net Contents**\_\_\_\_\_

**[BACK LABEL PANEL]**

<b>FIRST AID</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-222-1222 or 1-800-900-4044 for emergency medical treatment information.	
If swallowed	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give <b>any</b> liquid to the person.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
If in eyes	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
If on skin or clothing	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
If inhaled	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>Note to Physician and Veterinarian:</b> Do not administer or instill milk, cream or other substances containing vegetable or animal fats which enhance absorption of lipophilic substances. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.</p> <p><b>Emergency Phone Numbers:</b>  Human Health, Call Poison Control Center: 800-900-4044  Animal Health, Call ASPCA: 800-345-4735</p>	

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS & DOMESTIC ANIMALS**

**WARNING:** Causes skin irritation and moderate eye injury. Harmful if swallowed, inhaled or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not get on skin or on clothing. Avoid contact with eyes. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before re-use. Do not allow children or pets to go onto a treated area until the treated area such as grass or soil has dried.

**[BACK LABEL PANEL CONT'D]****Personal Protective Equipment:**

All pesticide handlers (mixers, loaders, and applicators) must wear a waterproof apron or long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Regular work shirts, pants, socks, shoes and waterproof gloves are sufficient 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. In addition, all pesticide handlers must wear a respiratory protection device when working in a non-ventilated space; all pesticide handlers must wear protective eyewear (goggles and/or a face shield and/or shielded safety glasses with front, brow and temple protection) when working in a non-ventilated space or when applying termiticide by nodding or sub-slab injection.

Use one of the following Mine Safety and Health Administration (MSHA) National Institute for Occupational Safety and Health (NIOSH) respirator types with approval number prefixes: TC-21C (Dust/mist filtering); TC-19C (Supplied-air); TC-13F (Self-contained breathing apparatus (SCBA)); TC-14G (Organic-vapor removing with pre-filter for removing pesticides).

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

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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

**ENVIRONMENTAL HAZARDS**

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

**PHYSICAL & CHEMICAL HAZARDS**

Do not use or store near heat or open flame. Do not use this product in or around electrical equipment due to the possibility of shock hazard.



**[BACK LABEL PANEL CONT'D]****DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.  
**READ ENTIRE LABEL BEFORE EACH USE.**

Not for Use on Plants being Grown for Sale or other Commercial Use or Commercial Seed Production or for Research Purposes.

**HOW TO MIX AND APPLY**

Unless otherwise directed, mix the recommended amount of Hi-Yield® 10% Permethrin Concentrate per 4 gallons of water and apply in accordance with specific directions for use. Where appropriate, calculate the area to be treated by measuring the length and the width then multiply together to determine the square footage of the area to be treated.

Unless otherwise directed, apply Hi-Yield® 10% Permethrin Concentrate with a pump-up or other commercial type sprayer capable of delivering a coarse spray. When mixing, first fill the sprayer with half of the required amount of water, then measure and add the appropriate amount of Hi-Yield® 10% Permethrin Concentrate. Complete filling the sprayer with the remaining amount of required water. Shake the sprayer or initiate agitation to mix the product and water. Thorough spray coverage is necessary, but avoid spray runoff.

For large area coverage, this product may also be used through a hose-end type sprayer such as a ferti-lome Air-O-Matic Hose-end Spray. Always follow the directions provided with the hose-end sprayer type for proper dilution and application of Hi-Yield® 10% Permethrin Concentrate.

Do not use food utensils, such as measuring spoons or cups, for food purposes after use in measuring pesticides.

**INDOOR ORNAMENTAL PLANTS**

Contact and residual spray. Use at the rate of 1 fl. oz. in 4 gallons of water. Use sufficient spray to obtain full and uniform coverage. Avoid spraying to the point of runoff. Adjust spray volume used to plant size.

<b>Plants</b>	<b>Insects</b>	<b>Instructions</b>
INTERIOR: To protect plants in greenhouses, lathhouses and for interior landscaping.  Ageratum, Ardisia, Aster, Azalea, Baby's breath, Begonia, Birds-nest fern, Bleeding heart, Carnation,	Aphids, Armyworms, Corn Earworms, Cankerworms (Fall and Spring), Inchworms, Japanese beetles, Leafminers, Leafrollers, Mealybugs, Scales, Spider Mites, Thrips	Remove infested plants from living areas prior to application. Spray plants outside in a shaded area away from children or pets (particularly fish). When leaves dry, plants can be returned to original location. Do not use more product than is

<p>Coleus, Crown of Thorns, Cockscomb, Cyclamen, Dracaena, English Ivy, Fuchsia, Gladiolus, Grape Ivy, Hypoestes, Ivy, Juniper, Lily, Marigold, Orchid, Palm, Pansy, Piperomia, Petunia, Philodendron, Piggyback Plant, Poinsettia, Portulaca, Pathos, Prayer Plant, Purple Passion, Rabbits Foot Fern, Rose, Schefflera, Snapdragon. Snake Plant, Statice. Velvet Plant, Verbena, Zinnia</p>	<p>(Exposed), Whiteflies</p>	<p>recommended as this may cause plant injury. Use with care on ferns, palms and fuchsia. As with all plants listed above, especially carnations, chrysanthemums and roses, there exists a wide variety of species and cultivars and therefore, a wide variety of susceptibility to injury. To ascertain possible phytotoxicity, spray a few plants as described above, wait 24 hours and check for possible injury. Repeat applications every 4 to 8 days only as necessary for insect</p>
<p>Chrysanthemums</p>	<p>Armyworms, Cabbageworms, Cutworms, Leafrollers</p>	<p>control. Repeat applications may be necessary to control adult Japanese beetles on roses.</p>
<p>Velvet Plants</p>	<p>Fungus gnats</p>	

**OUTDOOR ORNAMENTALS (In Residential Landscaped Areas and Landscaped Areas Around Institutional, Public, Commercial and Industrial Buildings, Parks, Recreational Areas and Athletic Fields (Including Trees, Shrubs, Flowers, Evergreens, Foliage Plants and Ground Covers)):**

**Not for use in Nurseries.** Use at the rate of 1 fl. oz. in 4 gallons of water. Apply as a uniform spray, thoroughly wetting all plant parts. Do not spray to the point of runoff. Apply to cover underside of leaves and to penetrate dense foliage. Adjust spray volume used to plant size.

Plants	Insects	Instructions
<p>Ageratum, Arizona Cypress, Aster, Azalea, Begonia, Coleus, Common Ninebark, Common Snowberry, Elm, Exacum, Euonymous, English Ivy, Gladiolus, Gold Bells, Hypoestes, Ivy, Lialic,</p>	<p>Aphids, Bagworms, Cicadas, Com Earworms, Cankerworms (Fall), Inchworms, Leafminers, Leafrollers, Lilac Borer, Mealybugs, Rhododendron Borer, Spider Mites, Taxus</p>	<p>Spray in the late afternoon or evening when the temperature ranges from 50°F to 75°F and when there is little or no wind. Repeat every 4 to 8 days as necessary. Application can</p>

Marigold, Mock Orange, Nannyberry, Orchid, Palm, Pansy, Pea Shrub, Petunia, Philodendron, Poinsettia, Rhododendron, Rose, Snapdragon, Taxus, Wax Plants, Weeping Fig, Zinnia	Weevil, Thrips (Exposed), Whiteflies	be made up to the day of collection.
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**ORNAMENTAL TREES & SHRUBS (In Residential Landscaped Areas and Landscaped Areas Around Institutional, Public, Commercial and Industrial Buildings, Parks, Recreational Areas and Athletic Fields (Including Trees, Shrubs, Flowers, Evergreens, Foliage Plants and Ground Covers)):**

**Not for use in Nurseries.** Use at the rate of 1 fl. oz. in 4 gallons of water. Apply as a uniform spray, thoroughly wetting leaves and branches. Do not spray to the point of runoff. Apply to cover underside of leaves and to penetrate dense foliage. Adjust spray volume used to plant size.

Plants	Insects	Instructions
Arizona Cypress, Azalea, Birch, Cherry, Non-bearing Citrus, Conifers, Elm, English ivy, Euonymus, Weeping Fig, Fir, Honeysuckle, Lilac, Mock-orange, Oak, Palm, Philodendron, Pine, Poinsettia, Tulip, Rhododendron, Taxus	Aphids, Bagworms, Cicadas, Cankerworms (Fall), Inchworms, Leafminers, Leafrollers, Mealybugs, Spider Mites, Thrips (exposed), Webworms (fall), Whiteflies	Spray at the first sign of insects. Spray in late afternoon or evening, when the temperature ranges from 50° to 75°F and when there is little or no wind. Repeat applications at 4 to 8 day intervals only as needed to control infestations. Applications can be made up to the day of collection.
Conifer	Budworms	
Elm	Elm Leaf Beetles, Elm Spanworms, Fall Webworms,	
Douglas and Grand Firs	Tussock Moths	
Non-bearing Citrus	Citrus Black Flies	
Oak	Oakworms	
Pine	Pine Beetles, Pine Moths, Pine Needle Miners, Needle Scales,	

**[BACK LABEL PANEL CONT'D]**

**To Control and Prevent Bark Beetles & Boring Insects (including, but not limited to: Ash Borer, Bronze Birch Borer, Rhododendron Borer, Elm Bark Beetles and Turpentine Beetles):** Mix 1 1/2 - 3 fl. oz. of this product per 1 gallon water. Treat lower branches and trunk areas until thoroughly wet but avoid applying to the point of runoff. Apply prior to adult emergence. Use the higher rate for heavy pest infestation. Use the lower rate for preventative control. Apply in early May and again in early June.

<b>NUISANCE PESTS IN OUTDOOR AREAS</b>		
Use at the rate of 6 2/3 fl. oz. per 1 gallon water to treat 1,600 linear feet with a 6-inch spray band.		
<b>Where</b>	<b>Insects</b>	<b>Instructions</b>
Outside Surfaces of Buildings	Ants, Clover mites, Crickets, Earwigs, Millipedes, Sowbugs (pillbugs)	To help prevent infestation of buildings, treat the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Also, apply as a residual spray to outside surfaces of buildings, including porches, screens, window frames, eaves, patios, garages, refuse dumps and other areas where these pests congregate or have been seen. Repeat treatment every 14 days only as needed to maintain insect control.
	Ants, Crickets, Earwigs, Fleas, Lone Star Ticks,	For localized infestations of these insects in areas where there are weeds or bushy non-crop areas, spray infested areas thoroughly. For Ants, thoroughly wet hills and runways. Repeat applications only when reinfestation occurs.
Other Outdoor Areas	Flies (Cluster and House), Flying moths, Gnats, Mosquitoes	Use as an aid in reducing the annoyance from these insects, spray outside surfaces of screens, doors, window frames or wherever these insects may enter the room. Also treat surfaces around light fixtures on porches, in garages and other places where these insects alight or congregate.

[BACK LABEL PANEL CONT'D]

Tent Caterpillars	Apply when caterpillars are young and tents are first noticed. For best results, apply in the late afternoon or evening, when caterpillars have returned to their tents. Wet tents with spray on all sides. A few caterpillars may be seen escaping from the tent; however, they should die within several hours. Treat new tents that may appear.
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**FOR LAWNS AROUND RESIDENTIAL, INSTITUTIONAL, PUBLIC, COMMERCIAL AND INDUSTRIAL BUILDINGS, PARKS, RECREATIONAL AREAS AND ATHLETIC FIELDS AND OTHER NON AGRICULTURAL OUTDOOR AREAS - (Bentgrass, Bermudagrass, Bluegrass, Dichondra, Fescue, Irish Moss, Merion & St. Augustine Grass):** For control of (*Ants (aids in control of Fire Ants), Armyworms, Brown Dog Ticks, Chinch Bugs, Crickets, Cutworms, Fleas, Japanese Beetle Grubs, Grasshoppers, Mole Crickets and Sod Webworms*), consult the following chart:

**Not for Use on sod farms or golf courses.**

Pests	Directions
Armyworms, Brown Dog Ticks, Cutworms, Chinch Bugs, Fleas, Japanese Beetle Grubs, Mole crickets, Sod Webworms	Thoroughly wet down grass a few hours before applying. Turf should be no taller than 3 inches at time of application. Slightly more water may be used as long as the amount of product per area is as follows. For heavy infestations, repeat application after 2 weeks.
Crickets, Grasshoppers, Ants	For Ants, Crickets, Grasshoppers, mix ½ fl. oz. in 3 gallons of water and treat 1,000 sq. ft. For all other insects, mix 1 ½ fl. oz. in 10 gallons of water and treat 1,000 sq. ft.
Fire Ants	Mix 1 1/2 fl. oz. in 1 gallon of water to treat one mound. Apply the solution as a gentle rain to each Fire Ant mound using a sprinkler can. Thoroughly wet the mound and the surrounding area to a 4-foot diameter. For best results, apply in cool weather, 65° - 80° F, or in early morning or late evening hours. Treat new mounds as they appear. Do not disturb the mound prior to treatment. Treat all mounds in the vicinity, and treat all colonies which have not yet constructed mounds. Do not use equipment that produces a pressurized spray since this will disturb fire ants and cause migration, reducing product effectiveness.

**[BACK LABEL PANEL CONT'D]**

**VEGETABLES AND FRUITS (For Vegetable, Fruit and Nut Crops Grown Around the Home Only):** Use at the rate given in the table in 4 gallons of water to cover 4,000 square feet. Spray at the first sign of insects. Wet the plants for thorough and uniform coverage but avoid applying to the point of runoff. Apply to cover the underside of leaves and to penetrate dense foliage. Treat in late afternoon or evening, when the temperatures range from 50° to 75°F and when there is little or no wind.

<b>Vegetable and Fruit</b>	<b>Target Pest(s)</b>	<b>Remarks</b>	<b>Rate/4 Gallons Water</b>
Asparagus (pre-harvest)	Cutworm, Asparagus Beetle	Do not apply more than 4 applications per season. Can be applied up to 3 days prior to harvest.	1 ½ fl. oz.
Asparagus (post-harvest)	Larval stages of Asparagus Beetle, Tarnished Plant Bug, Lygus Bugs and Adult Japanese Beetle	Treat ferns or brush growth after spear harvest when insects are present.	1 ½ fl. oz.
Celery - See Leafy Vegetables			
Cole Crops: Broccoli, Brussels Sprouts, Cabbage, Cauliflower	Beet Armyworm, Diamond Back Moth, Imported Cabbageworm, Cabbage-aphid, Cabbage Looper	Apply every 5 days only as needed to maintain insect control. Can be applied up to 1 day prior to harvest. Do not make more than 8 applications on Cauliflower, Brussels Sprouts and Broccoli and 10 applications on Cabbage per season.	1 fl. oz.

**[BACK LABEL PANEL CONT'D]**

<p>Cucurbit: Balsam Pear (Bitter Melon), Chinese Wax Gourd (Chinese Preserving Melon), Citron Melon, Cucumber, Gherkin, Edible Gourds: Melons (including hybrids such as Cantaloupe, Casaba, Crenshaw, Honeydew, Honey Balls, Mango Melon, Muskmelon, Persian Melon, Pumpkin, Summer &amp; Winter Squash, Watermelon</p>	<p>Aphids, Cabbage Looper, Cucumber Beetle (Adults), Cutworms, Leafhoppers, Leafminers, Melonworms, Pickleworm, Plant Bugs, Squash Bugs Flea Beetle</p>	<p>Do not make more than 8 applications per season. Ensure uniform coverage. Can be applied up to the day of harvest.</p>	<p>1 ½ fl. oz.</p>
<p>Eggplant</p>	<p>Colorado Potato Beetle, Vegetable Leaf Miner</p>	<p>Do not exceed 16 applications per season. Can be applied up to 3 days prior to harvest.</p>	<p>3 fl. oz</p>
<p>Horseradish (foliar Application)</p>	<p>Imported Crucifer Weevil</p>	<p>Do not exceed 3 foliar applications per season. Can be applied up to 22 days prior to harvest</p>	<p>3 fl. oz.</p>
<p>Leafy Vegetables: Arrugula, Celery, Celtnce, Chervil, Corn Salad. Chrysanthemum (edible-leaved &amp; garland). Cress (garden &amp; upland). Dandelion. Dock, Endive, Fennel, Lettuce (Head &amp; Leaf), Orach, Parsley, Purslane (garden &amp; winter), Rhubarb, Spinach, Swiss Chard</p>	<p>Alfalfa Looper, Aphids, Beet Armyworm, Cabbage Looper, Corn Earworm, Cutworms, European Corn Borer, Fall Armyworm, Green Cloverworm, Southern Armyworm, Tobacco Budworm, Vegetable Leafminer</p>	<p>Apply every 5 to 10 days as needed for insect control. Do not make more than 7 applications per crop. Can be applied up to 1 day prior to harvest.</p>	<p>2 fl. oz.</p>
<p>Melons- See Cucurbits</p>			

**[BACK LABEL PANEL CONT'D]**

Potatoes	Beet Armyworm, Colorado Potato Beetle, Potato Leafhopper, Potato Flea Beetle, Aster Leafhopper, Potato Aphid, Potato Tuberworm, Cabbage Looper, Cutworms, European Corn Borer, Potato Psyllid, Tarnished Plant Bug	Do not apply more than 12 applications per season. Can be applied up to 7 days prior to harvest.	1 ½ fl. oz
Peppers	Vegetable Leafminer, Cabbage Looper, Flea Beetle, Corn Earworm, Pepper Weevil, European Corn Borer	Do not make more than 8 applications per season. Can be applied up to 3 days prior to harvest.	2 fl. oz
Strawberries, Raspberries, Blueberries	Strawberry weevil, Aphid, Spider Mite, Lygus Bug, Flea Beetle, Ominvorous Leaftier, Spittlebugs, Japanese Beetles, Field Crickets, Leafroller, Weevils	Do not make more than 8 applications per season. Do not apply within 14 days of harvest.	1 1/5 fl. oz.
Sweet Com	Com Earworm, European Corn Borer, Fall Armyworm, Southern Armyworm.	Apply every 5 days only as needed to maintain pest control. Do not more than 6 applications per	1 ½ fl. oz.
Tomatoes (Do not apply on cherry tomatoes and varieties yielding tomatoes less than one inch in diameter.)	Beet and Southern Armyworm, Tomato Pinworm, Tomato Fruitworm, Horn Worms, Granulate Cutworms, Colorado Potato Beetle, Cabbage Looper	Do not make more than 6 applications per season. Can be applied up to date of harvest.	1 ½ fl. oz



**[BACK LABEL PANEL CONT'D]****TREE FRUIT AND NUT CROPS (For Vegetable, Fruit and Nut Crops Grown Around the Home Only):**

Use at the rate of 2 fl. oz. in 4 gallons of water. Spray at the first sign of insects. Wet trees for thorough and uniform coverage but avoid applying to the point of runoff. Apply to cover underside of leaves and to penetrate dense foliage.

<b>Trees (Fruit or Nut)</b>	<b>Target Pest(s)</b>	<b>Remarks</b>
Almonds, Pecans	Navel Orange Worm, Peach Twig Borer	Apply when insects appear. Do not make more than 2 applications during the period when the outer hull of the almond has started to open. Do not make more than 5 applications per season. Can be applied up to 7 days prior to harvest.
Apples	Plum Curculio, Redbanded Leafroller, Rosy Apple Aphid, Spotted Tentiform Leafminer, Tarnished Plant Bug, White Apple Leafhopper, Obliquebanded Leafroller, Green Fruitworm, Japanese Beetles	Apply when insects appear. Do not make more than 3 applications per season. Do not apply after petal fall.
Peaches	Lesser Peachtree Borer, Peach Twig Borer, Plum Curculio, Tarnished Plant Bug, Green Fruit Worm, Oriental Fruit Moth	Apply when insect appear. Do not apply within 7 days of harvest. Do not make more than 8 applications per season.
Pears	Aphids, Codling Moths, Green Fruitworms, Pear psylla	Apply when insects appear. Do not make more than 3 applications per season. Can be applied up to 14 days prior to harvest.

[BACK LABEL PANEL CONT'D]

OUTDOOR PET AND DOMESTIC LIVESTOCK USES

FOR USE ONLY ON DOGS AND DOMESTIC LIVESTOCK

ANIMALS AND ANIMAL PREMISE USE

CATTLE BARNS, SWINE HOUSES, MILK ROOMS, KENNELS, POULTRY HOUSES, HORSE BARNS, DAIRIES, MILKING PARLORS, STABLES, PADDOCKS.

For initial clean up of severe insect infestation, dilute at a rate of (1) part concentrate in 19 parts water (6.7 ounces per gallon) (1/2%). For normal infestations dilute (1) part concentrate in 100 parts water (1 1/3 ounces per gallon of water) (8 teaspoonfuls per gallon) (0.1 %).

REFERENCE CHART

<u>PESTS</u>	<u>DILUTIONS (Mix Well)</u>	<u>HOW TO APPLY</u>
<u>PESTS ON FARM PREMISES</u>		
<u>(Barns, Dairies, Loafing Sheds, Milking Parlors, Feedlots, Stables, Paddocks, Poultry and Livestock Housing)</u>		
Horseflies, Stableflies,	Dilute 1 1/3 fl. ozs. in 1 gal. water	Spray walls and surfaces thoroughly but do not allow runoff to occur; about 1 gal. per 750-1000 sq. ft. Treat no more often than once every 2 weeks. Do not contaminate animals feed or water by spray. Do not use in milk rooms.
Lesser Houseflies and other	Dilute 8 fl. ozs. in 6.25 gals. Water	
Manure breeding flies, Fleas,	Dilute 1 pt. in 12.5 gals. Of water	
Lice, Mites, Ticks, including	Dilute 1 qt. in 25 gals. Water	
Deer tick (carrier of Lyme disease)	Dilute 1 gal. in 100 gals. of water	
Aids in control of Cockroaches, Mosquitoes and Spiders		
<u>PESTS ON DOG PREMISES (Kennels, Dog Houses, Runs and Yards)</u>		
Fleas, Flies, Ticks, Lice and	Dilute 1 1/3 fl. ozs. in 1 gal. water	Thoroughly spray infested areas, pet beds and resting quarters. Fresh bedding should be placed in animals Quarters following treatment Most efficient pest control is accomplished when heavy pressure and good contact is achieved. Timing and frequency of applications should be based on pest populations reaching nuisance levels, but accompanying manure removal and sanitation practices should precede sprays. Do not spray feed, food or water. Repeat as needed but not more than once every two weeks.
Mange Mites (adult and larvae)	Dilute 8 fl. ozs. in 6.25 gals. water	
	Dilute 1 pt. in 12.5 gals. water	
	Dilute 1 qt. in 25 gals. water	

[BACK LABEL PANEL CONT'D]

**PESTS IN CATTLE BARNS, HORSE BARNS, SWINE HOUSES, KENNELS, MILKING PARLORS, MILK ROOMS, DAIRIES, POULTRY HOUSES, STABLES AND PADDOCKS**

Flies, Mosquitoes and Gnats	Dilute 1 1/3 fl. ozs. in 1 gal. water	FOG OR FINE MIST:
Apply,		
	Dilute 8 fl. ozs. in 6.25 gals. water	directing the spray toward the
	Dilute 1 pt. in 12.5 gals. water	ceiling and upper corners
	Dilute 1 qt. in 25 gals. water	until the area is filled with
	Dilute 1 gal. in 100 gals. water	mist. Use about 2 ounces per
		1000 cubic feet of space. For
		Results, close doors and
		Windows before spraying
		Keep closed for 10-15 mins.
		Remove animals prior to
		Treatment, ventilate before
		Reoccupying. Repeat at 10
		Day intervals only as needed
		To maintain control.

**PESTS ON LARGE ANIMALS (Dairy or Beef Cattle, Horses, Sheep and Goats)**

Faceflies, Hornflies, Horseflies, Ear Ticks	Dilute 8 fl. ozs. in 5 gals. oil Dilute 1pt. in 10 gals. oil Dilute 1qt. in 20 gals. oil Dilute 1gal. in 80 gals. oil	BACK RUBBER: Recharge backrubber as needed. Spray lactating dairy cows only after milking is completed.
Faceflies, Hornflies, Stableflies, Mosquitoes, Lice, Mites, Ticks, including Deer tick (carrier of Lyme Disease)	Dilute 8 fl. ozs. in 50 gals. water Dilute 1pt. in 100 gals. water Dilute 1qt. in 200 gals. water Dilute 1 gal. in 800 gals. water	Spray to thoroughly cover entire animal. For lice or mites a second treatment is recommended 14-21 days later. Spray lactating dairy cows only after milking is completed.
Hornflies, Faceflies Stableflies, Ear Ticks	Dilute 2 fl. ozs. in 1 gal. water Dilute 1pt. in 2.5 gals. water	SPOT TREATMENT-LOW PRESSURE SPRAY. Apply 1/2 oz. Per ear or 2-4 oz. on face or 12-16 oz. along the backline.

**PESTS ON SWINE AND POULTRY (Do not ship swine for slaughter within 5 days of last treatment)**

Mange Mites	Dilute 8 fl. ozs. in 25 gals. water Dilute 1pt. in 50 gals. water Dilute 1qt. in 100 gals. water	Spray, dip or sponge animals. Retreat after 14 days, spraying walls and floor space and bedding To kill later hatching, developing stages.
Blowflies, Flies, Mosquitoes, Hog Lice, Fleas, Ticks, including Deer Tick (carrier of Lyme disease)	Dilute 8 fl. ozs. in 25 gals. water Dilute 1pt. in 50 gals. water Dilute 1qt. in 100 gals. water	Spray, dip or sponge to apply 1 pint per pig, especially around ears.
Poultry Mites, Northern Fowl Mites & Lice	Dilute 8 fl. ozs. in 125.5 gals. water Dilute 1pt. in 25 gals. water Dilute 1qt. in 50 gals. water Dilute 1gal. in 200 gals. water	Spray at the rate of 1/2 oz. per bird, or 1 gal per 100 birds, with a fine mist. Spray roosts, walls and nests or cages.

**[BACK LABEL PANEL CONT'D]**

**ON DOGS:** To kill Fleas, Ticks, Lice and Mange and to obtain protection against reinfestation, use at the rate of 1 1/3 fl. oz. in 1 gallon of water. Start spraying at the tail, moving rapidly and making sure that the animal's entire body is covered, including the legs and underbody. While spraying, fluff the hair so that the spray will penetrate to the skin. Make sure spray wets thoroughly. Do not spray into eyes or face. Avoid contact with genitalia. Reapply every 35 days only as needed to control pests. Do not treat puppies less than twelve weeks old. Consult a veterinarian before using this product on debilitated, aged, pregnant or nursing animals, or animals on medication. **DO NOT use this product on cats.** Sensitivities may occur after using any pesticide product for pets. If signs of sensitivity occur, bathe pets with mild soap and water and rinse with large amounts of water. If signs continue, consult a veterinarian immediately.

**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 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 including *Reticulitermes*, *Zootermopsis*, *Heterotermes* and *Coptotermes* (Formosan termite). 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 supplied 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.

**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 such as stairs, patios, and slab additions.

For raised porches, terraces and entrance slabs outdoors, drill holes at one foot intervals, 6 inches from the foundation and pour one-half gallon of emulsion (or solution) into each hole. Refill holes.

**[BACK LABEL PANEL CONT'D]**

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 TREATMENT DIRECTIONS**

For use around existing structures, not for pre-construction use. For post-construction treatment around structures. Apply 0.50% - 1% emulsion to establish subsurface treatment control barriers as specified on this product labeling.

**Precaution:** 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.

**Note:** Avoid contamination of public and private water supplies by following these precautions. Do not allow a hose or any type of faucet extension to reach into the termite chemical solution while filling or mixing this material with water. Use anti-backflow or anti-siphonage equipment on all filling equipment. These devices can be purchased at hardware or plumbing supply stores.

Use of anti-backflow equipment will help ensure that the user of this chemical will not contaminate domestic water supplies.

Do not treat soil that is water saturated or frozen. Do not treat while precipitation is occurring.

Do not use in structural voids insulated with rigid foam. Be careful to have adequate ventilation when treating areas under structure.

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 barrier in the soil. These vulnerable or reinfested areas may be retreated in accordance with application techniques described in this product's labeling. The timing and type of these retreatments will vary, depending on factors such as termite pressure, soil types, soil conditions or other factors which 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

**[BACK LABEL PANEL CONT'D]**

**Mixing Directions:** Mix the termiticide use dilution in the following manner:

1. Fill tank 1/4 to 1/3 full.
2. Start pump to being by-pass agitation and place end of treating tool in tank to allow circulation through hose.
3. Add appropriate amount of Hi-Yield® 10% Permethrin Concentrate.
4. Add remaining amount of water.
5. Let pump run and allow recirculation through the hose for 2 to 3 minutes.

To prepare a 0.50% water emulsion, ready for use, dilute 6.8 fl. oz. of this product with 1 gallon of water. For a 1.0% emulsion, dilute 13.6 fl. oz. of product with 1 gallon of water. Apply as specified below.

**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.

**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 adjustments at 2% are not recommended for subslab injection.

<b>Volume Adjustment Chart</b>			
<b>Volume Allowed</b>	<b>Rate (% Emulsion)</b>		
	<b>0.50%</b>	<b>1%</b>	<b>2%</b>
Horizontal (gal. emulsion/ 10 ft <sup>2</sup> )	1 Gal.	0.5 - 1 Gal.	0.25 - 0.5 Gal*
Vertical (gal. emulsion/10 lin. ft.)	4 Gal.	2 - 4 Gal.	1 - 2 Gal.*

\* Not recommended for subslab injections.

All holes in commonly occupied areas into which material has been applied must be plugged. Plugs must be of a non-cellulose material or covered by an impervious, non-cellulose material.

**Note:** Crawl spaces are to be considered inside of the structure.

**[BACK LABEL PANEL CONT'D]**

**Post-Construction Treatments:** Post construction applications shall be made by subslab injection, trenching and rodding into the trench, or trenching using low-pressure spray not exceeding 25 p.s.i. at the nozzle.

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

Rodholes or trenches should not extend below the footing because of the possibility of soil washout by the emulsion.

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

**Slab-on-ground:** Vertical barriers may be established by subslab injection inside, and trenching and rodding into the trench or trenching outside, at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth. Special care must be taken to distribute the treatment evenly. 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.

Horizontal barriers may be established where necessary by long rodding or by grid pattern injection using a rate of 1 to 1.5 gal. of emulsion/10 sq. ft. depending on fill type and condition.

Drill holes should be spaced in a manner that will allow for application of a continuous chemical barrier.

Where necessary, drill through the foundation walls from the outside and inject the chemical just beneath the slab or along the inside of the foundation.

**[BACK LABEL PANEL CONT'D]**

Along the outside of the foundation walls where shallow foundations exist (1 ft. or less), dig a narrow trench approximately 6 inches wide and not below the top of the footing. Apply the emulsion at the rate of 2 gal./10 lin ft. As the soil is being replaced into the trench, apply another 2 gal./ 10 lin. ft. to the backfill.

When making soil applications to the foundations extending deeper than 1 ft., follow instructions under Basements - Outside Perimeter.

**Hollow Masonry Units of Foundation Walls:** 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/10 lin. ft. of footing using a nozzle pressure of less than 25 p.s.i. 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.

Not for use in voids insulated with rigid foam.

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 at the rate of 4 gal., 10 lin. ft./ft. of depth from the grade to the top of the footing. For example, a footing 3 ft. deep would require 12 gal. of emulsion/10 lin. ft. Application shall be made by subslab injection, trenching and rodding into the trench, or trenching.

**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 in a manner that will allow for application of a continuous chemical barrier.



**[BACK LABEL PANEL CONT'D]**

**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 trenching and rodding into the trench, 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 with the soil as it is being replaced in the trench.

When the footer is more than 4 ft. below grade, the applicator may trench, or trench and rod into the trench along foundation wall to 4 ft. of depth.

**Accessible Crawl Spaces:** For crawl spaces, apply vertical termiticide barriers at the rate of 4 gal. of emulsion/10 lin. ft./ft. of depth from grade to the top of the footing, or if the footing is more than 4 ft. below grade, to a minimum depth of 4 ft. 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 section of the label if situations are encountered where the soil will not accept the full application volume.

- Rod holes and trenches must not extend below the bottom of the footing.
- Rod holes must be spaced so as to achieve a continuous chemical barrier but in no case more than 12 inches apart.
- 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 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.
- When treating crawl spaces, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil.

**[BACK LABEL PANEL CONT'D]**

**Inaccessible Crawl Spaces:** 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 crawl spaces. Otherwise, apply one, or a combination of the following two methods.

- To establish a horizontal barrier, apply to the soil surface, 1 gal. of emulsion/10 sq. ft. overall using a nozzle pressure of less than 25 p.s.i. and a coarse application nozzle (e.g., Delavan Type RD Raindrop, RD-7 or larger, or Spraying Systems Co. 8010LP TeeJet or comparable nozzle). For an area that cannot be reached with the application wand, use one or more extension rods to make the application to the soil. Do not broadcast or power spray with higher pressures.
- 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 gal of emulsion/10 sq. ft. Drill spacing must be at intervals not to exceed 16 inches. Many states have smaller intervals so check state regulations which may apply.

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

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

It is recommended that inadequately ventilated crawl spaces be brought into compliance with FHA Minimum Property Standards specifying 1 sq. ft. of ventilated opening/150 sq. ft. of crawl space area.

**Bath Traps:** Where there is exposed soil beneath and around plumbing/waist pipe entrances through a concrete slab, this soil may be treated with 0.50% emulsion 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 (from board materials) or cellular debris, treat the soil by rodding and/or drenching with 0.50% emulsion of this product.

**Foam Applications:** Hi-Yield® 10% Permethrin Concentrate emulsion 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.

Depending on the circumstances, foam applications may be used alone or in combination with liquid emulsion applications. Applications may be made behind veneers, piers, chimney bases, into rubble foundations, into block voids or structural voids, under slabs, stoops, porches, or to the soil in crawl spaces, and other similar voids.

**[BACK LABEL PANEL CONT'D]**

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.

**Rates:** Use a 0.50%-2.0% emulsion converted to a foam with expansion characteristics from 2-20 times.

**Note:** When using a foaming product be sure that it is compatible with Hi-Yield® 10% Permethrin Concentrate.

**Applications Under Slabs or to Soil in Crawl Spaces**

- Applications should be made using Hi-Yield® 10% Permethrin Concentrate foam in combination with liquid emulsion applications.
- The total amount of product applied with the combination of foam and liquid emulsion should be equivalent to that of an application using a liquid emulsion only.

**Applications to Other Areas**

- Applications may be made using either Hi-Yield® 10% Permethrin Concentrate foam alone or in combination with a liquid emulsion.
- 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 0.50%-1.0% emulsion. Treat on all sides to create a continuous barrier around posts and poles.

Use 1 gal. of emulsion/ft. of depth for poles and posts less than 6 inches in diameter. For large poles, use 1.5 gal. of emulsion/ft. of depth. For large constructions, use 4 gal./lin. ft./ft. of depth.

**[BACK LABEL PANEL CONT'D]**

For treatments made during installation, the emulsion 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 6 inches below the bottom of the wood.

Refer to FHA (Federal Housing Administration), state and local specifications for safe distances of treatment areas from wells.

Do not contaminate wells or cisterns.

**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. See "Mixing Directions" section of the 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.

**Structure 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 off-site movement of termiticide.

**Post-Construction After Treatment:** Before leaving the job site, securely plug all holes drilled in construction elements of commonly occupied areas of structures, including unfinished basements, enclosed porches, garages, and workshops.

**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 maybe made using a 0.50%-1 % Hi-Yield® 10% Permethrin Concentrate emulsion to prevent attack by termites and ants.

Apply 2-4 gal. of emulsion/10 lin. ft. 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 2-4 gal. of emulsion/10 lin. ft. 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 0.50% emulsion, the 1% emulsion maybe applied at  $\frac{1}{2}$  the application rate or 2 gal/10 lin. ft.

Finish filling the trench with untreated fill soil. The soil where each service protrudes from the ground may be treated by trenching and nodding into the trench, or trenching of no more than 1-2 gal. of emulsion into the soil.

**Precaution:** Do not treat electrically-active underground services.

**Retreatment:** Retreatment of 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 barrier in the soil. These vulnerable or reinfested areas may be retreated in accordance with application techniques described in this product's labeling. The timing and type of these retreatments will vary, depending on factors such as termite pressure, soil types, soil conditions and other factors which 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.

**Treatment of Wood in Place for Control of Termites and Wood Infesting Beetles:** (Localized areas in Structures) 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.

**[BACK LABEL PANEL CONT'D]****IMPORTANT**

Do not apply emulsion 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.

In the home all food processing surfaces and utensils in the treatment area should be covered during treatment or thoroughly washed before reuse. Remove pets, birds, and cover aquariums before spraying indoors. Do not permit humans or pets to contact treated surfaces until the spray has dried.

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

**Termites Above Ground:** For control of termites, subterranean aerial colonies, Formosan aerial colonies, or drywood termites in localized areas of infested wood structures, apply a 0.25%-0.50% 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. 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. Application to attics, crawl spaces, unfinished basements, or man-made voids may be made with a coarse fan spray of 0.25%-0.50% emulsion 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 or mechanical alteration to control subterranean termites, or fumigation for extensive infestation of drywood termites or other wood-infesting insects. Make treatments at a rate of 1 gal. of the emulsion/1,000 sq. ft. of surface area.

For termites active inside trees, utility poles and/or fence posts, drill to find the interior infested cavity and inject 0.25%-0.50% emulsion using treatment tool with a splashback guard.

Termite carton nests in trees or building voids may be injected with 0.50% emulsion 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.

**WOOD-INFESTING INSECTS INCLUDING TERMITES: For Beetles (Furniture, Deathwatch, False Powderpost, Longhorned, Powderpost), Carpenter Ants and other wood-infesting ants, Carpenter bees and Termites including dry-wood termites:** Treat outside surfaces of buildings, porches, wooden decks and patios, wooden fences, window frames, doorways, foundations, eaves, patios, garages, garbage areas and other areas where you may find these pests. Mix 2.5 fl. ozs. with 1 gallon of water to treat 100 sq. ft. Spray infested surfaces until thoroughly wet, avoiding dripping and runoff. Apply evenly on wood surfaces. To treat small areas, apply by brushing or spraying the diluted spray. For large areas, use a coarse, low pressure spray. Repeat treatment as needed to maintain effectiveness. Do not spray into electrical outlets or utilities.

**[BACK LABEL PANEL CONT'D]**

Spray infested areas and areas likely to be infested, such as wood surfaces, voids and channels in damaged wood, spaces between wooden parts of a structure, and between wood and foundations where infestation is likely to occur, also around fencepost, wood piles (do not use on firewood) and tree stumps.

Treated confined areas such as detached garages, under porches and decks, should be ventilated during and immediately following application before the areas are re-occupied.

**FOR CARPENTER ANTS:** Spray around doors and windows and other places where ants may enter or crawl and hide. Also treat cracks and crevices or openings into wall voids or other areas where these ants may be present.

**FOR CARPE LATER BEES:** Spray or inject into holes and tunnels already made by the bees with a tank sprayer, and spray areas where they are beginning to build tunnels into the wood.

**FOR TERMITES INCLUDING DRY-WOOD TERMITES (for localized control only):** Treat as for other wood-infesting insects. This product will kill workers and winged reproductive forms of termites in the treated areas. Re-treat only as needed to maintain effectiveness.

For localized control only. Such applications for termites are not a substitute for mechanical alternation, soil treatment or foundation treatments, but are merely a supplement. See "Soil Termite Treatment Directions" for additional uses.

**INDOOR USES**

To prepare dilutions, the concentrate should first be stirred or agitated well. Add the required amount of concentrate to water and blend thoroughly. Do not hold dilutions for more than 24 hours.

For maximum effectiveness, a combination of localized application and space treatment is recommended. Remove pets, birds and cover fish aquariums before spraying.

For initial clean up of severe insect infestation, dilute at a rate of 6.7 fluid ounces of this product to 1 gallon water of used (1/2% solution). For normal infestations dilute 1 1/3 fluid ounces of this product to 1 gallon of water used (0.1 %).

The product can be applied in the Non-Food/Feed Areas of the following sites:

**Indoor Use Areas:** Do not use in food/feed areas of food/feed handling establishments, restaurants or other areas where food/feed is commercially prepared and processed. Do not use in serving areas while food is exposed or facility is in operation. Serving areas are areas where prepared food is served such as dining rooms but excluding areas where foods may be prepared or held. In the home, all food processing surfaces and utensils should be covered during treatment or thoroughly washed before use. Exposed food/feed should be covered or removed.

**[BACK LABEL PANEL CONT'D]**

Non Food/Feed Areas: Include (but not limited to) garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets, and storage (after canning or bottling): HOMES, BAKERIES, BEVERAGE PLANTS, CANNERIES, FLOUR MILLS, FOOD PROCESSING PLANTS, GRAIN ELEVATORS, GRANARIES, HOSPITALS (non-occupied areas), HOTELS, MOTELS, INDUSTRIAL INSTALLATIONS, KENNELS, MEAT PACKING PLANTS, HOMES, OFFICE BUILDINGS, RAILROAD CARS, RESTAURANTS, SCHOOLS, SHIPS' HOLDS, SUPERMARKETS, TRUCK TRAILER, WAREHOUSES.

Do not apply to classrooms when in use. Do not apply this product in occupied patient rooms or in any rooms while occupied by the elderly or infirm.

**As A Surface Spray To Control Cockroaches, Waterbugs, Palmetto Bugs, Ants, Silverfish, Firebrats. Spiders, Crickets, Millipedes, Centipedes, Sowbugs, Pillbugs, Clover Mites, Cheese Mites, Granary Weevils, Rice Weevils, Confused Flour Beetles, Rust Red Flour Beetles, Sawtoothed Grain Beetles, Spider Beetles, Cigarette Beetles, Drugstore Beetles, Mealworms, Grain Mites and Cadelles.** Use a good sprayer and adjust to deliver a coarse wet spray. Direct the spray into hiding places, cracks and crevices, under pallets, around containers of stored foods, around the base of machinery, and behind shelves and drawers. Spray bookcases for silverfish. Spray ant trails, nests and points of entry.

If surface application only is to be used, spray floors, walls and other surfaces applying at a rate of (1) gallon to 750 square feet of surface.

**To Control Carpet Beetles:** Spray edges of carpeting and under carpeting and rugs. Make localized application to floor and baseboards. Spray directly into cracks, closets and infested areas of shelving. Repeat treatment as needed but not more often than once every 2 weeks.

**To Control Bedbugs:** Spray mattresses lightly, particularly around tufts and seams. Take beds apart and spray in all joints. Treat baseboards, moldings and floors. Repeat treatment as needed but not more often than once every 2 weeks. Allow all treated articles to thoroughly dry before use. After the mattress is dry, cover with mattress cover and sheet. Do not use mattress without cover.

**To Control Fleas and Ticks (adult and larvae):** Thoroughly spray infested areas, pet beds, resting quarters, nearby cracks and crevices, along and behind baseboards, moldings, window and door frames, and localized areas of floor and floor covering. Fresh bedding should be placed in animal quarters following treatment.

**As a Space Spray:** Apply with mechanical or compressed air equipment (non-thermal) adjusted to deliver a fine mist. Close doors and windows and shut off ventilating systems. Direct spray at an upward angle, distributing it uniformly through the entire area at a rate of (1) ounce per 1000 cubic feet of space. Keep area closed for at least 15 minutes. Vacate area after treatment then thoroughly ventilate before occupying. Reapply every 2 weeks as needed to control infestations.



**[BACK LABEL PANEL CONT'D]**

**For rapid control of house flies, fruit flies, gnats, mosquitoes, skipper flies, wasps, hornets, bees, black flies, angoumois grain moths and tobacco moths:** Apply using conventional mechanical or compressed air equipment (non-thermal) adjusted to deliver a fine mist. Close doors and windows and shut off ventilating systems. Direct spray at an upward angle distributing it uniformly through the entire areas at a rate of (1) ounce per 1000 cubic feet of space. Keep area closed for at least 15 minutes. Vacate areas after treatment and ventilate and sweep up dead insects before occupying. Reapply every 2 weeks as needed to control infestations.

**For rapid kill of exposed or accessible stages of other insects named on this label:** Apply using conventional mechanical or compressed air equipment (non-thermal) adjusted to deliver a fine mist. Close doors and windows and shut off ventilating systems. Direct spray at an upward angle distributing it uniformly through the entire areas at a rate of (1) ounce per 1000 cubic feet of space. Keep area closed for at least 15 minutes. Vacate areas after treatment and ventilate and sweep up dead insects before occupying. Reapply every 2 weeks as needed to control infestations.

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store product in its original container in a cool, dry, locked place out of reach of children and domestic animals. Always store container in an upright position.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal: Non-refillable container. Do not reuse or refill this container.** Triple rinse (or equivalent). Triple Rinse As Follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling 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.

Product is packaged in containers less than or equal to 5 gallons.

**[BACK LABEL PANEL CONT'D]**

NOTICE: BUYER ASSUMES ALL RISKS OF USE, STORAGE OR HANDLING OF THIS PRODUCT NOT IN STRICT ACCORDANCE WITH DIRECTIONS GIVEN HEREWITH. VOLUNTARY PURCHASING GROUPS, INC. WARRANTS THIS PRODUCT TO CONFORM TO THE CHEMICAL DESCRIPTION ON THE LABEL AND FOR THE PURPOSES STATED ON THE LABEL. THE LIMIT OF ANY LIABILITY INCURRED SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER.

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