



U.S. ENVIRONMENTAL PROTECTION AGENCY  
 Office of Pesticide Programs  
 Registration Division (7505P)  
 1200 Pennsylvania Ave., N.W.  
 Washington, D.C. 20460

**EPA Reg. Number:**

42750-395

**Date of Issuance:**

9/29/21

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
 (under FIFRA, as amended)

**Term of Issuance:**

Conditional

**Name of Pesticide Product:**

Bifenthrin 25.1% TIM

**Name and Address of Registrant (include ZIP Code):**

Nathan Ehresman  
 Albaugh, LLC  
 1525 NE 36<sup>th</sup> St.  
 Ankeny, IA 50021

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

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

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

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

**Signature of Approving Official:**

Jacquelyn Herrick, Product Manager 03  
 IVB1, Registration Division (7505P)

**Date:**

9/29/21

- a. Bifenthrin GDCI-128825-902
- b. Bifenthrin GDCI-128825-1159
- c. Bifenthrin GDCI-128825-1114

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 42750-395.”
4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 09/30/2020

If you have any questions, you may contact Hester Dingle at 703-347-8860 or via email at [dingle.hester@epa.gov](mailto:dingle.hester@epa.gov).

Enclosure

**ACCEPTED**

09/29/2021

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 42750-395

BIFENTHRIN	GROUP	3A	INSECTICIDE
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**BIFENTHRIN 25.1% TIM**  
**[ABN: Bifen 2EC Select]**  
 Termiticide/Insecticide/Miticide

Only 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.

**ACTIVE INGREDIENTS\***

Bifenthrin: (2 methyl[1,1'-biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate\* ..... 25.10%

**OTHER INGREDIENTS\*\*:** ..... 74.90%

**TOTAL:** ..... 100.00%

\*Cis isomers 97% minimum, trans isomers 3% maximum. \*\*Contains petroleum distillates. This product contains 2 pounds active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN**

**WARNING/AVISO**

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

<b>FIRST AID</b>	
<b>IF SWALLOWED:</b>	<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>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>Note to Physician:</b> This product is a pyrethroid. Contains petroleum distillate. Vomiting may cause aspiration pneumonia. This product also contains aromatic hydrocarbons. Because of the risk of hydrocarbon pneumonitis, if even tiny amounts are aspirated into the lung during emesis, consideration should be given to gastric lavage with endotracheal tube in place. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Animal and vegetable fats, milk, cream and alcohol may increase absorption and should not be administered. Have the product container or label with you when calling a poison control center or doctor or going for treatment. <b>Emergency Phone Numbers</b> CHEMTREC 1-800-424-9300 (transportation and spills)</p>	

[See inside booklet for additional First Aid, Precautionary Statements and Directions For Use.]

EPA Reg. No. 42750-xxx  
 EPA Est. No. XXX-XX-XXXX

Net Contents: \_\_\_\_\_ gallons

**MANUFACTURED FOR**  
 Albaugh, LLC  
 1525 NE 36<sup>th</sup> Street  
 Ankeny, IA 50021



# PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS & DOMESTIC ANIMALS

**WARNING/AVISO.** May be fatal if swallowed. Harmful if inhaled or absorbed through 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 and wash contaminated clothing before reuse.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

All pesticide handlers (mixers, loaders, and applicators) must wear long sleeved coveralls worn over a minimum of short-sleeved shirt and short pants, socks, chemical-resistant footwear, chemical-resistant gloves: barrier laminate, or viton  $\geq$  14 mils, and protective eyewear. 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, shirts, pants, socks, shoes, and waterproof gloves are sufficient. Wear a minimum of a NIOSH-approved elastomeric half mask respirator with organic vapor (OV) cartridges and combination R or P filters; OR a NIOSH-approved gas mask with OV canisters; OR a NIOSH-approved powered air purifying respirator with OV cartridges and combination HE filters. All pesticide handlers must wear protective eyewear when working in non-ventilated space or applying termiticide by rodding or sub-slab injection.

### USER SAFETY RECOMMENDATIONS

Users should:

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

## ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Protect pollinating insects by following label directions to minimize drift and to reduce risk to those organisms.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

## PHYSICAL/CHEMICAL HAZARDS

**DO NOT** use or store near heat or open flame.

**DO NOT** mix or allow contact with oxidizing agents, as a hazardous chemical reaction may occur.

## DIRECTIONS FOR USE

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

For both indoor and outdoor use.

**DO NOT** apply by air.  
**DO NOT** use in greenhouses, nurseries.  
**DO NOT** apply or irrigate to the point of run-off.  
**DO NOT** make applications during rain.

Do not make applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours). Rainfall within 24 hours after application may cause unintended runoff of pesticide application.

Spot treatments must not exceed two square feet in size (for example, 2 ft. by 1 ft. or 4 ft. by 0.5 ft.)

For soil or foliar applications, do not apply by ground within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.

Do not spray the product into fish pools, ponds, streams, or lakes. Do not apply directly to sewers or storm drains, or to any area like a drain or gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur.

Do not allow the product to enter any drain during or after application.

Do not apply directly to impervious horizontal surfaces such as sidewalks, driveways, and patios except as a spot or crack-and-crevice treatment.

Do not apply when the wind speed is greater than 15 mph.

Treat surfaces to ensure thorough coverage but avoid runoff.

To treat insects harbored in voids and cracks-and-crevices, application must be made in such a manner to limit dripping and avoid runoff onto untreated structural surfaces and plants.

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.

**Additional Application Restrictions for Residential Outdoor Surface and Space Sprays:**

All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:

1. Application to pervious surfaces such as soil, lawn, turf, and other vegetation;
2. Perimeter band treatments of 7 feet wide or less from the base of a man-made structure to pervious surfaces (e.g., soil, mulch, or lawn);
3. Applications to underside of eaves, soffits, doors, or windows permanently protected from rainfall by a covering, overhang, awning or other structure;
4. Applications around potential exterior pest entry points into man-made structures such as doorways and windows, when limited to a band not to exceed one inch;
5. Applications to vertical surfaces directly above pervious surfaces (e.g., driveways, sidewalks, etc.), up to 2 feet above ground level;
6. Applications to vertical surfaces directly above pervious surfaces, (such as soil, lawn, turf, mulch or other vegetation) only if the pervious surface does not drain into ditches, storm drains, gutters or surface waters.

Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches, and structural surfaces (such as windows, doors, and eaves) are limited to spot and crack-and-crevice applications only.

**RESISTANCE MANAGEMENT**

Bifenthrin 25.1% TIM contains a Group 3A insecticide. Any insect population may contain individuals naturally resistant to Bifenthrin 15.1% TIM and other Group 3A insecticides. The resistant individuals may dominate the insect/mite population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of Bifenthrin 25.1% TIM or other Group 3A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture.

In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):

- Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
  - Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
  - Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
  - For further information or to report suspected resistance contact Albaugh LLC at 1-(800)247-8013.

Base insecticide applications on comprehensive IPM programs. This program should include an insect management program that includes cultural and biological control where possible.

Use good resistance management strategies established for the use area. This may include the use of insecticide rotations or tank mixes with other groups of insecticide and miticides in an IPM program.

Always apply this product at the labeled rates and according to label directions. Do not use less than label rates alone or in tank mixtures unless directed otherwise in supplemental labeling supplied by Albaugh, LLC.

Monitor treated populations in the field for loss of control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain may be present. Immediately consult your local Albaugh, LLC representative or agricultural advisor for the best alternative method of control for your area.

Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.

Consult your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and /or IPM guidance for the specific site and resistant pest problems.

## GENERAL INFORMATION

**DO NOT** use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climactic modifications and being grown in interior landscapes, ornamental gardens or parks, or lawns and grounds.

This product prevents and controls termite infestations in and around structures and constructions.

The use of this product in and around structures and building construction will prevent and control termite infestations.

To institute a barrier between the wood and the termites in the soil, the chemical dilution must be effectively dispersed in the soil. It is important to remove unnecessary materials that contain cellulose and wood from around foundation walls, crawl spaces (inside of structure), and porches, and fix damaged plumbing and construction grade in order to deny termite access to moisture. Treat the soil around untreated structural wood in contact with soil as stated below.

To use this product effectively, it is important that the service technician be familiar with current control practices including trenching, rodding, sub-slab injection, low-pressure spray applications, coarse fan spraying of soil surfaces, crack and crevice (void) injection, excavated soil treatment and brush and spray applications to infested or susceptible wood. Using these techniques correctly is essential to prevent or control infestations by subterranean termite species of genera *Reticulitermes*, *Zootermopsis*, *Coptotermes* and *Heterotermes*. When determining what procedures to follow, the service technician should consider certain variables. Some of the variables to consider are species biology and behavior, structure design, heating, ventilation, and air conditioning (HVAC) systems, water table, soil type and compaction, grade conditions, and the location and type of domestic water supplies and utilities.

For advice concerning current control practices with relation to specific local conditions, consult resources in structural pest control and state cooperative extension and regulatory agencies.

### Subterranean Termite Control – General Directions

**Important:** Observe the following precautions to avoid contamination of public and private water supplies:

- Use anti-backflow equipment and procedures to prevent insecticide from being siphoned into water supplies.
- Do not contaminate cisterns, wells, or other water tanks by treating the soil beneath these structures.
- Do not treat soil where runoff may occur.
- Do not treat water-saturated soil or frozen soil.
- Consult local and state specifications for recommended treatment practices in your area.
- If local or state specifications do not exist, consult the Federal Housing Administration (H.U.D.) guidance documents.

**Note:** For the purposes of this label, crawl spaces are defined as being inside of the structure.

**Critical Areas:** Points at which the foundation is penetrated or abuts another structure are critical areas. These include bath traps, cracks and expansion joints, utility entry points, and adjacent structures such as patios, slab additions, and stairs.

### 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 dilution 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 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 dilution, 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 the 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.

Before these techniques are used close to cisterns, wells, or other bodies of water, seek advice from local, state, or federal agencies for information on treatment practices that are accepted in your area.

**Application Rate:** Use a 0.06% dilution for subterranean termites. For other pests on the label use specific listed rates.

**Mixing Directions:** Mix the termiticide use dilution in the following manner: Fill tank 1/4 to 1/3 full. Start pump to begin bypass agitation and place end of treating tool in tank to allow circulation through hose. Add appropriate amount of this product. Add remaining amount of water. Let pump run and allow recirculation through the hose for 2 to 3 minutes.

This product may also be combined into full tanks of water. If combined into full tanks of water, allow sufficient time for agitation and/or recirculation to ensure consistency of the dilution.

To prepare a 0.06% water dilution, ready to use, dilute 1 quart of this product with 99.75 gallons of water.

**Mixing:** Using the chart below, determine the volume of this product and water required to produce the desired volume of finished dilution.

<b>Amount of this product (Gallons except where noted)</b>			
<b>Dilution Concentrate</b>	<b>Amount this product</b>	<b>Amount of Water</b>	<b>Desired Gallons of Finished Dilution</b>
0.06%	0.32 oz.	127.68 oz.	1
	1.6 oz.	4.99	5
	3.2 oz.	9.975	10
	8 oz.	24.94	25
	0.5 qt.	49.875	50
	0.75 qt.	74.8125	75
	1 qt.	99.75	100
	1.5 qt.	149.62	150
	2 qt.	199.5	200
0.12%*	0.64 oz.	127.36 oz.	1
	3.2 oz.	4.975	5
	6.4 oz.	9.95	10



<b>Amount of this product (Gallons except where noted)</b>			
<b>Dilution Concentrate</b>	<b>Amount this product</b>	<b>Amount of Water</b>	<b>Desired Gallons of Finished Dilution</b>
	0.5 qt.	24.875	25
	1 qt.	49.75	50
	1.5 qt.	74.625	75
	2 qt.	99.5	100
	3 qt.	149.25	150
	1 pt.	199	200

Units of Measure

1 pint = 16 fluid ounces (oz.)

1 quart = 2 pints = 4 cups = 32 fluid ounces (oz.)

\*For termite applications, use this rate only in conjunction with the application volume adjustments as listed in the section below or in the foam or underground services application sections.

**Application Volume:** To provide maximum control and protection against termite infestation apply the specified volume of the finished water dilution 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 the label directed rates and a continuous barrier can still be achieved.

The volume of the 0.12% dilution may be reduced by 1/2 the labeled volume where desirable for pre- and post-construction applications. When the volume is reduced, the hole spacing for subslab injection and soil rodding may also need to be adjusted to account for lower volume dispersal of the termiticide in the soil. Consult the following Volume Adjustment Chart for details.

<b>Volume Adjustment Chart</b>		
<b>Rate (% dilution)</b>	<b>0.06%</b>	<b>0.12%</b>
Volume allowed		
Horizontal (gallons dilution/10 ft <sup>2</sup> )	1.0 Gallons	0.5 Gallons
Vertical (gallons dilution/10 linear ft)	4.0 Gallons	2.0 Gallons

**After Treatment:** 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.

#### **Pre-Construction Subterranean Termite Treatment**

**DO NOT apply at a lower dosage and/or concentration than specified on this label for applications prior to the installation of finished grade.**

The treatment site must be covered prior to a rain event in order to prevent run-off of the pesticide into non-target areas.

The applicator must either cover the soil him/herself or provide written notification of the above requirement to the contractor on site and to the person commissioning the application (if different than the contractor). If notice is provided to the contractor or the person commissioning the application, then they are responsible under FIFRA to ensure that: 1) if the concrete slab cannot be poured over the treated soil within 24 hours of application the treated soil is covered with a waterproof covering (such as polyethylene sheeting), and 2) the treated soil is covered if precipitation is predicted to occur before the concrete slab is scheduled to be poured.

**DO NOT** treat soil that is water-saturated or frozen.

**DO NOT** treat when raining.

**DO NOT** allow treatment to runoff from the target area.

**DO NOT** apply within 10 feet of storm drains. Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds).

**DO NOT** make on-grade applications when sustained wind speeds are above 10 mph (at application site) at nozzle end height.

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.

To produce effective pre-construction subterranean termite control, create vertical and/or horizontal chemically treated zones of protection using 0.06% dilution of this product.

### **Horizontal Barriers**

Establish a horizontal chemical barrier wherever treated soil will be covered by a slab, such as basement floors, carports, entrance platforms, footing trenches, and slab floors.

Apply 1 gallon of 0.06% dilution per 10 square feet, or use 0.32 fluid ounce of Bifen 2 LB per 10 square feet in sufficient water (no less than  $\frac{1}{4}$  gallon or more than 2 gallons) to provide a uniform treated barrier for the area being treated.

If the fill is coarse aggregate, such as washed gravel, a sufficient volume of dilution must be applied to allow it to reach the soil beneath the coarse fill.

Make applications with a low-pressure spray (less than 50 p.s.i.), using a coarse spray nozzle. If foundation walls have not been installed around the treated soil and the slab will not be poured the same day as treatment, the treated soil must be covered with a water-proof barrier. Polyethylene sheeting may be used for this purpose.

### **Vertical Barriers**

Establish vertical barriers in Critical Areas, such as along the inside of foundation walls, plumbing, bath traps, utility services and other features that will penetrate the slab.

Using a 0.06% dilution, apply 4 gallons of dilution per 10 linear feet per foot of depth or 1.28 fluid ounces of this product per 10 linear feet per foot of depth from grade level to the top of the footing in sufficient water to provide a uniform treated barrier. Use not less than 2 gallons to not more than 8 gallons of water per 10 linear feet.

When trenching and rodding into the trench, or trenching, take care to ensure that the dilution reaches the top of the footing. Space the rod holes so that a continuous treated barrier is created, but not exceeding 12 inches apart. Avoid washing-out the soil around the footing. Trenches should be about 6 inches wide and 6 inches deep. Mix the chemical dilution with the soil as it is being replaced in the trench. Inside vertical barriers may not be required for monolithic slabs.

When treating hollow block voids, use 2 gallons of dilution per 10 linear feet to assure that the dilution reaches the top of the footing.

Hollow block voids may be treated at the rate of 2 gallons of emulsion per 10 linear feet so that the emulsion reaches 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 Treatment**

**Application Volume:** To provide maximum control and protection against termite infestation apply the specified volume of the finished water dilution 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 the label directed rates and a continuous barrier can still be achieved.

The volume of the 0.12% dilution may be reduced by 1/2 the labeled volume where desirable for pre- and post-construction applications. When the volume is reduced, the hole spacing for subslab injection and soil rodding may also need to be adjusted to account for lower volume dispersal of the termiticide in the soil. Consult the following Volume Adjustment Chart for details.

Volume Adjustment Chart		
Rate (% dilution)	0.06%	0.12%
Volume allowed		
Horizontal (gallons dilution/10 ft <sup>2</sup> )	1.0 Gallons	0.5 Gallons
Vertical (gallons dilution/10 linear ft)	4.0 Gallons	2.0 Gallons

**After treatment:** 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.

For post-construction treatment, use a 0.06% dilution. Post-construction treatments 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. Proper precautions should be taken to avoid soil wash-out around the footing.

Locate, identify, and mark wells, electrical conduits, water and sewer lines, and radiant heat pipes prior to application of this product. Do not puncture or inject this product into such structures.

**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 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.

**Slabs**

Create vertical barriers by trenching and rodding into the trench or trenching outside at a rate of 4 gallons of dilution per 10 linear feet per foot of depth and by sub-slab injection within the structure. Ensure an even distribution of chemical. Applications must not be made below the bottom of the footing.

Apply beside the outside of the foundation and under the slab on the inside of foundation walls, where needed. Treatment of slabs may also be necessary under and beside both sides of any interior footing-supported walls, in all cracks and expansion joints, and beside one side of interior partitions. By long-rodding or grid pattern injection vertically through the slab, horizontal barriers may be created where necessary.

- a. To permit the creation of an uninterrupted insecticidal barrier, drill holes in the foundation and/or slab.

- b. For foundations that are less than or equal to 1 foot, dig a narrow trench about 6 inches wide beside the outside of the foundation walls. Do not dig beneath the bottom of the footing. As the soil is placed back into the trench, apply 4 gallons of 0.06% dilution per 10 linear feet per foot of depth to the trench and soil.
- c. Follow the rates for Basements (below) for foundations that are deeper than 1 foot.
- d. A 0.06% dilution may be used to treat exposed soil and wood in bath traps.

### **Basements**

Treatment must be made by trenching and rodding into the trench or trenching at the rate of 4 gallons of dilution per 10 linear feet per foot of depth wherever the footing, from grade to the bottom of the foundation, is greater than 1 foot of depth. When the footer is greater than four feet below grade, the applicator may trench and rod into the trench, or trench beside foundation walls at the rate designated for four feet of depth. Space rod holes to create a continuous insecticidal barrier, but in no case more than 12 inches apart. Depending on the type of soil, degree of compaction, and location of termite activity, the actual depth of treatment will differ. However, a structure should never be treated below the footer. Sub-slab injection may be needed beside the inside of foundation walls, around conduits, piers, and pipes, beside both sides of interior footing-supported walls, and beside cracks and partition walls.

### **Crawl Spaces - Accessible**

For crawl spaces, apply vertical termiticide barriers at the rate of 4 gallons of dilution 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 section of the 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 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 to be wider than 6 inches. When trenching in sloping (tiered) soil, the trench must be stepped to ensure adequate distribution and prevent termiticide from running off. The dilution must be mixed with the soil as it is replaced in the trench.
4. When treating plenums or 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.

### **Crawl Spaces - Inaccessible**

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 instruction for accessible crawl spaces. 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 dilution per 10 square feet 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 TeJet® 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 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 dilution per 10 square feet. 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 plenums and crawl spaces, turn off the air circulation systems of the structure until application has been completed and all termiticide has been absorbed by the soil.

## **Masonry 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 a rate of 2 gallons of dilution per 10 linear feet 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 clean-up is completed.

**NOTE:** When treating behind veneer structures (walls, etc.) take proper care to not drill beyond the veneer. If concrete blocks exist behind the veneer, both can be drilled and treated simultaneously.

Not for use in voids insulated with rigid foam insulation.

**Excavation Technique:** When treating in troublesome areas (e.g., beside fieldstone or rubble walls, beside faulty foundation walls, and around pipes and utility lines leading downward from the structure to a well or pond) apply using the following technique:

1. Prepare a trench, placing the removed soil onto heavy-weight plastic sheeting or similar, water-impermeable material.
2. Treat the soil with 4 gallons of 0.06% dilution per 10 linear feet per foot of depth of the trench. Completely mix the dilution into the soil, exercising care to avoid liquid running off the sheeting.
3. Place the treated soil back into the trench after it has absorbed the dilution.

**Attention:** Wear NIOSH approved respirator and unvented goggles when applying this product in a confined area.

## **Foam Applications**

This product, from 0.06 to 0.12% may be converted to foam with 2X - 40X expansion, characteristics and used to control or prevent termite infestations.

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 crawlspaces, and other similar voids.

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.

## **Application Under Slabs or to Soil in Crawlspaces to Prevent or Control Termites**

When making foam applications, this product (foam) can be used alone or in combination with liquid dilution. Whether applied as a dilution, foam, or some of both, the equivalent of at least 4 gallons of 0.06% dilution (1.28 fluid ounces of product concentrate) per 10 linear feet must be applied for a vertical barrier, or at least 1 gallon of 0.06% dilution (0.32 fluid ounce of product concentrate) per 10 square feet must be applied for a horizontal barrier. For a foam only application, apply this product concentrate in sufficient concentration and volume to equal 1.28 fluid ounces of concentrate per 10 linear feet or 1 ounce of concentrate per 10 square feet. For example, 2 gallons of 0.12% dilution converted to foam and used to cover 10 linear feet is the equivalent of 4 gallons of 0.06% dilution per 10 linear feet.

### **Sand Barrier Installation and Treatment**

As long as termites have access to soil that has not been treated and can avoid soil that has been treated with this product, they can build mud tubes over surfaces that have been treated. Cracks and spaces should be filled with play box or builder's sand and then treated in the same manner as soil. Follow the rates listed on this product's label.

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 re-infested 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 re-treatment of the structure is prohibited unless there is clear evidence that reinfestation or barrier disruption has occurred.

### **APPLICATION IN CONJUNCTION WITH THE USE OF ABOVE-GROUND TERMITE BAITS**

As part of an integrated pest management (IPM) program for termite control, this product may be applied to critical areas of the structure including plumbing and utility entry sites, bath traps, expansion joints, foundation cracks and areas with known or suspected infestations at a rate of 0.06% 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** (e.g., cables, conduits, pipes, utility lines, wires) may be in rights-of-way, inside of structures or to guard long range (miles) of installations of services.

Treat the soil using a 0.06 to 0.12% this product dilution to prevent and control termite and ant infestations.

Treat the bottom of the trench with 2 gallons of dilution per 10 linear feet and let it soak into the soil. Place the services on the treated soil and cover with about 2 inches of fill soil. Apply another 2 gallons per 10 linear feet over the fill soil to complete the chemical barrier. Only treat the soil in the area near the services in wide trenches but ensure a continuous barrier of treated soil surrounding the services.

In the event that the soil will not accept the volume stated above, 1 gallon of 0.12% this product may be applied per 10 linear feet of trench over the soil that covers the services and to the base of the trench. Fill the remainder of the trench with the treated fill soil. Where each service sticks out of the ground, the soil may be treated by trenching/rodding no more than 1 to 2 gallons of dilution into the soil.

**Precautions:** Do not treat electrically active underground services.

#### **Posts, Poles, and Other Constructions**

Around wooden constructions (signs, fences, and landscape ornamentation) an insecticidal barrier can be established by treating with a 0.06% dilution. Sub-surface injection and gravity-flow through holes in the bottom of the trench, are two treatment methods that can be used on poles and posts that have already been installed. Establishing a complete chemical zone around the pole can be accomplished by treating on all sides. For poles and posts that are fewer than 6 inches in diameter use 1 gallon of dilution per foot of depth and 1.5 gallons for larger poles, applying under the wood to a depth of 6 inches. 4 gallons per 10 linear feet per foot of depth should be used for larger constructions.

#### **Control of Wood-Infesting Insects in Wood (Localized Areas in Structures)**

<b>Insects</b>	<b>Application Rate</b>	<b>Remarks</b>
Termites Ants Carpenter Ants Wood-infesting beetles	Apply a 0.06% dilution to voids and galleries in damaged wood and in spaces between wooden	<ul style="list-style-type: none"><li>• Can be applied as a paint or fan spray.</li><li>• Place plastic sheeting under overhead areas that are spot treated except for soil surfaces in crawl spaces.</li></ul>

(including Old House Borer & Powder Post)	members of a structure and between wood and foundations where wood is at risk.	<ul style="list-style-type: none"> <li>• Areas to which access is difficult can be treated by drilling, and then injecting dilution with a crack and crevice injector into the damaged wood or void spaces. (Not intended as a replacement for soil treatment, mechanical alteration or fumigation to control widespread infestation of wood-infesting insects.</li> </ul>
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Controlling termite carton nests in building voids can be accomplished by injecting with a 0.06% dilution. To obtain control, various depths of injection and numerous injection points may be needed. After treatment is complete and when feasible, remove the carton nest material from the building void.

To control Bees, Wasps, Hornets, and Yellow-Jackets, apply a 0.06% dilution late in the evening or when insects are at rest. Direct the spray at nest openings in the ground, bushes, and in cracks and crevices, where the insects may nest. Saturate the openings and contact as many insects as possible.

**Important:** Locate, identify, and mark wells, electrical conduits, water and sewer lines, and radiant heat pipes prior to application of this product. **DO NOT** puncture or inject this product into such structures.

**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 re-use. Remove pets, birds, and cover aquariums before spraying. 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 (except where exempt).

Wear protective clothing, unvented goggles, gloves and respirator, when applying to overhead areas or in poorly ventilated areas. Avoid touching sprayed surfaces until spray has completely dried. Refer to PPE section for additional information.

**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 food may be prepared or held.

In the home, cover all food handling surfaces and cover or remove all food and cooking utensils, or wash thoroughly after treatment. Non-food/feed areas of food/feed areas are areas such as garbage rooms, lavatories, floor drains (to sewers) entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closers, and storage (after bottling or canning).

Not for use in *Federally Inspected* Meat and Poultry Plants.

**Control of Wood-Infesting Insects and Nuisance Pests (Outside of Structures)**

In order to control listed wood-infesting insects active inside trees, utility poles and/or fences, inject 0.06% dilution into the infested cavity, which can be found by drilling into the wood. If treating nuisance pests on the exterior of the structure, use a fan spray at a maximum pressure of 25 p.s.i. and apply up to the point of runoff. To control Bees, Wasps, Hornets, and Yellow-Jackets, apply late in the evening. Direct the spray at nest openings in the ground, bushes, and in cracks and crevices, where the insects may nest. Saturate the openings and contact as many insects as possible.

**Pests Under Slabs**

To control infestations of Arthropods (e.g., ants, cockroaches, and scorpions) that live beneath the slab area, drill or

horizontally rod and inject 1 gallon of a 0.06% to 0.12% dilution per 10 square feet or 2 gallons of dilution per 10 linear feet.

### **Attention**

**DO NOT** apply to pets, crops, or sources of electricity.

**DO NOT** treat firewood.

Use only in well ventilated areas.

During any application to overhead areas of structure, cover surfaces below with plastic sheeting or similar material (except where exempt).

**DO NOT** allow spray to contact food, foodstuffs, food contacting surfaces, food utensils or water supplies.

Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product.

**DO NOT** treat areas where food is exposed.

During indoor surface applications, **DO NOT** allow dripping or run-off to occur.

### **General Applications Instructions**

This product formulation mixes readily with water and other aqueous carriers, and controls listed insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in interiorscapes including hotels, shopping malls, office buildings, and outdoor plantscapes, including around residential dwellings, parks, institutional, recreational, athletic fields, and home lawns. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity within 365 days of application.

This product may be tank-mixed with other products, including insect growth regulators. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. The addition of spreader stickers is not necessary. The physical compatibility of this product may vary with different sources of pesticide products, and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (pint or quart jar), using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture.

The following procedure is for preparation of a new tank, mix, unless specified otherwise in label directions: (1) Add wettable powders to tank water, (2) Agitate, (3) Add liquids and flowables, (4) Agitate, (5) Add emulsifiable concentrates, and (6) Agitate. If a mixture is found to be incompatible following this order of addition, try reversing the order of addition, or increase the volume of water. Note: If the tank-mixture is found to be compatible after increasing the amount of water, then the sprayer will need to be recalibrated for a higher volume application. Do not allow tank mix to stand overnight.



## APPLICATION LAWNS

This product may be used as a broadcast treatment. To accomplish uniform control when applying to dense grass foliage, use volumes of up to 10 gallons per 1000 square feet.

For low water volume usage, less than 2 gallons/1000 square feet, addition of a non-ionic or silicone based surfactant (0.25% v/v) is recommended, as is immediate irrigation of treated area with at least 0.25 inches of water following application to ensure efficacy of sub-surface pests including Mole Crickets.

Pests	Product Application Rate
Annual Bluegrass Weevil <sup>1</sup> (Listronotus, formerly Hyperodes) Armyworms <sup>2</sup> Billbugs Crane Flies <sup>3</sup> Crickets Cutworms <sup>2</sup> Earwigs Fall Webworms Fleas (adults, larvae) Grasshoppers Mites Sod Webworms <sup>2</sup> Spittlebugs	0.07 – 0.15 fl. oz. per 1000 ft <sup>2</sup>
Ants Chinch Bugs Imported Fire Ants <sup>5</sup> Japanese Beetles (adult) Mole Crickets <sup>4</sup> Stink Bugs Ticks <sup>6</sup>	0.07 – 0.30 fl. oz. per 1000 ft <sup>2</sup>

To maximize efficacy against sub-surface pests, apply with a non-ionic or silicone-based surfactant (0.25% v/v) in sufficient water to ensure good penetration of spray to soil-thatch matrix. Irrigate treated areas with 0.25 to 0.5 inches of water immediately afterwards, ensure run-off or puddling does not occur. Consult your local extension agent for specific control recommendations for your area.

<sup>1</sup>Applications should be timed to control adult weevils with their earliest spring activity. This generally begins when Forsythia is in full bloom and concludes when flowering dogwood (*Cornus florida*) is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.

<sup>2</sup>Delay watering or mowing for 24 hours after application to ensure optimum control of armyworms, cutworms and sod worms.

<sup>3</sup>Treatments can be made to control early to mid-season larvae (approximately August – February) as they feed on plant crowns. Treatments made to late-season larvae (approximately March, April) may only provide suppression.

<sup>4</sup>For control of overwintered mole crickets, apply the lower rate in early spring. For the control of adult mole crickets in late summer or early fall, apply the higher rate.

<sup>5</sup>This application rate is for foraging ants. See the Pest Control on Outside Surfaces and Around Buildings section for mound control application instruction.

<sup>6</sup>**Ticks (Including ticks that may transmit Lyme Disease and Rocky Mountain Spotted fever):** Do not make spot applications. Treat the entire area where exposure to ticks may occur. Use higher spray volumes when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed activity. Repeat application should be limited to no more than once per seven days.

**Deer ticks (Ixodes sp.)** have a complicated life cycle that ranges over a two-year period and involves four life stages. Applications should be made in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.

**American dog ticks** may be a considerable nuisance in suburban settings, particularly where homes are built on land that was previously field or forest. These ticks commonly congregate along paths or roadways where humans are likely to be encountered. Apply from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

<sup>7</sup>Ground nesting (solitary) bees and wasps (including Bumble Bees, Sweat Bees, Mining Bees, Digger Bees, Leafcutting Bees, Digger or Treadwaisted Wasps) are helpful biocontrol agents and valuable pollinators. They should be ignored if possible. If control is necessary, however, nest entrances must first be located. Watch the insects during the day when they are active. Groups of single nests occur in bare soil, grassy/weedy areas, or cavities of shrubs, stems, twigs, or logs. Treatment of tunnels and the surrounding area at dusk or after dark improves product contact to individual in-ground nest dwellers. Individual nest drenches should be applied using 0.07 fl. oz. per gallon of water in and around each cavity. Cover the entrance hole with soil after application. For preventative treatment, broadcast spray in enough finished volume of water to penetrate the groundcover so that 0.30 fl. oz. is applied per 1000 square feet.

**In New York State, this product may not be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).**

**In New York State, do make a single repeat application of this product if there are signs of renewed insect activity, but not sooner than two weeks after the first application.**

**DO NOT** apply more than 14.7 fl. oz. of this product (0.23 lb a.i.) per acre.

**DO NOT** apply when wind conditions favor downwind drift to nearby water bodies.

**DO NOT** apply when wind velocity exceeds 10 miles per hour.

Avoid application when wind gusts approach 10 mph.

Apply using nozzles that provide the largest droplet size compatible with adequate coverage.

**Ornamentals and Trees:** Dilute 0.26 to 1.28 fl. oz. of this product per 10 gallons of water and apply at the rate of 10 gallons per 4,356 square feet. 2.3 gallons of finish spray will treat 1000 sq. ft. If a higher volume application is needed to sufficiently cover the plant canopy, this product can be diluted in large volumes of water and applied through low volume equipment as long as the maximum label rate (12.8 fluid ounces per acre) is not exceeded.

Pests	Product Application Rate		Comments
	Lb ai/ 10 Gallons	Fl Oz ai/ 10 Gallons	
Ants Aphids Bagworms Black Vine Weevil (Adults) Brown Soft Scales	0.004 – 0.02	0.26 – 1.28	Apply the specified rate as a full coverage foliar spray. As foliage and pest pressure increases, repeat application as needed using higher rates. <b>DO NOT</b> apply more than

<p>Broad Mites  Budworms  California Red Scale (crawlers)  Centipedes  Clover Mites  Crickets  Cutworms  Douglas-fir Needle Midge  Earwigs  Elm Leaf Beetles  Fall Webworms  Flea Beetles  Fungus Gnats (adults)  Glassywinged Sharp Shooter  Grasshoppers  Gypsy Moth Caterpillars  Lace Bugs  Leafhoppers  Leaf feeding Caterpillars  Mealybugs  Millipedes  Mole Crickets*  Nantucket Pinetip Moth  Orchid Weevils  Pillbugs  Pine Sawflies  Pine Needle Scales (crawlers)  Plant Bugs (incl. <i>Lygus</i> spp)  Psyllids  San Jose Scales (crawlers)  Scale  Sowbugs  Spiders  Spittlebugs  Tent Caterpillars  Tip Moths  Weevils  Whiteflies</p>			<p>once per seven days.</p> <p>Bagworm Control: Treat when larvae start to hatch. Spray larvae directly. Applications will be most successful if they are made when the larvae are young.</p> <p>Spray at the time of bud break to control Douglas-fir needle midge.</p> <p>Scale Crawler and Twig Borer Control: Treat trunks, stems, and twigs along with plant foliage. Best results are achieved when thorough spray coverage is achieved at the beginning of crawler activity.</p> <p>Before treating an entire planting, treat a small amount of plants and observe for one week since certain cultivars may be sensitive to the final spray solution.</p> <p>To prevent or postpone pest resistance to this product, use an alternate class of chemistry.</p> <p>To achieve complete coverage, make sure enough water is used. Normal use rates are 100 gallons of spray per acre.</p> <p>Black Vine Weevil and Fungus Gnat Larvae Control: Apply as a drench at the rate of approximately 8 oz. of finished spray per 6 inch pot.</p>
<p>Citrus Thrips  Beet Armyworm  Diaprepes (larvae, adult)  European Red Mite  Leafrollers  Spider Mites  Thrips  Treehoppers  Twig Borers  Zimmerman Pine Moth</p>	0.006 – 0.02	0.38 – 1.28	<p>*Overwintered Mole Cricket Control: Early Spring-use the lower rate Late Summer or early Fall-use the higher rate.</p>
<p>Black vine Weevil (larvae)  Fungus Gnats (adults &amp; larvae)  Japanese Beetles (adult)  Leafminers  Pecan Leaf Scorch Mite  Black Vine Weevil (larvae)  Fungus Gnats (larvae)</p>	0.01 – 0.02	0.64 – 1.28	

**Pest Control on Outside Surfaces and Around Buildings**

Follow Additional Application Restrictions for Residential Outdoor Surface and Space Sprays under DIRECTIONS FOR

USE.

Applications to vertical exterior surfaces (e.g., foundations) are permitted to a maximum height of 2 feet from ground level. Sections of vertical exterior surfaces that abut non-porous horizontal surfaces can only be treated if either 1) these sections are protected from rainfall and spray from sprinklers or 2) they do not drain into a sewer, storm drain, or curbside gutter (e.g., not to sections that abut driveways or sidewalks that drain into streets).

Use Sites	Pests	Rate	Comments
Outdoor siding Foundations Porches (spot only) Window frames Overhang and eaves Patios (spot only) Garages Garbage sites Soil Trunks of woody ornamentals	Ants (excluding pharaoh and harvester ants) Armyworms Bees Centipedes Chiggers Chinch Bugs Clover Mites Crickets Cutworms Dichondra Flea Beetles Earwigs European Crane Flies Grasshoppers Hornets Millipedes Mosquitoes Moths Roaches (Cockroaches) Scorpions Sod Webworms Sowbugs (Pillbugs) Spiders (Black Widow Spiders) Springtails Stink Bugs Ticks (Brown Dog Ticks) Wasps	For a 0.03% dilution mix 1/6 fl. oz. / 1 gal. water (1 fluid oz. = 2 tablespoons)  For a 0.06% dilution mix 1/3 fl. oz. / 1 gal. water (1 fluid oz. = 2 tablespoons)	Apply this product as a residual spray using a 0.03 to 0.06% dilution.  <b>DO NOT</b> use household utensils to measure this product.  For heavy pest infestation, quicker knockdown or longer residual control use the higher labeled rate.  To sustain effectiveness, repeat treatment as needed. <b>DO NOT</b> apply more than once per seven days.
Lawns next to: Private houses Duplexes Townhomes Condos Trailers Apartments Carports Garages Fence rows Utility sheds Barns  Residential and noncommercial structures			

**Perimeter Treatment:** Apply to a 7-foot-wide band of soil and vegetation around and next to the structure and treat the foundation of the structure to a height of 2 feet. Use a spray volume of 2 to 10 gals, of dilution per 1000 sq. ft. If foliage is thick or there is mulch or leaf litter nearby, higher volumes of water may be necessary. If certain pests such as Gypsy Moth adults and caterpillars, Boxelder Bugs, Elm Leaf Beetles, Earwigs or Silverfish are nearby, apply to house siding.

For sections of foundation that abut non-porous horizontal surfaces, the treated areas must be protected from rainfall and spray from sprinklers.

**For Optimal Control of Ant and Fire Ant Mounds use this product 0.06% dilution as Drench Method:** Sprinkle the mound, using 1-2 gallons of dilution, until it is wet and apply to a 4-foot diameter circle around the mound. When treating mounds larger than 12", use the higher volume. Do not treat in the heat of the day and for optimum results, apply in cool weather, such as in early morning or late evening hours.

**Application to Home Lawns:** Apply this product as a broadcast treatment in 2 to 10 gallons of carrier per 1000 sq. ft. When treating thick grass foliage, use higher volumes to get complete, uniform coverage.

**DO NOT** apply more than 0.23 lb of bifenthrin per acre.

**Attention:** Keep children and pets off treated areas following application until the spray has dried.

**TRUNK SPRAYS TO ORNAMENTAL TREES**

**To control *Dendroctonus* bark beetles such as Black turpentine beetle, mountain pine beetle, western pine tip beetle, southern pine tip beetle, and engraver beetles (*Ips* spp.)**

**Preventative Control:** In the spring, or when trees nearby have become infested posing a threat, treat the trunk of the tree with a hydraulic sprayer using a mixture that contains 1.0 to 2.0 pints of this product per 100 gallons (0.25 to 0.5 lbs. ai/100 gallons) of water. Treat the main trunk from the base of the tree to at least halfway into the live crown spraying the tree directly and until the bark is completely wet (usually 1 to 4 gallons of spray per tree). Do not apply more than 0.2 lbs. ai (12.8 fl. oz.) of this product to trees per acre. If reinfestation is probable it may be necessary to repeat treatment. Depending on certain local variables and target pests, application rates and timing will differ. Check with your local State Extension specialist or other qualified expert for specific recommendations.

**Treatment of Infested Trees:** To control emerging brood, treat trees that still have beetles in the bark by using a spray mixture containing 2.0 pints of this product per 100 gallons of water. Treat the main trunk from the base of the tree to at least halfway into the live crown spraying the tree directly and until the bark is completely wet (usually 1 to 4 gallons of spray per tree). Do not apply more than 0.2 lbs. ai (12.8 fl. oz.) of this product to trees per acre. Trees that have needles that have all turned brown normally have been vacated and should not be treated unless infestation is evident. Scrape off the outer bark to determine whether or not the tree is infested. If trunks are currently infested, fell the infested trees and cut into sections. Spray the trunk and large limbs of the sections thoroughly to treat the entire surface area. **DO NOT** apply more than 0.2 lbs. ai (12.8 fl. oz.) of this product per acre.

**To control other beetles including Ambrosia beetles, elm bark beetles and Emerald Ash borer**

**Preventative Control:** In the early spring or before adult beetle flight and tree infestation, treat the trunk, scaffolding and limbs of the tree with a hydraulic sprayer using a spray mixture containing 1.0 to 2.0 pints of the product per 100 gallons (0.25 to 0.5 lbs. ai/100 gallons) of water. Spray the tree until the bark is completely wet (usually 6 to 12 gallons of spray per tree). Do not to apply more than 0.2 lbs. ai to trees per acre. If reinfestation is probable it may be necessary to repeat treatment. Depending on certain local variables and target pests, application rates and timing will differ. Check with your local State Extension specialist or other qualified expert for specific recommendations.

**OTHER BORERS ON ORNAMENTAL TREES**

To control other boring insects, see the table below. Depending on geographic location and environmental conditions, application rate and timing will differ. Spray the tree until the bark is completely wet (usually 1 to 4 gallons of spray per tree). Do not apply more than 100 gallons of diluted spray mixture to trees on a treated acre. Check with your local State Extension specialist or other qualified expert for specific recommendations.

<b>Pests</b>	<b>Product Application Rate</b>	<b>Comments</b>
Clearwing Moth borers Ash borer, banded ash clearwing, Dogwood borer, Lesser peachtree borer, Lilac borer, Oak borer, peachtree borer, rhododendron borer	6.4 – 12.8 fl. oz. per 100 gallons	Treat trunks and lower branches before adult emergence.
Coleopteran borers Bronze birch borer, Flatheaded Appletree borer		
For maximum residual control of the above listed pests	12.8 fl. oz. per 100 gallons	



## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Do not freeze. Do not store below 40° F. If crystals are observed, warm material to above 60° F by placing container in warm location. Shake or roll container periodically to redissolve solids. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call CHEMTREC (Transportation and Spills): (800)-424-9300. To confine spill, dike surrounding area or absorb with sand, cat litter or commercial clay. Place damaged package in a holding container. Identify contents.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Do not pour or dispose down-the-drain or sewer. Call your local solid waste agency for local disposal options. 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 of the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Metal or Plastic Container - Non-refillable container (in sizes 5 gallons or less): Do not reuse or refill this container. Triple rinse as follows: Empty the contents into application equipment or a mix tank and drain for 10 seconds after flow begins to drip. Fill container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill.

Non-refillable container (in sizes greater than 5 gallons) - Do not reuse or refill this container. Triple rinse or pressure rinse. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip back and forth several times. Turn the container over onto its other end and tip back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Returnable/Refillable Containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**DO NOT USE CONTAINERS FOR THE STORAGE OF FOOD, FEED, OR DRINKING WATER!**

**Distributors Should Sell in Original Packages Only.**

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

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

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

ALBAUGH, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent consistent with applicable law, this warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ALBAUGH, LLC and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ALBAUGH, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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## LABEL HISTORY

(Not included in final printed label)

<b>File Name</b>	<b>Version Mark</b>	<b>Comment</b>
042750-00xxx.20200930.DRAFT	093020	Initial Registrations revisions for EPA
042750-00xxx.20210803.DRAFT	080321	Response to EPA comments
042750-00xxx.20210827.DRAFT	082721	Response to EPA comments