BIFEN I/T

Insecticide/Termiticide

For Use by Individuals/Firms licensed by the State to apply termiticide products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the pest control regulatory agency of your State prior to use of this product.

To control pests indoors and outdoors on residential, institutional, public, commercial, and industrial buildings, and lawns, ornamentals, parks, recreational areas and athletic fields.

Active Ingredient:	**By Wt.**
Bifenthrin*	**7.9%**
Inert Ingredients:	**92.1%**
Total:	**100.0%**

Contains 2/3 pound active ingredient per gallon.
***Cis isomers 97% minimum, trans isomers 3% maximum.**

KEEP OUT OF REACH OF CHILDREN

CAUTION

See attached booklet for additional precautionary statements

NET CONTENTS: 3/4 GALLON

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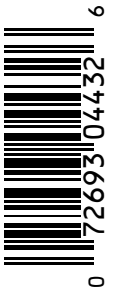

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EPA Reg. No. 53883-118

EPA Est. No. 53883-TX-002

KEEP OUT OF REACH OF CHILDREN

CAUTION

Control Solutions, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507-1041

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	• Hold eye open and rinse slowly and gently with water 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continuing rinsing eye. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the Poison Control Center 800-222-1222.	
Note to Physician - This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Caution - Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

All pesticide handlers (mixers, loaders, and applicators) must wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves. After the product is diluted in accordance with label directions for use, and/or when mixing and loading using a closed spray tank transfer system, or an in-line injector system, shirt, pants, socks, shoes, and waterproof gloves are sufficient. In addition, all pesticide handlers must wear a respiratory protection device[1] when working in a non-ventilated space. All pesticide handlers must wear protective eyewear when working in non-ventilated space or when applying termiticide by rodding or sub-slab injection.

[1]Use one of the following NIOSH approved respirator with any R, P or HE filter or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R,P or HE prefilter.

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 applications 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

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. Care should be used when spraying to avoid fish and reptile pets in/around ornamental ponds.

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 to drift to blooming crops if bees are visiting the treatment area.

Physical and Chemical Hazards

Do not apply water-based dilutions of Bifen I/T to electrical conduits, motor housings, junction boxes, switch boxes or other electrical equipment because of possible shock hazard.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
Do not apply a broadcast application to interior surfaces of homes.
Do not apply by air.
Do not apply in greenhouses, nurseries.
Do not apply this product through any kind of irrigation system.
Not for use on sod farm turf, golf course turf, or grass grown for seed.

STORAGE AND DISPOSAL

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

Pesticide Storage: Keep out of reach of children and animals. 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 container.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To Confine Spill: If liquid, dike surrounding area or absorb with sand, cat litter, or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.
In the event of a major spill call 1-800-424-9300 (CHEMTREC).

Pesticide Disposal: Pesticide wastes are toxic. Do not contaminate water, food, or feed by storage or disposal. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Dispose of excess or waste pesticide by use according to label directions, or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

(continued)

STORAGE AND DISPOSAL *(continued)*

Container Disposal:

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

Returnable/Refillable Sealed Container: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

General Information on the Use of this Product

Not for 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 only for aesthetic purposes or climatic modifications and being grown in interior plantscapes, ornamental gardens or parks, or lawns and grounds.

The use of this product prevents and controls termite infestations in and around structures and constructions.

The dilute insecticidal emulsion must be adequately dispersed in the soil to establish a barrier between the wood and the Termites in the soil. As a good practice: 1) all non-essential wood and cellulose containing materials should be removed from around foundation walls, crawl spaces, and porches; 2) eliminate termite access to moisture by repairing faulty plumbing and/or construction grade. Soil around untreated structural wood in contact with soil should be treated as described below.

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

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

Directions for Use

Important: Contamination of public and private water supplies must be avoided by following these precautions: Use anti-backflow equipment or procedures to prevent siphonage of insecticide into water supplies. Do not contaminate cisterns or wells. Do not treat soil that is water saturated or frozen or in any conditions where runoff or movement from the treatment area (site) is likely to occur. Consult state and local specifications for recommended distances of wells from treated areas, or if such regulations do not exist, refer to Federal Housing Administration Specifications (H.U.D.) for guidance.

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

Critical Areas: Critical areas include areas where the foundation is penetrated by the 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.

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 this label. Mix thoroughly into the soil taking care to contain the liquid and prevent runoff or spillage.
   c) After the treated soil has absorbed the diluted emulsion, replace the soil into the trench.
2. Treat infested and/or damaged wood in place using an injection technique such as described in the "Control of Wood Infesting Insects" section of this label.

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

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

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

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

Application Rate:

Use a 0.06% emulsion 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 by-pass agitation and place end of treating tool in tank to allow circulation through hose. Add appropriate amount of Bifen I/T. Add remaining amount of water. Let pump run and allow recirculation through the hose for 2 to 3 minutes.

Bifen I/T may also be mixed into full tanks of water, but requires substantial agitation to insure uniformity of the emulsion.

To prepare a 0.06% water emulsion, ready to use, dilute 3 quarts of Bifen I/T with 99.25 gallons of water.

Mixing:

For the desired application rate, use the chart below to determine the amount of Bifen I/T for a given volume of finished emulsion:

Amount of Bifen I/T (Gallons except where noted)			
Emulsion Concentrate	**Amount of Bifen I/T**	**Amount of Water**	**Desired Gallons of Finished Emulsion**
0.06%	1 oz.	127 oz.	1
	5 oz.	4.9	5
	10 oz.	9.9	10
	25 oz.	24.8	25
	1.5 qt.	49.6	50
	2.25 qt.	74.4	75
	3 qt.	99.25	100
	4.5 qt.	148.8	150
	6 qt.	198.5	200
0.12%*	2 oz.	126 oz.	1
	10 oz.	4.9	5
	19.5 oz.	9.8	10
	1.5 qt.	24.6	25
	3 qt.	49.2	50
	4.5 qt.	73.8	75
	6 qt.	98.5	100
	9 qt.	147.7	150
	3	197	200

Common units of measure:
1 pint = 16 fluid ounces (oz.)
1 quart = 2 pints = 4 cups = 32 fluid ounces (oz.)

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

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 the label directed rates and a continuous barrier can still be achieved.

Where desirable for pre and post construction treatments, the volume of the 0.12% emulsion may be reduced by 1/2 the labeled volume. See Volume adjustment chart below.

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

VOLUME ADJUSTMENT CHART		
Rate (% emulsion)	**0.06%**	**0.12%**
Volume allowed		
• Horizontal (gallons emulsion/10 ft.^{2})	1.0 gallons	0.5 gallons
• Vertical (gallons emulsion/10 linear ft.)	4.0 gallons	2.0 gallons

After treatment: All holes in commonly occupied areas into which Bifen I/T 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 use as a preventative treatment for new construction in Florida.

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

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

Effective pre-construction subterranean termite control is achieved by the establishment of vertical and/or horizontal insecticidal barriers using 0.06% emulsion of Bifen I/T. To meet Termite proofing requirements, follow the procedures in the latest edition of the Housing and Urban Development Minimum Property Standards.

Horizontal Barriers

Create a horizontal barrier wherever treated soil will be covered by a slab, such as footing trenches, slab floors, carports, and the soil beneath stairs and crawl spaces.

For a 0.06% rate apply 1 gallon of dilution per 10 square feet, or use 1 fluid ounce of Bifen I/T per 10 square feet in sufficient water (no less than 1/2 gallon or more than 2 gallons) to provide thorough and continuous coverage of the area being treated.

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

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

Vertical Barriers

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

For a 0.06% rate, apply 4 gallons of dilution per 10 linear feet per foot of depth or 4 fluid ounces of Bifen I/T per 10 linear feet per foot of depth from grade to top of footing in sufficient water (not less than 2 gallons or more than 8 gallons) to ensure complete coverage.

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

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

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

Post Construction Subterranean Termite Treatment

Use a 0.06% emulsion for post-construction treatment. Post-construction soil applications shall be made by injection, trenching and rodding into the trench or trenching, or coarse fan spray with pressures not exceeding 25 p.s.i at the nozzle. Care should be taken to avoid soil wash-out around the footing.

Do not apply emulsion until location of wells, radiant heat pipes, water and sewer lines and electrical conduits are known and identified. Caution must be taken to avoid puncturing and injection into these elements.

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

Vertical barriers may be established by sub-slab injection within the structure 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. Treatment should not extend below the bottom of the footing.

Treat along the outside of the foundation and where necessary beneath the slab on the inside of foundation walls. Treatment may also be required beneath the slab along both sides of interior footing-supported walls, one side of interior partitions and along all cracks and expansion joints. Horizontal barriers may be established where necessary by long-rodding or by grid pattern injection vertically through the slab.

a. Drill holes in the slab and/or foundation to allow for the application of a continuous insecticidal barrier.
b. For shallow foundations (1 foot or less) dig a narrow trench approximately 6 inches wide along the outside of the foundation walls. Do not dig below the bottom of the footing. The emulsion should be applied to the trench and soil at 4 gallons of emulsion per 10 linear feet per foot of depth as the soil is replaced in the trench.
c. For foundations deeper than 1 foot follow rates for basement.
d. Exposed soil and wood in bath traps may be treated with a 0.06% emulsion.

Basements

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

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

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 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 emulsion 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 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 powerspray with higher pressures.
2. To establish a horizontal barrier, drill through the foundation wall or through the floor above and treat the soil perimeter at a rate of 1 gallon of emulsion per 10 square feet. Drill spacing must be at intervals not to exceed 16 inches. Many states have smaller intervals, 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 emulsion 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 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.

Not for use in voids insulated with rigid foam insulation.

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

a. Trench and remove soil to be treated onto heavy plastic sheeting or similar material.
b. Treat the soil at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth of the trench. Mix the emulsion thoroughly into the soil taking care to prevent liquid from running off the liner.
c. After the treated soil has absorbed the liquid emulsion, replace the soil in the trench.

Attention: When applying Bifen I/T in a confined area, the user should wear unvented goggles and a respirator approved by NIOSH during application.

Foam Applications

Bifen I/T emulsion, from 0.06 to 0.12% may be converted to foam with expansion characteristics from 2 to 40 times.

Localized Application

Foam Applications: The emulsion may be converted to foam and the foam 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 insure 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

Application may be made using Bifen I/T foam alone or in combination with liquid emulsion. The equivalent of at least 4 gallons (4 ounces of Bifen I/T concentrate) of 0.06% emulsion per 10 linear feet (vertical barrier), or at least 1 gallon (1 ounce of Bifen I/T concentrate) of 0.06% emulsion per 10 square feet (horizontal barrier) must be applied either as emulsion, foam, or a combination of both. For a foam only application, apply Bifen I/T concentrate in sufficient foam concentration and foam volume to deposit 4 ounces of concentrate per 10 linear feet or 1 ounce of concentrate per 10 square feet. For example, 2 gallons of 0.12% emulsion generated as foam to cover 10 linear feet is equal to the application of 4 gallons of 0.06% emulsion per 10 linear feet.

Sand Barrier Installation and Treatment

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

SPECIFIC PEST CONTROL APPLICATIONS

Underground Services such as: wires, cables, utility lines, pipes, conduits, etc. Services may be within structures, in right-of-ways or to protect long range (miles) of installations of services.

Soil treatment may be made using 0.06 to 0.12% Bifen I/T emulsion to prevent attack by termites and ants.

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

Where soil will not accept the above-labeled volume, 1 gallon of 0.12% Bifen I/T may be used per 10 linear feet of trench both to the bottom of the trench and over the soil on top of the services.

Finish filling the trench with treated fill soil. The soil where each service protrudes from the ground may be treated by trenching/rodding of not more than 1 to 2 gallons of emulsion into the soil.

Precautions: Do not treat electrically active underground services.

Posts, Poles, and Other Constructions
Create an insecticidal barrier in the soil around wooden constructions such as signs, fences and landscape ornamentation by applying a 0.06% emulsion.

Previously installed poles and posts may be treated by sub-surface injection or treated by gravity-flow through holes made from the bottom of a trench around the pole or post. Treat on all sides to create a continuous insecticidal barrier around the pole. Use 1 gallon of emulsion per foot of depth for poles and posts less than six inches in diameter. For larger poles, use 1.5 gallons of emulsion per foot of depth. Apply to a depth of 6 inches below the bottom of the wood. For larger constructions, use 4 gallons per 10 linear feet per foot of depth.

Treatment of Wood-in-Place for Control of Wood-Infesting Insects: (Localized Areas in Structure) For the control of insects such as Termites, Ants, Carpenter Ants, and wood-infesting beetles such as Old House Borer and Powder Post in localized areas of infested wood in and around structures, apply a 0.06% 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. Paint on or fan spray applications may also be used. Plastic sheeting must be placed immediately below overhead areas that are spot treated except for soil surfaces in crawl spaces. 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. This type of application is not intended to be a substitute for soil treatment, mechanical alteration or fumigation to control extensive infestation of wood-infesting insects.

Termite carton nests in trees or building voids may be injected with 0.06% emulsion. 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.

Control of Bees and Wasps Indoors: To control Bees, Wasp, Hornets, and Yellow-Jackets apply a 0.06% emulsion. Application should be made in the late evening when insects are at rest. Spray liberally into hiding and breeding places, especially under attic rafters, contacting as many insects as possible. 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 insect activity.

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 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.

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.

Broadcast Treatment of Wood for the Control of Wood-infesting Insects and Nuisance Pests Outside of Structure
Apply a 0.06% emulsion with a fan spray using a maximum pressure of 25 psi. Treatment should be made just to the point of run-off.

To control wood-infesting insects active inside trees, utility poles and/or fence posts, drill to find the interior infested cavity and inject a 0.06% emulsion. To control Bees, Wasps, Hornets, and Yellow-Jackets, apply in late evening when insects are at rest. Aim spray at nest openings in ground, bushes and in cracks and crevices which may harbor nests, saturating nest openings and contacting as many insects as possible.

Pests Under Slabs

Infestations of Arthropods, such as Ants, Cockroaches and Scorpions inhabiting under slab area may be controlled by drilling and injecting or horizontal rodding and then injecting 1 gallon of a 0.06% to 0.12% emulsion per 10 square feet or 2 gallons of emulsion per 10 linear feet.

Formula for Determining the Active Ingredient Content of the Finished Spray Mixture: The following formula may be used to determine the percent active ingredient that is in the spray tank after mixing Bifen I/T:

$$\frac{(7.9)(\text{Fl. Oz. of Bifen I/T added to tank})}{(\text{Gallons of finished spray mix})(128)} = \text{Percent Active Ingredient of spray mix}$$

General Applications Instructions

Bifen I/T formulation mixes readily with water and other aqueous carriers, and controls a wide spectrum of insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in interiorscapes including hotels, shopping malls, office buildings, etc., and outdoor plantscapes, such as around residential dwellings, parks, institutional buildings, recreational areas, athletic fields and home lawns. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

Bifen I/T may be tank-mixed with other pesticides, including insect growth regulators. When tank mixing Bifenthrin termiticide/insecticide with other pesticides, observe all precautions and limitations on each separate product label. The physical compatibility of Bifenthrin termiticide/insecticide 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 pesticides and water to ensure the physical compatibility of the mixture.

The following procedure is recommended 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 Recommendations

Lawn: Apply Bifen I/T as a broadcast treatment. Use application volumes of up to 10 gallons per 1000 square feet to get a uniform control when treating dense grass foliage.

For low volume applications, less than 2 gallons/1000 square feet, immediate irrigation of treated area with at least 0.25 inches of water following application to ensure efficacy of sub-surface pests such as, but not limited to, Mole Crickets, is recommended.

LAWN APPLICATION RATES

The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, Bifen I/T may be applied at up to 1 fl. oz. per 1000 square feet to control each of the pests listed in the Table. The higher application rates should be used when maximum residual control is desired.

Pest	Application Rate Bifen I/T
Armyworms[1] Cutworms[1] Sod Webworm[1]	0.18 - 0.25 fluid oz. per 1000 sq. ft.
Annual Bluegrass Weevil (Hyperodes) (Adult)[2] Banks Grass Mite[6] Billbugs (Adult)[3] Black Turfgrass Ataenius Adult[4] Centipedes Chinch Bugs[5] Crickets Earwigs Fleas (Adult) Grasshoppers Leafhoppers Mealybugs Millipedes Mites[6] Pillbugs Sowbugs	0.25 - 0.5 fluid oz. per 1000 sq. ft.
Ants Fleas (Larvae)[7] Imported Fire Ants[8] Japanese Beetle (Adult) Mole Cricket (Adult)[9] Mole Cricket (Nymph)[10] Ticks[11]	0.5 - 1.0 fluid oz. per 1000 sq. ft.

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 Bifen I/T if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

Comments

[1]**Armyworms, Cutworms, and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the grass area is being maintained at a mowing height of greater than 1 inch, then higher application rates (Up to 1 fluid oz. per 1000 square feet) may be required during periods of high pest pressure.

[2]**Annual Bluegrass Weevil (Hyperodes) adults:** Applications should be timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement 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.

[3]**Billbug adults:** Applications should be made when adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of over-wintered chinch bugs.

[4]**Black Turfgrass Ataenius adults:** Applications should be made during May and July to control the first and second generation of black turfgrass ataenius adults, respectively. The May application should be timed to coincide with the full bloom stage of Vanhoutte spiraea (*Spiraea vanhouttei*) and horse chestnut (*Aesculus hippocastanum*). The July application should be timed to coincide with the blooming Rose of Sharon (*Hibiscus syriacus*).

[5]**Chinch Bugs:** Chinch bugs infest the base of grass plants and are often found in the thatch layer. Irrigation of the grass area before treatment will optimize the penetration of the insecticide to the area where the chinch bugs are located. Use higher volume applications if the thatch layer is excessive or if a relatively long mowing height is being maintained. Chinch bugs can be one of the most difficult pests to control in grasses and the higher application rates (Up to 1 fluid oz. per 1000 square feet) may be required to control populations that contain both nymphs and adults during the middle of the summer.

[6]**Mites:** To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, five to seven days after the first, may be necessary to achieve acceptable control.

[7]**Flea larvae:** Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil. Note: If the lawn area is being treated with **Bifen I/T** at 0.25 fluid ounces per 1000 square feet for adult flea control, then the larval application rate may be achieved by increasing the application volume two- to four-fold.

[8]**Imported Fire Ants:** Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will control existing colonies. If the soil is not moist, then it is important to irrigate before application or use a high volume application. Broadcast treatments should apply 1 fluid oz. per 1,000 square feet. Mounds should be treated by diluting 1 teaspoon of **Bifen I/T** per gallon of water and applying 1 to 2 gallons of finished spray per mound. The mounds should be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. A four foot diameter circle around the mound should also be treated. For best results, apply in cool weather (65-80°F) or in early morning or late evening hours. Note: a spray rig that is calibrated to apply 1 fluid oz. per 1,000 square feet of **Bifen I/T** in 5 gallons per 1,000 square feet contains the approximate dilution (1 teaspoon per gallon) that is required for fire ant mound drenches in the spray tank.

[9]**Mole Cricket adults:** Achieving acceptable control of adult mole crickets is difficult because preferred grass areas are subject to continuous invasion during the early spring by this extremely active stage. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized. Grass areas that receive pressure from adult mole crickets should be treated at peak egg hatch to ensure optimum control of subsequent nymph populations (see below).

[10]**Mole Cricket nymphs:** Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch. Optimal control is achieved at this time because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging, nymphs later in the year may require both higher application rates and more frequent applications to maintain acceptable control. Application should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized.

[11]**Ticks (including ticks that may transmit Lyme Disease and Rocky Mountain Spotted Fever):** Do not make spot application. 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. Applications should be made as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

Bifen I/T Lawn Dilution Chart

Application Volume: Gallons Per 1,000 Sq. Ft.	Application Rate: Fluid Ounces Per 1,000 Sq. Ft.	Fluid Ounces* of Bifen I/T Diluted to these Volumes of Finished Spray			
		1 gallon	5 gallons	10 gallons	100 gallons
1.0	0.18	0.18	0.90	1.8	18.0
1.0	0.25	0.25	1.25	2.5	25.0
1.0	0.5	0.5	2.5	5.0	50.0
1.0	1.0	1.0	5.0	10.0	100.0
2.0	0.18	—	0.45	0.90	9.0
2.0	0.25	0.13	0.63	1.25	12.5
2.0	0.5	0.25	1.25	2.5	25.0
2.0	1.0	0.5	2.5	5.0	50.0
3.0	0.18	—	0.30	0.60	6.0
3.0	0.25	—	0.42	0.83	8.3
3.0	0.5	0.17	0.83	1.67	16.7
3.0	1.0	0.33	1.67	3.33	33.3
4.0	0.18	—	0.23	0.45	4.5
4.0	0.25	—	0.31	0.63	6.3
4.0	0.5	0.13	0.63	1.25	12.5
4.0	1.0	0.25	1.25	2.5	25.0
5.0	0.18	—	0.18	0.36	3.6
5.0	0.25	—	0.25	0.5	5.0
5.0	0.5	0.1	0.5	1.0	10.0
5.0	1.0	0.2	1.0	2.0	20.0
10.0	0.18	—	—	0.18	1.8
10.0	0.25	—	0.13	0.25	2.5
10.0	0.5	—	0.25	0.5	5.0
10.0	1.0	0.1	0.5	1.0	10.0

*To convert to millimeters, multiply by 29.57
1 fluid ounce = 29.57 ml = 2 tablespoons = 6 teaspoons
Do not use household utensils to measure Bifen I/T.

ORNAMENTALS AND TREES

For ornamental applications (including but not limited to trees, shrubs, ground covers, bedding plants, and foliage plants) apply 0.125 to 1.0 fl. oz. of Bifen I/T per 1,000 square feet or 5.4 to 43.5 fl. oz. per 100 gallons. Bifen I/T may be diluted and applied in various volumes of water providing that the maximum label rate (1.0 fluid oz. per 1,000 square feet or 43.5 fl. oz. per 100 gallons.) is not exceeded. Bifen I/T may be applied through low volume application equipment by dilution with water or other carriers and providing that the maximum label rate (1.0 fluid oz. per 1,000 square feet or 43.5 fl. oz. per 100 gallons is not exceeded.

Apply the specified application rate as a full coverage foliar spray. Repeat treatment as necessary to achieve control using higher application rates as pest pressure & foliage increases. Repeat application should be limited to no more than once per seven days.

Certain cultivars may be sensitive to the final spray solution. A small number of plants should be treated and observed for one week prior to application to the entire planting.

Use of an alternate class of chemistry in a treatment program is recommended to prevent or delay pest resistance.

Bifen I/T Ornamental Dilution Chart

Application Volume: Gallons Per		Application Rate: Fluid Ounces Per 1,000 Sq. Ft.	Fluid Ounces* of Bifen I/T Diluted to these Volumes of Finished Spray			
1,000 Sq. Ft.	Acre		1 gallon	5 gallons	10 gallons	100 gallons
2.3	100	0.125	—	0.27	0.54	5.4
2.3	100	0.25	0.11	0.54	1.08	10.8
2.3	100	0.5	0.22	1.09	2.17	21.7
2.3	100	1.0	0.44	2.17	4.35	43.5
4.6	200	0.125	—	0.14	0.27	2.7
4.6	200	0.25	—	0.27	0.54	5.4
4.6	200	0.5	0.11	0.54	1.09	10.9
4.6	200	1.0	0.22	1.09	2.17	21.7
6.9	300	0.125	—	—	0.18	1.8
6.9	300	0.25	—	0.18	0.36	3.6
6.9	300	0.5	—	0.36	0.72	7.2
6.9	300	1.0	0.15	0.72	1.45	14.5

*To convert to millimeters, multiply by 29.57
300 gallons per acre is a typical application volume for landscape ornamental applications.
1 fluid ounce = 29.57 ml = 2 tablespoons = 6 teaspoons
Do not use household utensils to measure Bifen I/T.

Calculating Dilution Rates using the Ornamental Application Rates Table and the Bifen I/T Ornamental Dilution Chart: The following steps should be taken to determine the appropriate dilution of Bifen I/T that is required to control specific pests:

1) Identify the least susceptible target pest (the pest requiring the highest application rate for control).
2) Select an application rate in terms of fluid oz. of Bifenthrin.
3) Identify your application volume and how much spray mix you want to prepare.
4) Use the Ornamental Dilution Chart to determine the appropriate volume of Bifen I/T that must be mixed in your desired volume of water.

For example, suppose you are tying to control black vine weevil adults on rhododendron. The Ornamental Application Rates table shows that 0.25 to 0.5 fluid ounces of Bifen I/T should be applied per 1,000 square feet. You select an application rate of 0.5 fluid oz. per 1,000 square feet because maximum residual control is desired. Your application volume is approximately 300 gallons per acre, which is equivalent to 6.9 gallons per 1,000 square feet. Consulting the Ornamental Dilution Chart reveals that you should dilute 0.72 fluid oz. of Bifen I/T in 10 gallons of water.

ORNAMENTAL APPLICATION RATES

The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, the Bifen I/T may be applied at up to 1 fluid oz. per 1,000 square feet. (43.5 fl. oz. per 100 gallons) to control each of the pests listed in this table. The higher application rates should be used when maximum residual control is desired.

Pest	Application Rate Bifen I/T	
	Fluid Ounces per 1,000 sq. ft.	**Fluid Ounces per 100 gallons**
Bagworms[12] Cutworms Elm Leaf Beetles Fall Webworms Gypsy Moth Caterpillars Lace Bugs Leaf Feeding Caterpillars Tent Caterpillars	0.125 - 0.25	5.4 - 10.8
Adelgids† Ants Aphids Bees Beet Armyworm Beetles[13,1] Black Vine Weevil (Adults) Brown Soft Scales Broad Mites Budworms California Red Scale (Crawlers)[13] Centipedes Cicadas† Citrus Thrips Clover Mites Crickets Diaprepes (Adults)	0.25 - 0.5	10.8 - 21.7

(continued)

Pest	Application Rate Bifen I/T	
	Fluid Ounces per 1,000 sq. ft.	Fluid Ounces per 100 gallons
Earwigs European Red Mite Flea Beetles Fungus Gnats (Adults) Grasshoppers Japanese Beetle (Adult)† Leafhoppers Leaftrollers Mealybugs Millipedes Mites Mosquitoes Orchid Weevil Pillbugs Pine Needle Scales (Crawlers)[13] Plant Bugs (Including *Lygus spp.*) Psyllids† San Jose Scales (Crawlers)[13] Scropions Sowbugs Spider Mites[14] Spiders Spittlebugs† Thrips Tip Moths	0.25 - 0.5	10.8 - 21.7
Treehoppers† Twig Borers[13] Wasps Weevils[13] Whiteflies	0.25 - 0.5	10.8 - 21.7
Imported Fire Ants** Leafminers Pecan Leaf Scorch Mite Pine Shoot Beetle (Adults) Spider Mites[14]	0.5 - 1.0	21.7 - 43.5

[12]**Bagworms:** Apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.

[13]**Beetles, Scale Crawlers, Twig Borers, and Weevils:** Treat trunks, stems and twigs in addition to plant foliage.

[14]**Spider Mites:** Bifen I/T provides optimal twospotted spider mite control when applied during spring to mid-summer. Higher application rates and/or more frequent treatments may be required for acceptable twospotted spider mite control during mid- to late-summer. The addition of a surfactant or horticultural oil may increase the effectiveness of Bifen I/T. Combinations of Bifen I/T with other registered miticides have also proven effective. Alternately, Bifen I/T applications may be rotated with those of other products that have different modes of action in control programs that are designed to manage resistance by twospotted spider mites. Consult your local Cooperative Extension Service for resistance management recommendations in your region.

**For foraging ants.

†Not for use in California.

Pest Control on Outside Surfaces and Around Buildings

For control of Ants, Carpenter Ants, Fire Ants, Armyworms, Bees, Beetles†, Biting Flies, Boxelder Bugs, Centipedes, Chiggers. Chinch Bugs, Clover Mites, Crickets, Cutworms, Dichondra Flea Beetles, Earwigs, Elm Leaf Beetles, Firebrats, Fleas, Flies, Gnats, Grasshoppers, Hornets, Japanese Beetles†, Midges, Millipedes, Mosquitoes, Moths, Roaches (including Cockroaches), Scorpions, Silverfish, Sod Webworms, Sowbugs (Pillbugs), Spider Mites, Spiders (including Black Widow Spiders), Springtails, Ticks (including Brown Dog Ticks), and Wasps.

†Not for use in California.

Apply Bifen I/T using a 0.02 to 0.06% suspension as a residual spray to outside surfaces of buildings including, but not limited to, exterior siding, foundations, porches, window frames, eaves, patios, garages, refuse dumps, lawns such as grass areas adjacent or around private homes, duplexes, townhouses, condominiums, house trailers, apartment complexes, carports, garages, fence lines, storage sheds, barns, and other residential and non-commercial structures, soil, trunks of woody ornamentals and other areas where pests congregate or have been seen. Use a spray volume of up to 10 gallons of emulsion per 1,000 square feet. Higher application volumes may be used to obtain the desired coverage of dense vegetation or landscaping materials.

Mixing Directions: For 0.02% suspension, mix 0.33 fluid oz. of Bifen I/T per gallon of water. For 0.06% suspension, mix 1 fluid oz. Bifen I/T per gallon of water (1 fluid oz. = 2 tablespoons). Do not use household utensils to measure Bifen I/T. Use the higher rates for heavy pest infestation, quicker knockdown or longer residual control. 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 insect activity. Repeat application should be limited to no more than once per seven days.

Perimeter Treatment: Apply to a band of soil and vegetation 6 to 10 feet wide around and adjacent to the structure. Also, treat the foundation of the structure to a height of 2 to 3 feet. Apply 0.33 to 1.0 fluid oz. of Bifen I/T per 1,000 square feet in sufficient water to provide adequate coverage (refer to Perimeter Application Dilution Chart).

Bifen I/T Perimeter Application Dilution Chart

Application Volume: Gallons Per 1,000 Sq. Ft.	Application Rate: Fluid Ounces Per 1,000 Sq. Ft.	Fluid Ounces* of Bifen I/T Diluted to these Volumes of Finished Spray			
		1 gallon	5 gallons	10 gallons	100 gallons
1	0.33	0.33	1.67	3.33	33.3
1	0.5	0.5	2.5	5.0	50.0
1	0.67	0.67	3.33	6.67	66.7
1	0.75	0.75	3.75	7.5	75.0
1	1.0	1.0	5.0	10.0	100.0
2	0.33	0.17	0.83	1.65	16.5
2	0.5	0.25	1.25	2.5	25.0
2	0.67	0.33	1.67	3.35	33.5
2	0.75	0.38	1.88	3.75	37.5
2	1.0	0.5	2.5	5.0	50.0

(continued)

Bifen I/T Perimeter Application Dilution Chart *(continued)*

Application Volume: Gallons Per 1,000 Sq. Ft.	Application Rate: Fluid Ounces Per 1,000 Sq. Ft.	Fluid Ounces* of Bifen I/T Diluted to these Volumes of Finished Spray			
		1 gallon	5 gallons	10 gallons	100 gallons
3	0.33	0.11	0.55	1.10	11.0
3	0.5	0.17	0.83	1.67	16.7
3	0.67	0.22	1.11	2.23	22.3
3	0.75	0.25	1.25	2.5	25.0
3	1.0	0.33	1.67	3.33	33.3
4	0.33	—	0.41	0.83	8.3
4	0.5	0.13	0.63	1.25	12.5
4	0.67	0.17	0.84	1.67	16.7
4	0.75	0.19	0.94	1.88	18.8
4	1.0	0.25	1.25	2.5	25.0
5	0.33	—	0.33	0.67	6.7
5	0.5	0.1	0.5	1.0	10.0
5	0.67	0.13	0.67	1.33	13.3
5	0.75	0.15	0.75	1.5	15.0
5	1.0	0.2	1.0	2.0	20.0
10	0.33	—	0.17	0.33	3.3
10	0.5	—	0.25	0.5	5.0
10	0.67	—	0.33	0.67	6.7
10	0.75	—	0.38	0.75	7.5
10	1.0	0.1	0.5	1.0	10.0

*To convert to milliliters, multiply by 29.57
1 fluid oz. = 29.57 ml = 2 tablespoons = 6 teaspoons
Do not use household utensils to measure Bifen I/T .

For Ant and Fire Ant Mounds use Bifen I/T 0.06% emulsion as Drench Method: Apply 1-2 gallons of emulsion to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mound. Use the higher volume for mounds larger than 12". For best results, apply in cool weather, such as in early morning or late evening hours, but not in the heat of the day.

Mosquito Control: Dilute 0.33 to 1.0 fl. oz. of Bifen I/T per gallon of water and apply at the rate of one gallon of dilution per 1,000 square feet as a general spray around landscapes, lawn and buildings to control mosquitoes. For higher volume applications, Bifen I/T may be diluted at lower concentrations and applied at greater volumes to deliver the desired amount of product per area (refer to the Ornamental or Perimeter Application Dilution Charts).

INDOOR USE

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

For control of ants, bees, beetles, boxelder bugs, carpet beetles, centipedes, clothes moths, cockroaches, crickets, earwigs, firebrats, flies, gnats, midges, millipedes, pillbugs, scorpions, silverfish, sowbugs, spiders, ticks, and wasps.

Use a 0.02% to 0.06% suspension (0.33 to 1 fluid oz. per gallon of water) for residual pest control in buildings and structures and on modes of transport. Apply either as a crack and crevice, pinstream, spot, coarse, low-pressure spray (25 psi or less) or with a paint brush.

Indoor Treatments: Apply as a coarse, low pressure, crack and crevice or spot spray to areas where pests hide, such as baseboards, corners, storage areas, closets, around water pipes, doors and windows, attics and eaves, behind and under refrigerators, cabinets, sinks, furnaces, stoves, the underside of shelves, drawers and similar areas. Do not use as a space spray. Pay particular attention to cracks and crevices.

Mixing Directions: See mixing directions in "Pest Control on Outside Surfaces and Around Buildings" section.

Bifen I/T is to be diluted with water for spray or brush application. Fill sprayer with the desired volume of water and add Bifen I/T. Close and shake before use in order to insure proper mixing. Mix only the amount of solution needed for the application. 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 insect activity. Repeat application should be limited to no more than once per seven days.

Cockroaches, Crickets, Firebrats, Scorpions, Silverfish, Spiders, and Ticks: Apply as a coarse, low pressure spray to areas where these pests hide, such as baseboards, corners, storage areas, closets, around water pipes, doors and windows, attics and eaves, behind and under refrigerators, cabinets, sinks, furnaces, and stoves, the underside of shelves, drawers, and similar areas. Pay particular attention to cracks and crevices.

Ants: Apply to any trails, around doors and windows and other places where ants may be found.

Bees and Wasps: Application to nests should be made late in the evening when insects are at rest. Thoroughly spray nest and entrance and surrounding areas where insects alight.

Boxelder Bugs, Centipedes, Earwigs, Beetles, Millipedes, Pillbugs, and Sowbugs: Apply around doors and windows and other places where these pests may be found or where they may enter premises. Spray baseboards, storage areas and other locations.

Food Handling Establishments: Applications of this product are permitted in both food/feed and nonfood/ areas of food/feed handling establishments as a general surface, spot, or crack and crevice treatment.

Food/feed handling establishments are defined as places other than private residences in which exposed food/feed is held, processed, prepared or served. Included also are areas for receiving, storing, packing (canning, bottling, wrapping, boxing), preparing, edible waste storage and enclosed processing systems (mills, dairies, edible oils, syrups) of food. Serving areas where food is exposed and the facility is in operation are also considered food areas.

Permitted non-food areas of use include garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, garages, mop closets and storage (after canning or bottling).

Permitted use sites include, but are not limited to: Aircraft (Do not use in aircraft cabins), apartment buildings, bakeries, bottling facilities, breweries, buses, cafeterias, candy plants, canneries, dairy product processing plants, food manufacturing plants, food processing plants, food service establishments, granaries, grain mills, hospitals, hotels, industrial buildings, laboratories, meat/poultry/egg processing plants, mobile/motor homes, nursing homes, offices, railcars, restaurants, schools, ships, trailers, trucks, vessels, warehouses and wineries.

- **General Surface Application:** Do not use this application method in food/feed handling establishments when the facility is in operation or foods/feeds are exposed. Do not apply directly to food products. Cover or remove all food processing and/or handling equipment during application. After application in food processing plants, bakeries, cafeterias and similar facilities, wash all equipment, benches, shelving and other surfaces which food will contact. Clean food handling or processing equipment and thoroughly rinse with clean, fresh water.
- **Spot, Crack and Crevice Application:** Spot or crack and crevice applications may be made while the facility is in operation; however, food should be covered or removed from area being treated. Do not apply directly to food.

Foam Applications

Bifen I/T termiticide/insecticide may be converted to foam and used to treat structural voids. Dilute 0.33 to 1.0 fluid oz. of Bifen I/T per gallon of water and add the manufacturers recommended volume of foaming agent to produce a 0.02 to 0.06 percent foam concentration. Verify before treatment that the foaming agent is compatible with Bifen I/T.

TERMITE CONTROL (ABOVE GROUND ONLY)

The purpose of the applications described below is to kill termite workers or winged reproductives that may be present at the time or treatment. These applications are intended as supplements to, and not substitutes for, mechanical alteration, soil treatment or foundation treatment.

To control exposed workers and winged reproductive termites in localized areas, dilute 1.0 fluid ounce of Bifen I/T per gallon of water and apply as a course fan spray at the rate of one gallon per 1,000 square feet to attics, crawl spaces, unfinished basements and other void areas. Treat swarming termites as well as the areas in which they congregate.

To control above-ground termites in localized areas of infested wood, dilute 1.0 fluid oz. of Bifen I/T per gallon of water and apply as a liquid or foam to voids and galleries in damaged wood as well as to spaces between wooden structural members and between the sill plate and foundation where wood is vulnerable to attack. Applications may be made to inaccessible areas by drilling and then injecting the dilution or foam, with a suitable directional injector, into damaged wood or wall voids. All treatment holes drilled in construction elements in commonly occupied areas of structures should be securely plugged after treatment.

To control termite carton nests in building voids, dilute 1.0 fluid oz. of Bifen I/T per gallon of water and apply as liquid or foam using a pointed injection tool. Multiple injection points and varying depths of injection may be necessary to achieve control. When possible, the carton nest material should be removed from the building void after treatment.

ANT CONTROL

Nuisance Ants Indoors: For best results, locate and treat ant nests. Dilute 0.5 to 1.0 fluid oz. of Bifen I/T per gallon of water and apply at the rate of one gallon of dilution per 1,000 square feet as a general surface, crack and crevice or spot treatment to areas where ants have been observed or are expected to forage. These areas include, but not limited to, baseboards, in and behind cabinets, under and behind dishwashers, furnaces, refrigerators, sinks and stoves, around pipes, cracks and crevices and in corners. Particular attention should be given to treating entry points into the home or premises such as around doors and windows. When using Bifen I/T in combination with baits, apply Bifen I/T as instructed above, and use baits in other areas that have not been treated with Bifen I/T.

Nuisance Ants Outdoors: For best results, locate and treat ant nests. Apply Bifen I/T to ant trails around doors and windows and other places where ants have been observed or are expected to forage. Apply a perimeter treatment using either low or high volume applications described in the "Pest Control on Outside Surfaces and Around Buildings" section of this label. The higher dilutions and/or application volumes, as well as more frequent applications, may be necessary when treating concrete surfaces for ant control. Maximum control is generally achieved using the following procedure:

1. Treat non-porous surfaces with low volume applications using 0.5 to 1.0 fluid oz. of Bifen I/T per gallon of water and applying this dilution at the rate of one gallon per 1,000 square feet.
2. Treat porous surfaces and vegetation with high volume applications using dilutions that are calculated to deliver 0.5 to 1.0 fluid oz. of Bifen I/T per 1,000 square feet (refer to the Ornamental and Perimeter Application Dilution Charts).

3. For maximum residual control, dilute 0.5 to 1.0 fluid oz. of Bifen I/T per gallon of water and apply at a rate of up to 10 gallons of dilution per 1,000 square feet.

Carpenter Ants Indoors: Dilute 0.5 to 1.0 fluid oz. of Bifen I/T per gallon of water and apply at the rate of one gallon of dilution per 1,000 square feet as a general surface, crack and crevice or spot treatment to areas where carpenter ants have been observed or are expected to forage. These areas include, but are not limited to, baseboards, in and behind cabinets, under and behind dishwashers, furnaces, refrigerators, sinks, and stoves, around pipes, cracks and crevices, and in corners. Particular attention should be given to treating entry points into the home or premises such as around doors and windows. Spray or foam into cracks into crevices or drill holes and spray, mist or foam into voids where carpenter ants or their nests are present. When using Bifen I/T in combination with baits, apply Bifen I/T as instructed above, and use baits in other areas that have not been treated with Bifen I/T.

Carpenter Ants Outdoors: Apply Bifen I/T to carpenter ant trails around doors and windows and other places where carpenter ants have been observed or are expected to forage. For best results, locate and treat carpenter ant nests. Apply a perimeter treatment using either low or high volume applications described in the "Pest Control on Outside Surfaces and Around Buildings" section of this label. The higher dilutions and/or application volumes, as well as more frequent applications, may be necessary when treating concrete surfaces for carpenter ant control. Maximum control is generally achieved using the following procedure:

1. Treat non-porous surfaces with low volume applications using 0.5 to 1.0 fluid oz. of Bifen I/T per gallon of water and applying this dilution at the rate of one gallon per 1,000 square feet.
2. Treat the trunks of trees that have carpenter ant trails, or upon which carpenter ants are foraging, using 0.5 to 1.0 fl. oz. of Bifen I/T per gallon of water and applying this dilution to thoroughly wet the bark from the base of the tree to as high as possible on the trunk.
3. Treat porous surfaces and vegetation with high volume applications using dilutions that are calculated to deliver 0.5 to 1.0 fluid oz. of Bifen I/T per 1,000 square feet (refer to the Ornamental and Perimeter Application Dilution Charts)
4. For maximum residual control, dilute 0.5 to 1.0 fluid oz. of Bifen I/T per gallon of water and apply at a rate of up to 10 gallons of dilution per 1,000.

To control carpenter ants inside trees, utility poles, fencing or deck materials and similar structural members, drill to locate the interior infested cavity and inject or foam a 0.06% dilution (1.0 fl. oz. of Bifen I/T per gallon of water) into the cavity using a sufficient volume and an appropriate treatment tool with a splash-back guard.

To control carpenter ants that are tunneling in the soil, dilute 0.5 to 1.0 fluid ounces of Bifen I/T per gallon of water and apply as a drench or inject the dilution or foam at intervals of 8 to 12 inches. Establish a uniform vertical barrier at the edges of walls, driveways or other hard surfaces where ants are tunneling beneath the surfaces.

For wood piles and stored lumber apply a 0.06% emulsion. Use a hose-end sprayer or sprinkling can to deliver a coarse drenching spray. Treated wood can be burned or used for lumber one month after treatment. Do not use in structures.

To protect firewood from carpenter ants, dilute 1.0 fluid oz. of Bifen I/T per gallon of water and apply to the soil beneath where the firewood will be stacked at the rate of one gallon of dilution per 8 square feet. DO NOT treat firewood with this product.

Attention

Do not apply a broadcast application to interior surfaces of homes.

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

Firewood is not to be treated.

Use only in well-ventilated areas.

During any application to overhead areas of structure, cover surface below with plastic sheeting or similar material except for soil surfaces in crawlspaces.

Do not allow spray to contact food, foodstuffs, food-contacting surfaces or 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 runoff occur.

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

Let surfaces dry before allowing people and pets to contact surface.

Bifen I/T will not stain, or damage any surface that water alone will not stain or damage.

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

Do not apply in classrooms when in use.

Do not apply when occupants are present in the immediate area in institutions such as libraries, sports facilities, etc.

Do not apply this product in livestock buildings (barns).

Application equipment that delivers low volume treatments, such as Micro-Injector® or Actisol® applicators, may also be used to make crack and crevice, deep harborage, spot and general surface treatments of Bifen I/T.

Distributors Should Sell in Original Packages Only.
Terms of Sale or Use: On purchase of this product buyer and user agree to the following conditions:

Warranty: Control Solutions, Inc. makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and /or storage is contrary to label instructions.

Directions and Recommendations: Follow directions carefully. Timing, method of application, weather conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller and are assumed by the buyer at his own risk.

Use of Product: Control Solutions, Inc.'s recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

Damages: Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.

Micro-injector is a registered trademark of Whitmire Micro-Gen Research Laboratories

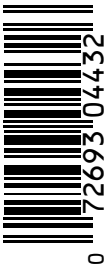
Actisol is a registered trademark of Rousse-Uclaf

Bifen I/T

Insecticide/Termiticide

For Use by Individuals/Firms licensed by the State to apply termiticide products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the pest control regulatory agency of your State prior to use of this product.

To control pests indoors and outdoors on residential, institutional, public, commercial, and industrial buildings, and lawns, ornamentals, parks, recreational areas and athletic fields.



Active Ingredient:	**By Wt.**
Bifenthrin*	7.9%
Inert Ingredients:	92.1%
Total	100.0%

Contains 2/3 pound active ingredient per gallon.
*Cis isomers 97% minimum, trans isomers 3% maximum.

EPA Reg. No. 53883-118

EPA Est. No. 53883-TX-002

KEEP OUT OF REACH OF CHILDREN

CAUTION

Control Solutions, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507-1041