

PM-3

51036-287

2/6/98

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**PERMETHRIN 3.2 TC**  
TERMITICIDE/INSECTICIDE

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 Ingredient:

*Permethrin**	.....	36.8%
Inert Ingredients:***	.....	63.2%
Total	.....	100.0%

\*(3-Phenoxyphenyl) methyl (±) cis-trans 3-(2,2-dichloroethenyl)-2,2-dimethylcyclo-propanecarboxylate  
\*\*cis/trans ratio: Max. 55%(±) cis and min. 45% (±) trans

\*\*\*Contains petroleum distillates  
Contains 3.2 pounds permethrin per gallon.

KEEP OUT OF REACH OF CHILDREN

**CAUTION**

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center. Do not induce vomiting as it may cause aspiration pneumonia. Do not give anything by mouth to an unconscious person. Avoid alcohol.

IF INHALED: Remove victim to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. Get medical attention.

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

IF IN EYES: Flush with plenty of water. Call a physician if irritation persists.

NOTE TO PHYSICIAN: This product contains aromatic hydrocarbons which can produce a severe pneumonitis if aspirated, consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

EPA Reg. No. 51036-287

EPA Est. No. 51036-GA-1

Manufactured By:  
MICRO FLO COMPANY  
P.O. BOX 5948  
LAKELAND, FL 33807

<b>ACCEPTED</b>
FEB - 6 1998
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 51036-287

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## PRECAUTIONARY STATEMENTS

### Hazards to Humans (and Domestic Animals)

#### CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing dust (vapor or 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, shirt, pants, socks, shoes and waterproof gloves are sufficient. In addition: all pesticide handlers must wear a respiratory protection device (air-purifying respirator with NIOSH approved TC-23C pesticide cartridges) when handling the concentrate or when working in a non-ventilated space and all pesticide handlers must wear protective eyewear when working in a non-ventilated space or when applying termiticide by rodding or sub-slab injection.

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.

#### ENVIRONMENTAL HAZARDS

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

This product is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. Do not apply when weather conditions favor drift from treated areas.

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### PHYSICAL/CHEMICAL HAZARDS

Do not use or store near heat or open flame.

### DIRECTIONS FOR USE

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

Shake Well Before Using

### STORAGE AND DISPOSAL

#### PESTICIDE STORAGE

Store at temperatures above 40 degrees F (5 degrees C).

If separation occurs, and less than entire contents of container are to be used, remix by agitation. For the 1.25 and 2.5 gallon containers, invert and shake several times until contents are homogeneous. For the 5 gallon U-Turn container, grasp handle and rock container forward and backward vigorously until contents are homogeneous.

If crystals form, warm to room temperature 70 degrees F (21 degrees C) by room heating only for 24-48 hours and shake occasionally until crystals dissolve and product appears uniform. Do not use external source of heat for warming container.

Do not use or store near heat, open flame or hot surfaces.

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

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, commercial clay or gel absorbents. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

#### PESTICIDE DISPOSAL

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

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Office for guidance.

CONTAINER DISPOSAL

Plastic Containers: 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.

Metal containers: Triple rinse (or equivalent). The offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Do not cut or weld metal containers.

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 for aesthetic purposes or climatic modification and being grown in interior plantscapes, ornamental gardens or parks, or lawns and grounds.

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 the specific local conditions, consult resources in structural pest control and state cooperative extension and regulatory agencies.

SUBTERRANEAN TERMITE CONTROL

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,

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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.

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. Do not treat while precipitation is occurring. 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: Crawlspace are to be considered inside of the structure.

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

#### STRUCTURES WITH WELLS/CISTERNS INSIDE FOUNDATIONS

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

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



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Mixing: For the desired application rate, use the chart below to determine the amount of PERMETHRIN 3.2 TC for a given volume of finished emulsion:

AMOUNT OF PERMETHRIN 3.2 TC

EMULSION CONCENTRATION	AMOUNT OF PERMETHRIN 3.2 TC	AMOUNT OF WATER	DESIRED GALLONS OF FINISHED EMULSION
0.5%	1 2/3 fl. oz.	7.9 pts.	1
	6 2/3 fl. oz.	31.6 pts.	4
	8 1/3 fl. oz.	39.5 pts.	5
	16 2/3 fl. oz.	9.9 gals.	10
	0.25 gals.	18.75 gals.	19
	0.50 gals.	37.5 gals.	38
	0.75 gals.	57.25 gals.	58
	1.25 gals.	94.75 gals.	96
	2.50 gals.	189.5 gals.	192
1.0%*	1 2/3 fl. oz.	62 1/3 fl. oz.	0.5
	3 1/3 fl. oz.	7.8 pts.	1
	6 2/3 fl. oz.	15.6 pts.	2
	16 2/3 fl. oz.	4.9 gals.	5
	33 1/3 fl. oz.	9.7 gals.	10
	0.5 gals.	18.5 gals.	19
	1 gals.	37 gals.	38
	1.5 gals.	56.5 gals.	58
	2.5 gals.	91 gals.	96
5 gals.	187 gals.	192	
2.0%*	1 2/3 fl. oz.	30 1/3 fl. oz.	.25
	6 2/3 fl. oz.	7.6 pts.	1
	33 1/3 fl. oz.	4.74 gals.	5
	66 2/3 fl. oz.	9.5 gals.	10
	1	18 gals.	19
	2	36 gals.	38
	3	55 gals.	58
	5	91 gals.	96
	10	182 gals.	192

Common units of measure:

1 pint = 16 fluid ounces (oz.)

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

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

PRE-CONSTRUCTION SUBTERRANEAN TERMITE TREATMENT

PRECONSTRUCTION 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 0.5% emulsion of PERMETHRIN 3.2 TC. To meet termite proofing requirements, follow the procedures in the latest edition of the Housing and Urban Development Minimum Property Standards (refer to U.S.D.A. Home and Garden Bulletin No. 64).

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

For a 0.5% rate, apply 1 gallon of dilution per 10 square feet or use 1.6 fluid ounces of PERMETHRIN 3.2 TC 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 should be established in areas such as around the base of foundations, plumbing, utility entrances, backfilled soil against foundation walls and other critical areas.

For a 0.5% rate, apply 4 gallons of dilution per 10 linear feet per foot of depth or 1.6 fluid ounces of PERMETHRIN 3.2 TC per 10 linear feet per foot of depth from grade to top of footing in sufficient water (no less than 2 gallons or more than 8 gallons) to ensure complete coverage.

- a. When rodding or trenching, it is important that emulsion reaches the top of the footing. Rod holes should be spaced to provide a continuous insecticidal barrier.
- b. Care should be taken to avoid soil wash-out around the footing.

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- 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.

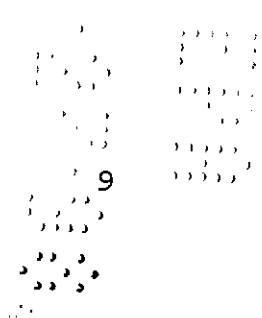
#### POST-CONSTRUCTION SUBTERRANEAN TERMITE TREATMENT

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

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

Where desirable for post construction treatments, the volume of the 1.0% emulsion may be reduced by 1/2 the labeled volume or a 2.0% emulsion may be applied at 1/4 the labeled volume (see Volume Adjustment Chart). Volume adjustments at 2.0% are not recommended for subslab injection. 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.



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### VOLUME ADJUSTMENT CHART

RATE (% EMULSION)	0.5%	1.0%	2.0%
Volume allowed			
Horizontal (gallons emulsion/10 sq. ft.)	1.0 gallons	0.5 gallons	0.25 gallons*
Vertical (gallons emulsion/10 lin. ft.)	4.0 gallons	2.0 gallons	1.0 gallons*

\*Not recommended for subslab injection.

After Treatment: All holes in commonly occupied areas into which PERMETHRIN 3.2 TC has been applied must be plugged. Plugs must be of a non-cellulose material or covered by an impervious, non-cellulose material.

Use a 0.5% emulsion for post-construction treatment. Post-construction soil applications shall be made by injection, rodding, and/or trenching or coarse fan spray with pressure 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 rodding and/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

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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-rodging 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 rate for basement.
- d. Exposed soil and wood in bath traps may be treated with 0.5% emulsion.

Basements: Where the footing is greater than 1 foot in depth from grade to the bottom of the foundation, application can be made by trenching and/or rodding at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth. When the footing is more than four feet below grade, the applicator may trench and/or rod along foundation walls at the rate prescribed for four feet of depth. The actual depth of treatment will vary depending on soil type, degree of compaction, and location of termite activity. However, in no case should a structure be treated below the footing. Sub-slab injection may be necessary along the inside of foundation walls, along cracks and partition walls, around pipes, 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.

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- 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 be wider than 6 inches. When trenching in sloping (tiered) soil, the trench must be stepped to ensure adequate distribution and to prevent termiticide from running off. The emulsion must be mixed with the soil as it is replaced in the trench.
- 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 instructions 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 sq. ft. overall using a nozzle pressure of less than 25 p.s.i. and a coarse application nozzle (e.g., Delavan Type RD Raindrop, RD-7 or larger, or Spraying Systems Co. 8010LP TeeJet or comparable nozzle). For an area that cannot be reached with the application wand, use one or more extension rods to make the application to the soil. Do not broadcast or 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 system 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 the 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.

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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.

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 trench soil has absorbed the liquid emulsion, replace the soil in the trench.

#### FOAM APPLICATIONS

PERMETHRIN 3.2 TC termiticide/insecticide emulsion, from 0.5 to 2.0%, may be converted to a foam with expansion characteristics from 2 to 40 times.

#### LOCALIZED APPLICATION

Foam Applications: The emulsion may be converted to a 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 crawl spaces, and other similar voids.

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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.

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

#### APPLICATION UNDER SLABS OR TO SOIL IN CRAWLSPACES TO PREVENT OR CONTROL TERMITES

Application may be made using PERMETHRIN 3.2 TC foam alone or in combination with liquid emulsion. The equivalent of at least 4 gallons (6.4 ounces of PERMETHRIN 3.2 TC concentrate) of 0.5% emulsion per 10 linear feet (vertical barrier), or at least 1 gallon (1.6 ounces of PERMETHRIN 3.2 TC concentrate) of 0.5% emulsion per 10 square feet (horizontal barrier) must be applied either as emulsion, foam, or a combination of both. For a foam only application, apply PERMETHRIN 3.2 TC concentrate in sufficient foam concentration and foam volume to deposit 6.4 ounces of concentrate per 10 linear feet or 1.6 ounces of concentrate per 10 square feet. For example, 1 gallon of 2% emulsion generated as foam to cover 10 linear feet is equal to the application of 4 gallons of 0.5% emulsion per 10 linear feet.

#### SAND BARRIER INSTALLATION AND TREATMENT

Termites can build mud tubes over treated surfaces as long as they have access to untreated soil and do not have to move PERMETHRIN 3.2 TC treated soil. Fill in cracks and spaces with builder's or playbox sand and treat the sand with PERMETHRIN 3.2 TC. The sand should be treated as soil following the termiticide rate listed on the PERMETHRIN 3.2 TC 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.

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

#### APPLICATION IN CONJUNCTION WITH THE USE OF FIRSTLINE TERMITE BAITS

As part of the integrated pest management (IPM) program for termite control, PERMETHRIN 3.2 TC 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 0.5% as a spot treatment or complete barrier treatment. Applications may be made as described in the Postconstruction treatment section of this label.

#### SPECIFIC PEST CONTROL APPLICATIONS

##### UNDERGROUND SERVICES

Such as : wires, cables, utility lines, pipes, conduit, etc. Services may be within structures or located outside structures, in right-of-ways or to protect long range (miles) of, installations of service.

Soil treatment may be made using 0.5% to 1.0% PERMETHRIN 3.2 TC emulsion to prevent attack by termites and ants.

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

Where soil will not accept the above labeled volume, 1 to 2 gallons of 1.0% PERMETHRIN 3.2 TC 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 no 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

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constructions such as signs, fences, and landscape ornamentation by applying a 0.5% emulsion.

Previously installed poles and post 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 0.5% emulsion to voids and galleries in damaged wood and in spaces between wooden members of a structure and between wood and foundations where wood is vulnerable. 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 crawlspaces. Application may be made to inaccessible areas by drilling, and then injecting emulsion with a crack and crevice injector into the damaged wood or void spaces. 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.

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

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

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.

#### GENERAL INFORMATION

PERMETHRIN 3.2 TC is to be used for residual pest control in and on buildings and structures and their immediate surroundings and on



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modes of transport. Permitted areas of use include, but are not limited to industrial buildings, houses, apartment building, laboratories, buses, greenhouses, and the non-food/feed areas of stores, warehouses, vessels, railcars, trucks, trailers, aircraft (do not use in aircraft cabins), schools, nursing homes, hospitals (non-patient areas), restaurants, hotels, and food manufacturing, processing and servicing establishments.

Do not tank mix this product with dichlorvos (DDVP) containing products. Can be tank-mixed with Insect Growth Regulators (IGR's) or pyrethrin- containing products. When mixing PERMETHRIN 3.2 TC with other products, observe all precautions and limitations on the labels of each product. To prepare the emulsion, dilute PERMETHRIN 3.2 TC with water only. To prepare a 0.50% emulsion, mix 1.6 oz. (50ml) in 1 gallon of water.

PERMETHRIN 3.2 TC is an emulsifiable concentrate to be diluted with water and used to control pests in and around homes and other structures. The pests controlled are listed in the accompanying tables.

PERMETHRIN 3.2 TC may be used as a broadcast or spot application to carpeting, wood home or residential lawns only and soil (crawl space and perimeter) and as a crack and crevice injection, or paint-on treatment. Crawlspace are considered inside the structure. Consult tables for specific use instructions.

#### BROADCAST TREATMENT OF WOOD FOR THE CONTROL OF WOOD-INFESTING INSECTS AND NUISANCE PESTS OUTSIDE OF STRUCTURE

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

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

#### PEST 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 0.5% to 1.0% emulsion per 10 square feet or 2 gallons per 10 linear feet.

#### PEST CONTROL IN CRAWLSPACES

Broadcast PERMETHRIN 3.2 TC at 0.5% to all surfaces in crawlspace

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to control ants, fleas, roaches, scorpions, or other arthropods. Product may also be applied through under structure insecticidal delivery systems such as piping or flexible tubing mounted under the structure. This treatment is not intended as a substitute for termite control. Treat surface, do not allow run-off to occur. Keep children and pets off surface until dry.

#### PEST CONTROL ON OUTSIDE SURFACES AND AROUND BUILDINGS

Apply PERMETHRIN 3.2 TC using a 0.5% emulsion 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, residential lawns only 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. Repeat treatment as necessary to maintain effectiveness.

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

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PEST	SPECIFIC INSTRUCTIONS																												
Ants 4 Ant Mounds 1,4 Armyworm 4 Fire Ants 4 Bees Carpenter Bees Bark Beetles 3 Borers 3 Boxelder Bugs 2,4 Centipedes Cockroaches 4 Asian Cockroaches Crickets 4 Mole Crickets 4 Earwigs Elm Leaf Beetles 2 Firebrats Fleas 4 Ground Beetles 4 Gypsy Moths (adults & caterpillars) 2 Millipedes Scorpions Sod Webworms 4 Silverfish Sowbugs Spiders 4 Wasps Ticks 4,5 Flies Carpenter Ants Chinchbugs 4 Pill Bugs	<p>Apply as a pinstream, as a fine/coarse spray, as a spot treatment or with a paintbrush. Treat where pests are found or entry points of the structure such as window and door frames and along the foundation. Do not apply to structures with high pressure sprayers such as air-blast sprayers.</p> <p>1. Drench Method: Apply 1-2 gallons of emulsion to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mounds. Use the higher volume for mounds larger than 12". For best results, apply in cool weather, such as in early morning or late evening hours, but not in the heat of the day.</p> <p>2. Boxelder Bugs, Elm Leaf Beetles, Gypsy Moth Caterpillars: Spray tree trunks, building siding or wherever pests congregate, to the point of runoff.</p> <p>3. Borers and Bark Beetles: To prevent infestation of trees and woody ornamentals, spray the bark to the point of runoff.</p> <p>4. Apply PERMETHRIN 3.2 TC at the rate 0.4 to 0.8 fluid ounces per 1000 square feet in a volume of water sufficient for uniform coverage such as 4 to 25 gallons. Use the lower rate to knock down existing pests and the higher rate where faster knockdown or greater residual is desired. For example:</p> <table border="1" data-bbox="520 1053 1395 1287"> <thead> <tr> <th>Lawn</th> <th>Sq.Ft.</th> <th>Oz. of PERMETHRIN 3.2 TC</th> <th>Gals. of Water</th> </tr> </thead> <tbody> <tr> <td>Small</td> <td>1,000</td> <td>.4 to 0.8</td> <td>4 to 25</td> </tr> <tr> <td></td> <td>2,000</td> <td>0.8 to 1.6</td> <td>8 to 50</td> </tr> <tr> <td></td> <td>3,000</td> <td>1.2 to 2.4</td> <td>12 to 75</td> </tr> <tr> <td>Medium</td> <td>6,000</td> <td>2.4 to 4.8</td> <td>24 to 150</td> </tr> <tr> <td>Large</td> <td>12,000</td> <td>4.8 to 9.6</td> <td>48 to 300</td> </tr> <tr> <td>1 Acre</td> <td>44,000</td> <td>17.0 to 34.0</td> <td>176 to 1,100</td> </tr> </tbody> </table> <p>Lawn should not be longer than 3 inches at the time of application. Repeat application if necessary. Application in combination with compatible surfactants may enhance penetration. Arid climates generally require the higher volumes.</p> <p>5. Residual treatment for control of Deer tick (<i>Ixodes dammini</i>), western black-legged tick (<i>Ixodes pacificus</i>) and other ticks (important vectors for Lyme Disease, Rocky Mountain Spotted Fever).</p>	Lawn	Sq.Ft.	Oz. of PERMETHRIN 3.2 TC	Gals. of Water	Small	1,000	.4 to 0.8	4 to 25		2,000	0.8 to 1.6	8 to 50		3,000	1.2 to 2.4	12 to 75	Medium	6,000	2.4 to 4.8	24 to 150	Large	12,000	4.8 to 9.6	48 to 300	1 Acre	44,000	17.0 to 34.0	176 to 1,100
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ORNAMENTAL USE

(Not for use on plants being grown for sale or other commercial, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in interior plantscapes, ornamental gardens or

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parks, or lawns and grounds.)

GENERAL APPLICATION INSTRUCTIONS

PERMETHRIN 3.2 TC is a 3.2 pounds per gallon formulation of the insecticide permethrin. Apply PERMETHRIN 3.2 TC when insects appear or feeding is noticed. The higher rate should be used as pest populations increase. Repeat the application as necessary to maintain control. PERMETHRIN 3.2 TC may be applied by ground equipment only. Use sufficient water to obtain full coverage.

Do not apply more than 2.0 lb. a.i/A/year.

PERMETHRIN 3.2 TC has demonstrated excellent plant safety; however, not all cultivars have been tested. Before treating large numbers of plants of a particular cultivar, treat a few plants and observe prior to full scale application.

Spray Drift Precautions:

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

Do not make ground applications during temperature inversions.

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

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

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RECOMMENDED APPLICATION RATES

CROP	PEST	RECOMMENDED RATE	SPECIFIC INSTRUCTIONS
Ornamentals (including interiorscapes, foliage and flowering plants, woody and herbacious non-edible ornamentals and non-bearing plants of fruiting species)	Ants Aphids Bagworm Beet Armyworm Cabbage Looper Citrus Thrips Fungus Gnat Heliothis spp Japanese Beetles Lace Bug Leaf Feeding Caterpillars Leafminers Leafhoppers Leafrollers Lygus Bugs Mealybugs Root Weevils (Adult) Whiteflies	4 to 8 fl.oz. per 100 gal.  or  Broadcast 4 to 8 fl. oz. per acre	Apply sufficient volume of water to adequately cover foliage.  Use higher rate for moderate to high infestations.  Direct application to blooms may cause browning of petals.  Marginal leaf burn may occur on Salvia, Dieffenbachia and Pteris Fern.
Ornamental Trees	Bark Beetles Borers	1 qt. per 100 gals.	Apply to the lower branches and trunk directly prior to adult emergence. Emergence varies according to host tree, environmental conditions and geography of the country. Complete heavy uniform coverage of bark on scaffold limbs to the ground level of the trunk is recommended for best control.
Conifers	Nautucket Pine Tip Moth Coneworms*	4 to 8 fl.oz. per 100 gal.  or  Broadcast 4 to 8 fl. oz. per acre	Begin application when adults appear. Repeat applications may be made on 5-7 day intervals as needed.

\*To control Coneworm-Use PERMETHRIN 3.2 TC at the following rates:

For high volume sprayers: Use 8 ounces in 100 gallons of water. Apply 5 to 10 gallons in finished spray per tree.

For low volume sprayers: Use 42 ounces in 100 gallons of water. Apply 100 gallons per acre.

To control Webbing Coneworm - Make first application within 1 week

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of female flower closure or peak pollen flight.

To control other coneworms - Make first application within 30 days following flower closure.

APPLICATIONS TO AGRICULTURAL STRUCTURES  
For Agricultural use only

GENERAL APPLICATION INSTRUCTIONS

PERMETHRIN 3.2 TC can be used for residual pest control in and on buildings and structures used for agricultural purpose; their immediate surroundings.

PERMETHRIN 3.2 TC is an emulsifiable concentrate to be diluted with water and applied as an emulsion to control pests in and around agricultural structures. Pests controlled are listed in the accompanying tables.

AGRICULTURAL STRUCTURES

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

FOR APPLICATION IN	TARGET INSECTS	METHOD OF APPLICATION	DILUTE	APPLICATION RATE
Dairies, Barns, feedlots, stables, poultry houses, swine and livestock houses	House flies, Stable flies and other manure breeding flies.  Also aids in the reduction of cockroaches, mosquitoes and spiders	Sprayer	4 ounces to 12.5 gallons of water	1 gallon per 750 square feet of surface

PEST CONTROL INDOORS

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

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

Food/Feed Areas: PERMETHRIN 3.2 TC is not labeled for use in

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

Not for use in Federally Inspected Meat and Poultry Plants.

Use PERMETHRIN 3.2 TC to control pests listed in the following table by application of a 0.5% emulsion.

PESTS	SPECIFIC INSTRUCTIONS
Fleas	Prior to treatment, carpets and furniture should be vacuumed thoroughly and vacuum cleaner bag discarded in an outdoor trash container. Evenly apply a broadcast spray at a rate of 1 gallon/per 800 to 1600 square feet to infested areas such as crawlspaces, rugs, carpets, pet beds and other pet resting areas. Avoid wetting or soaking. For crawlspace applications, the applicator must wear a respirator recommended by NIOSH for filtering spray mists and organic vapors. When treating upholstered furniture take care to treat between and under cushions. Pay particular attention to areas which are frequented by pets. Old pet bedding should be replaced with clean, fresh bedding after treatment. To control the source of flea infestations, pets inhabiting the treated premises should be treated with a flea-control product registered for application to animals.

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PESTS	SPECIFIC INSTRUCTIONS
Centipedes, Ants*, Carpenter Ants*, Fire Ants, Bat Bugs, Bed Bugs, Bees and Wasps, Carpenter Bees, Boxelder Bugs, Cockroaches, Asian Cockroaches, Crickets, Flies- (such as Drain Cluster House), Earwigs, Firebrats, Ground Beetles, Leaf Beetles, Millipedes, Pantry Pests** such as: Flour Beetles, Indian Meal Moths, Larder Beetles, Pillbugs, Scorpions, Silverfish, Sowbugs, Spiders	Apply crack and crevice, as a pinstream, as a find/course, low pressure spray (20 psi or less), spot application or with a paint brush. Treat where pests are found or normally occur, such as crack and crevices in walls, in and around kitchen cabinets and drawers, along baseboards, behind sinks and around plumbing and other utility installations.  *Ant infested wood may be drilled and injected with PERMETHRIN 3.2 TC.  **Remove all utensils, uncovered foodstuffs (or any having original package opened), shelf paper and other objects before spraying. Allow treated surfaces to dry and cover shelves with clean paper before replacing any utensils, foodstuff or other items. Any food stuff accidentally contaminated with spray solution should be discarded.
Carpet Beetles	For the control of carpet beetles, evenly apply the spray to rugs, carpets, along baseboards and edges of carpeting, under carpeting, rugs and furniture, in closets, on shelving, and wherever else these insects are seen or suspected. Avoid wetting or soaking.
Brown Dog Ticks	For the control of Brown Dog Ticks, evenly apply the spray to infested areas, such as pet beds and resting quarters, nearby cracks and crevices, along baseboards, windows and door frames, and areas of floor and floor coverings where these pests may be present. Avoid wetting or soaking. Old bedding should be removed and replaced with clean, fresh bedding after treatment.



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ATTENTION

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

Do not allow people or pets on treated surfaces; such as carpets until the spray has dried.

Do not use concentrated or emulsion in fogging equipment.

Firewood is not to be treated.

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.

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

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

Do not apply to classrooms when in use.

Do not touch treated surface until dry.

Dealers 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: MICRO FLO COMPANY 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.

Use of Product: MICRO FLO COMPANY'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

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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.