



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

Ms. Kim Davis
Representing Marman USA, Inc.
30856 Rocky Road
Greeley, CO 80631-9375

DEC 18 2000

Subject: Pestban TC
EPA Registration No. 48273-14
Submission dated November 16, 2000

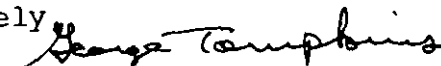
Dear Ms. Davis:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided that you make the labeling changes indicated below before you release the product for shipment bearing the amended labeling:

1. On page 1 of the submitted label immediately below the ingredient statement you must add the following statement "Contains xylene range aromatic solvents".
2. On page 2 under the PPE statement you must change the words "short-sleeved shirt" to "long-sleeved shirt". Under the "First Aid" statement you must add the correct telephone number for the emergency medical treatment information.
3. On page 3 under the "General Use Precautions" statement separate the word "doesnot" to "does not" in the second sentence.
4. On page 4 change the word "tha" in the first sentence to "the".
5. On page 7 paragraph (e) change the word "form" to "from" so that it reads "When necessary, drill through the foundation walls from the outside.....areas."
6. On page 10 under "Perimeter sprays" in the third sentence delete one of the two words "that which".

Submit two copies of your final printed labeling before you release the product for shipment. A copy of the labeling stamped "Accepted With Comments" is enclosed for your records.

Sincerely,


George Tompkins, Ph.D., Entomologist
Insecticide-Rodenticide Branch
Registration Division (7505C)

RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

PESTBAN TC

Specialty Termiticide Concentrate

ACTIVE INGREDIENT:

chlorpyrifos (CAS No. 2921-88-2)	44.9%
OTHER INGREDIENTS	55.1%
Total	100.0%

Contains 4 pounds of chlorpyrifos per gallon.

Keep Out of Reach of Children
WARNING AVISO

Precaucion al usuario: Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

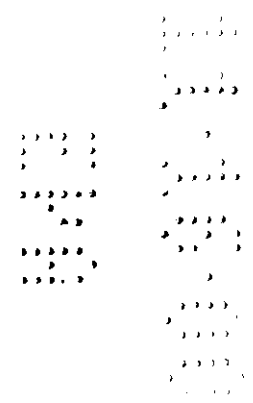
See back panel for additional precautionary statements.

ACCEPTED
with COMMENTS
In EPA Letter Dated:
DEC 18 2000
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
48273-14

Net Contents: ____ gal.

EPA Reg. No. 48273-14 EPA Est. 48273-FL-1

MARMAN USA, INC.
P.O. Box 22829
Tampa, FL 33622-2829



PRECAUTIONARY STATEMENTS
Hazards to Humans & Domestic Animals

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

Personal Protective Equipment (PPE)

Mixers and loaders must wear a minimum of short-sleeved shirt and long pants, chemical-resistant footwear, socks, chemical-resistant gloves and protective eyewear (goggles, face shield or safety glasses with front, brow and temple protection). **Mixers and loaders** who do not use a mechanical system (such as the Voyager* container or in-line injector) to transfer the contents of this container must wear coveralls or chemical-resistant apron in addition to other required PPE. **Pesticide applicators** must wear long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. In addition, all pesticide handlers (mixers, loaders and applicators) must wear a respiratory protection device (MSHA/NIOSH approval number TC-21C or TC-23C; or respirator with an organic-vapor removing cartridge and a prefilter approved for pesticides with MSHA/NIOSH approval number TC-14G; or supplied-air respirator with MSHA/NIOSH approval number TC-19C; or self-contained breathing apparatus (SCBA) with MSHA/NIOSH approval number TC13F) and protective eyewear when working in a non-ventilated space and all pesticide applicators must wear protective eyewear when applying termiticide by rodding or sub-slab injection.

First Aid

If Swallowed	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor 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 on Skin or Clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Immediately rinse skin with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in Eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If Inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further 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 1-800-xxx-xxxx for emergency medical treatment information.

Note to Physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.

Environmental Hazards

This pesticide is toxic to birds and wildlife, and extremely toxic to fish and aquatic organisms. 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 runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Cover or incorporate spills. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

[Refer to label booklet for additional precautionary information and Directions for Use.]

Notice: Read the entire label. Use only according to label directions. **Before buying or using this product, read Warranty Disclaimer and Limitations of Remedies elsewhere on this label [inside label booklet].**

DIRECTIONS FOR USE

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

Storage and Disposal

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

Storage: Store in original container in secured dry storage area. Prevent cross-contamination with fertilizers and other pesticides. Avoid storing above 122°F for extended periods of time. Storage below 40°F may result in formation of crystals. If product crystallizes, store at 55-75°F and shake occasionally to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

Container Disposal: Non-Refillable Containers: Triple rinse (or equivalent), then offer for recycling or reconditioning, or puncture and/or crush rinsed, empty container and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

or

Triple rinse (or equivalent). Then dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. **Refillable Containers:** Replace the dry disconnect cap, if applicable, and seal all openings that have been opened during use. Return the empty container to a collection site designated by Marman USA, Inc. If the container has been damaged and cannot be returned according to the recommended procedures, contact Marman USA, Inc.'s customer service center to obtain proper handling instructions.

Carefully read all *Directions for Use* before applying.

Do not tank mix this product with products containing dichlorvos (DDVP).

Do not formulate this product into other end-use products.

Subterranean Termites

Pestban TC termiticide concentrate for soil treatment is used to establish a barrier that is lethal to termites. In order to provide an effective barrier between the wood in the structure and termite colonies in the soil, disperse the chemical emulsion so as to avoid untreated gaps in the barrier.

It is important that the service technician be familiar with current control practices including trenching, rodding, subslab injection and low pressure spray applications. These techniques must be correctly employed to prevent or control infestations by subterranean termite species of *Reticulitermes*, *Zootermopsis*, *Heterotermes* and *Coptotermes*. Choice of appropriate procedures includes consideration of such variable factors as the design of the structure, water table, soil type, soil compaction, grade conditions and the location and type of domestic water supplies. The biology and behavior of the involved termite species are important factors to be known as well as suspected location of the colony and severity of the infestation within the structure to be protected. For advice concerning current control practices for specific local conditions, consult resources in structural pest control.

Important Use Limitation

Postconstruction Use: Only for use outside structures. For postconstruction use, this product may be applied only as a spot or local barrier treatments with a maximum end-use dilution of 0.5%. Spot treatments not to exceed 25% of the amount required to treat the entire structure of the label rate. Areas treated must be annually inspected for signs of reinfestation. Post construction applications may be made until December 31, 2002. Thereafter, postconstruction use of this product is prohibited.

General Use Precautions

All nonessential wood- and cellulose-containing materials, including scrap wood and form boards, should be removed from around foundation walls, crawl spaces and porches. This doesnot include existing structural soil contact wood that has been treated.

When treating adjacent to an existing structure, the applicator must check the areas 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 the contaminated areas of the structure until the cleanup is completed.

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 that may reduce the barrier effectiveness.

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

Contamination of public and private water supplies must be avoided by following these minimum precautions:

1. Use anti-backflow equipment or procedures to prevent siphonage of pesticide back into water supplies.
2. Do not treat soil that is water saturated or frozen.
3. Do not treat while precipitation is occurring.
4. Consult Federal, state and local specifications for information regarding approved treatment practices in your area.
5. Do not contaminate wells or cisterns. See specific *Treatment of Structures with Wells, Cisterns or Other Bodies of Water Adjacent to Treated Sites*.

Rate Determination Guidelines

A dilution rate of 0.5% is required for all termiticide applications. A 1.0% to 2.0% dilution may be used to protect underground utility cable and conduit and utility poles and fence posts in non-residential areas.

Table 1
Dilution Directions

Gallons of Finished Dilution Desired	Pestban TC Needed		
	0.5%	1.0%	2.0
1	1-1/3 fl. oz.	2-2/3 fl. oz.	5-1/3 fl. oz.
5	6-2/3 fl. oz.	13-1/3 fl. oz.	26-2/3 fl. oz.
10	13-1/3 fl. oz.	26-2/3 fl. oz.	53-1/3 fl. oz.
24	1 qt.	1/2 gal.	1 gal.
48	1/2 gal.	1 gal.	2 gals.
97	1 gal.	2 gals.	4 gals.

Mixing Directions

It is important that the termiticide dilution be uniformly mixed in the spray tank before beginning the treatment. Once mixed, Pestban TC will not settle out in the tank although the initial mixing will be enhanced by agitation, circulation through the treating hose and the filling process.

1. Fill tank 1/4 to 1/3 full.
2. Start pump to begin by-pass agitation and place end of treating tool in tank to allow circulation through hose.
3. Add appropriate amount of Pestban TC.
4. Add remaining amount of water.
5. Let pump run and allow recirculation through the hose for 2 to 3 minutes.

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, such as heavy, clay-type soils, 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. This would also apply to sensitive areas and/or horizontal applications where less volume may be desirable. Minimum volumes will be specified in the appropriate use directions. In light textured soils such as sand or gravel that accept larger amounts of water, increased volumes that deliver the appropriate concentration of termiticide in the soil may be used. Maximum volumes will be specified in the appropriate use directions. **Note:** Large reductions of application volume reduce the ability to obtain a continuous barrier. Variance is allowed when volume and concentration are consistent with label directed rates and a continuous barrier can still be achieved.

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Treatment of Structures with Wells, Cisterns or Other Bodies of Water Within or Adjacent to Treated Sites

Do not contaminate wells or cisterns.

1. **Structures with Wells/Cisterns Inside Foundations:** Structures that contain wells or cisterns within the foundation of a structure can be treated using only the following techniques:
 - a. 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:
 - (1) Trench and remove soil to be treated onto heavy plastic sheeting or similar material or into a wheelbarrow.
 - (2) 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.
 - (3) After the treated soil has absorbed the diluted emulsion, replace the soil into the trench.
 - b. Infested and/or damaged wood in place may be treated using an injection technique such as described in the *Control of Wood Infesting Insects* section of this label.
2. **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 application.
 - a. Prior to treatment, if feasible, expose the water pipe(s) coming from the well to the structure, if they enter the structure within 3 feet of grade.
 - b. 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, soil type and degree of compaction should be taken into account in determining the depth of treatment.
 - c. 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 the termiticide.

Preconstruction Subterranean Termite Treatment

Areas treated with 0.5% or less must be annually reinspected for signs of reinfestation.

Preconstruction applications are defined as those applications made prior to the finished grade being installed. Effective preconstruction treatment for subterranean termite prevention requires the establishment of vertical and/or horizontal chemical barriers between wood in the structure and the termite colonies in the soil. Follow state and local regulations to meet minimum treatment standards for preventive preconstruction treatments.

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.

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.

See *Rate Determination Guidelines* and *Table 1* for dilution directions.

1. For **horizontal barriers**, applications shall be made using a low pressure spray (not to exceed 50 psi when measured at the treating tool to minimize exposure and potential for drift) after grading is completed and prior to the pouring of the slab or footing.
 - a. Apply 1 gallon of dilution per 10 square feet or use 1-1/3 fluid ounces of Pestban 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. (See *Application Volume* section) 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.
 - b. If concrete slabs cannot be poured over the soil the same day it has been treated, a vapor barrier should be placed over the treated soil to prevent disturbance of the termiticide barrier.

2. For **vertical barriers**, apply the 0.5% end-use dilution at a rate of 4 gallons per 10 linear feet per foot of depth. Establish vertical barriers in areas such as around foundations, plumbing lines, backfilled soil against foundation walls and other areas that may warrant more than just a horizontal barrier.
 - a. 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.
 - b. Trenches need not be wider than 6 inches. Treat soil with the dilution as it is being replaced in the trench. Apply 4 gallons of dilution per 10 linear feet per foot of depth or 5-1/3 fluid ounces of Pestban 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.
 - c. Hollow block foundations or voids of masonry can be treated to make a complete chemical barrier especially if the soil was not treated prior to pouring the footing. Apply the dilution at a rate of 2 gallons per 10 linear feet so that it reaches the top of the footing.
 - d. For crawl spaces, establish a vertical barrier on both sides of the foundation and around all piers and areas where underground utilities exit the soil. Do not apply the dilution to the entire surface area intended as the crawl.
3. For **plenum type structures** that use a sealed underfloor space to circulate heated and/or cooled air throughout the structure, apply the end-use dilution at the rate of 4 gallons per 10 linear feet per foot of depth. Soil adjacent to both sides of foundation walls, supporting piers, plumbing and conduits should be treated by trenching or rodding (where soil conditions permit) to a depth of 6 inches or, if less shallow, to the top of the footing. When conditions will not permit trenching or rodding, surface application adjacent to interior foundation walls may be made but the treated strip shall not exceed a width of 18 inches, horizontally, from the foundation walls, piers or pipes. The surface application should be made at a rate of 1 gallon per 10 square feet as a very coarse spray under low pressure (not to exceed 20 psi when measured at the treating tool). After soil treatment, a continuous vapor barrier of at least 6 mil polyethylene film or other suitable vapor barrier must be installed on the ground surface over the entire subfloor area and on the inside of the plenum walls, in accordance with the recommended practices for plenum type structures.

Postconstruction Treatments

Postconstruction applications are defined as those applications made after the final grade is installed.

Use Limitations on Postconstruction Application: Post construction use of this product is limited to local and spot applications (see *Important Use Limitations* section at the beginning of the *Directions for Use* section). Spot or local treatments may be used to control active termite infestations or used preventatively. Complete barrier treatments for postconstruction application are prohibited.

Treatment of Active Termite Infestations: Spot and local application of this product must be limited to portions of the structure containing active termite infestations and underlying soil containing nesting sites. The extent of treatment must be limited to portions of the structure necessary to bring an existing termite infestation under control. When used as a spot or local application it is recommended that Pestban TC be used in conjunction with the Sentricon* Colony Elimination System as part of an integrated pest management (IPM) program to ensure continued protection of the entire structure.

Preventative Use: Preventative use is recommended in conjunction with the use of the Sentricon* Colony Elimination System as a part of the IPM program for control of subterranean termites. As a preventative treatment Pestban TC may be used as a spot or local application in critical areas of the structure including plumbing and utility entry sites, bath traps, expansion joints, foundation cracks or other areas where termites may find entry or infestation is suspected.

See *Rate Determination Guidelines* and *Table 1* for dilution directions.

Precaution: Do not apply dilution until location of heat or air conditioning ducts, vents, water and sewer lines and electrical conduits are known and identified. Extreme caution must be taken to avoid contamination of these structural elements and airways.

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

1. For **slab-on-ground construction** applications may be made using techniques such as subslab injection, rodding and/or trenching. Injectors should not extend beyond the tops of the footings.
 - a. Treat along the outside of the foundation to form a continuous termiticide barrier in the soil. 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 footings. For foundations with exposed footings, dig a trench alongside the footing taking care not to undermine the footing. The dilution should be applied to the trench and mixed with the soil as it is replaced in the trench. Apply 4 gallons of the 0.5% end-use dilution per 10 linear feet or use 5-1/3 fluid ounces of Pestban TC per 10 linear feet in sufficient water (no less than 2 gallons or more than 8 gallons) to provide thorough and complete coverage of the area being treated. For foundations with footings deeper than 1 foot, apply the dilution at a rate of 4 gallons per 10 linear feet per foot of depth. 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 4 feet below grade, the applicator must trench and rod into the trench or trench along the foundation wall at the rate prescribed to a minimum depth of 4 feet. The actual depth of treatment will vary depending on soil type, degree of compaction and location of termite activity. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. However, in no case should a structure be treated below the footing.
 - b. When treating cracks and expansion joints in the slab, along sidewalks or patios adjacent to the exterior foundation wall or other areas where holes are to be drilled to form a continuous termiticide barrier, the holes should be spaced at intervals up to 24 inches depending on soil type. Hard, dry soils typically allow good lateral (horizontal) dispersion. However, they may be slow in absorption or downward movement. Care must be taken when injecting through slabs into areas with this type of soil. Low pressures should be considered in this situation. This will help to avoid backsplashing from the injection hole, backflow from cracks and expansion joints, and unwanted emergence of the termiticide dilution from adjacent drill holes. A slow, low pressure application using the proper volume of termiticide dilution will allow the soil to absorb the liquid and provide an adequate vertical barrier. The wider drill hole spacings (18 to 24 inches) can usually be used in this situation. Sand, loam or gravel backfill materials are commonly found under slab foundations. The type of fill, amount of settling that has occurred, moisture content, etc., will determine the drill hole spacing and amount of termiticide dilution to be injected through each hole. Highly absorptive soils or those with large pore spaces (gravel, coarse sand) will afford rapid downward (vertical) movement and limited lateral (horizontal) distribution of the termiticide dilution. In this situation, consider using a lateral dispersion tip on the sub-slab injector and place the drill holes closer together (12 to 18 inches). Apply 4 gallons of the 0.5% end-use dilution per 10 linear feet.
 - c. It may be necessary to treat along one side of interior partition walls if there are cracks in the slab, plumbing entry points, existing termite infestations, or other conditions that would make treatment appropriate.
 - d. To form a termiticide barrier under slab foundations, it may be necessary to drill and treat near plumbing and electrical entry areas, cracks or other areas where termites might enter the structure. In this instance, one or more holes should be drilled in the slab as close to the entry point as is practical and termiticide placed in the fill. As a general rule, 3 to 5 gallons of dilution per entry point will usually give adequate coverage, however, the use of directional or lateral dispersion tips or foam delivery systems can give adequate coverage with lower volumes. Location of the drill hole in relation to the entry point, type of soil fill, presence or absence of a vapor barrier, application pressure and other considerations will affect the coverage and volume of termiticide needed to form a complete barrier. Precautions must be taken to avoid drilling into plumbing or electrical conduit.
 - e. When necessary, drill through the foundation walls from the outside and force the dilution just beneath the slab either along the inside of the foundation or along all the cracks and expansion joints and other critical areas.
 - f. **Bath traps:** Exposed soil or soil covered with tar or a similar type sealant beneath and around plumbing and/or drain pipe entry areas may be treated with the 0.5% end-use dilution of Pestban TC. An access door or inspection vent should be cut and installed, if not already present. After inspection and removal of any wood or cellulose debris, the soil can be treated by rodding or drenching the soil. A one square foot bath trap will usually require about 3 to 5 gallons of dilution for thorough and complete coverage.
2. **Hollow block foundations or voids in masonry** resting on the footing can be treated to make a continuous chemical barrier in the voids. If the void has direct contact with the soil, it should be treated. Drill and treat all voids in multiple masonry elements of the structure extending from the structure to the soil in order to create a continuous treatment barrier in the area to be treated. Apply at the rate of 2 gallons of emulsion per 10 linear feet of footing using a nozzle pressure of less than 25 psi. When using this treatment access holes must be drilled below the sill plate and should be as close as possible to the footing as is practical. Treatment of voids in block or rubble foundation walls must be closely examined. Applicators must inspect areas of possible runoff as a precaution against application leakage in the

treated areas. Some areas may not be treatable or may require mechanical alteration prior to treatment. Not for use in voids insulated with rigid foam.

3. For **basements**, apply at a rate of 4 gallons of dilution per 10 linear feet per foot of depth. Where footings are greater than 1 foot of depth from the grade to the top of the footing, application may be made by trenching and/or rodding at a rate of 4 gallons of dilution per 10 linear feet per foot of depth. When the footing is more than 4 feet below grade, the applicator must trench and rod into the trench or trench along the foundation wall at the rate prescribed to a minimum depth of 4 feet. The actual depth of treatment will vary depending on soil type, degree of compaction and location of termite activity. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. However, in no case should a structure be treated below the footing. Treat outside of foundation walls, and if necessary, beneath the basement floor along inside of foundation walls, along cracks in basement floors, along interior load bearing walls, around sewer pipes, conduits and piers.
4. **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 top of footing, or if the footing is more than 4 feet below grade, to a minimum depth of 4 feet. Apply 4 gallons of the 0.5% end-use dilution per 10 linear feet per foot of depth or 5-1/3 fluid ounces of Pestban 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. Apply by trenching and rodding into the trench, or trenching. Treat both sides of foundation and around all piers and pipes. Where physical obstructions, such as concrete walkways adjacent to foundation elements, prevent trenching, treatment may be made by rodding alone. When soil type and/or conditions make trenching prohibitive, rodding may be used. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. Read and follow the mixing and use direction sections of the label if situations are encountered where the soil will not accept the full application volume.
 - a. Rod holes and trenches shall not extend below the bottom of the footing.
 - b. Rod holes shall be spaced so as to achieve a continuous chemical barrier but in no case more than 12 inches apart.
 - c. Trenches shall 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 shall 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.
 - d. When treating crawl spaces, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil.
5. **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. Apply 4 gallons of the 0.5% end-use dilution per 10 linear feet or 5-1/3 fluid ounces of Pestban TC per 10 linear feet in sufficient water (no less than 2 gallons or more than 8 gallons) to ensure complete coverage (see **Application Volume** section).
 - a. To establish a horizontal barrier, apply to the soil surface, 1 gallon of emulsion per 10 sq. ft. Use a nozzle pressure of less than 25 psi and a coarse application nozzle (e.g., Delavan Type RD Raindrop, RD-7 or larger, or Spraying Systems Co. 8010LP TeeJet or comparable nozzle). 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 higher pressures.
 - b. 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 that may apply.

When treating crawl spaces, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil.
 - c. In the presence of unsupported termite tubes, mechanically destroy each tube and apply approximately 1 pint of the end-use dilution to an area of no more than 18 inches in diameter where the tubes emerge from the soil.
6. In **plenum type structures** that use a sealed underfloor space to circulate heated and/or cooled air within the structure, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil. Apply the 0.5% end-use dilution at the rate of 4 gallons per 10 linear feet per foot of depth. Soil adjacent to both sides of foundation walls, supporting piers, plumbing and conduits should be treated by trenching or rodding (where soil conditions permit) to a depth of 6 inches or to the top of the footing. When conditions will not

permit trenching or rodding, a surface application adjacent to interior foundation walls may be made, but the treated strip shall not exceed a width of 18 inches, horizontally, from the foundation piers or pipes. Surface application is made at a rate of 1 gallon per 10 square feet as a very coarse spray under low pressure (not to exceed 20 psi when measured at the treating tool). In order to properly calculate the amount of termiticide dilution needed, use the following guideline: A strip 18 inches wide and 6 feet 8 inches long is equal to 10 square feet. Before treatment, a barrier of at least 6 mil polyethylene film or other suitable vapor barrier must be present on this ground surface over the entire subfloor area in accordance with recommended practices for plenum type structures. Install a new vapor barrier if barrier is absent or deteriorated. The vapor barrier film on the ground and foundation walls must be folded back from the areas to be treated prior to treatment and replaced immediately following treatment. Structures should be ventilated during application and until treatment is dry.

7. **Application using foam generating equipment:** The emulsion may be converted to a foam and the foam used to control or prevent termite infestations. Depending on 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. Foam and liquid application must be consistent with volume and active ingredient instructions in order to ensure proper application has been made. The volume and amount of active ingredient are essential to an effective treatment. At least 50 to 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 the label and use recommendations of the foam manufacturer and the foaming equipment manufacturer for adjuvant rates to produce the needed expansion ratio with this product. Foam applications are generally a good supplement to liquid treatments in difficult areas, but may be used alone in difficult spots.

The following provides the amount of Pestban TC required for a given area and volume range of the prefoamed termiticide dilution necessary for application of the product. For a 0.5% rate, apply 5-1/3 fluid ounces of Pestban TC per 10 linear feet using no less than 2 gallons or more than 8 gallons, of prefoamed dilution.

Underground Utility Cable and Conduit (Non-Residential)

Preventative Treatment for Use only in Guam, Hawaii and Other Pacific Islands: Use a 1.0 to 2.0% dilution (See *Rate Determination Guidelines* and *Table 1* for dilution directions). After digging the trench, place approximately 6 inches of backfill or sand at the bottom and apply 2 gallons of the dilution per 10 linear feet. Allow to dry then replace the cable backfill. Cover with an additional 6 inches of backfill or sand and apply another 2 gallons of emulsion per 10 linear feet. Finish filling trench with untreated soil. Wherever cables emerge from the soil to enter poles, light frames, etc., treat the soil around the cable and pole or frame to establish a continuous 6-inch chemical barrier. A continuous 6-inch chemical barrier must be established around the cable to ensure protection from termite attack.

Utility Poles and Fence Posts (Non-Residential)

Preventative Treatment: Use a 1.0 to 2.0% dilution (See *Rate Determination Guidelines* and *Table 1* for dilution directions). After pole or post hole has been dug, mix the dilution with the soil as it is being replaced to a depth of approximately 10 inches. Place pole or post on top of this layer. The remaining soil fill and termiticide dilution should be mixed while backfilling the hole. The treated soil zone around the post or pole should be approximately 6 inches wide. Soil for the base layer and backfill of each pole or post should be treated at a rate of 4 gallons of dilution per 10 cubic feet of soil.

Remedial Treatment: To control existing infestations or to prevent infestation of posts and poles already in place, use a 1.0 to 2.0% dilution. The termiticide dilution should be injected into termite galleries or channels in the wood. For maximum protection, injection sites should be at or below grade. Posts or poles may also be treated by rodding down to the base of the structure. Rod holes should be placed approximately 3 inches away from the pole and about 6 inches apart. Inject approximately 12 fluid ounces of dilution per foot of depth into each rod hole. It may be appropriate to use one or both treatment techniques depending upon the specific circumstances at the work site, e.g., soil type.

Pest Control on Outside Surfaces and Around Buildings (Only Industrial Plant Sites)

To control ants, bees, carpenter ants, clover mites, cockroaches, crickets, earwigs, hornets, millipedes, scorpions, spiders, ticks, wasps and yellowjackets.

Outside surfaces: Apply Pestban TC as a residual spray to outside surfaces of buildings including porches, window frames, eaves, patios, garages, refuse dumps and other areas where pests congregate or have been observed. Treatment may be repeated as needed to maintain effectiveness.

Perimeter sprays: To help prevent infestation of buildings, treat a band of soil and vegetation 6 to 10 feet wide around and adjacent to the building. Also, treat the building foundation to a height of 2 to 3 feet where pests are active and may find entrance. For **scorpions**, treat or remove accumulations of lumber, firewood and other materials that which serve as insect harborage sites.

Dosage and Mixing Instructions: Use Pestban TC mixed as a **0.25% to 0.5% dilution** as indicated in the following table:

Gallons of Finished Dilution Desired	Pestban TC Required	
	0.25% Solution	0.5% Solution
1	2/3 fl. oz.	1-1/3 fl. oz.
5	3-1/3 fl. oz.	6-2/3 fl. oz.
10	6-2/3 fl. oz.	13-1/3 fl. oz.
24	16 fl. oz.	1 qt.
48	1 qt.	2 qts.
97	2 qts.	1 gal.

Warranty Disclaimer

Marman USA, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. **Marman USA, Inc. makes no other express or implied warranty of merchantability or fitness for a particular purpose or any other express or implied warranty.**

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes); presence of other materials, the manner of application or other factors, all of which are beyond the control of Marman USA, Inc. or the seller. All such risks shall be assumed by the buyer.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability or other legal theories), shall be limited to, at Marman USA, Inc.'s election, one of the following:

- 1) Refund of purchase price paid by buyer or user for product bought, or
- 2) Replacement of amount of product used.

Marman USA, Inc. shall not be liable for losses or damages resulting from handling or use of this product unless Marman USA, Inc. is promptly notified of such loss or damage in writing. In no case shall Marman USA, Inc. be liable for consequential or incidental damages or losses.

The terms of the **Warranty Disclaimer** and this **Limitation of Remedies** cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Marman USA, Inc. or the seller is authorized to vary or exceed the terms of the **Warranty Disclaimer** or this **Limitation of Remedies** in any manner.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

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{Note: The First Aid statements' grid format will be used if market label space permits; otherwise a paragraph format will be used.}