



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

April 27, 2000

Mr. Matthew Talley  
Micro Flo Company  
P.O. Box 772099  
Memphis, TN 38117-2099

Subject: Label Amendments to Comply With PR Notice 96-7  
Permethrin 3.2 TC  
EPA Reg. No. 51036-287  
Your Submission Dated December 15, 1999

Dear Mr. Talley:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comments listed below. Two (2) copies of the finished labeling must be submitted prior to releasing the product for shipment. A stamped copy of the label is enclosed for your records.

- 1) On the front panel of your label, please revise the paragraph at the top of the label to read as follows:

For use by individuals/firms licensed or registered by the state to apply pesticide products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the pest control regulatory agency of your state prior to the use of this product.

For use as a termiticide and use on ornamentals and lawns in landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.



- 2) EPA has recently issued a PR Notice revising First Aid statements. The following are the revised statements that will be required for products placed in category III and above. Please revise your "Statement of Practical Treatment" to read as follows:

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center for treatment advice.

**IF INHALED:** 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.

Also, please add the following statement near your "Statement of Practical Treatment": "Have the product container or label with you when calling a poison control center or doctor or going for treatment".

- 3) Please check whether the respirators you have listed on page 2 are correct, specifically TC-23C and TC-19C, neither of which are listed in PR Notice 96-7.
- 4) On page 2, 2nd paragraph, please specify what protective eyewear should be used when handling your product.
- 5) On page 7, under "Mixing Directions", for ease of understanding please rewrite that paragraph in a number format as follows:

"Mix the termiticide use dilution in the following manner:


- 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 Permethrin 3.2 TC
- 4) Add remaining amount of water.
- 5) Let pump run and allow recirculation through the hose for 2 to 3 minutes"



- 6) Either delete all "Repeat as necessary" - type statements from your label or qualify by stating the minimum allowable time interval between applications. This should be based on the efficacy data cited in support of your product and the duration claims currently claimed.
- 7) We did not find any cited efficacy data in your file for fire ants, bees, cockroaches, Asian cockroaches, mosquitoes, fleas, scorpions, wasps, ticks, and flies. Please submit or have FMC Corporation cite (with MRID numbers) this data with your final printed labeling or remove them from your label.

If you have any questions regarding this action, please contact Tracy Keigwin of my team at (703) 305-6605.

Sincerely,

  
Per George T. LaRocca  
Product Manager (13)  
Insecticide Branch  
Registration Division (7505C)



**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%

\*\*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 772099  
MEMPHIS, TN 38117

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

APR 27 2000

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

51036-287

1



5729



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.

(

<sup>1</sup>Use one of the following Mine Safety and Health Administration (MSHA)/National Institute for Occupational Safety and Health (NIOSH) air purifying respirator types with approval number prefixes such as : TC-23C, TC-21C, TC-19G, TC-13F and TC-14G.

(

1  
 2  
 3  
 4  
 5  
 6  
 7  
 8  
 9  
 10  
 11  
 12  
 13  
 14  
 15  
 16  
 17  
 18  
 19  
 20  
 21  
 22  
 23  
 24  
 25  
 26  
 27  
 28  
 29  
 30  
 31  
 32  
 33  
 34  
 35  
 36  
 37  
 38  
 39  
 40  
 41  
 42  
 43  
 44  
 45  
 46  
 47  
 48  
 49  
 50  
 51  
 52  
 53  
 54  
 55  
 56  
 57  
 58  
 59  
 60  
 61  
 62  
 63  
 64  
 65  
 66  
 67  
 68  
 69  
 70  
 71  
 72  
 73  
 74  
 75  
 76  
 77  
 78  
 79  
 80  
 81  
 82  
 83  
 84  
 85  
 86  
 87  
 88  
 89  
 90  
 91  
 92  
 93  
 94  
 95  
 96  
 97  
 98  
 99  
 100  
 101  
 102  
 103  
 104  
 105  
 106  
 107  
 108  
 109  
 110  
 111  
 112  
 113  
 114  
 115  
 116  
 117  
 118  
 119  
 120  
 121  
 122  
 123  
 124  
 125  
 126  
 127  
 128  
 129  
 130  
 131  
 132  
 133  
 134  
 135  
 136  
 137  
 138  
 139  
 140  
 141  
 142  
 143  
 144  
 145  
 146  
 147  
 148  
 149  
 150  
 151  
 152  
 153  
 154  
 155  
 156  
 157  
 158  
 159  
 160  
 161  
 162  
 163  
 164  
 165  
 166  
 167  
 168  
 169  
 170  
 171  
 172  
 173  
 174  
 175  
 176  
 177  
 178  
 179  
 180  
 181  
 182  
 183  
 184  
 185  
 186  
 187  
 188  
 189  
 190  
 191  
 192  
 193  
 194  
 195  
 196  
 197  
 198  
 199  
 200  
 201  
 202  
 203  
 204  
 205  
 206  
 207  
 208  
 209  
 210  
 211  
 212  
 213  
 214  
 215  
 216  
 217  
 218  
 219  
 220  
 221  
 222  
 223  
 224  
 225  
 226  
 227  
 228  
 229  
 230  
 231  
 232  
 233  
 234  
 235  
 236  
 237  
 238  
 239  
 240  
 241  
 242  
 243  
 244  
 245  
 246  
 247  
 248  
 249  
 250  
 251  
 252  
 253  
 254  
 255  
 256  
 257  
 258  
 259  
 260  
 261  
 262  
 263  
 264  
 265  
 266  
 267  
 268  
 269  
 270  
 271  
 272  
 273  
 274  
 275  
 276  
 277  
 278  
 279  
 280  
 281  
 282  
 283  
 284  
 285  
 286  
 287  
 288  
 289  
 290  
 291  
 292  
 293  
 294  
 295  
 296  
 297  
 298  
 299  
 300  
 301  
 302  
 303  
 304  
 305  
 306  
 307  
 308  
 309  
 310  
 311  
 312  
 313  
 314  
 315  
 316  
 317  
 318  
 319  
 320  
 321  
 322  
 323  
 324  
 325  
 326  
 327  
 328  
 329  
 330  
 331  
 332  
 333  
 334  
 335  
 336  
 337  
 338  
 339  
 340  
 341  
 342  
 343  
 344  
 345  
 346  
 347  
 348  
 349  
 350  
 351  
 352  
 353  
 354  
 355  
 356  
 357  
 358  
 359  
 360  
 361  
 362  
 363  
 364  
 365  
 366  
 367  
 368  
 369  
 370  
 371  
 372  
 373  
 374  
 375  
 376  
 377  
 378  
 379  
 380  
 381  
 382  
 383  
 384  
 385  
 386  
 387  
 388  
 389  
 390  
 391  
 392  
 393  
 394  
 395  
 396  
 397  
 398  
 399  
 400  
 401  
 402  
 403  
 404  
 405  
 406  
 407  
 408  
 409  
 410  
 411  
 412  
 413  
 414  
 415  
 416  
 417  
 418  
 419  
 420  
 421  
 422  
 423  
 424  
 425  
 426  
 427  
 428  
 429  
 430  
 431  
 432  
 433  
 434  
 435  
 436  
 437  
 438  
 439  
 440  
 441  
 442  
 443  
 444  
 445  
 446  
 447  
 448  
 449  
 450  
 451  
 452  
 453  
 454  
 455  
 456  
 457  
 458  
 459  
 460  
 461  
 462  
 463  
 464  
 465  
 466  
 467  
 468  
 469  
 470  
 471  
 472  
 473  
 474  
 475  
 476  
 477  
 478  
 479  
 480  
 481  
 482  
 483  
 484  
 485  
 486  
 487  
 488  
 489  
 490  
 491  
 492  
 493  
 494  
 495  
 496  
 497  
 498  
 499  
 500  
 501  
 502  
 503  
 504  
 505  
 506  
 507  
 508  
 509  
 510  
 511  
 512  
 513  
 514  
 515  
 516  
 517  
 518  
 519  
 520  
 521  
 522  
 523  
 524  
 525



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.

#### 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 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). Then 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, 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 or in any conditions where runoff or movement from the treatment area (site) is likely to occur. Permethrin, the active ingredient in Permethrin 3.2 TC Termiticide/Insecticide, is extremely toxic to fish and aquatic invertebrates. Care should be used when making applications near bodies of water. Locate sources of water discharge from structures, such as french drains and sump systems. Turn off discharge pumps until after application is complete. Observe for any change in color or odor of effluent discharge. 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.
2. Treat infested and/or damaged wood in place using an injection technique such as described in the "Control of Wood Infesting Insects" section of this label.

## STRUCTURES WITH ADJACENT WELLS/CISTERNS AND/OR OTHER WATER BODIES

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

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



treatment.

3. When appropriate (i.e., on the water side of the structure), the treated backfill technique (described above) can also be used to minimize off-site movement of termiticide.

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

Application Rate: Use a 0.5% emulsion for subterranean termites. For other pests on the label use specific listed rates.

Mixing Directions: Mix the termiticide use dilution in the following manner: Fill tank 1/4 to 1/3 full. Start pump to begin by-pass agitation and place end of treating tool in tank to allow circulation through hose. Add appropriate amount of PERMETHRIN 3.2 TC termiticide/insecticide. Add remaining amount of water. Let pump run and allow recirculation through the hose for 2 to 3 minutes.

PERMETHRIN 3.2 TC may also be mixed into full tanks of water, but requires substantial agitation to insure uniformity of the emulsion.

To prepare a 0.5% water emulsion, ready to use, dilute 1.25 gallons of PERMETHRIN 3.2 TC with 94.75 gallons of water.

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



EMULSION CONCENTRATION	AMOUNT OF PERMETHRIN 3.2 TC	AMOUNT OF WATER	DESIRED GALLONS OF FINISHED EMULSION
	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, slabs 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 waterproof barrier such as polyethylene sheeting. This is not necessary if foundation walls have been installed around the treated soil.

Vertical Barriers: Vertical barriers must be established in areas such as around the base of foundations, plumbing, utility entrances, 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 trenching and rodding into the trench or trenching, it is important that emulsion reaches the top of the footing. Rod holes must be spaced so as to achieve a continuous insecticidal barrier, but in no case more than 12 inches apart.
- b. Care should be taken to avoid soil washout around the footing.
- c. Trenches need not be wider than 6 inches. Emulsion should be mixed with the soil as it is being replaced in the trench.
- d. For a monolithic slab, an inside vertical barrier may not be required.

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

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



# POST-CONSTRUCTION SUBTERRANEAN TERMITE TREATMENT

**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  $\frac{1}{2}$  the labeled volume or a 2.0% emulsion may be applied at  $\frac{1}{4}$  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.

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~~ **Post-construction soil applications shall be made by injection, trenching, or rodding and 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~~  
Vertical barriers may be established by sub-slab injection within the structure and trenching, or rodding and trenching outside at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth. Special care must be taken to distribute the treatment evenly. Treatment should not extend below the bottom of the footing.

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

- a. Drill holes in the slab and/or foundation to allow for the application of a continuous insecticidal barrier.
- b. For shallow foundations (1 foot or less) dig a narrow trench approximately 6 inches wide along the outside of the foundation walls. Do not dig below the bottom of the footing. The emulsion should be applied to the trench and soil at 4 gallons of emulsion per 10 linear feet per foot of depth as the soil is replaced in the trench.
- c. For foundations deeper than 1 foot follow 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 must be made by trenching and rodding into the trench, or trenching at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth. When the footing is more than four feet below grade, the applicator may trench and rod into the trench, or trench along foundation walls at the rate prescribed for four feet of depth. Rod holes must be spaced so as to achieve a continuous termiticide barrier, but in no case more than 12 inches apart. The actual depth of treatment will vary depending on soil type, degree of compaction, and location of termite activity. However, in no case should a structure be treated below the 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.
- 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



10 / 29

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. 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.**

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.

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



18 429

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. These vulnerable or reinfested areas may be retreated in accordance with application techniques described in this product's labeling.

#### RETREATMENTS

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. 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 effectiveness of the barrier.

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 constructions such as signs, fences, and landscape ornamentation by



20 729

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 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, lawns 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 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, lawn areas adjacent or around private homes, duplexes, townhouses, condominiums, house trailers, apartment complexes, carports, garages, fence lines, storage sheds, barns, and other residential structures, commercial, industrial and institutional buildings, 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.

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	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.  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.  2. Boxelder Bugs, Elm Leaf Beetles, Gypsy Moth Caterpillars: Spray tree trunks, building siding or wherever pests congregate, to the point of runoff.  3. Borers and Bark Beetles: To prevent infestation of trees and woody ornamentals, spray the bark to the point



Ground Beetles 4	of runoff.		
Gypsy Moths (adults & caterpillars) 2	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:		
Millipedes			
Scorpions			
Sod Webworms 4			
Silverfish			
Sowbugs			
Spiders 4			
Wasps			
Ticks 4,5			
Flies			
Carpenter Ants			
Chinchbugs 4			
Pill Bugs			
	Lawn	Sq.Ft.	Oz. of PERMETHRIN 3.2 TC
			Gals. of Water
	Small	1,000	.4 to 0.8
		2,000	0.8 to 1.6
		3,000	1.2 to 2.4
	Medium	6,000	2.4 to 4.8
	Large	12,000	4.8 to 9.6
	Acre	44,000	17.0 to 34.0
			4 to 25
			8 to 50
			12 to 75
			24 to 150
			48 to 300
			176 to 1,100
	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.		
	5. Residual treatment for control of Deer tick (Ixodes dammini), western black-legged tick (Ixodes pacificus) and other ticks (important vectors for Lyme Disease, Rocky Mountain Spotted Fever).		

#### ORNAMENTAL AND LAWN 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 parks, or lawns and grounds.)

Permethrin 3.2 TC may be used to control insect pests on ornamentals and lawns in landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

#### 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.

#### RECOMMENDED APPLICATION RATES

CROP	PEST	RECOMMENDED RATE	SPECIFIC INSTRUCTIONS
Ornamentals in interiorscapes, in residential landscaped areas and landscaped areas around institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields (including foliage and flowering plants, woody and herbaceous non-edible ornamentals and non-bearing plants of fruiting species)	Ants	4 to 8 fl.oz. per 100 gal.	Apply sufficient volume of water to adequately cover foliage.
	Aphids	or	Use higher rate for moderate to high infestations.
	Bagworm	Broadcast 4 to 8 fl. oz. per acre	Direct application to blooms may cause browning of petals.
	Beet Armyworm		Marginal leaf burn may occur on Salvia, Dieffenbachia and Pteris Fern.
	Birch		
	Leafminer		
	Cabbage		
	Looper		
	Cankerworms		
	Citrus Thrips		
	Fungus Gnat		
	Gypsy Moth		
	Caterpillars		
	Heliothis spp		
	Japanese		
	Beetles		
	Lace Bug		
	Leaf Feeding		
	Caterpillars		
	Leafminers		
	Leafhoppers		
	Leafrollers		
	Lygus Bugs		
	Mealybugs		
	Pine Sawflies		
	Plant Bugs		
	Root Weevils		
	(Adult)		
	Tent		
	Caterpillars		
	Webworms		
	Whiteflies		
	Zimmerman		
	Pine Moths		



CROP	PEST	RECOMMENDED RATE	SPECIFIC INSTRUCTIONS
Ornamental Trees	Bark Beetles Borers (including, but not limited to, Dendroctonus spp., Ips spp., Scolytus spp., Ash Borer, Bronze Birch Borer, Elm Bark Beetles, Rhododendron Borer, and Turpentine Beetles)	1 to 2 qts. 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	Nantucket 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.
Lawns around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields	Chinchbugs Pillbugs Sod Webworm (See also list of pests under "Pest Control On Outside Surfaces and Around Buildings")	0.4 to 0.8 fl.oz. per 1,000 sq.ft.	Apply using sufficient water to provide adequate coverage.

\*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 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 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.
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 luster House), Earwigs, Firebrats, Ground Beetles, Leaf Beetles, Millipedes, Pantry Pests** such as: Flour Beetles, Indian Meal Moths, Larder	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.



PESTS	SPECIFIC INSTRUCTIONS
Beetles, Pillbugs, Scorpions, Silverfish, Sowbugs, Spiders	
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.

#### 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 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.