PM19 51036-122 1 of 14

SEP 27 1993

Mr. Morris Gaskins
Micro Flo Company
P.O. Box 5948
Lakeland, Florida 33807

Dear Mr. Gaskins:

Subject: Amended Labeling
Micro Flo Chlorpyrifos Termite Concentrate
EPA Registration No. 51036-122
Your Application Dated July 1[illegible], 1993

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), sec. 3(c)(7)(A), is acceptable provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data.

2. Make the following labeling changes before you release the product for shipment bearing the amended labeling:

   a. In the Directions for Use on plenum type structures, we believe the phrase "...not to exceed 10 P.S.I. when measured at the treating tool" should say: "...not to exceed 20 P.S.I., when measured at the treating tool."

   b. In the "Dosage and Mixing Instructions" for control of wood infesting insects, delete the reference to "Table 1." There is no "Table 1" in this labeling. The chart you are referring to has no name.

   c. There are a number of typographical errors in the labeling, especially on pages 5, 6, 7, 9, and 11. These are indicated (circled) on the stamped label we are returning to you. Please make the appropriate corrections.

3. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the labeling is enclosed for your records.

Sincerely yours,

DKE

Dennis H. Edwards, Jr.
Product Manager (19)
Insecticide Rodenticide Branch
Registration Division (H7505C)

Enclosure

3c414

ACCEPTED
with COMMENTS
In EPA Letter Dated

SEP 27 1993

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 51036-122

Draft label in response to Agency letter of 7/1/93

MICRO FLO

CHLORPYRIFOS TERMITE CONCENTRATE

To Be Applied Only By Or Under The Supervision of Commercial Applicators Responsible For Insect Control Programs. Not Intended For Use By Homeowners.

ACTIVE INGREDIENT:	
Chlorpyrifos (0,0-diethyl 0-(3,5,6-trichloro-2-pyridyl) phosphorothioate)	42.8%
INERT INGREDIENTS:	57.2%
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 ingles, no use este producto hasta que le etiqueta haya sido explicada ampliamente.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician immediately. Do not induce vomiting. Contains an aromatic petroleum solvent. Do not give anything by mouth to an unconscious person.
IF IN EYES: Flush with plenty of water. Call a physician.
IF ON SKIN: Remove contaminated clothing and immediately wash skin with soap and water.
IF INHALED: Remove victim to fresh air. Apply artificial respiration if indicated.

EPA Reg. No. 51036-122 EPA Est. No. 51036-GA-1

Manufactured By
MICRO FLO COMPANY
P.O. Box 5948
Lakeland, FL 33807

PRECAUTIONARY STATEMENTS
Hazards To Humans And Domestic Animals

WARNING

May be fatal if swallowed. May be fatal if absorbed through skin or clothing. Do not get in eyes, on skin or clothing. Avoid breathing of vapors. Wash thoroughly after handling. Do not wear contaminated clothing. Keep away from food, feed stuffs and water supplies.
NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate degree 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 antidotes immediately after establishing an open airway and respiration.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish, birds, and other wildlife. Do not apply directly to water. 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

COMBUSTIBLE! Do not use or store near heat or open flame. Do not cut or weld container.

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: Storage below 55 degrees F may result in formation of crystals. If product crystallizes out of solution, store at 72 degrees F to 90 degrees F and agitate to redissolve crystals.

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 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: 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.

SAFE HANDLING PROCEDURES

Wear suitable protective clothing when using or handling this product to help avoid exposure to eyes and skin. As a minimum, chemical workers goggles, neoprene or natural rubber gloves and footwear, a long-sleeved shirt and long-legged pants or coveralls are recommended. To avoid breathing spray mist during application in confined areas, wear a mask or respirator of a type recommended by NIOSH for filtering spray mists and organic vapors.

SUBTERRANEAN TERMITES

Chlorpyrifos Termite Concentrate for soil treatment is used to establish a barrier which is lethal to termites. The chemical emulsion must be adequately dispersed in the soil to provide a barrier between the wood in the structure and the termite colonies in the soil.

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, 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.

GENERAL USE PRECAUTIONS

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

1. Use antiback-flow equipment or procedures to prevent siphonage of pesticide back into water supplies.

2. Do not treat soil that is water saturated or frozen.

3. Consult state and local specifications for recommended distances of treatment areas from wells, and refer to Federal Housing Administration Specifications for further guidance.

Structures that contain wells or cisterns may be treated using the following guidelines:

1. Do not treat soil while it is beneath or within the foundation of a structure that contains a well or cistern. The treated backfill method may be used if the soil is removed and treated outside the foundation.

2. If treatment must be made along exterior foundation walls of structures containing wells or cisterns or other difficult situations such as near wells or cisterns, along fieldstone or rubble walls, along faulty foundation walls, around pipes and utility lines which lead downward from the structure to a well, pond, or other body of water, application may be made in the following manner:

   EXCAVATION/TREATED BACKFILL TECHNIQUE

   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 diluted emulsion per 10 linear feet per foot of depth of the trench or 1 gallon of dilution per 1.0 cubic feet (See Rate Determination Guideline below). An initial treatment using a 0.75 - 1.0 % dilution will provide effective optimum long term residual control. Mix thoroughly into the soil takeing 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.

3. Infested and/or damaged wood can be treated using an injection technique such as described in "Control of Wood Infesting Insects".

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 does not include existing structural soil contact wood that either has been or needs to be treated.

RATE DETERMINATION GUIDELINES

Consult the local extension agent or state entomologist for application rate recomendations.
An initial treatment using 0.75 - 1.0% dilution will prove effective, optimum long term residual control.
The 0.75% rate may also be used when making follow-up or spot treatments with no reinspection restrictions.
A 2.0% dilution may be used to protect utility poles and fence posts.

DILUTION DIRECTIONS

Gallons of Finished Dilution Desired	Chlorpyrifos Termite Concentrate Needed			
	0.5%	0.75%	1.0%	2.0%
1	1 1/3 fl oz	2 fl oz	2 2/3 fl oz	5 1/3 fl oz
5	6 2/3	10	13 1/3	26 2/3
10	13 1/3	20	26 2/3	53 1/3
24	1 qt	1 1/2 qt	1/2 gl	1 gl
48	1/2 gl	3 qt	1 gl	2 gl
97	1 gl	1 1/2 gl	2 gl	4 gl

Mixing Directions

It is important that the termiticide dilution be uniformly mixed in the spray tank before begining the treatment. Once mixed, Chlorpyrifos 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 Chlorpyrifos 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 ensure thorough and complete coverage in different soil types, it may become necessary to adjust the volume being applied. In situations such as heavy, clay-type soils which will not accept large amounts of water, reduced volumes can be used which wll deliver the appropriate concentrations of termiticide in the soil. 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 which accept larger amounts of water, increased volumes which deliver the apropriate concentration of termiticide in the soil may be used. Maximum voumes will be specified in the appropriate use directions.

8.04.14

PRECONSTRUCTION SUBTERRANEAN TERMITE TREATMENT

Effective preconstruction subterranean termite control requires the establishment of a unbroken vertical and/or horizontal chemical barrier between wood in the structure and the termite colonies in the soil. To meet F.H.A. termite proofing requirements, follow the latest edition of the Housing and Urban Development (H.U.D.) Minimum Property Standards. Follow state and local regulations to meet minimum treatment standards for preventive preconstruction treatments.

All holes drilled in construction elements for preconstruction treatments shouild be securely plugged following application.

See "Rate Determination Guidelines" and Table 1 for dilution directions

1. For Horizontal barriers, applications shall be made using a low pressure spray after grading is copleted and prior to the pouring of the slab or footing.

   a. For a 0.75% rate, apply 1 gallon of dilution per 10 square feet or use 2 fluid ounces of Chlorpyrifos TC per 10 square feet in sufficient water (not less than 1/2 or more than 2 gallons) to provide thorough and continuous coverage of the area being treated (see Application Volume section).

      For a 1.0% rate, apply 1 gallon of diluton per 10 square feet, or use 2 2/3 fluid ounces of Chlorpyrifos 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").

      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 vopor barrier should be placed over the treated soil to prevent disturbance of teh termiticide barrier.

2. For Vertical barriers, apply the 0.75-1.0% dilution at a rate of 4 gallons per 10 linear feet per foot of depth. Establish vertical barriers in areas such as around the base of foundations, plumbing lines, backfiled soil against foundation walls and other areas which may warrant more than just a horizontal barrier.

a. Rodding and/or trenching applications should be made to reach the top of the footing. Rod holes should be spaced to provide a continuous barrier.

b. Trenches need not be wider than 6 inches. Treat soil with the dilution as it is being replaced in the trench.

For a 0.75% rate, apply 4 fallons of dilution per 10 linear feet per foot of depth or 8 fluid ounces of Chlorpyrifos TC per 10 linear feet per foot of depth from grade to top of footing in sufficient water (not less than 2 gallon or more than 8 gallons) to ensure complete coverage.
For a 1.0% rate, apply 4 gallons of dilution per 10 linear feet per foot of depth or 10 2/3 fluid ounces of Chlorpyrifos TC per 10 linear feet per foot of depth from grade to top of footing in sufficient water (not less than 2 gallons or more than 8 gallons) to insure 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 are intended as the crawl.

3. For Plenum type structures which use a sealed underfloor space to circulate heated and/or cooled air throughout the structure, apply the dilution at the rate of 4 gallons per 10 linear feet per foot of depth. Soil adjacent to both sides of foundation walls, supporting peirs, 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 wlls 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 10 P.S.I. when measured at the treating tool). After soil treatment, a continuous vapor barrier of at least 6 mil polythylene 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

Use a 1% emulsion for subterranean termites. Mix 2 gallons of Chlorpyrifos Termite Concentrate in 98 gallons of water to produce a 1% water emulsion. Postconstruction applications shall be made by injection, rodding, and/or trenching (using low pressure spray). Do not apply emulsion 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.

1. For slab on ground construction apply at the rate of 4 gallons of emulsion per 10 linear feet. Applications may be made by sub-slab injection and/or trenching. Injectors should not exceed beyond the tops of the footings. Treat along the outside of the foundation and where necessary just beneath the slab along one side of interior partitions and along all cracks and expansion joints.

    a. Drill holes in the slab to provide a continuous chemical barrier.

    b. Where necessary, drill through the foundation walls from the outside and force the emulsion just beneath the slab either along the inside of the foundation or along all the cracks and expansion joints and other critical areas.

    c. For shallow foundations, 1 foot or less, dig a narrow trench approximately six inches wide along the outside of the foundation walls. Do not dig below the bottom of the foundation. The emulsion should be applied to the trench and the soil at 4 gallons per 10 linear feet as the soil is replaced in the trench. Cover the treated soil with a layer of untreated soil.

    d. For foundations deeper than 1 foot follow rates for basements.

2. Hollow block foundation or voids of masonry should be treated to make a continuous chemical barrier in voids. Apply at the rate of 2 gallons of emulsion per 10 linear feet.

3. For basements apply at the rate of 4 gallons of emulsion per 10 linear feet. Where footings are greater than 1 foot of depth from the grade to the bottom of the foundation application may be made by trenching and/or rodding at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth. 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. In crawl spaces apply at the rate of 4 gallons of emulsion per 10 linear feet per foot of depth from grade to bottom of foundation. Application may be made by rodding and/or trenching (utilizing low pressure spray). Treat both sides of foundation and around all piers and pipes.

   a. Rod holes should be spaced (about 1 foot) to provide a continuous chemical barrier.

   b. Trench need not be wider than 6 inches nor below the foundation. The emulsion should be mixed with the soil as it is replaced in the trench. Cover the treated soil with a layer of untreated soil or other suitable barrier such as polyethylene sheeting.

   c. For inaccessible crawl spaces, treat soil by an alternate method such as drilling and rodding through foundation walls from the outside.

All treatment holes drilled in construction elements of living areas of homes should be securely plugged.

5. In plenum type st uctures, which use a sealed underfloor space to circulate heated and/or cooled air within the structure, apply the 0.75% - 1.0% 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. The surface application should be made at a rate of 1 gallon per square feet as a very coars spray under low pressure (not to exceed 20 P.S.I. when measured at the treating tool). In order to properly calculate the amount of termiticide dilution needed, use the following guidelane: 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 recomended 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 toi be treated prior to treatment and replaced immediately following treatment. Structures should be ventilated during application and until treatment is dry.

6. Application using foam generating equipment: In situations where conventional application methods have not or are not likely, to provide adequate coverage, foam generating equipment or similar machines can be used to provide a continuous barrier. Treatment of filled porches, chimney bases, soil under slabs and treatment of wall voids are examples where foam applications may be useful.

Foam Treatment Recommendations:
Refer to label of foaming adjuvant for proper amount of material to add per gallon of Chlorpyrifos TC dilution.

The following provides the amount of Chlorpyrifos TC required for a given area and volume range of the prefoamed termiticide dilution necesary for application fo the product.

For a 0.75% rate, apply 8 fluid ounces of Chlorpyrifos TC per 10 linear feet using no less than 2 gallons, or more than 8 gallons, of prefoamed diluion.

For a 1% rate, apply 10 2/3 fluid ounces of Chlorpyrifos TC per 10 linear feet using no less than 2 gallons, or more than 8 gallons, of prefoamed dilution.

RETREATMENT RESTRICTIONS

1. Retreatment for subterranean termites should only be made when there is evidence of reinfestation subsequent to the initial treatment, or there has been a disruption of the chemical barrier in the soil due to construction, excavations, landscaping, etc.

2. Retreatments may be made to critical areas in accordance with the application techniques described above. This application should be made as a spot treatment to these areas. Routine retreatment of the entire premises should be avoided.

CONTROL OF WOOD INFESTING INSECTS

Dosage and Mixing Instructions:
Chlorpyrifos Termite Concentrate is recommended for use as an aqueous emulsion containing 0.5% or 1% Chlorpyrifos. See "Table 1" for dilution directions.

Advisements:
When spraying overhead interior areas of homes, apartment buildings, etc. to the point of runoff, cover all surfaces below the area being sprayed with plastic sheeting or other mnaterial which could be disposed of by placing in trash if contamination from dripping occurs. Sprayed surfaces should be avoided until the spray has totally dried.

Contact with treated surfaces should be avoided until spray has dried. Cover or remove exposed foods before treatment. Do not use in structures housing animals which are intended for or which which produce products to be used for food purposes. Do not use for above ground control of wood infesting insects in food areas of food handling establishments, restaurants or other areas where food is commercially prepared or processed.

To control wood-infesting beetles such as powderpost beetles (LYCTIDAE), false powder post beetles (BOSTRICHIDAE), deathwatch beetles (ANOBIIDAE), old house borers (CERAMBYCIDAE) and ambrosia beetles (SCOLYTIDAE) in homes and other structures, treatment may be applied either as coarse sprays or by brushing the product onto targeted surfaces. Use a sufficient amount of spray to cover the area to the point of wetness but avoid runoff. Use the following guidelines to determine appropriate rates of application:

New Wood - (typically less than 10 years of age) apply approximately 1 gallon of dilution per 150 square feet as a coarse spray.
Old Wood - (typically greater than 10 years of age) apply approximately 1 gallon of dilution per 100 square feet as a coarse spray.

Treatment Directions

For control of carpenter ants in homes and other structures, apply dilution around doors and windows and other places where carpenter ants enter the premises and where they crawl and hide. Also spray into cracks and crevices or through openings sor small newly drilled holes into walls voids where these ants or their nests are present. Use a fufficient amount of coarse spray to cover the area to the point of wetness but avoiding runoff.

For control of termites (localized areas of infesed wood in structures), apply dilution to voids and channels in damaged wood and in spaces between members of a structure and between wood and foundations where termite infestation is likely to occur. Application may be made to inaccessible areas by drilling, and then injecting the emulsion. Use a sufficient amount of spray to cover the area to the point of wetness but avoiding runoff. Treatment of localized areas is intended to kill workers and winged reporductive forms of termites in the treated areas and to prevent infestations for a temporary period. This type of application is not intended to be a subsiute for soil treatment or mechanical alteration to control subterranean termites.

PEST CONTROL ON OUTSIDE SUFACES AND AROUND BUILDINGS

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

Outside surface: Apply Chlorpyrifos TC termiticide 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 which serve as insect harborage sites.

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

Gallons of Finished Dilution Desired	Chlorpyrifos 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 qt
97	2 qt	1 gal

Small amounts of solution mixed at 0.5% to 1.0% termiticide rates remaining in the spray tank can be diluted as indicated in the following table and used to treat surfaces or perimeter areas:

Concentration of Termiticide Dilution	Amount of Water to Add to Each Gallon of Termiticide Dilution to Provide a 0.25% Spray	Amount of Water to Add to Each Gallon of Termiticide Dilution to Provide a 0.5% Spray
0.5%	1 gallon	none
0.75%	2 gallons	0.5 gallons
1.0%	3 gallons	1 gallon

CONDITIONS OF SALE

All statements concerning the use of this product apply only when used as directed.
THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THIS PRODUCT OR ITS USE, WHICH EXTEND BEYOND THE DESCRIPTION ON THE LABEL.

Read all directions carefully.