

OCT 17 1995

Mr. Lee Tharrington
Micro Flo Company
P.O. Box 5948
Lakeland, Florida 33807

Dear Mr. Tharrington:

Subject: Revised Precautionary Text, Mosquito Use Deletion
Chlorpyrifos 4E
EPA Registration No. 51036-154
Your Application Dated August 16, 1995

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 Environmental Hazards statement, replace the phrase "disposal of wastes" with: "disposal of equipment washwaters."
 - b. On page 7, under "General Information," delete the phrase: "and for mosquito control."
 - c. There are several typographical errors throughout the label, ie. on page 5, "hallow" should be "hollow," on page 9, "routing" should be "routine." Please ensure that these errors, and any that we may have also missed, are corrected prior to printing of the finished label copy.
3. Submit two 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,

DHE

Dennis H. Edwards, Jr.
Product Manager (19)
Insecticide-Rodenticide Branch
Registration Division (7505C)

Enclosure

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CHLORPYRIFOS 4-E INSECTICIDE
ORGANOPHOSPHATE

Controls Numerous Pests of Households, Turf & Ornamental Plants. Also recommended for Area Control of Ticks & Chiggers. To be applied only by or under the supervision of Pest Control Operators, Public Health Organizations, and other trained personnel responsible for Insect Control Programs.

ACTIVE INGREDIENT:

Chlorpyrifos (0,0-diethyl 0-(3,5,6-trichloro-2-pyridinyl) phosphorothioate)	44.70%
INERT INGREDIENTS:	55.30%
TOTAL.....	100.00%

This product contains petroleum distillates.
Contains 4 pounds of chlorpyrifos per gallon.

KEEP OUT OF REACH OF CHILDREN

WARNING AVISO

Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

STATEMENT OF PRACTICAL TREATMENT
Organophosphate

IF SWALLOWED: Do not induce vomiting. Contains xylene range aromatic solvent. Call a physician immediately.

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

IF IN EYES: Flush eyes with plenty of water for 15 minutes. Call a physician.

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

NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine only by injection is an antidote. This product is an organophosphorus ester that inhibits cholinesterase.

See Additional Precautionary Statements Inside

EPA Reg. No. 51036-154

EPA Est. No. 51036-GA-1

ACCEPTED
with COMMENTS
in EPA Letter Dated

OCT 17 1995

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

51036-154

17B

Manufactured By
MICRO FLO COMPANY
P.O. BOX 5948
LAKE LAND, FLORIDA 33807

PRECAUTIONARY STATEMENTS
Hazards To Human And Domestic Animals

WARNING

May be fatal if swallowed. Harmful if absorbed through skin or inhaled. Causes eye irritation. Avoid contact with eyes, skin or clothing. Avoid breathing vapors. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves, such as barrier laminate or viton
3. Shoes plus socks
4. Protective eyewear

Exception: Applicator's who submerge containerized or balled/burlaped plants in tanks must wear:

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves, such as barrier laminate or viton
3. Chemical-resistant footwear plus socks
4. Chemical-resistant apron
5. Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish, birds, and other wildlife. For terrestrial uses, do not apply directly to water, or 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 wastes.

PHYSICAL AND 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.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

1. Coveralls
2. Chemical-resistant gloves, such as barrier laminate or nitrile
3. Shoes plus socks
4. Protective eyewear

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides [40 CFR Part 170]. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep children, pets and other unprotected persons out of treated area until sprays have dried.

CHEMIGATION PROHIBITION

Do not apply this product through any type of irrigation system.

STORAGE AND DISPOSAL

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

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 incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PESTS INDOORS

General Information:

Use Chlorpyrifos 4E to control the pests indicated in the areas listed below by application as a 0.25% or 0.5% chlorpyrifos spray. Use the 0.25% spray to control light infestations and the 0.5% spray to quickly reduce heavy infestations or as directed. To prepare the spray, dilute chlorpyrifos 4E with water or with a suitable base oil* as shown in the following Spray Dilution Chart. Repeat the treatment as needed. *Use only deodorized Kerosene for oil-based sprays to be applied in food handling establishments.

NOTE: Where quick "knockdown" and/or "flushing action" is desired, dichlorvos (DDVP) or pyrethrins may be added to the spray mixture containing Chlorpyrifos 4E. For best results, use dichlorvos at a concentration of 0.25% in both water and oil-base sprays. Consult labeling for the dichlorvos or pyrethrins product used to determine the amount needed to give the desired spray concentration. Also read and observe all use and handling precautions for these products. Do not use Chlorpyrifos 4E in combination with dichlorvos (DDVP) or pyrethrins for treatment of food areas of food handling establishments.

4.4.13

*Note: 1 fluid ounce = 2 tablespoonfuls = 6 teaspoonfuls
 **Calculated on basis of deodorized kerosene. Approx. Wt. 6.68
 lbs./gal.

Use as a spot treatment in and around both food and non food areas to control cockroaches (including strains resistant to other insecticides), ants, crickets, firebrats, silverfish, spiders and stored product insects such as confused flour beetles, saw-toothed grain beetles, Indian meal moths, rice weevils, Mediterranean flour moths and red flour beetles. Apply as a coarse, low pressure (20 psi or less) spray to localized areas where the above pests have been seen or are suspected of hiding or entering. Apply only enough spray to thoroughly cover the surfaces treated using special care to avoid unnecessary runoff. Do not introduce the spray into the air or allow the spray to contact food or food-contacting surfaces. Areas treated may include dark corners of rooms and closets, along and behind baseboards, beneath and behind stoves, refrigeration units and similar food preparation areas and equipment, floor drains, and around plumbing and other utility installations. For ants, apply to ant trails and wherever these pests may find entrance. Spot treatment may encompass crack and crevice treatment by applying small amounts of material directly into openings leading to voids and hallow spaces in walls, equipment legs and bases or which occur at points between different elements of construction or between equipment and floors. Equipment capable of delivering a pinstream of insecticide should be used. Repeat treatment as needed but not more than once every 7 days in restaurants and similar food service establishments or more often than once every 14 days in other types of food handling

establishments. In case of emergency (call back), Chlorpyrifos 4E may be applied after 2 days from last treatment but emergency use should be limited to once per month. Applications of this product in food handling establishments other than as a spot and/or crack and crevice treatment are not permitted. .

Application Within Residential Buildings Including Home and Apartment Buildings and Within Nonfood Areas of Industrial, Institutional, and Commercial buildings including hospitals, stores, manufacturing plants and warehouses:

For Spot Treatment Only - Apply as a coarse spray or with a paint brush to localized areas where cockroaches (including strains resistant to certain other insecticides), ants, clover mites, crickets, firebrats, silverfish, and spiders are found or normally occur including dark corners of rooms and closets, cracks and crevices in walls, along and behind baseboards, beneath and behind sinks, stoves, refrigerators and cabinets, around plumbing and other utility installations.

For ants, apply to ant trails, also around doors and windows and wherever else these pests may find entrance.

For clover mites, use a 0.5% spray only.

Note: A period of 4 to 7 days is normally required for maximum effect on cockroaches.

For control of carpet beetles, thoroughly apply a 0.5% spray as a spot treatment along baseboards and edges of carpeting, under carpeting, rugs and furniture, in closets and on shelving, and wherever else these insects are seen or suspected.

For control of brown dog ticks, thoroughly apply a 0.5% spray as a spot treatment to infested areas such as pet beds and resting quarters, nearby cracks and crevices, along and behind baseboards, window and door frames and localized areas of floor and floor covering where these pests may be present. Old bedding of pets should be removed and replaced with clean, fresh bedding after treatment. DO NOT TREAT PETS WITH THIS PRODUCT.

Attention (Pests Indoors):

Do not apply water-base sprays of this product in conduits, motor housings, junction and switch boxes or other electrical equipment because of possible shock hazard. If there is need to treat such areas use only oil-base sprays. Prior to application de-energize electrical equipment. After application allow time for oil to evaporate before starting motors or placing switches in the "ON" position. Do not use in poultry houses or other animal buildings. Do not apply spray to contact food, feedstuffs, and water supplies. Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product. Remove pets and cover fish bowls (tanks) before spraying.

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PESTS OUT-OF-DOORS

General Information:

Use Chlorpyrifos 4E for control of certain pests on outside surfaces of buildings and on lawns and ornamental plants, for area control of ticks and chiggers and for mosquito control. Consult the following directions for dosage and application details to control the pests listed.

Pests on Outside Surfaces of Buildings:

Use Chlorpyrifos 4E at the rate of 1 1/3 fluid ounces per one gallon of water (0.5% chlorpyrifos emulsion) to control ants, clover mites, cockroaches, crickets, earwigs, fleas, flies, millipedes, mosquitoes, sowbugs, spiders and ticks by application as a residual spray or with a paint brush to outside surfaces of buildings including porches, screens, window frames, eaves, patios, garages, refuse dumps and other areas where these pests congregate or have been seen. Do not treat or allow the spray to contact plants (lawns, flowering plants, shrubs, trees, evergreens, etc.) because of possible injury. Repeat treatment as needed to maintain effectiveness.

NOTE: To help prevent infestation of buildings by ants, crickets, earwigs, millipedes, and sowbugs (pillbugs), treat a band of soil 6 to 10 feet wide around and adjacent to buildings, also the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Use 8 ounces of Chlorpyrifos 4E per 100 gallons of water and apply as a coarse spray at the rate of about 10 gallons spray mixture per 1000 sq. ft. to thoroughly and uniformly wet the band area.

Pests of Lawns and other Ornamental and Recreational Turf Grass Areas:

Use Chlorpyrifos 4E to control pests listed below by application at the recommended dosages and in accordance with the directions given below. Dilute Chlorpyrifos 4E in enough water to obtain complete and uniform coverage of pest infested areas and apply as a coarse, low-pressure spray using suitable application equipment. Thoroughly water immediately after treatment to wash the insecticide into the turf, except as noted. For best results, the lawn should be moist at time of treatment.

Pests of Ornamentals:

Use Chlorpyrifos 4E to treat flowers, shrubs, vines, shade and flowering trees, and evergreens found to be infested with pests listed below. Dilute Chlorpyrifos 4E with water according to directions given below and apply using suitable hand or power spray equipment in a manner to provide complete and uniform coverage. For best results apply a wetting spray to both upper and lower leaf surfaces and infested limb and trunk areas. Attempt to penetrate dense foliage but avoid overspraying to the point of excessive runoff. Treat when pests appear and repeat at 7 to 10 day

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intervals, if needed.

NOTE: DO NOT USE on azaleas, camellias, poinsettias, rose bushes, or variegated ivy because of possible injury to these plants.

Wood Boring Insects, Infesting Shrubs and Trees such as Dogwood Borer, Lilac Borer, Ash Borer and Rhododendron Borer:

Apply Chlorpyrifos 4E to the trunks and lower limbs of trees and shrubs when the adults begin to emerge. Consult your State Agricultural Experiment Station or Extension Service specialist for proper time to treat in your area. Mix at the rate of one quart of Chlorpyrifos 4E in 100 gallons of water and apply uniformly as a coarse, low pressure spray.

DOSAGES AND DIRECTIONS FOR USE ON TURF

ANTS, ARMYWORMS, CHIGGERS, CHINCH BUGS, CLOVER MITE, CRICKETS, CUTWORMS, EARWIGS, FLEAS, GRASSHOPPERS, SOD WEBWORMS, TICKS - 3/4 fl. oz. per 1000 sq. ft., 3 3/4 fl. oz. per 5000 sq. ft., 1/2 pint per 10,700 sq. ft., 1 quart per acre. Spray when pests first appear. Repeat when needed. For sod webworms delay watering or mowing the treated area for 12 to 24 hours after treatment.

TURFGRASS (HYPERODES) WEEVIL - 1 1/2 fl. oz. per 1000 sq. ft. Spray suspected problem areas in mid-April and again in mid-May or as recommended by your local Agricultural Extension Service specialist in your area.

WHITE GRUBS (INCLUDING EUROPEAN CHAFER, SOUTHERN MASKED CHAFER, AND JAPANESE BEETLE LARVAE) - 1 1/2 to 3 fl oz. For white grubs spray when grubs are young and actively feeding near the soil surface, usually during late July and August or as recommended by your local Agricultural Extension Service specialist in your area. Immediately after spraying, irrigate the treated area with 1/2 to 1 inch of water to wash the insecticide in the underlying soil.

BLUEGRASS BILLBUG - 1 1/2 to 3 fl. oz. Spray early in the season when adults first appear. Repeat when needed.

PEACH TREE BORER - Apply Chlorpyrifos 4E to flowering trees and shrubs of the Genus Prunus in water as a trunk spray before newly hatched larvae enter the trees. Apply as a coarse, low-pressure spray. Thoroughly wet all bark areas from ground level to scaffold limbs. Consult your State Agricultural Experiment Station or Extension Service specialist for proper time to treat your area. Mix at the rate of 3 quarts per 100 gallons of water.

NOTE: Mosquitoes coming to rest on areas treated for control of turf and ornamental plant pests will be killed for varying periods of time after treatment, depending on exposure of treated areas to weathering conditions.

Attention (Lawn and Ornamental Plant Pests):

Keep out of lawn and garden fishpools and other bodies of water.

Native Elm Bark Beetle:

Prevention of Overwintering. To prevent the adult beetle from overwintering in uninfected trees and to reduce beetle populations in disease free areas, apply Chlorpyrifos 4E as a 0.5% mixture of chlorpyrifos in water to the bottom 9 feet of trunk. Wet the trunk thoroughly but do not spray to runoff. Care should be taken to apply the spray right to the base of the root flare. Applications can be made with either a back pack mist blower or a hydraulic pressure sprayer from spring through to the early fall.

Prevention of Branch and Twig Feeding on High Value Elm Trees:

To reduce the twig and branch feeding on uninfected trees deemed to be high in value apply a 0.5% chlorpyrifos water spray to the tree crown. Application should be made in the spring or early summer using a sprayer that will give thorough coverage to the tree crown.

) Area Control of Ticks and Chiggers:

Use Chlorpyrifos 4E to control ticks and chiggers, infesting non-cropland areas such as roadsides, footpaths and trails, picnic and camping sites, parks and other recreational areas where these pests are present and create a nuisance or possible public health problem. Apply Chlorpyrifos 4E in water at the rate of 1/2 pt. per acre (equivalent to 1/2 fl. oz. per 2,700 sq. ft.) using a hydraulic sprayer, mist applicator, knapsack sprayer, or other suitable hand or power spray equipment. Treat low underbrush, grassy areas, weeds, and ground surface and debris using enough spray volume to obtain thorough coverage, usually 40 to 100 gallons per acre.

IMPORTED FIRE ANT

) Treatment of potted, containerized and balled burlapped nursery stock:

Use Chlorpyrifos 4E to control imported fire ants in soil attached to roots of these plants by completely submerging the ball of soil in a tank containing Chlorpyrifos 4E diluted at the rate of 4 fl. oz. per 100 gallons of water. Do not remove burlap wrap or plastic containers with drain holes prior to, submerging. Keep soil submerged until complete saturation has occur, normally about 30 seconds. An alternate treatment to submerging potted plants is to apply a solution containing Chlorpyrifos 4E (4 oz per 100 gallons of water) as a substitute for plain water during routing watering activities. This solution should be applied to the point of run-off on a twice daily schedule for three consecutive days. Do not remove burlap wrap or container from plants prior to treatment. Application should be made in a well-ventilated area.

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Treatment of Fire Ant Mounds:

Apply Chlorpyrifos 4E as a drench diluted at the rate of 1 fl. oz. (30cc) per 4 gallons of water. Gently sprinkle a total of 1 gallon of the diluted solution over the surface of each mound using a sprinkler can. Thoroughly wet mound and surrounding area to a 4 ft. diameter (12 sq. ft.). For best results apply in cool weather, 65-80 deg. F. or in early morning or late evening hours. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness.

DOSAGES AND DILUTIONS FOR USE ON ORNAMENTAL PLANTS

APHIDS, BAGWORMS, EASTERN TENT CATERPILLARS, FALL WEBWORMS, GRASSHOPPERS, MITES, ORANGE STRIPED OAKWORMS, SPITTLEBUGS, WHITEFLIES, YELLOW NECKED CATERPILLARS - 0.25 fl. oz. per 3 gallons of water, 0.8 fl. oz. per 10 gallons of water, 0.5 pint per 100 gallons of water (equivalent to 4 oz. of chlorpyrifos per 100 gallons).

CUTWORMS, LEAFHOPPERS, MEALYBUGS, MIMOSA WEBWORMS, REDHUMPED CATERPILLARS, THRIPS (EXPOSED) - 0.5 fl. oz. per 3 gallons of water, 1.6 fl. oz. per 10 gallons of water, 1 pint per 100 gallons of water (equivalent to 8 oz. of chlorpyrifos per 100 gallons).

ASH BORER, DOGWOOD BORER, LILAC BORER, RHODODENDRON BORER, SCALE CRAWLERS, OAK LECANIUM, PINE NEEDLE TEA, WINTER PEACH - 1.0 fl. oz. per 3 gallons of water, 3.2 fl. oz. per 10 gallons of water, 1 quart per 100 gallons of water (equivalent to 1 lb. of chlorpyrifos per 100 gallons).

PEACH TREE BORER - 2.9 fl. oz. per 3 gallons, 9.6 fl. oz. per 10 gallons of water, 3 quarts per 100 gallons of water (equivalent to 3 lbs. of chlorpyrifos per 100 gallons).

MICRO FLO WARRANTS THAT THIS PRODUCT CONFORMS TO THE CHEMICAL DESCRIPTION ON THE LABEL THEREOF AND IS REASONABLY FIT FOR THE PURPOSE STATED ON SUCH LABEL ONLY WHEN USED IN ACCORDANCE WITH THE DIRECTIONS FOR USE. IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS INHERENTLY ASSOCIATED WITH THE USE OF THIS PRODUCT. CROP INJURY, INEFFECTIVENESS, OR OTHER UNINTENDED CONSEQUENCES MAY RESULT BECAUSE OF SUCH FACTORS AS WEATHER CONDITIONS, PRESENCE OF OTHER MATERIALS, OR THE MANNER OF USE OR APPLICATION, ALL OF WHICH ARE BEYOND THE CONTROL OF MICRO FLO. IN NO CASE SHALL MICRO FLO BE LIABLE FOR THE CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER.

EXCEPT AS EXPRESSLY PROVIDED HEREIN, MICRO FLO MAKES NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY,

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FITNESS FOR A PARTICULAR PURPOSE, USE OR ELIGIBILITY OF THE PRODUCT
FOR ANY PARTICULAR TRADE USAGE.