

JUN 25 1992

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

Dear Mr. Gaskins:

Subject: Addition of Indoor Uses
Chlorpyrifos 1E
EPA Registration No. 51036-119
Your Application Dated March 30, 1992

The amendment referred to above, submitted in connection with registration under 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 labeling change listed below before you release the product for shipment bearing the amended labeling:

- On page 5, in the paragraph beginning "Attention (Pests Indoors)," correct the sentence which reads "Do not apply spray to contact food, feedstuffs..." to "Do not allow spray to contact food, feedstuffs, and water supplies."

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 constitutes acceptance of these conditions.

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

We also acknowledge receipt of the revised Confidential Statement of Formula (CSF). The CSF (dated March 30, 1992) which

lists the certified limits calculated in accordance with PR Notice 91-2 is incorrect. Based on the label claim, or nominal value (N) of 12.6%, we would expect the upper certified limit to be 13.23% and the lower certified limit to be 11.97%. These limits are calculated using N plus (+) or minus (-) 5%(N), or N +/- 0.63. Please refer to the Table of Standard Certified Limits in section 158.175 of Title 40 of the Code of Federal Regulations. At this time, the CSF which shows the lower certified limit for the active ingredient to be the same as the label claim, is acceptable. However, in the future, the CSF will need to be revised to the nominal method for calculation of the certified limits. This will be required at the time of reregistration.

Sincerely,

DHE

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

Enclosure

This draft represents an amendment to the 1E reg 51036-119 to add indoor uses as on the 2E label (but with rates adjusted) that was originally submitted on 1/7/92 and rejected for minor text and CSF deficiencies. This draft reflects EPA mandated text changes per their 3/25/92 letter of rejection.

CHLORPYRIFOS 1E

Controls Numerous Pests of Turf and Ornamental Plants.
Also Recommended For Area Control Of Ticks And Chiggers.

To Be Applied Only By Or Under The Supervision Of Commercial Applicators Responsible For Insect Control Programs

ACTIVE INGREDIENT:

Chlorpyrifos (0,0-diethyl 0-(3,5,6-trichloro-2-pyridyl) phosphorothioate)

INERT INGREDIENTS:.....
TOTAL.....

12/18/92
87-2486
100.00
JUN 25 1992
51036-119

Contains 1 pound 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 etiqueta le haya sido explicada ampliamente.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician immediately. Vomiting may cause aspiration hazard. DO NOT induce vomiting. Contains an aromatic petroleum solvent. Do not give anything by mouth to an unconscious person.

IF INHALED: Remove victim to fresh air. Apply respiration if indicated Get medical attention.

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.

See Additional Precautionary Statements On Label

EPA Reg. No. 51036-119

EPA Est. No. 51036-GA-1

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

PRECAUTIONARY STATEMENTS
Hazards To Humans And Domestic Animals
WARNING

Causes eye irritation. May be fatal if swallowed. May be fatal if absorbed through skin or clothing. Do not get in eyes, on skin or clothing. Wash contaminated clothing before reuse. Do not wear contaminated clothing. Wash thoroughly after handling. Avoid breathing of vapors. Keep away from food, feedstuffs and water. Keep children and pets out of treated areas until the areas are dry. Keep container closed. Handle concentrate in a ventilated area.

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 waste. Do not contaminate water when disposing 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.

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. **STORAGE:** Storage below 23 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. Do not use or store near heat or open flame.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of

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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.

PEST INDOORS

General Information: Use Chlorpyrifos 1E 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 1E 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 1E. 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 1E in combination with dichlorvos (DDVP) or pyrethrins for treatment of food areas of food handling establishments.

SPRAY DILUTION CHART

Gallons of Spray	Fluid Ounces* of Chlorpyrifos 1E to Use	
Mixture Desired	0.25% spray	0.50% spray
Water-base spray		
1	2 2/3	5 1/3
3	8	16
5	13 1/3	26 2/3
10	26 2/3	53 1/3
Oil-based spray**		
1	2	4
3	6	12
5	10	20
10	20	40

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*Note: 1 fluid ounce = 2 tablespoonfuls = 6 teaspoonfuls

**Calculated on basis of deodorized kerosenes.

Application within food handling establishments (places other than private residences in which food is held, processed, prepared or served) including, but not limited to restaurants, grocery stores, bakeries, bottling plants, canneries and grain mills: 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 hollow 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 delivery 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 1E 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

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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. Do not allow children or pets to contact treated surfaces until spray had dried. Remove pets and cover fish bowls (tanks) before spraying.

PESTS OUT-OF-DOORS

GENERAL INFORMATION: Use Chlorpyrifos 1E for control of certain pests on outside surfaces of buildings and on lawns and ornamental plants, and for area control of ticks and chiggers. Consult the following directions for dosage and application details to control the pests listed.

PESTS ON OUTSIDE SURFACES OF BUILDINGS: Use Chlorpyrifos 1E at the rate of 5 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

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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 the buildings, also the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Use 2 pints of Chlorpyrifos 1E 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 1E to control pests listed in the following table by application at the recommended dosages and in accordance with the directions given below. Dilute Chlorpyrifos 1E 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.

PEST OF ORNAMENTALS: Use Chlorpyrifos 1E to treat flowers, shrubs, vines, shade and flowering trees, and evergreens found to be infested with the pests listed in the following table. Dilute Chlorpyrifos 1E with water according to directions given in the table 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 intervals, if needed. NOTE: Do not use on azaleas, camelias, poinsettias, rose bushes, or variegated ivy because of possible injury to these plants.

DOGWOOD BORER: Apply Chlorpyrifos 1E to the trunks and lower limbs of dogwood trees when the adults begin to emerge. Consult your State Agricultural Experimental Station or Extension Service specialist for proper time to treat in your area. Mix at the rate of one gallon of Chlorpyrifos 1E in 100 gallons of water and apply uniformly on trees as a coarse, low-pressure spray.

PEACH TREE BORER: Apply Chlorpyrifos 1E to flowering trees and shrubs and the Genus Prunus in water as 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 Experimental Station or Extension Service specialists for proper time to treat in your area. 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.

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ATTENTION: Keep children and pets off treated areas until spray has dried. 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 uninfested trees and to reduce beetle populations in disease-free areas, apply Chlorpyrifos 1E as a 0.5% mixture of chlorpyrifos in water to the bottom 9 feet of the 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 uninfested trees deemed to be high in value apply 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.

DOSAGES AND DIRECTIONS FOR USE ON TURF

PEST

DOSAGE CHLORPYRIFOS 1E
PER 1000 SQ. FT.

Ants, Armyworms, Brown dog tick,
Chinch bugs, Clover mite,
Crickets, Cutworms, Earwigs, Fleas,
Grasshoppers, Sod Webworms, Ticks

3+ fl. oz. Chiggers,
(90 ml)

REMARKS: Spray when pests first appear, repeat when needed. For sod webworms delay watering or moving the treated areas to 12 to 24 hours after treatment.

Turfgrass (Hyperodes) weevil

6 fl. oz.
(180 ml)

REMARKS: Spray suspected problem areas in mid-April and again in mid-May or as recommended by your local Agricultural Extension Service specialist for your area.

White grubs (European chafer and
Japanese Beetle larvae only)

6 to 12 fl. oz.
(180 ml to 360 ml)

REMARKS: 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 for your area. Immediately after spraying, irrigate the treated area with 1/2 to 1 inch of water to wash the insecticide into the underlying soil.

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Bluegrass billbug

6 to 12 fl. oz.
(180 to 360 ml)

REMARKS: Spray early in the season when adults appear. Repeat as needed.

+1 1/2 fl. oz. per 1000 sq. ft. = 7 1/2 fl. oz. per 5000 sq. ft.
= 1 pint per 10,700 sq. ft. - 2 quarts per acre.

ATTENTION: Do not allow public use of treated areas during application or until spray has dried.

AREA CONTROL OF TICKS AND CHIGGERS: Use Chlorpyrifos 1E to control ticks and chiggers infesting noncropland 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 1E in water at the rate of 2 pints per acre (equivalent to 1 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 and burlapped nursery stock. Use Chlorpyrifos 1E 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 1E diluted at the rate of 16 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 occurred, normally about 30 seconds. Wear rubber gloves, boots and apron during this operation. Treatment of fire ant mounds. Apply Chlorpyrifos 1E as a drench diluted at the rate of 2 fl. oz. (60ml) per 2 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 degrees 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.

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.

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