



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

JUL 28 2000

Mr. Matt Talley
MicroFlo Company
P.O. Box 772099
Memphis, TN 38117-2099

Subject: Chlorpyrifos 2E AG, Chlorpyrifos MOA
EPA File No. 51036-257
Submission dtd July 5, 2000

Dear Mr. Talley:

The revised labeling referenced to above, submitted in connection with the registration under the Federal Insecticide, fungicide, and Rodenticide Act (FIFRA) as amended, is acceptable. A stamped copy of the label is enclosed for your records. This amendment does not involve a use deletion and therefore does not require publication of a Federal Register Notice.

As specified in the June 2000 Memorandum of Agreement Between the Environmental Protection Agency and the Signatory Registrants Regarding the Registration of the Pesticide Products Containing Chlorpyrifos (MOA), the conditions of paragraph 10 are accepted by the Agency as conditions of the subject registration. Failure to comply with any of the conditions of registration set forth in the MOA shall be grounds for cancellation of the affected registration(s) under FIFRA section 6(e).

This amended label is effective Dec 1, 2000 as specified in paragraph 5 in the MOA. If you have questions, please contact me at (703) 308-6742 or electronically at McNeilly.Dennis@EPA.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Dennis McNeilly", is written over the typed name.

Dennis McNeilly, Chemist
Insecticide-Rodenticide Branch
Registration Division (7505C)

Enclosure (1): Stamped label



Recycled/Recyclable
Printed on paper that contains
at least 75% recycled fiber

RESTRICTED USE PESTICIDE

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

CHLORPYRIFOS 2E AG

Insecticide

For control of various insects infesting alfalfa and cotton

Active Ingredient:	Ingredient:
Chlorpyrifos: 0,0-diethyl-O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate	24.66%
Inert Ingredients:	75.34%
TOTAL	100.00%

Contains 2 pounds of chlorpyrifos per gallon.
Composition of inert ingredients includes xylene.

KEEP OUT OF REACH OF CHILDREN

WARNING

AVOID

ACCEPTED

JUL 28 2000

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide Registered under EPA Reg. No. 51036-257

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

FIRST AID

Organophosphate

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. Do not give anything by mouth to an unconscious person.

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

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

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.

EPA Reg. No. 51036-257

EPA Est. No. 51036-GA-1

Manufactured By:
MICRO FLO COMPANY
P.O. BOX 772099
MEMPHIS, TN. 38117-2099

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

May Cause Eye Injury. Harmful if swallowed or absorbed through the skin. Do not get in eyes, on skin, or on clothing.

EMERGENCY TELEPHONE NUMBERS: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact:

- (800) 424-9300 CHEMTREC (transportation and spills)
- (800) 900-4044 Poison Control Center (human health)
- (800) 345-4735 ASPCA (animal health)

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category F on an EPA chemical resistance category selections chart. Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, or Viton
- Shoes plus socks
- 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/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. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds and wildlife, and extremely toxic to fish and aquatic organisms. 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 when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Protective information may be obtained from your Cooperative Agricultural Extension Service.

PHYSICAL OR CHEMICAL HAZARDS

Flammable-Do not use or store near heat sources or open flame. Do not use in the vicinity of pilot lights.

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

NOTICE: Read the entire label. Use only according to label directions. In case of emergency endangering health or the environment involving this product, call 800-451-8461.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying. 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. 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 exemptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of \pm 24 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:

- Coveralls
- Chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, or Viton
- Shoes plus socks
- Protective eyewear

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 puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

Chlorpyrifos 2E AG insecticide controls various insects infesting alfalfa and cotton. Chlorpyrifos 2E AG forms an emulsion when diluted with water and is suitable for use in all conventional spray equipment.

General Use Precautions

Chlorpyrifos 2E AG is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply when bees are foraging or clustered outside of hives. Information on methods of protecting bees from insecticide damage may be obtained from your Agricultural Extension Service.

Chemigation: Do not apply Chlorpyrifos 2E AG through any type of irrigation system.

Mixing Directions

Partly fill spray tank with water. Start agitation, and add the required amount of Chlorpyrifos 2E AG. Continue agitation and finish filling spray tank to required spray volume. Maintain sufficient agitation during mixing and application to insure uniformity of the spray mixture.

Application Guidelines

Proper application techniques are necessary to insure thorough spray coverage and correct dosage required for effective insect control. The following recommendations should be followed when applying Chlorpyrifos 2E AG.

Aerial Application

Shorten boom length if necessary to prevent spray from entering vortices generated by wing tips or helicopter rotors. Reduce swath width when the wind direction is parallel to the direction of spraying. A flying height of 5 to 15 feet above the target surface is recommended to achieve optimum coverage. Use permanent swath markers or flagging for aerial application. Proper nozzle arrangement and swath width are required to prevent variability in the spray pattern and insure proper spray deposition. Spray boom nozzle orientation affects the amount of droplet break-up which occurs. More break-up occurs when nozzle orientation is changed from straight back (parallel) to straight down (at a right angle) to the air flow over the boom. The desired droplet size (100 to 200 microns) is obtained by setting the nozzle orientation somewhere between these two extremes. Spray pattern deposition, droplet size distribution and effective swath width can be evaluated by application of sprays containing a water-soluble dye over a paper tape (adding machine tape).

Ground Application

Use power-operated equipment capable of thorough coverage of the target crop. Use flat fan or disc-core hollow cone nozzles. Refer to manufacturer's recommendations on nozzle spacing, boom height and operating pressure to obtain uniform coverage. Swath width should not exceed boom width. Ideal droplet size (100 to 200 microns) is obtained with a boom spray pressure of 40 to 60 psi. Adjust boom pressure to minimize spray drift. Spray drift is wasted spray and cannot be confined to the target area.

APPROVED CROPS

Alfalfa (For use in Arizona and California)

Use Chlorpyrifos 2E AG to control insects infesting alfalfa by application as a broadcast spray at the dosages indicated:

PEST	APPLICATION RATE
alfalfa caterpillar	1 1/2 to 2 pints per acre
armyworms	2 pints per acre
Egyptian alfalfa weevil	
blue alfalfa aphid	

Apply Chlorpyrifos 2E AG in enough water to ensure thorough coverage of crop foliage using aerial (fixed wing or helicopter) or power-operated ground spray equipment. Chlorpyrifos 2E AG should be applied in 3 to 10 gallons of water per acre. Do not apply in dilutions exceeding 10 gallons (water plus insecticide) per acre. Treat when field counts or crop injury indicates that damaging pest populations are developing or present. Excessively cool conditions may cause a reduction in insect control.

Precautions

Do not tank mix Chlorpyrifos 2E AG with pesticides, surfactants, or fertilizer formulations unless prior use has shown the combination to be non-injurious under current conditions of use. Some phytotoxic symptoms may be observed on young, tender, rapidly growing alfalfa plants or alfalfa plants under extreme heat or drought stress when treated with Chlorpyrifos 2E AG. Alfalfa will outgrow these symptoms and no yield loss is expected.

This product is highly toxic to bees exposed to direct treatment. Do not apply if nearby bees are clustered outside of hives and bees are foraging. Protective information may be obtained from your Agricultural Extension Service.

Do not apply through overhead sprinkler irrigation systems.

Restrictions

Do not cut or graze treated alfalfa within 4 days after application of 1 1/2 to 2 pints of Chlorpyrifos 2E AG per acre. Do not make more than 4 applications per year or apply more than one time per crop cutting.

Cotton (For Use in Arizona and California)

Use Chlorpyrifos 2E AG to control the following pests at the dosages indicated:

PEST	APPLICATION RATE
armyworm cotton aphid cotton fleahopper Lygus salt marsh caterpillar thrips cotton bollworm tobacco budworm boll weevil cutworm pink bollworm	2 pints per acre

Note: The 2.0 pint rate per acre will aid in the suppression of cotton leaf perforator and spider mites.

Chlorpyrifos 2E AG may be applied undiluted (0.25 gallons/acre) or in up to 10 gallons of total spray volume per acre using aerial (fixed wing or helicopter) or power-operated ground equipment. Do not exceed 10 gallons total spray volume per acre. Treat when field counts indicate damaging insect populations are

developing or present. Re-treat as necessary to maintain control.

Special Guidelines for Bollworm and Budworm Control

For the most effective control of bollworms and budworms, scout fields twice a week and apply Chlorpyrifos 2E AG when worms are 1/4 inch or less in length. The following table illustrates the size of worms in relation to age and stage of development (instar) as a guide to timing treatments for optimum control.

When to Treat	Age (Days)	Average Size	Instar
Treat worms from "Hatch" through "II" Instar	Hatch 3 5* 6 8	1/16" 3/32" 9/32" 7/16" 11/16"	Hatch I II III IV
1/16" 3/32" 9/32" 7/16" 11/16"	(pictures of worms to right of these dimensions)		

***Note:** A scouting schedule of once per week is inadequate since hatching worms will have exceeded ideal size for control (hatch through II instar) before the next scouting observation has determined the need to spray.

Restrictions

Do not apply Chlorpyrifos 2E AG within 40 days before harvest.
Do not allow livestock to graze in treated areas.
Do not feed gin trash or treated forage to livestock.

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