



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg.  
Number:

51036-  
257

Date of Issuance:

APR 08 1996

NOTICE OF PESTICIDE:

X Registration  
     Reregistration

(under FIFRA, as amended)

Term of Issuance: Until  
Reregistration

Name of Pesticide Product:

Chlorpyrifos 2E AG

Name and Address of Registrant (include ZIP Code):

Micro Flo Company  
P.O. Box 5948  
Lakeland, Florida 33807-5948

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) 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; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the following label change before you release the product for shipment:

- a. Revise the EPA Registration Number to read, "EPA Reg. No. 51036-257".
- b. Revise the statement "Applicators other handlers must wear" on page 2 of the proposed labeling to read "Applicators and other handlers must wear".

Signature of Approving Official:

DTE

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

Date:

APR 08 1996

- b. Under "Environmental Hazards" replace the statement "Avoid...foraging" with "Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area".

3. Submit one copy of the revised final printed label for the record 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 label is enclosed for your records.

Sincerely,

*DHE*

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

Enclosure

# CHLORPYRIFOS 2E AG

Insecticide

For control of various insects infesting alfalfa and cotton

Active Ingredient:

Chlorpyrifos: O,O-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

AVISO

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

## STATEMENT OF PRACTICAL TREATMENT (First Aid)

Organophosphate insecticide.

IF SWALLOWED: Do not induce vomiting. Contains aromatic petroleum solvent. Call a physician or Poison Control Center immediately.

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

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

IF INHALED: Remove to fresh air if effects occur. Get medical attention.

Note to Physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance 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 antidote immediately after establishing an open airway and respiration.

EPA Reg. No. 51036-

EPA Est. No. 51036-GA-1

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

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

APR 08 1996

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

51036-257

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.

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 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: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 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. Avoid use when bees are actively foraging. 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 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:

- 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 Egyptian alfalfa weevil blue alfalfa aphid	2 pints per acre

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 cottonleaf 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.