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

EPA Reg. Number:
67760-22

Date of issuance:
APR 15 1996

NOTICE OF PESTICIDE:
 Registration
 Reregistration

Term of Issuance: Until
Reregistration

Name of Pesticide Product: Cheminova
Chlorpyrifos 4E-AG-SG

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Cheminova Inc.
1700 Route 23, Suite 210
Wayne, New Jersey 07470

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 changes:
 - a. Revise the EPA Registration Number to read, "EPA Reg. No. 67760-22."
 - b. Verify that the Spanish text under "Keep Out Of Reach of Children/Warning" is an accurate translation of the proper precautionary statement.
 - c. Revise the First Aid/If on skin to "Wash with plenty of soap and water. Get medical attention."

Signature of Approving Official:

Date:

APR 15 1996

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

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d. Revise the First Aid/If inhaled to "Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention."

e. Revise the Hazards to Humans and Domestic Animals section to "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."

f. Revise the second sentence of the Personal Protective Equipment section to "If you want more options, following the instructions for category G on an EPA chemical resistance category selection chart."

g. In the last paragraph of the Personal Protective Equipment section correct the spellings of "materials," "maintaining," and "separately."

h. Revise the User Safety Recommendations to "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."

i. Revise the last sentence of the Environmental Hazards section to "Do not contaminate water by cleaning of equipment or disposal of equipment washwaters."

j. In the last paragraph of the Agricultural Use Requirements correct the spelling of "Worker."

k. In the Agricultural Use Requirements revise the section on gloves to "Chemical resistant gloves, such as barrier laminate or Viton."

l. Revise the second sentence of the Container Disposal directions to "Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning."

1. In the second paragraph of the Mixing Directions, revise the third sentence to "When tank mixtures of Chlorpyrifos 4E-AG-SG and herbicides are involved, add wettable powders first, flowables second, and emulsifiable concentrates last."

m. In the Sprinkler Irrigation/Special Use Directions revise the fourth sentence to "Determine the amount of insecticide needed to cover the desired acreage. Pump the required Chlorpyrifos 4E-AG-SG into a steel tank..."

3. Submit two copies of the revised final printed label for the record.

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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 yours,

DHE

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

Enclosure

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CHEMINOVA CHLORPYRIFOS 4E-AG-SG

Insecticide

RESTRICTED USE PESTICIDE

DUE TO ACUTE TOXICITY TO AVIAN AND AQUATIC ORGANISMS

For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

For distribution and use only in Arizona, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and Wyoming.

For control of aphids, including Russian wheat aphid and grasshoppers infesting wheat.

Active Ingredient:

Chlorpyrifos: O,O-diethyl-O-(3,5,6-trichloro-2-pyridinyl)

Phosphorothioate.....44.7%

*Inert Ingredients.....55.3%

*Contains xylene range aromatic solvents

Contains 4 pounds of chlorpyrifos per gallon.

EPA Reg. No. 67760 -- EPA Est. 51036 - GA- Net Contents -----Gallons

KEEP OUT OF REACH OF CHILDREN

WARNING

AVISO:

Percussion al usuario: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada amplemente.

FIRST AID:

If swallowed: Do not induce vomiting. Contains xylene range aromatic petroleum solvent. Call a physician or Poison Control Center immediately.

If in eyes: Flush with plenty of water for at least 15 minutes. Get medical attention.

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.

ACCEPTED
with COMMENTS
in EPA Letter Dated
APR 15 1995
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
67760-22

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

May be Fatal if Swallowed. Harmful If Absorbed Through Skin. Causes Substantial But Temporary Eye Injury. Causes Skin Irritation.

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 F on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as barrier laminate, or butyl rubber or nitrile rubber or Viton.
- Shoes plus socks.
- Protective eyewear.
- Dust/mist filtering respirator (MSHA/NIOSH), approval number prefix TC-21C.

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.

PHYSICAL OR CHEMICAL HAZARDS

Combustible - Do not use or store near heat or open flame. Do not cut container.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds and wildlife, and extremely toxic to fish and aquatic organisms. 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.

Bee Caution: 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.

ENGINEERING CONTROLS STATEMENTS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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 (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 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 regulations.

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, or butyl rubber, or nitrile rubber, or Viton.
- Shoes plus socks.
- Protective eyewear.

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STORAGE AND DISPOSAL

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

Storage: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50 to 70°F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

Pesticide Disposal: Open dumping is prohibited. 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.

GENERAL INFORMATION

Chlorpyrifos 4E-AG-SG insecticide forms an emulsion when diluted with water and is suitable for use in all conventional spray equipment. Consult your state experiment station or state extension service for proper timing of applications.

GENERAL USE PRECAUTION

Do not use on turf or for structural pest control. Do not formulate this product into other end use products.

Mixing Directions

To prepare the spray, add a portion of the required amount of water to the spray tank and with agitation add the Chlorpyrifos 4E-AG-SG. Complete filling the tank with the balance of water needed. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture.

Chlorpyrifos 4E-AG-SG may also be used in tank mixtures with certain herbicides and /or with non-pressure fertilizer solutions as recommended under specific crop use directions. Prepare tank mixtures in the same manner as recommended above for use of Chlorpyrifos 4E-AG-SG alone. When tank mixtures first of Chlorpyrifos 4E-AG-SG and herbicides are involved, add wettable powders first, flowables second, and emulsifiable concentrates last. Where a fertilizer solution is involved, it is strongly recommended that a fertilizer pesticide compatibility agent such as Unite or Compex be used. Maintain constant agitation during both mixing and application to ensure uniformity of the spray mixture. Do not allow spray mixtures to stand overnight.

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Note: Test compatibility of the intended tank mixture before adding Chlorpyrifos 4E-AG-SG to the spray or mix tank. Add proportionate amounts of each ingredient to a pint or quart jar; cap shake, and let set 15 minutes. Formation of precipitates that do not readily redisperse indicates an incompatible mixture that should not be used.

**Sprinkler Irrigation
Special Use Directions**

The following use directions are to be followed when Chlorpyrifos 4E-AG-SG is applied through sprinkler irrigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injector with soap and water. Determine the required Chlorpyrifos 4E-AG-SG into a steel tank, start mechanical or hydraulic agitation, and add in order the non-emulsifiable oil and/or water. Continually agitate the mixture containing Chlorpyrifos 4E-AG-SG. Set the sprinkler system to deliver the desired inches of water per acre. Start the water pump and sprinkle, and let the system achieve the desired pressure and speed before starting the injector. Start the injector and calibrate the injector system according to number 14 in "Special Use Precautions". The mixture containing Chlorpyrifos 4E-AG-SG must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.

SPECIAL USE PRECAUTIONS

The following use precautions will result in a safe and successful application of mixtures containing Chlorpyrifos 4E-AG-SG.

1. Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, microsprinkler, or hand move. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, you should contact state extension service specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

5. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
6. The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information.
7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
8. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
10. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
11. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. The metering pump must provide a greater pressure than that of the irrigation system at the point of injection. The pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70 and must contain Viton or Teflon seals.
12. To insure uniform mixing of the insecticide into the water line, inject the mixture through a nozzle placed in the fertilizer injection port or just ahead of an elbow or tee in the irrigation line so that the turbulence created at those points will assist in mixing. It is suggested that the injection point be higher than the insecticide tank to prevent siphoning.
13. The steel tank holding the insecticide mixture should be large enough to allow the system to complete a revolution with one filling. It should be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injector pump.

- 14. In order to calibrate the irrigation system and injector to apply the mixture containing Chlorpyrifos 4E-AG-SG, determine the following: 1) Calculate the number of acres irrigated by the system, 2) Set the irrigation rate and determine the number of minutes for the system to cover the intended treatment area, 3) Calculate the total gallons of insecticide mixture needed by the number of minutes to cover the treatment area. This value equals the gallons per minute to milliliters or ounces per minute output that the injector must deliver. Calibrate the injector pump with the system in operation at the desired irrigation rate. It is suggested that the injector pump be calibrated at least twice before operation, and the system should be monitored during operation.
- 15. Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application, if they irrigate nontarget areas.
- 16. Do not allow irrigation water to collect or runoff and pose a hazard to livestock, wells, or adjoining crops.
- 17. Do not apply through sprinkler systems which deliver a low coefficient of uniformity such as certain water drive units.

APPROVED CROPS

**WHEAT
USE AND DOSAGE RECOMMENDATIONS**

Apply Chlorpyrifos 4E-AG-SG at the rate of 1/2 to 1 pint per acre(0.25 to 0.5 lb ai/acre) to control aphids (including Russian wheat aphid) and grasshoppers. Mix the required dosage with water and apply in a minimum of 2 gallons per acre finished spray volume. Apply using aerial (fixed wing or helicopter) or power-operated ground spray equipment. Chlorpyrifos 4E-AG-SG may also be applied through sprinkler-irrigation systems. If anyone sees dead birds or fish which may have been killed by chlorpyrifos, please call 1-800-258-3033.

Restrictions:

- Do not make more than two applications per crop.
- Do not apply closer than 28 days before harvest.
- Do not allow livestock to graze or otherwise feed treated forage to livestock within 14 days of application

Do not feed straw from treated wheat within 28 days after application

Do not apply directly to bodies of water.

Do not apply product where runoff is likely to occur to aquatic habitats (including lakes, public reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries or other natural waters).

Do not apply when weather conditions favor drift or runoff from treated areas.

Ground Application

For ground applications, the distance from treated areas to aquatic habitats (including lakes, public resevoirs, rivers permanent streams, marshes, natural ponds, estuaries or other natural waters) must be 30 feet or more.

Do not make ground applications if wind speed is greater than 15 mph.

Do not apply at spray boom pressures greater than 45 psi.

Aerial Application

Do not apply by air within 300 feet of aquatic habitats(including lakes, public reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries or other natural waters).

Do not make aerial applications of Chlorpyrifos 4E-AG-SG when wind speeds exceed 10 mph or when an atmospheric temperature inversion exists.

Boom length should not exceed 75% of the wing span and release height for aerial applications should be no greater than 10 feet above the crop canopy.

NOTICE: Because Cheminova, Inc. has no control over storage, handling and conditions of use which are of critical importance, Cheminova, Inc. makes no representation or warranty, either express or implied, concerning this product, due to misuse, improper handling or storage of this material. Nor does Cheminova, Inc. assume any responsibility for injury to persons, animals, soil or property arising out of misuse, improper handling or storage of this material.

ATTENTION: Do not use in any manner other than recommended on this label.