

MAY 29 1987

**BEST AVAILABLE COPY**

Ms. Carol D. Campbell  
Drexel Chemical Company  
P.O. Box 9306  
Memphis, TN 38109

Dear Ms. Campbell:

Subject: Drexel Methoxychlor 4L Insecticide  
EPA Registration No. 19713-118  
Your Application Dated March 17, 1987

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
  - a. Under the Directions for Use in empty grain bins add "Allow bins to air and dry before refilling with grain, 2 to 4 weeks."
  - b. After the PHI instructions for asparagus delete "remove residues by washing or blanching." Indicate a 3-day PHI only.
  - c. For beans, indicate a PHI of 7 days. Delete "apply within 3 days of harvest if vines are not used for feed or forage."
3. Submit five (5) copies of your final printed labeling before you release the product for shipment.

85113:I/C:Edwards:193093:E-10:KENCO:4/20/87:4/29/87:de:EK:VO:BJP

CONCURRENCES

SYMBOL	ORIGINATOR							
SURNAME								
DATE								

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If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

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

Sincerely yours,

Dennis Edwards  
Acting Product Manager (12)  
Insecticide-Rodenticide Branch  
Registration Division (TS-767C)

Enclosure



## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Do not breathe spray. Wash thoroughly after handling and before eating or smoking. Keep away from food, feedstuffs or water supplies.

### ENVIRONMENTAL HAZARDS

This product is toxic to fish, birds and other wildlife. Do not apply directly to lakes, streams or ponds. Shrimp and crab may be killed at application rates recommended on this label. Do not apply where these are considered important resources. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label. This product is highly toxic to bees exposed to direct treatment or to residues on plants. Protective information may be obtained from your Cooperative Agricultural Extension Service.

### PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

### GENERAL INFORMATION

METHOXYCHLOR 4L Insecticide should be used only in accordance with the recommendations on this label. NOTE: PHI stands for Preharvest Interval.

### DIRECTIONS FOR USE

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

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

### REENTRY STATEMENT

Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

## VEGETABLES

ASPARAGUS - Asparagus Beetles: 1 to 2½ qt. per acre. PHI: If applied within 3 days of harvest, remove residues by washing or blanching.

BEANS, BLACK-EYED PEAS - Corn Earworm, Cucumber Beetles, Fall Armyworm Alfalfa and Garden Webworms, Flea Beetles, Mexican Bean Beetle, Potato Leafhopper, Bean Leaf Beetle, Japanese Beetle, Rose Chafer, Cowpea Curculio: 1 to 3 qt. per acre. PHI: 7 days, apply within 3 days of harvest if vines are not used for feed or forage.

BRUSSELS SPROUTS, BEETS, BROCCOLI, CABBAGE, CANTALOUPE, CARROT, CAULIFLOWER, COLLARD, EGGPLANT, KALE, KOHLRABI, LETTUCE, PEPPER, RADISH, RUTABAGA, SPINACH, TURNIP - Blister Beetles, Flea Beetles, Leafhoppers, Alfalfa Looper, Fall Armyworm, Japanese Beetle, Imported Cabbageworm: 1 to 2½ qt. per acre. PHI: 14 days except cauliflower, radishes and rutabagas, 7 days; cabbage, 3 days; eggplant, kohlrabi, and pepper, 7 days (1 day at 1 3/4 qt. per acre or less).

CORN - Fall Armyworm, Armyworm, Japanese Beetle, Flea Beetles, Rose chafer: 1 to 2½ qt. per acre. PHI: 7 days.

CUCUMBER, MELONS, PUMPKIN, SQUASH, SUMMER SQUASH - Squash Vine Borer, Fall Armyworm, Cucumber Beetles, Flea Beetles - 1 to 3 qt. per acre. PHI: 1 day for rates of 1 3/4 qt. per acre and below; otherwise, 7 days.

PEAS - Alfalfa Looper, Pea Weevil (to foliage early bloom before eggs are laid and again 5 days later). Bean Leaf Beetle: 1 to 3 qt. per acre. PHI: NONE.

POTATO (Irish) - Colorado Potato Beetle, Flea Beetles, Fall Armyworm, Leafhoppers, Blister Beetles: 1 to 2½ qt. per acre. PHI: NONE.

SWEET POTATO, YAM - Fall Armyworm, Flea Beetles - 1 to 2½ qt. per acre. PHI: NONE.

TOMATO - Colorado Potato Beetle, Flea Beetles, Fall Armyworm, Leafhoppers, Blister Beetles: 1 to 3 qt. per acre. PHI: 1 day for rates of 1 3/4 qt. and below, otherwise, 7 days.

## FARM BUILDINGS

(Except Poultry Houses)

For control of Stable flies, House flies, Face flies, Fleas, Mosquitoes: Use 2 pt. in 2½ gal. of water. Apply 1 gal. of spray to 500 sq. ft. of surface, treating walls, floors, cracks, crevices, baseboards pet bedding, stalls, and pens. Such heavy deposits usually are effective for 3 to 6 weeks unless removed by weathering or other means. Care should be taken to avoid contamination of milk handling equipment, feed stuffs, feed troughs and water receptacles. Dairy animals should not be present while spraying. The use of any residual fly spray should be supplemented with proper sanitary measures, including spraying or removal of breeding sources such as manure in and around buildings.

Dairy animals should not be present while spraying.

MUSHROOM HOUSES - Mushroom Fly: Use 2 pt. in 3 gal. of water; apply 1 gal. of spray to 500 sq. ft. of beds, walls, floors, and posts. Apply 3 weeks and 1 week before emergence of mushrooms. Do not apply after mushrooms appear in bed.

GRAIN STORAGE BINS, ELEVATOR TUNNELS (GALLERY FLOOR, HEADHOUSE) PEANUT WAREHOUSES, FREIGHT CARS, GRAIN TRUCKS, SHIPS' HOLDS

Aids in control of Cadelle, flat Grain Beetle, Saw-Toothed Grain Beetle, Lesser Grain Borer, Red Flour Beetle, Long-Headed Flour Beetle, Rice Weevil, Granary Weevil, Confused Flour Beetle, Foreign Grain Beetle and Hairy Fungus Beetle: Use 2 pt. in 2½ gal. of water; apply 1 gal. of spray per 500 sq. ft. of surfaces. Treat when empty.

#### STORED SEED

SEED POTATOES - Potato Tuberworm: Sprinkle METHOXYCHLOR 4L over potatoes at 1.9 oz. (in enough water to provide thorough coverage) per 100 lb. before placing in storage. Do not use treated seed for food or feed purposes.

#### MOSQUITO BREEDING AREAS

MOSQUITO CONTROL: METHOXYCHLOR 4L Insecticide is effective for controlling both adult and larval mosquitoes on non-agricultural lands such as parks, beaches, public dumps and residential areas.

Adult Mosquitoes - Thermal fogging is effective if applied during the active periods of the adults (morning and evening). Avoid fogging when winds exceed 5 m.p.h. as its effectiveness is reduced.

For fogging large areas, prepare a 100 gal. batch of spray material. Mix 1.75 gal. of METHOXYCHLOR 4L Insecticide in 96½ gal.

For fogging smaller areas, mix 0.5 pt. of METHOXYCHLOR 4L Insecticide in 4 7/8 gal. of light fuel oil (5 gal. batch) and apply 5 gal./A.

Adult Mosquitoes - Mist blowers or sprayer equipment require mixing of the METHOXYCHLOR 4L Insecticide with water. For mist blowers or sprayers, mix 2 gal. of METHOXYCHLOR 4L Insecticide with 96 gal. of water and apply 5 to 7 gal/A.

For spraying smaller areas, mix .75 pt. of METHOXYCHLOR 4L Insecticide in 4 7/8 gal. of water (5 gal. batch) and apply 5 gal. per acre.

For aerial application over large land masses at low volume, mix .5 gal. of METHOXYCHLOR 4L Insecticide in 15 gal. of light fuel oil and apply approximately 4 gal./A.

For mosquito larval control, mix .5 pt. of METHOXYCHLOR 4L Insecticide in either light fuel oil or water to make 10 gal. of spray. Apply to 1 acre of marshland, swamp or low lying areas. Thorough, even coverage is essential for effective control. Repeat application as infestation warrants. Apply only to known mosquito breeding sites.

#### FLOWERS, ORNAMENTALS

For control of Blister Beetles, Cankerworms, Cucumber Beetles, Flea Beetles, Fleahoppers, Flower Thrips, Japanese Beetle, Leafhoppers, Rose Chafer, Rose Slugs (sawflies): Use 1 to 1½ qt. per 100 gal. of water, or .32 oz. per gallon; spray thoroughly to runoff. Begin applications when insects first appear and repeat at 7 to 14 day intervals or as needed.

#### FOREST AND SHADE TREES

For control of the following insects (see table), Use 6% methoxychlor solution with a mist blower at rates recommended in the following table.

Mix ½ gal. METHOXYCHLOR 4L Insecticide per 3 gal. of water for mist blower solution, or ½ to 1 qt. METHOXYCHLOR 4L Insecticide per 100 gal. of water for conventional sprayer.

PINTS OF 6% SOLUTION PER TREE  
Tree Height

Insects	35-50'	50-65'	65-80'	80-120'	Gal./A
Cankerworm	2	2	3	4	2
Eastern Tent Caterpillar	2	2	3	4	2
Elm Leaf Beetle	2	4	6	8	
Fall Webworm	0.5	1	2	3	1
Forest Tent Caterpillar	1	1.5	2	3	2
Gypsy Moth	0.5	1	2	2	2
Japanese Beetle	2	4	4	4	3
Lace Bugs (Oaks and Sycamore)	1.5	2	3	4	2
May Beetle	1.5	2	3	4	2
Tussock Moth	2	2	3	4	2

## PREPARATION OF SPRAY SOLUTIONS

12% Spray: Dilute 1 part METHOXYCHLOR 4L Insecticide with 2 parts of water.

6% Spray: Dilute 1 part METHOXYCHLOR 4L Insecticide with 6 parts of water.

2% Spray: Dilute 1 part METHOXYCHLOR 4L Insecticide with 24 parts of water.

1% Spray: Dilute 1 part METHOXYCHLOR 4L Insecticide with 48 parts of water.

Control of Elm Bark Beetle (Vectors of Dutch Elm Disease) - Apply first application before elm flowers or leaves sprout using a 12% spray solution of METHOXYCHLOR 4L Insecticide with a mist blower, or a 2% spray solution in a conventional sprayer. This application will usually be applied in March in the Southern States and in April in the Northern States. Use 2 to 3 gal. of spray solution, wetting all surfaces thoroughly.

Second application should be made 2½ to 3 months after the first treatment. Reduce the active ingredient to 6% for mist blower, and 1% for conventional sprayer. Cover all leaf and bark surfaces.

Control of Elm Leafhopper (Vectors of Elm Phloem Necrosis) - Apply first application when elm leaves are fully grown. Use 6% spray solution of METHOXYCHLOR 4L Insecticide with a mist blower, or a 1% spray solution in a conventional sprayer. This application will be made in May in the Southern States and in June in the Northern States. Thoroughly cover all leaf surfaces. When second flush of growth appears, usually 1 to 2 months after first treatment, repeat the above application covering all leaf surfaces thoroughly.

In those states where both elm leafhopper and elm leaf beetle are known to be present, a three spray schedule will provide effective control. Apply protective spray before elm flowers or leaves sprout, follow with second protective spray 2½ to 3 months after the first. Then apply the third protective spray about 1 to 3 months after the second protective spray. Be sure to thoroughly cover all bark and foliar surfaces with each protective spray.

## AGRICULTURAL CROPS

Apply METHOXYCHLOR 4L Insecticide at recommended rates as a spray with ground or aerial equipment to thoroughly cover foliage and fruit. Mix METHOXYCHLOR 4L Insecticide in water using the appropriate volume of water for equipment to be used (for example, 5 to 20 gal./A

for aircraft or ground concentrate sprayers and greater amounts for high volume sprayers). Continuous agitation is required to keep the material in suspension. For small areas, use .32 oz. of METHOXYCHLOR 4L Insecticide per gal. of water and apply as a thorough coverage spray.



## FORAGE AND FIELD CROPS

ALFALFA, CLOVER, COWPEA, FORAGE GRASSES - Alfalfa Caterpillar, Alfalfa Weevil (larvae), Clover Leaf Weevil, Blister Beetles, Leafhoppers, Cucumber Beetles, Mexican Bean Beetle, Webworms, Fall Armyworms, Armyworm, Cowpea Curculio, Flea Beetles, Japanese Beetle, Pea Weevil, Spittlebugs, Velvet Bean Caterpillar: 1 to 3 qt. per acre. PHI: 7 days.

PEANUT, SOYBEAN - Velvet Bean Caterpillar, Mexican Bean Beetle, Japanese Beetle, Blister Beetles, Garden Webworm, Alfalfa Webworm, Cowpea Curculio, Leafhoppers, Fall Armyworm: 1 to 3 qt./A. PHI: 7 days.

## FRUITS

APPLE, PEAR, QUINCE - Apple Maggot, Codling Moth, Japanese Beetle, Plum Curculio, Tent Caterpillars: 3 3/4 to 7 1/2 qt./A or 1 to 1 1/2 qt./100 gal. of water at 350 to 500 gal./A. PHI: 7 days for cherries, plums, prunes; 21 days for apricots, nectarines, peaches.

BLUEBERRY, CRANBERRY, CURRANT, GOOSEBERRY - Japanese Beetle, Cranberry Fruitworm, Leafhoppers, San Jose Scale (crawlers): 1 to 3 qt./A or 1 to 1 1/2 qt. per 100 gal. water at 100 to 200 gal./A. PHI: 14 days.

BLACKBERRY, LOGANBERRY, RASPBERRY, BOYSENBERRY, DEWBERRY, YOUNGBERRY, STRAWBERRY - Rose Chafer, Strawberry Weevil, Flea Beetles, Omnivorous Leaf Tier, Spittlebugs, Japanese Beetle: 1 to 1 1/2 qt./A or per 100 gal. water/A. PHI: 14 days

GRAPE - Berry Moth, Grape Leafhopper, Japanese Beetle, Leaf Skeletonizer, Rose Chafer: 1 to 3 qt./A or 1 to 1 1/2 qt. per 100 gal. water at 100 to 200 gal./A. PHI: 14 days.

## LIVESTOCK

BEEF CATTLE, NON-LACTATING SHEEP, SWINE, GOATS AND DAIRY CATTLE:  
For control of Hornflies, Lice and Fleas: Repeat treatment every 3 weeks as needed; may be used on young dairy animals up to two weeks of freshening.

Spray or Dip - Use 1 qt. in 25 gal. of water. As a spray, wet animals to the skin. For control of tail louse of cattle, use 2 to 3 qt. in 25 gal. of water and apply as a spray on infested tail only. Do not dip cows under 1 month of age.

Hogs - For control of lice, use ½ qt. METHOXYCHLOR 4L Insecticide to 12½ gal. water applied as a drenching spray.

CONTACT AND SPACE SPRAY FOR FLIES - To reduce populations of houseflies and stable flies in farm buildings (except poultry houses), in barnyards, in alleys, on dumps and other outdoor locations, dilute ½ pt. of METHOXYCHLOR 4L Insecticide with 2½ gal. of water and apply in space by mist blower or directly to flies by hydraulic sprayer, hand sprayer or cylindrical pressure sprayer. Care should be taken to avoid contamination of milk handling equipment, feedstuffs, feed troughs and watering receptacles. Dairy animals should not be present while spraying.

COMPATIBILTITY - Do not use this product with any spray materials which are incompatible with oil. Do not apply within 14 days of sulfur or sulfur - product applications.

#### SEED TREATMENT DIRECTIONS

Add METHOXYCHLOR 4L Insecticide to cool tap water and mix thoroughly for 15 minutes to prepare the METHOXYCHLOR 4L dilution.

Add 1.25 oz. of a suitable liquid dye\* to each 5 gal. of the METHOXYCHLOR 4L dilution and mix for an additional 10 minutes.

Add mixture of METHOXYCHLOR 4L Insecticide dilution and dye to seed at the following rate in any seed applicator assuring complete and uniform coverage. This product is normally used in a liquid or slurry seed treater, but can be mixed by hand with a wooden paddle.

Seed	Fluid ozs. of Concentrate Diluted to 1 gal.	Application Rate (concentrate of diluted product per 100 lb. of seed)
Beans (Snap & Dry) Soybeans, Cowpeas, Peanuts	0.9	240
Corn (Field)	1.1	270
Peas, Lima Beans, Lentils	0.9	370
Sesame	1.0	320
Rice	0.75	480
Sorghum, Millet	1.0	420

Seed	Fluid oz. of Concentrate Diluted to 1 gal.	Application Rate (concentrate of diluted product per 100 lb. of seed
Cantaloupe, Cucumber, Pumpkin, Squash, Watermelon	1.2	420
Castor Beans, Velvet Beans	1.95	250
Cotton (acid delinted)	1.2	420
Wheat	1.8	270
Rye, Oats	1.4	370
Corn (sweet)	1.2	480
Eggplant, Okra Tomato	1.55	420
Barley	1.9	320
Flax	1.4	530
Beet (Garden), Broccoli, Brussels Sprouts, Cabbage, Carrot, Cauliflower, Collards, Grasses, Kale, Kohlrabi, Endive, Mustard, Lettuce, Pepper, Radish, Small Seed, Legumes, Spinach, Swiss Chard, Turnip, Alfalfa Clover	1.5	580

NOTE: The purchaser of this product is responsible for insuring that all seeds treated with this product are adequately dyed with a suitable color to prevent its accidental use as a food for man or feed for animals; refer to 21 CFR Part 2, Subpart B, Section 2.25. Any dye added to treated seed must be cleared for use under 40 CFR, Part 180, Subpart D, Section 180.1001. Treated seed must be labeled in accordance with all applicable requirements of the Federal Seed Act.

## STORAGE AND DISPOSAL

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

### STORAGE INSTRUCTIONS

Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool dry area away from any heat or ignition source. Avoid storage at high temperatures. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Avoid contamination with acids or alkalis. Store in original containers only. If the contents are leaking or material is spilled, follow these steps:

1. Contain spill, absorb with a material such as saw dust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with water and soap to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in a plastic tub and transfer contents as soon as possible to an empty original container.
6. Do not allow runoff to enter sewer or contaminate water supplies.
7. Dispose of waste by burying in a noncrop area away from water supplies or by incineration.

### 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.

WARRANTY - CONDITION OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests<sup>2</sup> believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

In no case shall Drexel or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by Drexel Chemical Company and is accepted as such by the Buyer.