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OCT 29 1993

Ms. Nancy Hilton  
FMC Corporation  
1735 Market Street  
Philadelphia, PA 19103

Dear Ms. Hilton:

Subject: Amendment - Clarify directions for use; and  
Extend PHIs/Cucumbers, Melons, Pumpkins, Summer Squash,  
Winter Squash, Potatoes, and Sweet Corn  
Thiodan Pyrenone C.O. EC  
EPA Reg. No. 279-2735  
Your label submission dated November 19, 1990

The amendment referred to above, submitted in connection with the above registrations under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided the following revisions are made prior to release for shipment under the amended labeling:

- 1) Based on FMC's data for your "Thiodan 2 C.O. EC", EPA Reg. No. 279-2659, (MRID 41400501 through 41400506), which was developed in response to the Endosulfan Registration Standard with the intent to cover all of your endosulfan emulsifiable concentrate products containing 2 lbs. per gallon of this active ingredient (including those in combination with Pyrenone), the correct signal word for this product is DANGER POISON, with the skull and crossbones symbol in red.
- 2) Replace the current Hazards to Humans (& Domestic Animals) text with text identical to that found on the current label for "Thiodan 2 C.O. EC", EPA Reg. No. 279-2659 (a copy of the first page of that product is enclosed for reference).
- 3) Replace the current Environmental Hazards text with text identical to that found on the current label for "Thiodan 2 C.O. EC", EPA Reg. No. 279-2659 (a copy of the first page of that product is enclosed for reference), with the exception that "Do not apply directly to water or wetlands." should be

replaced by "Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark.". All other sentence in this section as it appears on the "Thiodan 2 C.O. EC" label should be retained as is.

- 4) Be sure to revise the written warnings text for Re-entry to carry the correct signal word, DANGER. Of course, this whole section of the label (and potentially some of the Precautionary Statements, as well) will have to be revised for compliance with the Worker Protection Standard (see below), and must reflect the Toxicity Category I nature of this product.
- 5) In the notes under the crop Tomatoes (Field & Greenhouse), delete "In greenhouse applications, wear a mask or respirator approved by MSA and OSHA for protection against endosulfan.". As indicated in the Hazards to Humans (& Domestic Animals) as revised - see item 2 above, a pesticide mask or respirator is required for all applications of this endosulfan product, whether outdoors or in greenhouses.
- 6) Be sure that the solvent, Xylene Range Aromatic Solvent, appears as a footnote under the ingredients statement and that its percentage is added to the Inert Ingredients percentage. FMC has already submitted a Notification to this effect on December 4, 1990, i.e., shortly after submission of the labeling being reviewed at this time.
- 7) There appears to be an error in the PHI for Tomatoes. On the labels for FMC's Thiodan 3 E.C., Thiodan 50W, and Thiodan 2 Pyrenone 0.3-0.03 EC, the PHI for tomatoes is 2 days. If 2 days is correct, then revise not only this label but also your Thiodan 2 C.O EC (Thiodan Cottonseed Oil) label.

A stamped copy of the label is enclosed for your records. Please submit five copies of the revised amended finished label prior to release for shipment under the amended labeling.

**NOTE:** This acceptance of your label does not relieve you of your obligation to comply with the Worker Protection Standard. If any of your products are covered by this Standard, you are required to submit, and receive the Agency's approval by April 21, 1994, a revised label reflecting the required label statements of 40 CFR

156, published in the **FEDERAL REGISTER** on August 21, 1992 (57 FR 38102). Please refer to PR Notice 93-7 for further guidance. According to 40 CFR 156, subpart K, "No product to which this subpart applies shall be distributed or sold without amended labeling by any registrant after April 21, 1994. Please call 1-800-777-2185 if you have any labeling questions regarding the Worker Protection Standard.

Sincerely,

George T. LaRocca  
Product Manager (13)  
Insecticide Rodenticide Branch  
Registration Division (H7505C)

Code 31111

Net Contents

# Thiodan® Pyrenone® C.O. EC

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## Insecticide

For Agricultural or Commercial Use Only

EPA Reg. No. 279-2735

EPA Est., 279-

Active Ingredients:	By Wt.
*Endosulfan (Hexachlorohexahydromethano-2,4,3-benzodioxathiepin oxide) .....	23.15%
Pyrethrins .....	0.18%
**Technical piperonyl butoxide .....	1.80%
Xylene range aromatic solvent .....	18.00%
Inert Ingredients: .....	56.87%
	100.00%

This product contains 2 pounds Endosulfan ("Thiodan") 0.25 ounce Pyrethrins, and 2.5 ounces piperonyl butoxide (Butacide") per gal.

\*Consists of 1.44% (butylcarbityl) (6-propylpiperonyl) ether and 0.36% of related compounds.

### KEEP OUT OF REACH OF CHILDREN WARNING

### AVISO

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

#### STATEMENT OF PRACTICAL TREATMENT

If swallowed: Call a physician immediately. Drink one or two glasses of water or one ounce of syrup of ipecac, if available, and induce vomiting by touching the back of the throat with finger. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth to an unconscious person.

If inhaled: Remove victim to fresh air. Apply respiration if indicated.

If on skin: Remove contaminated clothing and wash contaminated skin with soap and water.

If in eyes: Flush eyes with plenty of water. Call a physician if irritation persists.

Note to Physician: Endosulfan is a central nervous system stimulant. Treat symptomatically. There is no specific antidote.

For Emergency Assistance Call 716-735-3765

See Other Panels for Additional Precautionary Information.

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

OCT 29 1993

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 279-2735



FMC Corporation  
Agricultural Chemical Group  
Philadelphia PA 19103

#### PRECAUTIONARY STATEMENTS

##### Hazards to Humans (& Domestic Animals)

###### Warning

Hazardous if swallowed, inhaled or absorbed through skin! Do not breathe spray mist. Do not get in eyes, on skin or on clothing. In case of contact, immediately remove contaminated clothing and flush skin or eyes with plenty of water; for eyes, get medical attention. Wash thoroughly with soap and water after handling and before eating or smoking; wear clean clothing. During commercial or prolonged exposure in spray-mixing and loading operations, wear clean synthetic rubber gloves. Wear a respirator jointly approved by the Mining Enforcement and Safety Administration (formerly the U.S. Bureau of Mines) and by the National Institute for Occupational Safety and Health under the provisions of 30 CFR Part 11. Do not apply or allow to drift to areas occupied by unprotected humans or beneficial animals.

#### ENVIRONMENTAL HAZARDS

This product is toxic to fish and wildlife. Keep out of lakes, ponds and streams. Apply this product only as specified on the label. This product is toxic to bees and should not be applied when bees are actively visiting the area. Do not apply where runoff is likely to occur. Do not allow this material to drift onto neighboring crops or non-crop areas or use in a manner or at a time other than in accordance with label directions because animal, plant or crop injury, illegal residues or other undesirable results may occur. Do not contaminate water by cleaning of equipment or disposal of wastes.

#### PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

#### 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 through any type of irrigation system.

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.

Do not enter treated areas for 24 hours unless appropriate protective clothing is worn.

Protective clothing means, at least, a hat or other suitable head covering, a long sleeved shirt and long legged trousers or a coverall type garment (all of closely woven fabric covering the body, including the arms and legs), shoes and socks.

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

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure. An example of such information is given under written warnings. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information:

##### WARNING

Area treated with Thiodan® Pyrenone® C.O. EC on (insert date). Do not enter without appropriate protective clothing for 24 hours (insert State Department of Agriculture's re-entry interval, if more restrictive).

In case of accidental exposure to pesticide spray or dust, wash the skin thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If in eyes, flush with plenty of water. If inhaled, go to an area where the pesticide has not been applied. Get medical attention if needed.

## STORAGE AND DISPOSAL

### Pesticide Storage

Do not store in or around the home.

Do not store below 20°F, (-7°C).

Do not use or store near heat, open flame or hot surfaces.

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC collect: (716) 735-3765.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

### Pesticide Disposal

Pesticide wastes are acutely hazardous. 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 by other procedures approved by state and local authorities. Do not cut or weld metal containers.

Apply the listed amount per acre when insects first appear and repeat as required to maintain effective control. Coverage of upper and lower leaf surfaces is essential for good control. Observe use limitations. Do not use in undiluted form. If insect control is required beyond the following use patterns, supplement the control program with other suitable pesticides.

When applying this material by aircraft, mix the recommended amount with sufficient water to provide a minimum of 1 gallon finished spray per acre. By ground, use a minimum of 25 gallons of water per acre. Where more than 2 quarts of this material are recommended, mix with sufficient water to provide a minimum of finished spray equal to twice the amount of Thiodan Pyrenone C.O. EC used. Observe days interval between last application and harvest indicated by number in ( ) following the crop.

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## ARTICHOKES (7)

Insects Controlled	Rate of Application	Method of Application
Aphids (including Artichoke Aphid, Green Peach Aphid)	1 1/2 to 2 quarts per acre	Make applications when insects appear or feeding is noticed. Apply in a minimum of 25 gallons of water per acre by ground and in a minimum of 10 gallons of water per acre by air.
Artichoke Plume Moth Whitefly	2 quarts per acre	

Do not make more than 2 applications per year.  
Do not exceed a maximum of 2.0 lbs. active ingredient endosulfan (i.e., 4 quarts) per acre per year.

**BEANS, Succulent and Dry (except Lima Beans) (3)**

Insects Controlled	Rate of Application	Method of Application
Black Bean Aphid Bean Leaf Skeletonizer Cowpea Curculio Cucumber Beetles Flea Beetles Green Stink Bug Leafhoppers Mexican Bean Beetle	1 to 2 quarts per acre	Make applications when insects appear or feeding is noticed. For control of Cowpea Curculio, make 3 applications at 5-day intervals starting when the pods are 1/2 inch long.
Aphids Armyworms Western Bean Cutworm Whitefly	2 quarts per acre	
Do not feed treated threshings or allow livestock to graze in treated fields. Do not use on Lima Beans that are to be removed from the field for processing. Do not make more than 3 applications per year. Do not exceed a maximum of 3.0 lbs. active ingredient endosulfan (i.e., 6 quarts) per acre per year.		

**BROCCOLI (7), BRUSSEL SPROUTS (14), CABBAGE (7), CAULIFLOWER (14)**

Insects Controlled	Rate of Application	Method of Application
Cabbage Aphid Cabbage Looper Cross-striped Cabbageworm Diamondback Moth larvae Flea Beetles Harlequin Bug Imported Cabbageworm Leafhoppers Stink Bugs	1 1/2 to 2 quarts per acre	Make applications when insects appear or feeding is noticed.
Armyworms Cutworms Whitefly	2 quarts per acre	
Do not make more than 4 applications per year. Do not exceed a maximum of 3.0 lbs. active ingredient endosulfan (i.e., 6 quarts) per acre per year.		

**CARROTS (7)**

Insects Controlled	Rate of Application	Method of Application
Green Peach Aphid Leafhoppers	1 to 2 quarts per acre	Make application when insects appear or feeding is noticed.
Armyworms Flea Beetles Whitefly	2 quarts per acre	
Do not use tops for food or feed. Do not make more than one application per year. Do not exceed a maximum of 1.0 lb. active ingredient endosulfan (i.e., 2 quarts) per acre per year.		

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**CELERY (4)**

Insects Controlled	Rate of Application	Method of Application
Green Peach Aphid Cabbage Looper Leafhoppers	1 to 2 quarts per acre	Make application when insects appear or feeding is noticed.
Armyworms Flea Beetles Whitefly	2 quarts per acre	
<p>Do not make more than one application per year. Do not exceed a maximum of 1.0 lb. active ingredient endosulfan (i.e., 2 quarts) per acre per year.</p>		

**CELERY (7)**

Insects Controlled	Rate of Application	Method of Application
Green Peach Aphid	1 quart per acre	Make applications when insects appear or feeding is noticed.
<p>Do not make more than 2 applications per year. Do not exceed a maximum of 1.0 lb. active ingredient endosulfan (i.e., 2 quarts) per acre per year.</p>		

**COLLARDS (21)**

Insects Controlled	Rate of Application	Method of Application
Aphids Cabbage Looper Diamondback Moth larvae Fall Armyworm Flea Beetles Harlequin Bug Imported Cabbageworm Leafhoppers	1 1/2 to 2 quarts per acre	Make application when insects appear or feeding is noticed.
Whitefly	2 quarts per acre	
Do not make more than one application per year. Do not exceed a maximum of 1.0 lb. active ingredient endosulfan (i.e., 2 quarts) per acre per year.		

**CUCUMBERS (2), MELONS (2), PUMPKINS (2), SUMMER & WINTER SQUASH (2)**

Insects Controlled	Rate of Application	Method of Application
Aphids Cucumber Beetles Melonworm Pickleworm Rindworm (on watermelons) Squash Beetle Squash Bug Squash Vine Borer Striped Flea Beetle	1 to 2 quarts per acre	Make applications when insects appear or feeding is noticed. For Squash Vine Borer control, apply weekly to flower buds, stems, and vines beginning when moths first appear.
Cabbage Looper Omniverous Leafroller Whitefly	2 quarts per acre	
Do not make more than 6 applications per year. Do not exceed a maximum of 3.0 lbs. active ingredient endosulfan (i.e., 6 quarts) per acre per year.		

**EGGPLANT (1)**

Insects Controlled	Rate of Application	Method of Application
Blister Beetle Colorado Potato Beetle Flea Beetles Green Peach Aphid Green Stink Bug	1 to 2 quarts per acre	Make applications when insects appear or feeding is noticed.
Whitefly	2 quarts per acre	
Do not make more than 2 applications per year. Do not exceed a maximum of 1.0 lb. active ingredient endosulfan (i.e., 2 quarts) per acre per year.		

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**LETTUCE (14)**

Insects Controlled	Rate of Application	Method of Application
Cabbage Looper Diamondback Moth larvae Green Peach Aphid Imported Cabbageworm Leafhoppers	1 1/2 to 2 quarts per acre	Make applications when insects appear or feeding is noticed.
Armyworms Whitefly	2 quarts per acre	

On Head Lettuce: Do not make more than 3 applications after thinning. Remove wrapper leaves at harvest.

On Leaf Lettuce: Do not make more than 2 applications per year.

Do not feed crop refuse to livestock.

Do not exceed a maximum of 3.0 lbs. active ingredient endosulfan (i.e., 6 quarts) per acre per year.

**PEPPERS (1)**

Insects Controlled	Rate of Application	Method of Application
Flea Beetles Green Peach Aphid Hornworms Pepper Maggot	1 quart per acre	Make applications when insects appear or feeding is noticed.
Do not make more than 2 applications per year. Do not exceed a maximum of 1.0 lb. active ingredient endosulfan (i.e., 2 quarts) per acre per year.		

**PEPPERS (4)**

Insects Controlled	Rate of Application	Method of Application
Armyworms Flea Beetles Green Peach Aphid Hornworms Leafhoppers Pepper Maggot	1 to 2 quarts per acre	Make applications when insects appear or feeding is noticed.
Whitefly	2 quarts per acre	
Do not make more than 2 applications per year. Do not exceed a maximum of 2.0 lbs. active ingredient endosulfan (i.e., 4 quarts) per acre per year.		



**POTATOES (1)**

Insects Controlled	Rate of Application	Method of Application
Aphids Armyworms Colorado Potato Beetle Green Stink Bug Leaffooted Bug Plant Bugs Potato Flea Beetles Potato Leafhopper Potato Tubeworm Threelined Potato Beetle	1 to 2 quarts per acre	Make applications when insects appear or feeding is noticed.
European Corn Borer Potato Psyllid	1 1/2 to 2 qt.. per acre	
False Chinch Bug Whitefly	2 quarts per acre	
Do not make more than 6 applications per year. Do not exceed a maximum of 3.0 lbs. active ingredient endosulfan (i.e., 6 quarts) per acre per year.		

**SPINACH (21)**

Insects Controlled	Rate of Application	Method of Application
Armyworms Crown Mite Flea Beetles Green Peach Aphid Leafhoppers	1 1/2 to 2 quarts per acre	Make application when insects appear or feeding is noticed.
Whitefly	2 quarts per acre	

Do not make more than one application per year.  
Do not exceed a maximum of 1.0 lb. active ingredient endosulfan (i.e., 2 quarts) per acre per year.

**SWEET CORN (Fresh Vegetable Use Only) (2)**

Insects Controlled	Rate of Application	Method of Application
Corn Leaf Aphid	2 quarts per acre	Make applications when insects appear or feeding is noticed.
Corn Earworm	3 quarts per acre	Apply when silks first appear and continue until they begin to dry. Allow 5 days between applications.

Do not apply to Sweet Corn to be processed.  
Do not feed treated forage or ensilage to livestock or allow livestock to graze in treated fields.  
Do not make more than 3 applications per year.  
Do not exceed a maximum of 3.0 lbs. active ingredient endosulfan (i.e., 6 quarts) per acre per year.

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**TOMATOES (Field & Greenhouse) (1)**

Insects Controlled	Rate of Application	Method of Application
Aphids Blister Beetles Colorado Potato Beetle Flea Beetles Tomato Hornworm	1 to 2 quarts per acre	Make applications when insects appear or feeding is noticed.
Cabbage Looper Stink Bugs	1 1/2 to 2 qts. per acre	
Tomato Fruitworm Tomato Russet Mite Whitefly Yellowstriped Armyworm	2 quarts per acre	
Whitefly	1 quart per 100 to 200 gals. of water	

In greenhouse applications, wear a mask or respirator approved by MSA and OSHA for protection against endosulfan.  
Do not make more than 6 applications per year.  
Do not exceed a maximum of 3.0 lbs. active ingredient endosulfan (i.e., 6 quarts) per acre per year.

**Dealers Should Sell in Original Packages Only.**

**Terms of Sale or Use:** On purchase of this product buyer and user agree to the following conditions:

**Warranty:** FMC makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

**Directions and Recommendations:** Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller and are assumed by buyer at his own risk.

**Use of Product:** FMC's recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

**Damages:** Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.

Thiodan—Registered Trademark of Canadian Hoechst Ltd. Pyrenone\* and Butacide\*—Registered Trademarks of Fairfield American Corporation.

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