



PM 15 279-1380 10F5  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JAN 14 1994

George L. Meindl  
FMC CORP.  
ACG SPECIALITY PRODUCTS  
1735 Market Street  
Philadelphia, PA 19103

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 07/28/93 in Response to PR Notice 93-7  
EPA Reg. No. 279-1380  
THIODAN 50WP INSECTICIDE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

**WHAT THIS ACCEPTANCE MEANS:**

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

**WHAT YOU NEED TO DO NEXT:**

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable  
Printed with Soy/Canola ink on paper that  
contains at least 50% recycled fiber

Page 2

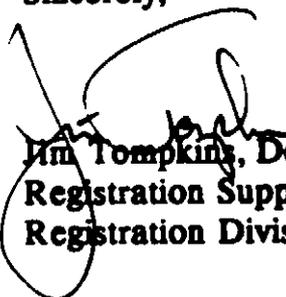
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs (7505C)  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief  
Registration Support Branch  
Registration Division (7505W)

Attachment

Code 1486

30F5  
Net Weight

**THIODAN** T&O®

50WP INSECTICIDE

ACCEPTED  
with COMMENTS  
In EPA Letter Dated  
JAN 14 1994

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

279-1380

For Agricultural or Commercial Use Only

EPA Reg. No. 279-1380AA

EPA Est. 279-

Active Ingredient:	By Wt.
*Endosulfan: (Hexachlorohexahydromethano- 2,4,3-benzodioxathiepin 3-oxide).....	50.0%
Inert Ingredients:.....	50.0%
	100.0%

\*Thiodan

KEEP OUT OF REACH OF CHILDREN

DANGER-POISON

PELIGRO

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.)

See Other Panels for Additional Precautionary Information.

**STATEMENT OF PRACTICAL TREATMENT**

If swallowed: Call a physician or Poison Control Center immediately. If possible, vomiting should be induced under medical supervision. Drink one or two glasses of water and induce vomiting by giving one (1) ounce of syrup of ipecac, if available, or by touching the back of the throat with a finger. Do not induce vomiting or give anything by mouth to a person who is unconscious or convulsing.

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

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

If in eyes: Flush eyes with plenty of water. Call a physician immediately.

Note to Physician: Endosulfan is a central nervous system stimulant absorbable by mouth, inhalation or through contact with skin. It may cause convulsions. There is no specific antidote. Diazepam I.V. is the drug of choice. Barbituric acid derivatives such as Phenobarbital may be used additionally. A neuromuscular blocking agent may be used if convulsions persist. This type of drug may be used only if complete control of respiration can be maintained. Epinephrine derivatives are absolutely contraindicated.

For Emergency Assistance Call (800) 331-3148.

**FMC.**

FMC Corporation  
Agricultural Chemical Group  
Philadelphia PA 19103

6/93

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans (and Domestic Animals)**

**Danger**

Fatal if swallowed or inhaled. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Do not breathe vapor.

**Personal Protective Equipment**

Applicators and other handlers (other than mixers and loaders) must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, chemical-resistant headgear for overhead exposure, and respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH) approval number prefix TC-23C, or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

Mixers and loaders must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, protective eyewear, chemical-resistant headgear, chemical-resistant apron when mixing or loading, and respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH) approval number prefix TC-23C, or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

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.

**Environmental Hazards**

This product is toxic to fish, birds, and other wildlife. Birds feeding on treated areas may be killed. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Due to the risk of runoff and drift, do not apply within a distance of 300 feet of lakes, ponds, streams, and estuaries. Shrimp and crab may be killed at application rates recommended on this label. Do not apply where fish, shrimp, crab and other aquatic life are important resources. This product must not be used in areas where impact on threatened endangered species is likely. Contact your State Fish and Game Agency before applying this product. Apply this product only as specified on this label.

This pesticide is toxic to bees exposed to direct application. Applications should be timed to coincide with periods of minimum bee activity, usually between late evening and early morning.

**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 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.

Do not apply this product through any type of irrigation system.

**BEST AVAILABLE COPY**

### 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 enter or allow worker entry into treated areas during the restricted entry interval (REI) of 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, waterproof gloves, shoes plus socks, and chemical-resistant headgear for overhead exposure.

### STORAGE AND DISPOSAL

#### Pesticide Storage

Do not store in or around the home.

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, fold and roll back bags, clamp 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: (800) 331-3148.

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

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

### GENERAL INSTRUCTIONS

Not for use or storage in or around the home.

Apply the listed amount per acre when insects first appear and repeat as required, unless otherwise noted, to maintain effective control. Use in sufficient water for thorough coverage of listed crops, unless otherwise noted. Coverage of upper and lower leaf surfaces is essential for good control. For ground application, apply recommended amount of pesticide in a minimum of 10 gallons of water per acre on vegetable or row crops. Observe use limitations. 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 of finished spray per acre on vegetable and field crops, unless otherwise noted, and a minimum of 20 gallons of finished spray per acre on fruit and nut trees and on vines. When applying 4 pounds or more of Thiodan® 50 WP, mix in a minimum of 10 gallons of water. Observe days interval between last application and harvest by number in ( ) following crop name.

#### Cherry, Peach, Plum Nursery Stock Dip

Insects Controlled	Rate of Application	Method of Application
Peachtree Borer	4 pounds per 40 gallons	Mix thoroughly. Immerse trees so that the roots and crowns are covered well above the grafting bud scar.

Wear rubber gloves during the dipping operation.  
Plant immediately or dry before returning stock to storage.

#### Citrus (Non-Bearing Trees and Nursery Stock)

Insects Controlled	Rate of Application	Method of Application
Citrus Aphid	1/2 pound per 100 gallons or a maximum of 5 pounds per acre	Make applications when insects appear or feeding is noticed.

Do not apply to bearing trees or trees that will bear fruit within twelve months.  
Do not make more than 2 applications per year.  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.

#### Tomatoes (Field and Greenhouse) ( )

Insects Controlled	Rate of Application	Method of Application
Aphids Blister Beetles Colorado Potato Beetle Flea Beetles Tomato Hornworm Webworm (California Only)	1 to 2 pounds per acre	Make applications when insects appear or feeding is noticed.
Cabbage Looper Stink Bugs	1 1/2 to 2 pounds per acre	
Tomato Fruitworm Tomato Russet Mite Whitefly Yellowstriped Armyworm	2 pounds per acre	
Whitefly	1 pound per 100 to 200 gallons of water	

Do not make more than 6 applications per year  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.

### COMMERCIALLY GROWN ORNAMENTALS

#### Ornamental Plants

##### Leatherleaf Fern (Leather Holly Fern)

Insects Controlled	Rate of Application	Method of Application
Leatherleaf Fern Borer	1 pound per 100 gallons (1 tablespoon per gallon)	Begin treatment when first larval feeding is observed in the mid-vein area at the base of the leaflets. Repeat at intervals of 2 to 3 weeks as necessary.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides.  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.

##### Ornamentals (Greenhouse, and Out-of-Doors)

Insects Controlled	Rate of Application	Method of Application
Aphid Cyclamen Mite Rose Chaler Whitefly	1 pound per 100 gallons (1 tablespoon per gallon)	Make applications when insects appear or feeding is noticed.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides.  
On chrysanthemums, best results will be obtained if applied before plants flower.  
Do not apply to "Bonafon Deluxe", "Fred Shoemith", and "White Knight" chrysanthemums as injury may result.  
Do not use on Birch trees.  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.

**BEST AVAILABLE COPY**

**Ornamental Trees and Shrubs**

**Dogwood, Lilac**

Insects Controlled	Rate of Application	Method of Application
Dogwood Borer Lilac Borer	1 to 2 pounds per 100 gallons (1-2 tablespoons per gallon)	Apply in early June and repeat in 10 to 14 days. Drench all bark areas down to the ground level.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides.  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.

**Douglas Fir (Grown for Ornamentals, Nursery Stock or Christmas trees)—Pacific Northwest Only**

Insects Controlled	Rate of Application	Method of Application
Aphids Cooley Spruce Gall Adelgid Douglas Fir Needle Midge	1 pound per 100 gallons (1 tablespoon per gallon)	Make applications when insects appear or feeding is noticed. For control of gall adelgid, apply when white cottony tufts appear. For control of needle midge, apply in late April or early May just before buds open.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides.  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.

**Pines (Austrian, Jack, Red, Scotch, White)**

Insects Controlled	Rate of Application	Method of Application
Zimmerman Pine Moth	1½ pounds per 100 gallons (1½ tablespoons per gallon)	Apply in mid-April and again, if necessary, in late fall. Thoroughly wet bark and main stem, especially where branches join main stem.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides.  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.

**Shade Trees (except Birch), Shrubs**

Insects Controlled	Rate of Application	Method of Application
Aphids	1 pound per 100 gallons (1 tablespoon per gallon)	Make applications when insects appear or feeding is noticed.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides.  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.

**Spruce (New England Area Only)**

Insects Controlled	Rate of Application	Method of Application
Spruce Gall Aphid	1 pound per 100 gallons (1 tablespoon per gallon)	Apply in late April or early May when aphids are present but before galls are formed.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides.  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.

**Taxus**

Insects Controlled	Rate of Application	Method of Application
Taxus Bud Mite	1 pound per 100 gallons (1 tablespoon per gallon)	Make 3 to 5 applications beginning in mid-May. Thoroughly spray foliage, twigs, and bark.
Black Vine Weevil	2 pounds per 100 gallons (2 tablespoons per gallon)	Spray thoroughly and drench soil under the plants. Apply when the weevils first appear and repeat in 14 days.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides.  
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 6 pounds) per acre per year.