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# THIODAN® 3 E.C.

INSECTICIDE

5 Gals.  
Net Contents

EPA Reg. No. 279-2924

### ACTIVE INGREDIENTS:

*Endosulfan (Hexachlorohexahydromethano-2,4,3-benzodioxathiepin oxide) .....	33.7%
Xylene base aromatic petroleum solvent .....	60.5%

INERT INGREDIENTS: .....	5.8%
	100.0%

\*Thiodan U. S. Patent No. 2,799,685

Thiodan 3 E. C. contains 3 pounds Thiodan per gallon.

Thiodan is a registered trademark of Canadian Hoechst Limited.

## WARNING KEEP OUT OF REACH OF CHILDREN.

**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 exposure in spray-mixing and loading operations, wear clean synthetic rubber gloves and a mask or respirator of a type passed by the U.S. Bureau of Mines for Endosulfan protection. Do not apply or allow to drift to areas occupied by unprotected humans or beneficial animals.

**WARNING:** Workers entering treated areas within 24 hours of application should wear protective clothing.

### ANTIDOTE

**Note to Physicians:** Active ingredient is a central nervous system stimulant and may cause convulsions. There is no specific antidote. Barbituric acid derivatives may be used in treatment.

For Emergency Assistance Call 716-735-3765

SEE SIDE PANEL FOR ADDITIONAL CAUTIONS.

MANUFACTURED IN U.S.A. BY  
**FMC CORPORATION**  
AGRICULTURAL CHEMICAL DIVISION  
MIDDLEPORT, N. Y. 14105

104

DO NOT STORE AT TEMPERATURES BELOW 20 °F.

DO NOT USE IN UNDILUTED FORM.

DO NOT USE, POUR, SPILL OR STORE NEAR HEAT OR OPEN FLAME

### ENVIRONMENTAL AND DISPOSAL CAUTIONS

This product is toxic to fish, birds and other wildlife. Birds feeding on treated areas may be killed. Keep out of lakes, ponds and streams. 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 toxic to bees and should not be applied when bees are actively visiting the area.

Rinse equipment and containers and DISPOSE OF WASTES by burying at least 18 inches deep in non-crop lands away from water supplies. Do not reuse container; smash or perforate and bury with wastes.

Dealers Should Sell In Original Packages Only.

**TERMS OF SALE OR USE:** On purchase or use of this product buyer and user agree to the following conditions:

**WARRANTY:** FMC warrants that this product, as of the time of sale by FMC, (1) conforms to the ingredient statement on the label, and (2) is reasonably fit for the purposes set forth in the Directions for Use. EXCEPT AS SO WARRANTED THE PRODUCT IS SOLD AS IS. FMC MAKES NO OTHER WARRANTY EXPRESS OR IMPLIED.

**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. Notice of any claim must be reported to FMC within 10 days of discovery by buyer or user, failing which buyer or user waives any claim for such damage.

**EXCUSE FROM NON-CONTROLLABLE CONDITIONS:** Because of certain critical conditions created or incurred by buyer or user or over which FMC has no control, buyer and user, as a condition of purchase or use, assume responsibility for and release FMC from, liability arising out of the handling or use of the product attributable to such causes. No person is authorized to vary or waive any statement contained herein.

# FMC Chemicals

Printed in U.S.A.

NECTARINES, see peaches

OATS, see barley

ORNAMENTALS (greenhouse and out of doors): Aphids, Cyclamen Mite, Whitefly, Rose Chafer - 2/3 qt. per 100 gals. On chrysanthemums, best results will be obtained if applied before plants flower. Do not apply to "Bonnanon Deluxe", "Fred Shoesmith", and "White Knight" chrysanthemums as injury may result. Do not use on birch trees. In greenhouse applications wear approved mask or respirator.

PEAS, succulent (0): Pea Aphid, Pea Weevil - 1-1/3 to 2-2/3 pints per acre. Do not exceed 2 applications during the fruiting period. Use only on peas to be harvested by combine. Do not feed treated vines to livestock or allow to graze in treated fields.

PEACHES (30), APRICOTS (30), NECTARINES (30): Aphids (Black Cherry, Black Peach, Green Peach, Rusty Plum), Catfacing Insects, Peach Twig Borer - 2/3 quart per 100 gallons or 2-2/3 to 3-1/3 quarts per acre. Lesser Peach Tree Borer - 1 quart per 100 gallons. Peach Silver Mite - 1/3 quart per 100 gallons or 2-2/3 to 3-1/3 quarts per acre. Do not exceed 2 applications during fruiting period. For Lesser Peach Tree Borer, thorough wetting of trunks and main branches is important.

PEACH NURSERY STOCK DIP, see cherry nursery stock dip

PEARS (7):\* Conspire Stink Bug - Ground treatment, use 2/3 quart per 100 gallons, 200 to 400 gallons spray per acre applied to orchard floor and ground around trees prior to bloom. Do not graze livestock in treated orchards. Foliar treatment, use 2/3 quart per 100 gallons or 2-2/3 to 3-1/3 quarts per acre. Stink Bugs must be wet to obtain control. Pear Rust Mite - 2/3 quart per 100 gallons or 2-2/3 to 3-1/3 quarts per acre. Pear Leaf Blister Mite - 1/3 to 2/3 quart per 100 gallons applied as a post harvest or dormant treatment. Pear Psylla - 3-1/3 quarts in sufficient water to treat 1 acre. (Minimums of 10 gallons per acre for aerial application, 40 gallons per acre for semi-concentrate, and 300 gallons per acre for dilute). Apply when adults are first observed or nymphs are small and repeat to maintain control. Make no more than 2 applications during the fruiting period. \*(21): Make no more than 5 applications during the fruiting period. NOTE: Aerial application does not result in satisfactory control and should only be employed if impossible to apply by ground.

PECANS: Black Pecan Aphid - 1 qt. per 100 gals. Do not apply after shuck split. Do not graze livestock in treated groves.

PEPPERS (4)\*: Green Peach Aphid, Flea Beetles, Hornworms, Pepper Maggot - 1-1/3 to 2-2/3 pints. \*(1): If maximum of 1-1/3 pints per acre is applied.

PINES (Austrian, Jack, Red, Scotch, White): Zimmerman Pine Moth - 1 qt. per 100 gals. Apply in mid-April and again if necessary in late fall. Thoroughly wet bark and main stem, especially where branches join main stem.

PLUMS (7), PRUNES (7): Lesser Peach Tree Borer - 1 quart per 100 gallons or 2-2/3 to 3-1/3 quarts per acre. Apply spray to thoroughly wet trunks and main branches. Peach Tree Borer - 1 quart per 100 gallons or 2-2/3 to 3-1/3 quarts per acre. Spray thoroughly to cover all bark areas from ground to scaffold limbs.

PLUM NURSERY STOCK DIP, see cherry nursery stock dip

POTATOES (0): Aphids, Armyworms, Colorado Potato Beetle Green Stink Bug, Leafhopper, Potato Flea Beetles, Potato Leafhopper, Potato Tuberworm, Whitefly - 1-1/3 to 2-2/3 pints per acre. European Corn Borer, Potato Psyllid - 1 to 1-1/3 quarts per acre. Threelined Potato Beetle - 1-1/3 pints per acre.

PRUNES, see plums

PUMPKINS (0): Aphids, Cucumber Beetles, Squash Vine Borer - 1-1/3 to 2-2/3 pints per acre. For vine borer control, apply weekly to flower buds, stems and vines beginning when moths first appear.

RYE, see barley

SAFFLOWER: Green Peach Aphid - 1-1/3 quarts per acre. Do not apply after flower heads open.

SHADE TREES (except Birch). SHRUBS: Aphids - 2/3 qt. per 100 gals.

SHRUBS, see shade trees

SPINACH (21): Crown Mite, Green Peach Aphid - 1 quart. Do not exceed 1 application per season.

SPRUCE: Spruce Gall Aphid (New England area only) - 2/3 qt. per 100 gals. Apply in late April or early May when aphids are present but before galls are formed.

SQUASH, SUMMER & WINTER, see cucumbers

STRAWBERRIES (4): Cyclamen Mite - 2-2/3 quarts per acre in 400 gallons of water. Do not reapply within 35 days when fruit is present. Meadow Spittlebug, Strawberry Aphid, Tamished Plant Bug - 1-1/3 quarts per acre in 200 gallons of water. Do not reapply within 15 days or more than twice within a 35 day period when fruit is present.

SUGAR BEETS (30): Green Peach Aphid - 2/3 to 1-1/3 qts. Meadow Spittlebug - 2/3 qt. Sugar Beet Webworm - 1 to 1-1/3 qts. Do not feed treated tops to livestock.

SUNFLOWER (0): Sunflower Moth - 1-1/3 qts. per acre. Do not exceed 3 applications. Make first application at onset of bloom and make two more applications at 4 to 7 day intervals. Do not feed treated forage to livestock.

SWEET CORN, Fresh vegetable use only (0): Corn Leaf Aphid - 1-1/3 quarts. Corn Earworm - 2 quarts. Apply at 2 to 3 day intervals beginning when silks first appear and continuing until they begin to dry. Do not exceed 5 applications per season. Do not apply to sweet corn to be processed. Do not feed treated forage or ensilage to livestock or allow to graze in treated fields.

SWEET POTATOES (0): Sweet Potato Flea Beetle - 2/3 qts. per acre. Begin applications shortly after transplanting or as soon as flea beetles appear. Banded Cucumber Beetle Larvae (aids in control of, and for use in South Central States only) - 1-1/3 to 2-2/3 qts. per acre broadcast. Work into the soil to a depth of approximately 3 inches making a single treatment just prior to plant set. Do not feed treated potatoes to livestock.

TAXUS: Taxus Bud Mite - 2/3 qt. per 100 gals. Apply 3 to 5 applications beginning in mid-May. Thorough treatment of foliage, twigs and bark is essential.

TOBACCO (5): Flea Beetle, Hornworm, Budworm, Green Peach Aphid, Cabbage Looper - FIELD: 2/3 to 1-1/3 qts. - SEED BED: Mix 2/3 qt. per 100 gals. of water and apply 6 gals. spray per 100 sq. yds. Green June Bug Larvae - Use 1/3 qt. per 100 gals. of water and drench plant bed with 1 gal. spray per sq. yd. Stink Bug - Use field application of 2/3 qt. per 100 gals.

TOMATOES (Field and Greenhouse) (1): Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid - 2/3 quart. Hornworms - 2/3 to 1-1/3 quarts. Tomato Russet Mite, Tomato Fruitworm, Yellowstriped Armyworm - 1-1/3 quarts. Stink Bugs - 1 to 1-1/3 quarts. Cabbage Looper - 1 quart. Whitefly - 2/3 quart per 100 gallons in 100 to 200 gallons water.

WHEAT, see barley

#### MEASURING GUIDE

1 qt. = 32 oz.	1 pint = 16 oz.
2/3 qt. = 21 oz.	2/3 pint = 10 oz.
1/3 qt. = 11 oz.	1/3 pint = 5 oz.

**DIRECTIONS FOR USE  
NOT FOR USE OR STORAGE IN OR AROUND THE HOME**

Apply the listed amount per acre when insects first appear and repeat as required to maintain effective control. Use in sufficient water for thorough coverage, unless otherwise noted for listed crops. Coverage of upper and lower leaf surfaces is essential for good control. 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 finished spray 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 3 EC used. Do not plant root crops other than carrots, potatoes, sweet potatoes, and sugar beets as follow-up crops. Observe days interval between last application and harvest indicated by number in ( ) following the crop.

**ALFALFA**, grown for forage (21): Meadow Spittlebug - 2/3 pint per acre. Apply 1 week after eggs begin to hatch or when first small masses of froth are produced in the crowns of the plant which is usually about the time the alfalfa is 4 to 6 inches tall. Apply in a minimum of 10 gallons of water per acre by ground or 2 gallons of water per acre by air. Do not apply more than once per cutting. Do not graze or cut forage within 21 days of treatment. Seed crop only: Aphids - 1-1/3 pints. Lygus Bugs - 2 to 2-2/3 quarts. Do not feed treated forage to dairy or meat animals. Do not use on forage to be sold commercially or shipped interstate.

**APPLES** (30): Aphids (Apple, Rosy Apple, Woolly Apple) - 2/3 quart per 100 gallons or 2-2/3 to 3-1/3 quarts per acre. Apple Rust Mite - 1/3 to 2/3 quart per 100 gallons or 4 to 5-1/3 quarts per acre. Do not feed pomace from treated apples to livestock. Do not exceed 2 applications during the fruiting period.

**ALMOND**: Peach Twig Borer - 2 1/2 to 3 1/3 qts. per acre for control of early season infestation. Apply during popcorn, pink or petal fall. Use in a minimum of 200 gals. of water per acre dilute or in 40 gals. per acre concentrate. For areas less than one acre use 1 qt. per 100 gals. of water. Do not exceed one application per season. Treated hulls may be fed to livestock and dairy animals.

**APRICOTS**, See peaches

**BARLEY, OATS, RYE, WHEAT**: Army Cutworm - 1 1/3 pt. per acre. Do not apply after heads begin to form. Do not feed treated forage to dairy animals or animals being finished for slaughter. For airplane application apply in 2 gals. diesel fuel oil per acre.

**BARLEY, OATS, RYE, WHEAT**: Cereal Leaf Beetle - Use in Illinois, Indiana, Michigan and Ohio only - 2/3 to 1 1/3 pts. per acre. Apply when small larvae are readily found in the field. For aerial application use a minimum of 1 to 2 gals. of water per acre. Do not apply after heads begin to form. Do not feed treated forage to livestock.

**BEANS** (3), succulent and dry (except Lima Beans): Black Bean Aphid, Bean Leaf Skeletonizer, Cucumber Beetles, Green Stink Bug, Mexican Bean Beetle - Use 1-1/3 to 2-2/3 pints. Western Bean Cutworm - Use 1-1/3 quarts. Do not exceed 3 applications per season. Do not feed threshings or allow livestock to graze in treated fields.

**BLUEBERRIES**: Blueberry Bud Mite - 2 qts. per acre in 300 gallons of water. Apply immediately after harvest and repeat 6 to 8 weeks later. Do not apply after buds are well formed.

**BOX ELDER**: Box Elder Bug - 2 qts. per 100 gals. (1-1/3 tablespoons per gal.). Spray foliage and trunks when insects first appear. Repeat as required. In late summer or fall spray tree trunks, outside walls, fences and other places where bugs congregate.

**BROCCOLI** (7), **BRUSSELS SPROUTS** (14), **CABBAGE** (7), **CAULIFLOWER** (14): Cabbage Aphid, Cabbage Looper, Cross Striped Cabbageworm, Diamondback Moth Larvae, Flea Beetle, Harlequin Bug, Imported Cabbageworm, Stink Bug - 1 to 1-1/3 quarts. Armyworms, Cutworms - 1-1/3 quarts per acre.

**BRUSSELS SPROUTS**, see broccoli

**CABBAGE**, see broccoli

**CARROTS** (7): Green Peach Aphid - 1-1/3 to 2-2/3 pints. Do not exceed 2 applications per season. Do not use tops for food or feed.

**CAULIFLOWER**, see broccoli

**CELERY** (7)\*: Green Peach Aphid - 1-1/3 pints. \*(4): Green Peach Aphid, Cabbage Looper - 2-2/3 pints. Do not exceed 3 applications per season.

**CHERRY** (21): Plum Rust Mite - 2/3 quart per 100 gallons or 2-2/3 to 3-1/3 quarts per acre. Do not exceed 2 applications after shuck split.

**CHERRY** (21): Mineola Moth (Michigan only) - 1-1/3 quarts per 100 gals. applied in delayed dormant period.

**CHERRY, PEACH, PLUM NURSERY STOCK DIP**: Peach Tree Borer - Thoroughly mix 2/3 gal. per 40 gals. of water. Immerse the bundles of trees so that the roots and crowns are covered well above the grafting bud scar. Plant immediately, or dry before returning to storage. Wear rubber gloves when dipping.

**COLLARDS** (21): Cabbage Looper, Diamond-back Moth Larvae, Harlequin Bug, Imported Cabbageworm - 1 qt. per acre. Do not exceed 1 application.

**CUCUMBERS** (0), **MELONS** (0), **SUMMER & WINTER SQUASH** (0): Aphids, Cucumber Beetles, Striped Flea Beetle, Melonworm, Pickleworm, Rindworm (on watermelons), Squash Beetle, Squash Bug, Squash Vine Borer - 1-1/3 to 2-2/3 pints. For Vine Borer control, apply weekly to flower buds, stems and vines beginning when moths first appear. For Cabbage Looper and Omnivorous Leafroller on Melons use 1-1/3 quarts.

**DOGWOOD**: Dogwood Borer. **LILAC**: Lilac Borer - 2/3 to 1-1/3 qts. per 100 gals. Apply in early June and repeat in 10 to 14 days. Drench all bark areas down to the ground level.

**EGGPLANTS** (1): Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Whitefly - 1-1/3 pints per acre.

**FELLED LOGS**: Bark Beetles (Scolytid species) - 1-1/3 gals. per 100 gals. Bark Beetles (Buprestids, Cerambycids, Curculionidae) - 2-2/3 gals. per 100 gals. Apply in late Spring to felled logs. Spray logs thoroughly to the point of spray run-off.

**GRAPES** (7): Grape Leafhopper - 2/3 quart per 100 gallons or 1-1/3 to 2 quarts per acre. Rose Chafer - 2/3 quart per 100 gallons. Do not apply to Concord variety as severe injury is likely to occur. Ground application preferred.

**KALE** (21): Cabbage Flea Beetle, Harlequin Bug, Imported Cabbageworm - 1 qt. per acre. Do not exceed 1 application.

**LEATHERLEAF FERN**: Leatherleaf Fern Borer - 2/3 qt. per 100 gals. 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.

**LETTUCE** (14): Cabbage Looper, Green Peach Aphid, Diamondback Moth Larvae, Imported Cabbageworm - 1 to 1-1/3 quarts. Do not exceed 3 applications after thinning head lettuce and remove outside leaves at harvest. Do not exceed 2 applications per season on leaf lettuce. Do not feed crop refuse to livestock.

**LILAC**, see dogwood

**MELONS**, see cucumbers

**MUSTARD GREENS** (21): Aphids, Cabbage Looper, Imported Cabbageworm - 1 quart per acre. Do not exceed 1 application per season.