

876-202

4-23-1979

1/8

Best Available Copy

VELSICOL

TIOVEL 50% WP

INSECTICIDE

ACTIVE INGREDIENT:	
Endosulfan*	50.00%
INERT INGREDIENTS:	50.00%
TOTAL:	100.00%

*Hexachlorocycloheximethano-2,4,3-benzodioxathiepin oxide

KEEP OUT OF THE REACH OF CHILDREN

WARNING

See Side Panel for Additional Precautionary Statements

Velsicol Chemical Corporation
341 E. Ohio St., Chicago, Illinois 60611

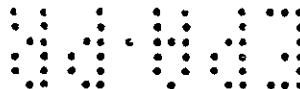
EPA Reg. No. 876-202-AA
EPA Est. No.

NET CONTENTS:

ACCEPTED

APR 23 1979

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 876-202



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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

May be fatal if swallowed, inhaled or absorbed through skin. Do not breathe vapors or spray mist. Do not get in eyes, on skin or on clothing. If swallowed, drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger or blunt object. Get medical attention. If inhaled, remove victim to fresh air. If victim is not breathing, give artificial respiration. Get medical attention. In case of contact: if on skin, wash gently with soap and water and rinse thoroughly; if in eyes, flush with plenty of water for at least 15 minutes. Get medical attention.

NOTE TO PHYSICIAN: This product contains endosulfan which is a central nervous system stimulant and may cause convulsions. There is no specific antidote. Barbituric acid derivatives may be used in treatment. Treat symptomatically.

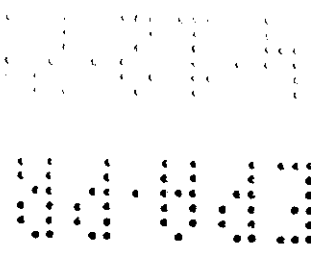
Wash thoroughly with soap and water after handling and before eating or smoking; wear clean clothing after use. During mixing, spraying and loading operations, wear protective clothing, synthetic rubber gloves and a mask or pesticide respirator jointly approved by the Mining Enforcement and Safety Administration (formerly the U.S. Bureau of Mines) and by the National Institute for Occupational Safety and Health, for endosulfan protection. Remove contaminated clothing and wash before reuse. Do not apply or allow to drift to areas occupied by unprotected humans or beneficial animals.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to fish and wildlife. Use with care when applying in areas frequented by wildlife or adjacent to any body of water. Keep out of lakes, streams or ponds. Do not apply when weather conditions favor drift from target areas.

This product is toxic to bees and should not be applied when bees are actively visiting the area.

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DIRECTIONS FOR USE

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

Re-Entry Statement

Workers entering treated fields within 24 hours of application should wear protective clothing.

Make application when insects first appear and repeat applications as necessary. (Do not exceed the maximum number of applications listed in the limitations section.) For ground application use a minimum of 20 gals. of water per acre/unless otherwise indicated. Consult extension service recommendations for concentrate spraying with this formulation. For aerial application use sufficient water to make 1 gal. of finished spray per acre to be treated. The number of days between last application and harvest is indicated by the number in () following the crop.

Almond (0) Peach Twig Borer - Use 4 to 5 lbs. per acre for control of early season infestation. Apply during popcorn, pink or petal fall in a minimum of 200 gals. dilute or 40 gals. per acre concentrate. (For areas less than one acre use 1 lb. per 100 gals.) Do not exceed one application per season.

Apples (21), Apple Aphid, Rosy Apple Aphid - Use 1 lb. per 100 gals. of water or a maximum of 4 to 5 lbs. per acre during the fruiting period. Do not exceed 3 applications during the fruiting period. If necessary use 1 1/2 lbs. per 100 gals. prior to petal fall. White Apple Leafhopper - For control of first generation use 1 lb. per 100 gals. of water; 4 to 5 lbs. per acre. Apply when nymphs first appear on the leaves. Do not feed pomace from treated apples to livestock.

Apples (30), Apple Rust Mite, Woolly Apple Aphid - Use 1 lb. per 100 gals. of water or a maximum of 8 lbs. per acre during the fruiting period. (For State of Washington dosage may be reduced to 0.75 lbs. per 100 gals. of water or a maximum rate of 6 lbs. per acre.) Do not exceed 2 applications during the fruiting period. Do not feed pomace from treated apples to livestock.

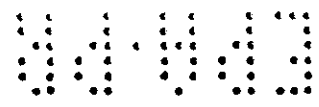
Apricots (21), Nectarines (21), Peaches (21), Peach tree Borer - Use 1 1/2 lbs. per 100 gals. (1 lb. per 100 gals. on West Coast.) Spray all bark from ground to scaffold branches. For Peach Tree Borer control on peaches in Southeastern states, apply 3 to 5 lbs. per 100 gals. post-harvest. Best control is obtained with a single application during the first week of September. Spray all bark areas from ground level to scaffold limbs.

Apricots (30), Nectarines (30), Peaches (30) Cat-facing Insects (Stink Bug type), Green Peach Aphid, Peach Twig Borer - Use 1 lb. per 100 gals. 4 to 5 lbs. per acre. (8 lbs. per acre West Coast.) Black Cherry Aphid, Black Peach Aphid, Rusty Plum Aphid - Use 1 lb. per 100 gals.; 4 to 5 lbs. per acre. Lesser Peach Tree Borer - Use 1 1/2 lbs. per 100 gals. thoroughly wetting trunk and main branches. Peach Silver Mite - Use 1/2 lb. per 100 gals.; 4 to 5 lbs. per acre. Do not exceed 2 applications during season.

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Beans (3), (Succulent and Dry Southern Field Peas) Black Bean Aphid, Bean Leaf Skeletonizer, Cucumber Beetles, Green Stink Bug, Mexican Bean Beetle, Cowpea Curculio - Use 1 to 2 lbs. per acre. Do not exceed 3 applications per season. Do not feed treated threshings to livestock or allow to graze in treated fields. Do not use on Lima Beans that are to be removed from the field for processing. For control of cowpea curculio make 3 applications at 5 day intervals, starting when the pods are 1/2 inch long.

Broccoli (7), Cabbage (7), Brussels Sprouts (14), Cauliflower (14), Cabbage Aphid, Cabbage Looper, Imported Cabbage Worm, Diamondback Moth Larvae, Cross-striped Cabbage Worm, Flea Beetles, Harlequin Bugs, Stink Bugs - Use 1 1/2 to 2 lbs. per acre. Armyworm, Cutworm - Use 2 lbs. per acre.

Carrots (7), Green Peach Aphid - Use 1 to 2 lbs. per acre. Do not use tops for food or feed. Do not exceed 2 applications per season. Do not plant root crops other than carrots, potatoes, sugar beets, and sweet potatoes as follow-up crops.

Celery (4), Green Peach Aphid, Cabbage Looper - Use 1 to 2 lbs. per acre. Do not exceed 3 applications - OR - (7) Green Peach Aphid - Use 1 lb. per acre. Unlimited number of applications.

Cherries (21), Black Cherry Aphid, Plum Rust (Nursery) Mite - Use 1 lb. per 100 gals.; 4 to 5 lbs. per acre. Peach Tree Borer - Use 1 1/2 lbs. per 100 gals. (1 to 1 1/2 lbs. per 100 gals. West Coast) and thoroughly wet all bark from ground to scaffold branches. Time application with moth flight. Lesser Peach Tree Borer - Use 1 1/2 lbs. per 100 gals.; 4 to 5 lbs. per acre thoroughly wetting trunks and main branches. For Eye-spotted Bud Moth and Fruit-tree Leaf Roller (Pacific Northwest only) - Use 1 lb. per 100 gals. at "popcorn" stage for bud moth control and during pre-pink stage of growth for leaf roller control.) For control of Mineola Moth (Michigan Only) - Use 2 lbs. per 100 gals. in the delayed dormant period. Do not exceed 2 applications after shuck split.

Cherry, Peach, Plum Nursery Stock, Peach Tree Borer - Use 4 lbs. per 40 gals. water. Mix thoroughly. Wear rubber gloves during dipping operation. Immerse trees so that roots and crowns are covered well above grafting bud scar. Plant immediately or dry before returning stock to storage.

Citrus, Nursery and Non-bearing Stock Citrus Aphid - Use 1/2 lb. per 100 gals.; 5 lbs. per acre. Do not apply to bearing trees or trees that will bear fruit within twelve months.

Collards (21), Cabbage Looper, Diamondback Moth Larvae, Harlequin Bug, Imported Cabbage Worm - Use 1 1/2 lbs. per acre. Do not exceed one application.

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Cotton, Cotton Leaf Perforator - Use 2 lbs. per acre. Do not apply after bolls open. Do not graze meat or dairy animals in treated fields.

Crucifers (Seed crop only) Broccoli, Cabbage, Collards, Chinese Cabbage, Kale, Mustard, Kohlrabi, Rape, Rutabags, Turnips - Seed Pod Weevil - Use 4 lbs. per acre. - 4 lbs. per acre. Apply in a minimum of 5 gals. of water by air or a minimum of 20 gals. by ground equipment. Do not use treated crops, crop residue or sweepings for food or feed. Do not graze in treated areas. Do not make more than 2 applications per season. Do not plant root crops other than carrots, potatoes, sweet potatoes and sugar beets as follow-up crops.

Cucumbers (0), Melons (0), Summer and Winter Squash (0) Aphids, Cucumber Beetles, Striped Flea Beetle, Melonworm, Pickleworm, Rindworm (on watermelons), Squash Beetle, Squash Bug, Squash Vine Borer - Use 1 to 2 lbs. per acre. For Vine Borer control, apply weekly to flower buds, stems, and vines beginning when moths first appear. For Cabbage Looper and Omnivorous Leaf Roller on Melons use 2 lbs. per acre.

Dogwood, Lilacs Dogwood Borer, Lilac Borer - Use 1 to 2 lbs. 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), Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Green Stink Bug, Whitefly - Use 1 lb. per acre.

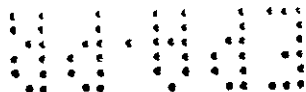
Filberts (0), Filbert Aphid - Use 1 lb. per 100 gals. or 3 to 4 lbs. per acre. Filbert Leafroller - Use 3 to 4 lbs. per acre. Do not graze livestock in treated groves.

Grapes (7), Grape Leafhopper, Grape Phylloxera (leaf form), Rose Chafer - Use 1 lb. per 100 gals.: 2 to 3 lbs. per acre. Do not use on Baco No. 1, Baco Nolf, Concord, Seibel 7053 (Chancellor), Seibel 8357 (Colobel), Seibel 13053 (Cascade) varieties of grapes as severe injury is likely to occur.

Kale (21), Cabbage Flea Beetle, Imported Cabbage Worm, Harlequin Bug - Use 1½ lbs. per acre. Do not exceed one application per season.

Leatherleaf Fern, Leatherleaf Fern Borer - Use 1 lb. per 100 gals. Begin treatment when first larvae feeding is observed in the mid-vine area at the base of the leaflets. Repeat at intervals of 2 to 3 weeks as necessary.

Lettuce (14), Cabbage Looper, Diamondback Moth Larvae, Green Peach Aphid, Imported Cabbageworm - Use 1½ to 2 lbs. per acre. On Head Lettuce, do not exceed 3 applications after thinning. Remove wrapper leaves at harvest. Do not feed crop refuse to livestock. On leaf lettuce, do not exceed 2 applications per season.



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Macadamia Nut (0), Southern Green Stink Bug - Use 2 lbs. per 100 gals. Do not graze livestock in treated groves.

Mustard Greens (21), Aphids, Cabbage Looper, Imported Cabbage Worm - Use 1½ lbs. per acre. Do not exceed one application per season.

Ornamentals (greenhouse & out of doors) Aphid, Cyclamen Mite, Rose Chafer Whitefly - Use 1 lb. per 100 gals. On Chrysanthemums, best results will be obtained if applied before plants flower. Do not use on Birch Trees. In greenhouse wear mask or respirator approved for Endosulfan protection.

Pear Leaf Blister Mite - Apply ¼ lb. to 1 lb. per 100 gals. as a post harvest or dormant treatment.

Pear (21)*, Psylla-Use 5 lbs. per acre in minimum of 10 gals. of water by aerial application or in 40 gals. of water for semi-concentrate or in 300 gals. of water for dilute application. Apply when adults are first observed or nymphs are small and repeat to maintain control. Do not exceed 5 applications during the fruiting period. If only two applications are made during the fruiting period, may be applied up to (7)* days prior to harvest.

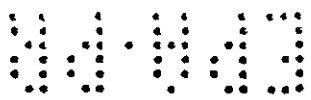
Pears (7), Consperse Stink Bug (Ground Treatment) - Use 1 lb. per 100 gals. : 200 to 400 gals. per acre applied to orchard floor around trees prior to bloom. Do not graze livestock in treated orchards. Consperse Stink Bug (Foliar Treatment), Pear Rust Mite - Use 1 lb. per 100 gals. : 4 to 5 lbs. per acre. Do not exceed 2 applications during the fruiting period. Stink bugs must be wet by spray to obtain control.

Peas succulent (0) Pea Aphid, Pea Weevil - Use 1 to 2 lbs. 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.

Peas (seed), Pea Aphid, Pea Weevil - Use 1 to 1½ lbs. per acre. Do not feed treated vines or threshing to dairy or meat animals.

Pecans, Black Pecan Aphids, Pecan Nut Casebearer, Spittlebug - Use 1½ lbs. per 100 gals. Do not apply after shuck split. Do not graze livestock in treated groves. For casebearer apply when eggs of first generation appear on tips of the young nuts. Another application may be required after second generation eggs are deposited. For spittlebug, apply when first leaves are half-grown and repeat as required.

Peppers (4)* Green Peach Aphid, Flea Beetles, Hornworms, Pepper Maggot - Use 1 to 2 lbs. per acre. *1 day if no more than 1 lb. per acre is used.



Pines (Austrian Jack Red, Scotch White) Zimmerman Pine Moth - Use 1½ lbs. 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), Fruit-tree Leaf Roller (Pacific Northwest Only) - Use 1 lb. per 100 gals.: 4 to 5 lbs. per acre. Apply during pre-pink stage of growth. Hop Aphid, Leaf Curl, Plum Aphid, Plum Rust (Plum Nursery) Mite, Thistle Aphid - Use 1 lb. per 100 gals.: 4 to 5 lbs. per acre. For aphids, apply when eggs hatch during pre-bloom or petal fall. Summer applications should be made before leaves curl. Lesser Peach Tree Borer - Use 1½ lbs. per 100 gals.: 4 to 5 lbs. per acre. Apply spray to thoroughly wet trunk and main branches. Peach Tree Borer - Use 1½ lbs. per 100 gals.: 4 to 5 lbs. per acre except West Coast use 1 to 1½ lbs. per 100 gals. Spray thoroughly to cover all bark areas from ground to scaffold limbs. Peach Twig Borer - Use 4 to 5 lbs. per acre.

Potatoes (0), Aphids, Colorado Potato Beetle, Green Stink Bug, Leafhopper, Potato Flea Beetle, Potato Leafhopper, Potato Tuberworm, Southern Armyworm, Whitefly - Use 1 to 2 lbs. per acre. European Corn Borer, Potato Psyllid - Use 1½ to 2 lbs. per acre. False Chinch Bug - Use 2 lbs. per acre. Threelined Potato Beetle - Use 1 lb. per acre. Do not plant root crops other than carrots, potatoes, sugar beets, and sweet potatoes as follow-up crops.

Pumpkins (0), Aphids, Cucumber Beetle, Squash Vine Borer - Use 1 to 2 lbs. per acre. For vine borer, apply weekly to flower buds, stems and vines, beginning when moths first appear.

Safflower, Green Peach Aphid - Use 2 lbs. per acre. Do not apply after flower heads open.

Soybeans, Green Stink Bug, Mexican Bean Beetle - Use 1 lb. per acre. Do not apply after pods begin to form. Do not feed threshings to livestock.

Spinach (21), Green Peach Aphid, Crown Mite - Use 1½ lbs. per acre. Do not exceed one application per season.

Strawberries (4), Tarnished Plant Bug, Meadow Spittlebug Strawberry Aphid - Use 2 lbs. per acre. Do not re-apply within 15 days or more than twice during any 35 day period when fruit is present. Cyclamen Mite - Thoroughly wet the foliage stem, and crowns of the plant. For multiple applications, do not apply at intervals less than 35 days during the fruiting period. West Coast - Use 8 lbs. in 800 gals. water per acre. Other areas - Use 1 lb. per 100 gals.: 4 lbs. per acre in 400 gals. of water.

Sugar Beets (30), Green Peach Aphid, Meadow Spittlebug - 1 to 2 lbs. per acre: Sugar Beet Webworm - 1½ to 2 lbs. per acre. Make 1 to 2 applications as needed for control. Do not feed, treated tops to livestock. Do not plant root crops other than carrots, potatoes, sugar beets and sweet potatoes as follow-up crops.

Sunflower (0), Sunflower Moth - Use 2 lbs. per acre. Do not exceed 3 applications. Make the first application at the onset of bloom and make two more applications at 4 to 7 day intervals. Do not feed treated forage to livestock.

Sweet Potatoes (South Central States Only) Banded Cucumber Beetle Larvae (aid in control of) - Apply 2 to 4 lbs. per acre broadcast, of 2/3 to 1 1/3 lbs. per acre in a 16 inch band over the row (48 inch spacing). Work into the soil to a depth of approximately 3 inches. A single treatment should be made just prior to plant set. Do not feed treated potatoes to livestock. Do not plant root crops other than carrots, potatoes, sugar beets, and sweet potatoes as follow-up crops.

Taxus, Taxus Bud Mite - Use 1 lb. per 100 gals. Apply 3 to 5 applications beginning in mid-May. Spray foliage, twigs and bark. Black Vine Weevil - Use 2 lbs. per 100 gals. Spray thoroughly and drench soil under plants. Apply when weevils first appear. Repeat in 14 days.

Tobacco (5), Budworm, Cabbage Looper, Flea Beetle, Green Peach Aphid, Hornworm - Seed Bed: Use 1 lb. per 100 gals. Apply about 6 gals. of finished spray per 100 sq. yards. Field: Use 1 to 2 lbs. per acre to control above insects. For Stink Bugs - Use 2 to 3 lbs. per 100 gals. Plant Bed: Green June Bug Larvae - Use ½ lb. per 100 gals. drenching at rate of 1 gal. per sq. yard.

Tomatoes (Field and Greenhouse) (1) Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid - Use 1 lb. per acre. Hornworm - Use 1 to 2 lbs. per acre. Tomato Fruitworm, Yellow-striped Armyworm - Use 2 lbs. per acre. Cabbage Looper, Stink Bugs - Use 1½ to 2 lbs. per acre. Whitefly - Use 1 lb. per 100 gals.: 100 to 200 gals. per acre.

Walnut, Walnut Aphid - Use 3 to 4 lbs. per acre. Do not apply after husk split. Do not graze livestock treated groves.

STORAGE AND DISPOSAL

- 1. Prohibitions
Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. Open dumping is prohibited. Do not reuse empty container.
- 2. Pesticide Disposal
Pesticide, spray mixture or rinse water that cannot be used or chemically processed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies.
- 3. Container Disposal
Dispose of in an incinerator or landfill approved for pesticide containers, or bury in a safe place.
- 4. General
Consult federal, state or local disposal authorities for approved alternatives.

NOTICE: Because Valvol Chemical Corporation has no control over storage, handling, and conditions of use, which are of critical importance, Valvol Chemical Corporation makes no representation or warranty, either express or implied, for results or residues greater than any tolerance which may be established by appropriate governmental agencies due to misuse, improper handling or storage of this material. Our Chem Valvol Chemical Corporation assumes any responsibility for injury to persons, crops, animals, soil or property arising out of misuse, improper handling or storage of this material.