

19713-99

PM-15

12/31/89

15/10



ENDOSULFAN 2 E.C. INSECTICIDE

FOR AGRICULTURAL USE ONLY

ACTIVE INGREDIENTS:

*Endosulfan (Hexachlorohexahydroethano-2,4,3-benzodioxathiepin 3-oxide).....	24.6%
INERT INGREDIENTS:.....	75.4%
TOTAL.....	100.0%

*Contains 2 lbs. per gallon Active Ingredient

KEEP OUT OF THE REACH OF CHILDREN

WARNING

AVISO

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

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center immediately. If possible, vomiting should be induced under medical supervision. Drink 1 or 2 glasses of water and induce vomiting by touching the back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF INHALED: Remove victim to fresh air. Apply artificial respiration if indicated.

IF ON SKIN: Remove contaminated clothing and wash affected area with soap and water.

IF IN EYES: Flush eyes with plenty of water. Call a physician immediately.

ANTIDOTE: Note to Physician - Active Ingredient is a central nervous system stimulant and may cause convulsions. There is no specific antidote. Barbituric acide derivatives may be used in treatment.

See Side Panel For Additional Precautionary Statements

EPA Reg. #19713-99
EPA Est #19713-MS-1

Mfg. by
Drexel Chemical Company
P.O. Box 9306
Memphis, TN 38109-0306

Net Contents: _____

Not Reviewed. Registrant claims to be in accordance with Reregistration of Pesticide Product Guidance for Phase 2 Response, Page 2.12, Active to Inert Change in Status.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING May be fatal if swallowed, inhaled, or absorbed through skin! Do not get in eyes, on skin or on clothing. Do not breath spray mist. Do not wear contaminated clothing. Keep away from heat and open flame. Do not use or store near food or feed products. Do not use around home or recreation areas.

USE PRECAUTIONS: 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 Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) for pesticide application under the provisions of 30 CFR Part II. Do not apply or allow to drift to areas occupied by unprotected humans or beneficial animals. 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.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, birds and other wildlife. Birds and other wildlife feeding on treated areas may be killed. Do not apply when weather conditions favor drift from areas treated. Do not apply directly to any body of water. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

BEE CAUTION: This pesticide is highly toxic to bees exposed to direct treatment or to residues remaining on the treated area. Do not apply when bees are actively visiting the crop, cover crop, or weeds blooming in the treatment area. Application should be timed to provide the maximum possible interval between treatment and the next period of bee activity.

CHEMICAL HAZARDS

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

WORKER SAFETY

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

Protective Clothing consists of long sleeved shirt, long legged pants or coveralls, and 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. Specific oral warnings must be given to inform workers of areas or fields that may not be entered which 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. When oral warnings are given, warnings shall be given in a language customarily understood by worker. 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 Endosulfan on (date of application). Do not enter without appropriate protective clothing until spray has dried. See the Statement of Practical Treatment located on product label.

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.

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 Endosulfan 2 E.C. 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 - 1 pt. 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 at least 10 gals. of water per acre by ground applicator or in at least 2 gals. of water per acre by airplane. Do not apply more than once per cutting. Do not graze or cut forage within 21 days of treatment.

Do not feed treated forage to dairy or meat animals. Do not use on forage to be sold commercially or shipped interstate.

Apples (30): Apple Aphid, Rosy Apple Aphid - 1 qt. per 100 gals. or 4 to 5 qts. per acre. Apple Rust Mite - 3/4 to 1 qt. per 100 gals. or 6 to 8 qts. per acre. Do not feed pomace from treated apples to livestock. Do not exceed 2 applications during the fruiting period at rate above 5 qts. per acre.

Apricots: see Peaches.

Barley, Oats, Rye, Wheat: Army cutworm - 1 qt. per acre. For serial application apply in 2 gals. diesel fuel oil per acre. Cereal Leaf Beetle (in Illinois, Indiana, Michigan, and Ohio only) - Use 1 to 2 pints per acre. apply when small larvae are readily found in the field. For serial 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, succulent and dry (3): Black Bean Aphid, Bean Leaf Skeletonizer, Cucumber Beetles, Green Stink Bug, Mexican Bean Beetle - Use 1 to 2 qts. per acre. Western Bean Cutworm - Use 2 qts. per acre. Do not exceed 3 applications per season. Do not feed threshings or allow livestock to graze in treated fields. Do not use on lima beans as injury may occur.

Blueberries: Blueberry Bud Mite - 3 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.

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 - $1\frac{1}{2}$ to 2 qts. per acre. Armyworms, Cutworms - 2 qts. per acre.

Brussels Sprouts: see Broccoli.

Cabbage: see Broccoli.

Carrots (7): Green Peach Aphid - 1 to 2 qts. Do not exceed 2 applications per season. Do not use tops for food or feed.

Cauliflower: see Broccoli.

Celery (7): Green Peach Aphid - 1 qt. per acre - or Celery (4): Green Peach Aphids, Cabbage Looper - 1 to 2 qts. per acre. Do not exceed 3 applications.

Cherry (21): Black Cherry Aphid, Plum Rust (nursery) Mite - 1 qt. per 100 gals. or 4 to 5 qts. per acre. Do not exceed 2 applications after shuck split. Mineola Moth (Michigan only) - 2 qts. per 100 gals. applied in delayed dormant period.

Collards (21): Cabbage Looper, Diamondback Moth Larvae, Harlequin Bug, Imported Cabbageworm - $1\frac{1}{2}$ qts. per acre. Do not exceed 1 application per season.

Cotton: Boll Weevil - 1 to $2\frac{1}{2}$ qts. per acre. Bollworm, Cabbage Looper, Cotton Leaf Perforator, Lygus Bugs, Stink Bugs - 2 qts. per acre. Thrips - 3 qts. per acre. Do not apply after bolls open. Do not graze dairy or meat animals in treated fields.

Cucumbers (0), Melons (0), Summer & Winter Squash (0): Aphids, Cucumber Beetles, Striped Flea Beetle, Melonworm, Pickleworm, Rindworm, (on water-melons), Squash Beetle, Squash Bug, Squash Vine Borer - 1 to 2 qts. per acre. For vine borer control, apply weekly to flowerbuds, stems and vines beginning when moths first appear. For Cabbage Looper and Omnivorous Leaf Roller on melons use 2 qts. per acre.

Eggplants (1): Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Green Stink Bug, Whitefly - 1 qt. per acre.

Kale (2): Flea Beetle, Harlequin Bug, Imported Cabbageworm - 1½ qts. per acre. Do not exceed 1 application per season.

Lettuce (14): Cabbage Looper, Green Peach Aphid, Diamondback Moth Larvae, Imported Cabbageworm - 1½ to 2 qts. per acre. 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 crops refuse to livestock.

Melons: see Cucumbers.

Mustard Greens (21): Aphids, Cabbage Looper, Imported Cabbageworm - 1½ qts. per acre. Do not exceed 1 application per season.

Nectarines: see Peaches.

Oats: see Barley

Ornamentals (greenhouse and out of doors): Aphids, Cyclamen Mites, Whitefly, Rose Chafer - 1 qt. per 100 gals. On Chrysanthemums, best results will be obtained if applied before plants flower. Do not apply to "Bonnafon Delux", "Fred Shoemith" and "White Knight" chrysanthemums as injury may result. Do not use on birch trees. In greenhouse applications wear ASHA and NIOSH approved mask or respirator.

Peaches (30), Apricots(30), Nectarines (30): Black Cherry Aphid, Black Peach Aphid, Cat-facing insects, Green Peach Aphid, Pear Twig Borer, Rusty Plum Aphid - 1 qt. per 100 gals. or 4 to 5 qts. per acre. Lesser Peach Tree Borer - 1½ qts. per 100 gals. Peach Silver Mite - ½ qt. per 100 gals. or 4 to 5 qts. 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 Tree Borer - in Eastern areas use 1½ qts. per 100 gals. Spray all bark from ground to scaffold branches. Do not apply within 21 days of harvest. For use in Southeastern states best control is obtained with a single application during first week in September at rate of 3 to 5 qts. per 100 gals.

Pears (7): Consperse Stink Bug - Ground treatment: Use 1 quart per 100 gallons, 400 to 500 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 1 quart per 100 gallons or 4 to 5 quarts per acre. Stink Bugs must be wet to obtain control. Pear Rust Mite - 1 quart per 100 gallons or 4 to 5 quarts per acre. Pear Leaf Blister Mite- ¼ to 1 quart per 100 gallons applied as a post-harvest or dormant treatment. Do not exceed 2 applications during the fruiting period. (21*): Pear Psylla. Use at the rate of 5 quarts in sufficient water to treat 1 acre. (Minimum of 10 gallons water per acre for arial 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. Do not apply more than five times during the fruiting period. *If no more than two applications are made during the fruiting period,

may be applied up to 7 days of harvest. NOTE: Aerial application does not result in satisfactory control and should only be employed if impossible to apply by ground.

Shade Trees (except Birch), Shrubs: Aphids - 1 qt. per 100 gals.

Peas, succulent (0): Pea Aphid, Pea Weevil - 1 to 2 qts. 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.

Peppers (4)*: Green Peach Aphid, Flea Beetles, Hornworms, Pepper Maggot - 1 to 2 qts. per acre. *1 day if maximum of 1 qt. per acre is applied.

Plums (7), Prunes (7): Eastern Use Only: Peach Tree Borer - 1½ qts. per 100 gals. Spray thoroughly to cover all bark areas from ground to scaffold limbs.

Potatoes (0): Aphids, Armyworms, Colorado Potato Beetle, Green Stink Bugs, Leaf-footed Bug, Plant Bugs, Potato Flea Beetles, Potato Leafhopper, Potato Tuberworm Whitefly - 1 to 2 qts. per acre. European Corn Borer, Potato Psyllid - 1½ to 2 qts. per acre. False Chinch Bug - 2 qts. per acre. Do not plant root crops other than carrots, potatoes, sugar beets and sweet potatoes as follow-up crops. Eastern use only: Three-lined Potato Beetle - 1 qt. per acre.

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

Rye: see Barley.

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

Squash: see Cucumbers.

Strawberries (4): Meadow Spittlebug, Strawberry Aphid - 2 qts. per acre. Tarnished Plant Bug - 1 qt. per 100 gals. or 2 qts. per acre. Do not reapply within 15 days or more than twice within 35 day period when fruit is present. Eastern Use Only: Cyclamen Mite - 4 qts. per acre in 400 gals. of water. Do not apply at intervals of less than 35 days when fruit is present.

Sugar Beets (30): Green Peach Aphid, Meadow Spittlebug - 1 to 2 qts. per acre. Sugar Beet Webworm - 1½ to 2 qts. per acre. Do not feed treated tops to livestock.

Sunflower (10): Sunflower Moth - 2 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) (10): Corn Leaf Aphid - 2 qts. per acre. Corn Earworm - 3 qts. per acre. Apply at 2 to 3 day intervals beginning when silks first appear and continuing until they begin to dry. Do not exceed 5 applications. 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 - 1 qt. 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) - 2 to 4 qts. per acre broadcast, or 2/3 to 1 1/3 qts. per acre in a 16 in. band over the row (48 inch spacing). 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.

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

Tomatoes (Field & Greenhouse) (1): Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid - 1 qt. per acre. Tomato Hornworms, Whitefly - 1 to 2 qts. per acre. Tomato Russet Mite, Tomato Fruitworm, Yellow-striped Armyworm - 2 qts. per acre. Stink Bugs - 1 1/2 to 2 qts. per acre. Cabbage Looper - 1 1/2 qts. per acre. In greenhouse applications wear ASHA and NIOSH approved mask or respirator.

Wheat: see Barley.

Almond (early infestation of): Peach Twig Borer - 4 to 5 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 40 gals. per acre concentrate. For areas less than one acre use 1 1/2 qts. per 100 gals. of water. Do not exceed one application per season. Treated hulls may be fed to livestock and dairy animals.

Macadamia Nuts (0): Southern Green Stink Bug - 2 qts. per 100 gals. of water (maximum of 5 gallons per acre). Do not graze livestock in treated groves.

Pecans: Black Pecan Aphid - 1 1/2 qts. per 100 gals. Do not apply after shuck split. Do not graze livestock in treated groves.

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Safflower; Green Peach Aphid - 2 qts. per acre. Do not apply after flower heads open.

Grapes (7): Grape Leafhopper - 1 qt. per 100 gals. or 2 to 3 qts. per acre. Rose Chafer - 1 qt. per 100 gals. Do not apply to Concord variety as severe injury is likely to occur. Ground Application preferred.

ORNAMENTALS:

Cherry Peach Plum Nursery Stock Dip: Peach Tree Borer - Thoroughly mix 1 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.

Pines (Austrian, Jack, Red, Scotch, White): Zimmerman Pine Moth - 1½ qts. 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.

Spruce: Spruce Gall Aphid (New England area only) - 1 qt. per 100 gals. Apply in late April or early May when aphids are present but before galls are formed.

Box Elder: Box Elder Bug - 3 qts. per 100 gals. (2 tablespoonfuls 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.

Dogwood: Dogwood Borer, Lilac: Lilac Borer - 4 gals. per 100 gals. Apply in early June and repeat in 10 to 14 days. Drench all bark areas down to the ground level.

Leatherleaf Fern: Leatherleaf Fern Borer - 1 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 at necessary.

Taxus: Taxus Bud Mite - 1 qt. per 100 gals. Apply 3 to 5 applications beginning in mid-May. Thorough treatment of foliage, twigs and bark is essential.

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STORAGE AND DISPOSAL

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

STORAGE INSTRUCTIONS

Storage should be under lock and key in a ventilated room and secure from access by unauthorized persons and children. Storage should be in a cool dry area away from any heat or ignition source. Do not stack over 2 pallets high. Move containers by handles or case. 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. 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 water and soap to remove remaining pesticide.
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 run off to enter sewer.
7. Dispose of waste as indicated below:

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:

Metal Containers

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.

Glass Containers

Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.

WARRANTY - CONDITION OF SALE:

OUR RECOMMENDATIONS FOR USE of this product are based upon tests 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.