

# ENDOSULFAN INSECTICIDE

Aug 30, 1972  
2749-218

**ACTIVE INGREDIENTS:**

\*Endosulfan (Hexachlorohexahydro-2, 4, 3-benzodioxathiepin oxide) 24.0%  
Xylene 69.0%

**INERT INGREDIENTS:**

7.0%  
Total 100%

\*Contains 2 lbs. active per gallon.

EPA REG. NO: 2749-218

NET CONTENTS:

**WARNING: KEEP OUT OF REACH OF CHILDREN.**

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 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.

CAUTION: WORKERS ENTERING TREATED AREAS WITHIN 24 HOURS OF APPLICATION SHOULD WEAR PROTECTIVE CLOTHING.

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.

NOTE TO PHYSICIAN: 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.

**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. Observe days interval between last application and harvest indicated by number in ( ) following the crop:

ROOT CROPS: Do not plant root crops other than carrots, potatoes and sweet potatoes as follow-up crops.

When applying this material by aircraft, mix the recommended amount with sufficient water to provide a minimum of one 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 used.

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 4-6 inches tall. Apply in at least 10 gals. of water per acre by ground applicator or in at least 2 gals. of water by airplane. Do not apply more than once per cutting. Do not graze or cut forage within 21 days of treatment.

BROCCOLI (7), CABBAGE (7) FLOWER (14); Cabbage Aphid, worm, Diamondback Moth Larva, Cabbageworm, Stink Bug - 1 1/2 to 2 applications per acre.

CARROTS (7): Green Peach Aphid - 1 to 2 applications per season. Do not use tops for feed.

CELERY (7): Green Peach Aphid, Aphid, Cabbage Looper - 1 to 2 applications per season.

COLLARDS (21): Cabbage Looper, Bug, Imported Cabbageworm - 1 1/2 to 2 applications per season.

CUCUMBERS (0), MELONS (0): Aphids, Cucumber Beetles, Striped Rindworm (on watermelon), Squash Borer - 1 to 2 qts. For vine borers, apply to stems and vines beginning when melons are 1/2 grown. Omnivorous Leaf Roller on Melons - 1 to 2 applications per acre.

EGGPLANTS (1): Blister Beetle, Cucumber Beetle, Peach Aphid, Green Stink Bug, Whitefly - 1 to 2 applications per acre.

KALE (21): Flea Beetle, Harlequin Beetle - 1 to 2 applications per acre. Do not exceed 1 application per season.

LETTUCE (14): Cabbage Looper, Larvae, Imported Cabbageworm - 1 to 2 applications per season on leaf lettuce and remove two applications per season on head lettuce. Do not feed to livestock.

MUSTARD GREENS (21), TURNIPS (21): Cabbage Looper, Imported Cabbageworm - 1 to 2 applications per season.

PEAS, Succulent (0): Pea Aphid, Pea Weevil - 1 to 2 applications, exceed two applications during the growing season. Do not feed to livestock harvested by combine. Do not feed to livestock grazed in treated fields.

**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 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.**

**CAUTION: WORKERS ENTERING TREATED AREAS WITHIN 24 HOURS OF APPLICATION SHOULD WEAR PROTECTIVE CLOTHING.**

**DO NOT STORE AT TEMPERATURES BELOW 20° F.  
DO NOT USE IN UNDILUTED FORM.  
DO NOT USE OR STORE NEAR HEAT OR OPEN FLAME.  
KEEP OUT OF LAKES, STREAMS OR PONDS.**

**THIS PRODUCT IS TOXIC TO FISH AND WILDLIFE. BIRDS FEEDING ON TREATED AREAS MAY BE KILLED. 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" DEEP IN NON-CROP LANDS AWAY FROM WATER SUPPLIES. DO NOT REUSE CONTAINERS; SMASH OR PERFORATE AND BURY WITH WASTES.**

control program with other suitable pesticides. Observe days interval between last application and harvest indicated by number in ( ) following the crop:

**ROOT CROPS:** Do not plant root crops other than carrots, potatoes and sweet potatoes as follow-up crops.

When applying this material by aircraft, mix the recommended amount with sufficient water to provide a minimum of one 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 used.

**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 4-6 inches tall. Apply in at least 10 gals. of water per acre by ground applicator or in at least 2 gals. of water by airplane. Do not apply more than once per cutting. Do not graze or cut forage within 21 days of treatment.

**ALFALFA, seed crop only:** Meadow Spittlebug - 1 pt. per acre. Aphids - 1 qt. Lygus Bugs - 3 to 4 qts. Apply in at least 10 gals. of water per acre. Do not feed treated forage to dairy or meat animals. Do not use on forage to be sold commercially or shipped interstate. Crop to be used for seed production only.

**BARLEY, OATS, RYE, WHEAT:** Army Cutworm - 1 qt. 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 applications, apply in 2 gals. diesel fuel oil per acre.

**BEANS (3) succulent and dry (except Lima Beans);** Black bean aphid, Bean Leaf Skeletonizer, Cucumber Beetles, Green Stinkbug, Mexican Bean Beetle - Use 1 to 2 qts. Western Bean Cutworm - Use 2 qts. 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 that are to be removed from the field for processing.

**BLUEBERRIES:** Blueberry Bud Mite - 3 qts. per acre in 300 gallons of water. Apply immediately after harvest and repeat 6-8 weeks later. Do not apply after buds are well formed.

**EGGPLANTS (1):** Blister Beetle, Peach Aphid, Green Stink Bug, W

**KALE (21):** Flea Beetle, Harlequin per acre. Do not exceed 1 applica

**LETTUCE (14):** Cabbage Looper Larvae, Imported Cabbageworm thinning head lettuce and remove two applications per season on livestock.

**MUSTARD GREENS (21), T** Looper, Imported Cabbageworm application per season.

**PEAS, Succulent (0):** Pea Aphid exceed two applications during harvested by combine. Do not graze in treated fields.

**PEPPERS (4) \* Green peach** Maggot - 1 to 2 qts. \*1 day if ma

**POTATOES (0):** Aphids, Army Stink Bug, Leaf-footed Bug, Leafhopper, Potato Tuberworm, Corn Borer, Potato Psyllid - 1 1/2 qts. per acre. Three-lined Potato

**PUMPKINS (0):** Aphids, Cucurbit qts. per acre. For vine borer control vines beginning when moths first

**SOYBEANS:** Green Stink Bug, after pods begin to form. Do not

**SPINACH (21):** Crown Mite, Green one application per season.

**SUGAR BEETS (0):** Green Peach 1 qt. Sugar Beet Webworm - livestock.



Manufactured For.

**ACETO CHEMICAL CO.**  
AGRICULTURAL CHEMICALS DIVISION

126-02 NORTHERN BOULEVARD, FLUSHING, N

# ENDOSULFAN INSECTICIDE

DO NOT DRIFT ONTO NEIGHBORING AREAS OR USE IN A MANNER IN ACCORDANCE WITH FEDERAL, STATE, LOCAL, ANIMAL, PLANT OR CROP PROTECTION ACTS OR OTHER UNDESIRABLE

Ingredient is a central nervous system inhibitor. It causes convulsions. There is no evidence that the active ingredients may be used in

USE AROUND THE HOME —

Insects first appear and repeat as soon as possible in sufficient water for thoroughly treated crops. Coverage of upper and lower surfaces of leaves. Observe use limitations. If necessary, supplement the treatment. Observe days interval between applications. Do not apply to plants in ( ) following the crop:

Do not apply to other than carrots, potatoes and

Mix the recommended amount with one gallon finished spray per acre. If other materials are recommended, mix with them. If finished spray equal to twice the

Meadow Spittlebug — 1 pt. per acre. Do not apply when first small masses of froth appear. Do not apply when which is usually about the time the first small masses of froth appear. Do not exceed 10 gals. of water per acre by ground application. Do not apply by water by airplane. Do not apply to plants or cut forage within 21 days of

**BROCCOLI (7), CABBAGE (7), BRUSSELS SPROUTS (14), CAULIFLOWER (14):** Cabbage Aphid, Cabbage Looper, Cross-striped Cabbageworm, Diamondback Moth Larvae, Flea Beetle, Harlequin Bug, Imported Cabbageworm, Stink Bug — 1½ to 2 qts. Armyworms, Cutworms — 2 qts. per acre.

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

**CELERY (7):** Green Peach Aphid — 1 qt. or **CELERY (7)** Green Peach Aphid, Cabbage Looper — 1 to 2 qts. Do not exceed 3 applications per season.

**COLLARDS (21):** Cabbage Looper, Diamondback Moth Larvae, Harlequin Bug, Imported Cabbageworm — 1½ qts. per acre. Do not exceed 1 application per season.

**CUCUMBERS (0), MELONS (0), SUMMER & WINTER SQUASH (0):** Aphids, Cucumber Beetles, Striped Flea Beetle, Melonworm Pickleworm, Rindworm (on watermelon), Squash Beetle, Squash Bug, Squash Vine Borer — 1 to 2 qts. 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 quarts.

**EGGPLANTS (1):** Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Green Stink Bug, Whitefly — 1 qt.

**KALE (21):** 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 — 2 qts. Do not exceed 3 applications after thinning head lettuce and remove outside leaves at harvest. Do not exceed two applications per season on leaf lettuce. Do not feed crop refuse to livestock.

**MUSTARD GREENS (21), TURNIP GREENS (21):** Aphids, Cabbage Looper, Imported Cabbageworm — 1½ qts. per acre. Do not exceed 1 application per season.

**PEAS, Succulent (0):** Pea Aphid, Pea Weevil — 2 qts. per acre. Do not exceed two 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.

**STRAWBERRIES (4):** Cyclamen Mite — 4 qts. per acre in 400 gals. of water to thoroughly wet foliage stems and crowns of plants. Do not apply at intervals of less than 35 days when fruit is present. Meadow Spittlebug, Strawberry Aphid, Tarnished Plant Bug — 2 qts. per acre in 200 gals. of water. Do not apply at intervals of less than 15 days or more than twice during any 35 day period when fruit is present.

**SUNFLOWER (0):** Sunflower Moth — 2 qts. per acre. Do not exceed 3 applications per season. Make first application at onset of bloom and make two more applications at 4 - 7 day intervals. Do not feed treated forage to livestock.

**SWEET CORN, fresh vegetable use only (0):** Corn Leaf Aphid — 2 qts. Corn Earworm — 3 qts. Apply at 2-3 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" band over the row (48" spacing). Work into the soil to a depth of approximately 3" 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:** 1-2 qts. **SEED BED:** Mix 1 qt. per 100 gals. of water and apply 6 gals. spray per 100 sq. yds. Green June Bug Larvae — 1/2 qt. per 100 gals. of water and drench plant bed with 1 gal. spray per 4 sq. yd. Stink Bug — Use field application of 2-3 qts. per 100 gals.

**TOMATOES (Field and Greenhouse): (1):** Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid — 1 qt. Hornworms — 1 to 2 qts. Tomato Russet Mite, Tomato Fruitworm, Yellow-Striped Armyworm — 2 qts. Stink Bugs — 1½ to 2 qts. Cabbage looper — 1½ qts. Whitefly — 1 qt. per 100 gals. in 100-200 gals. of water.

**APPLES (30):** Apple Aphid, Rosy Apple Aphid — 1 qt. per 100 gals. or 4-5 qts. per acre. Apple Rust Mite — 3/4 to 1 qt. per 100 gals. or 6-8 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.

**CHERRY (21):** Plum Rust (plum nursery) Mite — 1 qt. per 100 gals. or 4-5 qts. per acre. Do not exceed 2 applications after shuck split. Mineola Moth

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Manufactured For:

# ACETO CHEMICAL CO., INC.

AGRICULTURAL CHEMICALS DIVISION

6-02 NORTHERN BOULEVARD, FLUSHING, N.Y. 11368

**EGGPLANTS (1):** Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Green Stink Bug, Whitefly - 1 qt.

**KALE (21):** 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 - 2 qts. Do not exceed 3 applications after thinning head lettuce and remove outside leaves at harvest. Do not exceed two applications per season on leaf lettuce. Do not feed crop refuse to livestock.

**MUSTARD GREENS (21), TURNIP GREENS (21):** Aphids, Cabbage Looper, Imported Cabbageworm - 1½ qts. per acre. Do not exceed 1 application per season.

**PEAS, Succulent (0):** Pea Aphid, Pea Weevil - 2 qts. per acre. Do not exceed two 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. \*1 day if maximum of 1 qt. per acre is applied.**

**POTATOES (0):** Aphids, Armyworms, Colorado Potato Beetle, Green Stink Bug, 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. 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.

**SOYBEANS:** Green Stink Bug, Mexican Bean Beetle - 1 qt. Do not apply after pods begin to form. Do not feed treated threshings to livestock.

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

**SUGAR BEETS (0):** Green Peach Aphid - 1 to 2 qts. Meadow Spittlebug - 1 qt. Sugar Beet Webworm - 1½ to 2 qts. Do not feed treated tops to livestock.

acre in a 16" band over the row (48" spacing). Work into the soil to a depth of approximately 3" 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: 1-2 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 2-3 qts. per 100 gals.

**TOMATOES (Field and Greenhouse): (1):** Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid - 1 qt. Hornworms - 1 to 2 qts. Tomato Russet Mite, Tomato Fruitworm, Yellow-Striped Armyworm - 2 qts. Stink Bugs - 1½ to 2 qts. Cabbage looper - 1½ qts. Whitefly - 1 qt. per 100 gals. in 100-200 gals. of water.

**APPLES (30):** Apple Aphid, Rosy Apple Aphid - 1 qt. per 100 gals. or 4-5 qts. per acre. Apple Rust Mite - 3/4 to 1 qt. per 100 gals. or 6-8 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.

**CHERRY (21):** Plum Rust (plum nursery) Mite - 1 qt. per 100 gals. or 4-5 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.

**PEACHES (30), APRICOTS (30), NECTARINES (30):**

Black Cherry Aphid, Black Peach Aphid, Cat-facing Insects, Green Peach Aphid, Peach 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	)	1/2 qt. per 100 gals. or 4 to 5 qts. per acre.

**DO NOT EXCEED TWO APPLICATIONS DURING FRUITING PERIOD. FOR LESSER PEACH TREE BORER, THOROUGH WETTING OF TRUNKS AND MAIN BRANCHES IS IMPORTANT.**

**PLUMS (7), PRUNES (7):** Lesser Peach Tree Borer - 1½ qts. per 100 gals. or 4-5 qts. per acre. Apply spray to thoroughly wet trunks and main branches. Peach Tree Borer - 1½ qts. per 100 gals. or 4-5 qts. per acre. Spray thoroughly to cover all bark areas from ground to scaffold limbs.