

GROUP

2A

INSECTICIDE

**THIODAN (R) 4EC
INSECTICIDE
LIQUID EMULSIFIABLE CONCENTRATE**

Very Poisonous to Fish
Do Not Contaminate Streams
or Lakes

COMMERCIAL



REGISTRATION NO. 15747
PEST CONTROL PRODUCTS ACT

GUARANTEE: endosulfan 400 g/L
Warning, contains the allergen soya.



NET CONTENTS 10 LITRES

Bayer CropScience
Suite 100, 3131 114th Avenue SE
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**READ THE LABEL
BEFORE USING**

Printed in U.S.A.

THIODAN 4EC INSECTICIDE

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For More Information, Contact:

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GENERAL INFORMATION

Section 1: The Product

THIODAN 4EC is an effective, broad-spectrum insecticide.

THIODAN 4EC is an emulsifiable concentrate formulation; compatible with most commonly used insecticides and fungicides except Bordeaux mixture and hydrated lime.

SAFETY AND HANDLING

Section 2: Precautions, Protective Clothing and Equipment

PRECAUTIONS:

- KEEP OUT OF REACH OF CHILDREN.

- Hazardous if swallowed, inhaled, or absorbed through the skin.
- Avoid contact with eyes, skin and clothing.
- Avoid breathing spray mist.
- To minimize exposure, the following precautions should be followed:

After handling, wash thoroughly with soap and water before drinking, eating or smoking and change to clean clothing.

Avoid contamination of feed or food, including such crops on which residue is unsafe.

If this pest control product is to be used on a commodity that may be exported to the US and you require information on acceptable residue levels in the US contact 1-866-375-4648 or www.cropgro.org/

Protective Clothing and Equipment:

When spraying in greenhouses and during commercial or prolonged exposure in spray-mixing and loading operations, wear chemical resistant gloves and suitable mask or respirator for THIODAN 4EC protection, such as American Optical Respirator 5058 or Wilson Agritox Respirator.

Section 3: First Aid and Toxicological Information

FIRST AID:

Ingestion: If swallowed, call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

Eye Contact: In case of eye contact, hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Skin or clothing Contact: In case of skin or clothing contact, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

Inhalation: If inhaled, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Take container, label or Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION:

Medical personnel should contact Bayer medical information services toll-free: 1-800-334-7577. Endosulfan is a central nervous system stimulant. Symptoms of poisoning are nausea, headache, general feeling of being unwell, followed by generalized convulsion. There is no specific antidote. Use saline cathartics and gastric lavages (avoid aspiration). THIODAN 4EC contains XYLENE. Amobarbital-sodium or thiopental sodium may be given intravenously for convulsion. Do not give stimulants.

Section 4: Environmental Precautions and Information

This product contains a petroleum distillate which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic systems during application. Do not contaminate these systems through direct application, disposal of waste or cleaning equipment. Do not apply or allow to drift to areas occupied by unprotected persons and animals, or to streams, lakes or ponds to protect wildlife. THIS PRODUCT IS VERY TOXIC TO FISH. USE ONLY FOR RECOMMENDED PURPOSES AND AT RECOMMENDED RATES. DO NOT APPLY BY AIR.

Section 5: Storage

- CANNOT be stored below freezing.
- If stored for 1 year or longer, shake well before using.
- Store the tightly closed container away from feeds, seeds, fertilizers, plants and foodstuffs.
- Do not use or store in or around the home.
- Keep in original container during storage.

Section 6: Disposal

Container Disposal:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- (1) Triple- or pressure-rinse the empty container. Add the rinsing to the spray mixture in the tank.
- (2) Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

Disposal of Unused, unwanted product

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for cleanup of spills.

DIRECTIONS FOR USE

Section 7: Application Instructions and Cautions

Application Instructions:

Unless otherwise stated, apply at first appearance of insects or mites and repeat as required to maintain control.

Use sufficient water for thorough coverage, depending on foliage development and spray equipment.

Uniform, thorough wetting of all plant parts is essential to obtain good control.

Caution:

DO NOT APPLY BY AIR. Avoid contamination of feed or foodstuffs, including such crops on which residue is unsafe.

Section 8: Mixing Instructions

1. Ensure that the spray tank, lines and filter are thoroughly clean.
2. Fill the tank half full with clean water and start agitation or bypass system.
3. Add the correct amount of THIODAN 4EC to the spray tank.
4. Triple rinse the emptied container into the spray tank.
5. Add the remaining amount of water while agitation continues.
6. Thoroughly clean the spray tank by flushing with a water/detergent mixture after using THIODAN 4EC or before using any other pesticide.

Section 9: Crops, Insects, Rates, Timing, Cautions

CROP	INSECTS	RECOMMENDATIONS	RATE
POTATO	Aphid, Colorado Potato Beetle, Flea Beetle, Leafhopper, Tarnished Plant Bug*, Tuber Flea Beetle	Apply when insects first appear, repeat as necessary to maintain control. *Use 2 L/ha to control Tarnished Plant Bug.	1.5-2 L/ha

May be applied up to the date of harvest.

EGGPLANT, PEPPER, TOMATO	Aphid, Colorado Potato Beetle, Flea Beetle, Hornworm, Leafhopper, Pepper Maggot, Tomato Fruitworm*	Apply when insects first appear, repeat as required. Spray plants thoroughly, including underside of leaves. *Use 2.75 L/ha rate to control Tomato Fruitworm.	1.5-2.75 L/ha
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Do not apply within 2 days of harvest.

CUCUMBER, MELON, PUMPKIN, SQUASH	Aphid, Cucumber Beetle, Potato Flea Beetle, Squash Vine Borer	Apply when aphids and beetles first appear and repeat as required. For Vine Borer thoroughly spray base and stems of plants. Make 4 applications at 7-day intervals, starting late June.	1.5 L/ha
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Do not apply within 2 days of harvest.

BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER,	Aphid*, Cabbage Worm, Cabbage Looper**, Diamondback Moth, Flea Beetle	*Use a minimum of 2 L/ha to control Aphids. **For all Loopers spray 2 L/ha to underside of foliage using drop pipes. Use 1.5 L/ha only when worms are small. For Loopers repeat, every 7 days.	1.5-2 L/ha
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Do not apply within 7 days of harvest.
Do not feed crop refuse to livestock.

RUTABAGA, TURNIP	Aphid, Cabbage Looper, Cabbage Worm, Flea Beetle,	Apply when pests appear.	2 L/ha
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Do not apply more than twice per year.
Do not apply within 45 days of harvest.
Do not feed treated foliage to livestock, but the roots may be fed.

CELERY, HEAD LETTUCE, SPINACH	Aphid Cabbage Looper, Cabbage Worm, Tarnished Plant Bug,	Apply when pests appear. Trim celery at harvest.	2 L/ha
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Do not apply more than once on Spinach.
Do not apply more than 3 times on Head Lettuce.
Do not apply within 14 days of harvest.
Do not feed refuse to livestock.

BEAN	Black Bean Aphid, Green Cloverworm, Mexican Bean Beetle, Potato Leafhopper,	Do not apply on Lima Beans.	1.5-2.5 L/ha
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Do not apply within 2 days of harvest.
Do not feed treated threshing or crop refuse to livestock.

PEAS (canning)	Aphid, Weevil	Apply when insects appear, repeat as required. APPLY ONLY IF CROP IS TO BE HARVESTED BY COMBINE.	1.5-2 L/ha
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Do not apply more than twice per season.
Do not apply within 7 days of harvest.
Do not allow livestock to graze treated fields.
Do not feed fresh, dry or ensiled vines and pods to livestock.

SUGARBEETS	Beet Webworm, Green Peach Aphid*	Apply when insects appear. *Apply 2 L/ha to control aphids.	2-2.75 L/ha
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Do not apply more than once per season.
Do not apply within 45 days of harvest.
Do not feed treated foliage to livestock, but roots may be fed.

ALFALFA, CLOVER	Meadow Spittlebug	Apply soon after eggs hatch.	750 mL/ha
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Do not feed forage within 30 days of application.
Do not apply when bees are foraging.

FIELD CORN, SWEET CORN	Corn Ear Worm	Apply to the silk when government spray guide and letters recommend spraying.	2.75-4.25 L/ha
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	Corn Leaf Aphid	Apply when aphids appear. Repeat as necessary.	2.75 L/ha
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Do not apply more than twice per season.
Do not apply within 50 days of harvest.

SUNFLOWER	Sunflower Beetle	Apply when plants are about 45 cm high, using a row-crop sprayer with 45 L nozzles. Best control is obtained in a minimum of 110 L/ha of water.	1.5 L/ha
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Do not make more than one application per season.
Do not apply within 60 days of harvest.
Do not feed treated foliage to livestock.

STRAWBERRY	Cyclamen Mite	Apply in 4000-8000 L/ha of water before bud formation in spring; repeat after harvest if mites are present.	5 L/ha
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	Meadow Spittlebug, Strawberry Aphid, Tarnished Plant Bug	Apply in 2000 L/ha of water. For Tarnished Plant Bug apply at first bloom and repeat 10 days later. Apply at first signs of Aphid and Spittlebug; repeat as necessary.	2.5 L/ha
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Do not apply within 7 days of harvest.

APRICOT, PEACH, PLUM	Peach Tree Borer (Root Borer), Lesser Peach Tree Borer	Apply when local government spray calendar recommends spraying. Spray all bark on trunk and scaffold limbs; apply coarse spray with gun at 2100-2800 kPa pressure. Avoid spraying fruit.	1.75 L /1000 L of water
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Do not apply more than 3 times in eastern Canada.
Do not apply more than 2 times in British Columbia.
Do not apply within 15 days of harvest.

PEACH TREE SEEDLINGS PRE-PLANT TREATMENT	Peach Tree Borer (Root Borer)	Dip roots and crown prior to planting. If not planted immediately, allow to dry before placing in storage.	1.25L/100 L of water
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Wear chemical resistant gloves while handling.

ORNAMENTALS	Aphid, Black Vine Weevil, Cyclamen Mite, Elm Leaf Beetle, Rose Chafer, Spruce Gall Aphid, Whitefly	To control Cyclamen Mite ensure thorough coverage. Do not apply on Birch trees. Do not apply on Bonnafono Mums or Geraniums in greenhouse. Do not apply on mum cuttings within 1 month after potting. To control Spruce Gall Aphid apply in first half of May. To control Black Vine Weevil, spray lower branches and soil in early July, at the higher rate.	1.25-1.75 L/ 1000L of water
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GREENHOUSE:

CUCUMBER, TOMATO	Aphid, Whitefly,	Ensure thorough coverage.	1.25-1.5 L/1000 L of water
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Do not apply within 2 days of harvest.

GREENHOUSE PEPPERS	Aphid, Tarnished Plant Bug	Ensure thorough coverage. Apply when number of nymphs or adults warrant.	1.25-1.5 L/1000 L of water
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Do not apply more than twice per season.
Do not apply within 2 days of harvest.

GREENHOUSE LETTUCE	Green Peach Aphid	Apply when aphids appear. Use low volume mist or high volume spray.	1.5 L/12 -1000 L of water
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Do not apply more than once per season.
Do not apply within 14 days of harvest.

Section 10: Resistance Management

For resistance management, please note that Thiodan 4 EC contains a Group 2A insecticide. Any insect population may contain individuals naturally resistant to Thiodan 4 EC and other Group 2A insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of Thiodan 4 EC or other Group 2A insecticides with different groups that control the same pests in a field.
- Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- Contact your local Bayer CropScience representative, extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance, contact Bayer CropScience via internet at www.bayercropscience.ca or call 1-888-283-6847.

Section 11: Livestock Feeding and Pre-Harvest Periods

LIVESTOCK FEEDING:

Do not feed Alfalfa or Clover forage within 30 days of application.

Do not feed treated Bean threshings or crop refuse to livestock.

Do not feed crop refuse to livestock of the following; Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Celery, Head Lettuce, or Spinach

Do not feed fresh, dry or ensiled Pea vines and Pea pods to any livestock or allow grazing in treated fields.

Do not feed treated Rutabaga, Sugarbeet, nor Turnip foliage to livestock, however roots may be fed.

Do not feed treated Sunflower foliage to livestock.

PRE-HARVEST PERIODS

Crop	Pre-Harvest Interval (Days)	Crop	Pre-Harvest Interval (Days)
Alfalfa - forage	30	Peach	15
Apricot	15	Peas	7
Bean	2	Pepper - including greenhouse	2
Broccoli	7	Plum	15
Brussels Sprouts	7	Potato	1
Cabbage	7	Pumpkin	2
Cauliflower	7	Rutabaga	45
Celery	14	Spinach	14
Clover - forage	30	Squash	2
Corn	50	Strawberries	7
Cucumber	2	Sugarbeet	45
Eggplant	2	Sunflower	60
Lettuce head and greenhouse	14	Tomatoes including greenhouse	2
Melon	2	Turnip	45
Ornamentals-Mum cuttings	1 month after potting		

Section 12: Notices

NOTICE TO USER:

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

FOR MORE INFORMATION, CONTACT:

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