

**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL DAY OR NIGHT 1-800-561-8273 or
CHEMTREC 1-800-424-9300**

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

MANUFACTURED FOR:

UNITED AGRI PRODUCTS CANADA, INC.
789 Donnybrook Drive • Dorchester, Ontario N0L 1G5

24-Hour Emergency Phone: 1-800-561-8273
Medical Emergencies (Prosar): 1-800-301-7976
Additional Emergency Phone (Canutec): 1-613-996-6666 (Collect)

CHEMICAL IDENTITY: Endosulfan: Hexachlorohexahydromethano-2,4,3-benzodioxathiepin-3-oxide

PRODUCT USE: Insecticide – Group 2A

PCP REG. NO.: 14617

MSDS Number: 14617-08-UAP

MSDS Revisions: All sections revised

Date of Issue: 01/31/08

Supersedes: 01/31/05

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – DANGER - POISON – Harmful if swallowed, inhaled or absorbed through skin. After handling, wash thoroughly with soap and water after handling and before drinking, eating or smoking. Avoid breathing dust.

This product is tan powder with sharp, sulfur dioxide-like odour.

Warning Statements:

NOTE TO PHYSICIAN: Endosulfan is a central nervous system stimulant absorbable through oral, inhalation or dermal routes. It may cause convulsions. Central nervous system stimulation can be controlled with diazepam (i.v.) or barbituric acid derivatives. Close supervision and otherwise symptomatic and supportive treatment is advised. Contraindication: epinephrine due to cardiac muscle stimulation. This product can present serious health hazards if ingested. If emesis has not occurred spontaneously, gastric lavage, using a cuffed endotracheal tube, may be indicated. Administration of activated carbon in water can help absorb chemical remaining in the stomach. This product can present serious health hazards if ingested. If emesis has not occurred spontaneously, gastric lavage, using a cuffed endotracheal tube, may be indicated. Administration of activated carbon in water can help absorb chemical remaining in the stomach.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Endosulfan	50.00	115-29-7	0.1 mg/m ³ (skin)
Inert Ingredients, contains	50.00		
Kaolin Clay		1332-58-7	2 mg/m ³ R
Attapulgite Clay		12174-11-7	not listed
Ethylene Glycol		107-21-1	100 mg/m ³ C

4. FIRST AID MEASURES

If on skin or clothing: 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.

If in eyes: 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.

If swallowed: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

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

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-301-7976. Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

FLASH POINT (°C/Test Method): Does not flash.

FLAMMABLE LIMITS (LFL & UFL): Not established.

EXTINGUISHING MEDIA: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition products include, but are not limited to, oxides of sulfur, oxides of carbon, hydrogen chloride, and aldehydes. May support combustion at elevated temperatures.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and full protective gear.

UNUSUAL FIRE AND EXPLOSION HAZARDS: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Do not allow water runoff to enter nearby streams, ponds or lakes.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

For small spills, sweep up and place in an approved chemical container for proper disposal. For large spills, sweep up and place in an approved chemical container for proper disposal. Decontaminate the area with a household bleach and water mixture (1:2) and then absorb the liquid with clay or other absorbent. Flush residual spill area with water. Check local and provincial regulations for proper disposal.

CAUTION: Keep spills and cleaning runoff from flowing onto adjacent land, or into municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

HANDLING: Wash hands after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Store in original container in a cool, dry, well-ventilated area. Store product in an area inaccessible to children and domestic animals. Avoid storage in excessive heat. Do not store near fertilizers, herbicides, other insecticides, seeds, food, or feed. Do not contaminate water, food, or feed by storage or disposal.

Personal Protective Equipment: Applicators and other handlers must wear: long sleeved shirt and long pants, waterproof gloves and shoes plus socks. Follow manufacturer's instructions for cleaning and maintaining PPE. If no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

RESPIRATORY PROTECTION: Not normally required, if vapors exceed acceptable levels, wear a MSHA/NIOSH approved pesticide respirator with cartridges for pesticide vapors.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, hat, rubber boots with socks. Wear rubber or chemical-resistant gloves.

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
Endosulfan	not listed	0.1 mg/m ³ (Skin)
Kaolin Clay	15 mg/m ³ (total dust)	2 mg/m ³ R
Attapulgitte Clay	not listed	not listed
Ethylene Glycol	not listed	100 mg/m ³ C

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOUR: Tan powder with sharp, sulfur dioxide-like odour

SPECIFIC GRAVITY (Water = 1): 0.404 – 0.591 g/ml

VAPOUR PRESSURE: Not applicable

PERCENT VOLATILE (by volume): Not applicable

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

BULK DENSITY: 403,9 – 590,9 kg/m³

BOILING POINT: Not applicable

EVAPORATION RATE: Not applicable

SOLUBILITY: Disperses
pH: 8.57

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Excessive heat and fire.

INCOMPATIBILITY: 10% Potassium Permanganate.

HAZARDOUS DECOMPOSITION PRODUCTS: Sulfur dioxide, hydrogen chloride, oxides of carbon, and aldehydes..

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): 41.2 mg/kg

Eye Irritation (rabbit): Mild irritant

Inhalation LC₅₀ (male rat): 0.23 mg/L (4 HR)

Carcinogenic Potential: Not listed in OSHA, NTP, or IARC. Endosulfan, Kaolin Clay, and Ethylene Glycol are classified by ACGIH as TLV-A4: Not Classifiable as a Human Carcinogen. Attapulgitte Clay is classified by IARC as IARC-2B (long fibers): Possibly Carcinogenic to Humans and/or IARC-3 (short fibers): Unclassifiable as to Carcinogenicity in Humans.

Acute Dermal LD₅₀ (rabbit): >2000 mg/kg

Skin Irritation (rabbit): Slight irritant

Skin Sensitization (Guinea Pig): Not a sensitizer

12. ECOLOGICAL INFORMATION

Endosulfan is toxic to birds, fish and other wildlife. Birds feeding on treated areas may be killed. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Due to the risk of runoff and drift, do not apply within a distance of 300 feet of lakes, ponds, streams, and estuaries. Shrimp and crab may be killed at application rates recommended on the product label. Do not apply where fish, shrimp, crab, and other aquatic life are important resources. This product is toxic to bees exposed to direct application. Applications should be timed to coincide with periods of minimum bee activity. Do not contaminate water by cleaning equipment or disposal of wash waters.

13. DISPOSAL CONSIDERATIONS

Do not reuse containers for any purpose. Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. For disposal, empty container may be returned to the point of purchase (distributor/dealer). Follow provincial instructions for any required additional cleaning of container. Make the empty container unsuitable for further use. Dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food, or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT/TDG Shipping Description: RQ ORGANOCHLORINE PESTICIDE, SOLID, TOXIC, 6.1, UN2761, II (ENDOSULFAN 50%) MARINE POLLUTANT ERG GUIDE 151

IMDG Shipping Description: RQ ORGANOCHLORINE PESTICIDE, SOLID, TOXIC, 6.1, UN2761, II (ENDOSULFAN 50%) MARINE POLLUTANT ERG GUIDE 151

U.S. Surface Freight Classification: INSECTICIDES OR FUNGICIDES, INSECT OR ANIMAL REPELLENTS, NOI, OR VERMIN EXTERMINATORS, ANIMAL OR POULTRY, NOI; POISON (NMFC 102100; CLASS: 77.5)

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:	NFPA		HMIS
	2 Health	0 Least	2 Health
	0 Flammability	1 Slight	0 Flammability
	0 Instability	2 Moderate	0 Reactivity
		3 High	HI PPE
		4 Severe	

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:	Immediate	<u>Y</u>	Fire	<u>N</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>Y</u>	Reactive	<u>N</u>		

Reportable Quantity (RQ) under U.S. CERCLA: Endosulfan (CAS: 115-29-7) 1 lb.

SARA, Title III, Section 313: Endosulfan (CAS: 115-29-7) 52.63%; Ethylene Glycol (CAS: 107-21-1) 2.00%

RCRA Waste Code: Not listed in its purchased form as a listed or characteristic waste.

CA Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

16. OTHER INFORMATION

MSDS STATUS: All sections revised to 16-section format

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

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