

IN CASE OF EMERGENCY DUE TO A MAJOR SPILL, FIRE OR POISONING INVOLVING THIS PRODUCT 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
Additional Emergency Phone (Canutec): 1-613-996-6666 (Collect)

CHEMICAL IDENTITY: Malathion: O-O-Dimethyl phosphorodithioate of diethyl mercaptosuccinate
PRODUCT USE: Insecticide – Group 1B
PCP REG. NO.: 25638
MSDS Number: 25638-11-UAP

MSDS Revisions: Sections 1, 4

Date of Issue: 01/07/11

Supersedes: 01/07/08

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION - POISON – Hazardous if swallowed, inhaled, or absorbed through skin. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Avoid contamination of feed and foodstuffs. DO NOT treat dairy barns or apply to pastures while occupied by dairy animals. After using this product ventilate thoroughly before occupying enclosed spaces. Do not allow contact with treated surfaces until sprays have dried. The product contains petroleum distillates.

This product is straw to amber coloured liquid with a slightly aromatic odor.

WARNING STATEMENTS:

NOTE TO PHYSICIAN: This product is an organophosphate (cholinesterase-inhibiting) insecticide. Atropine is antidotal and should be given in multiple doses as necessary until the patient is atropinized. In severe cases 2-PAM may be given provided therapy begins within 24 hours of exposure. Monitor serum and RBC cholinesterase. Administer intravenous fluids cautiously, if needed, to correct dehydration. Symptoms of cholinesterase inhibition include salivation, gastrointestinal hypermotility, abdominal cramping, nausea, diarrhea, sweating, miosis, tearing, blurred vision, headache, dizziness, ataxia, bradycardia, dyspnea, cyanosis, and muscle twitching or tremors. In extreme cases, tetany, mental confusion, incontinence, weakness, collapse, paralysis, convulsive seizures, and even death, can occur.

3. COMPOSITION, INFORMATION ON INGREDIENTS

| <u>Chemical Ingredients:</u> | <u>Percentage by Weight:</u> | <u>CAS No.</u> | <u>TLV (Units)</u> |
|------------------------------|------------------------------|----------------|-----------------------------|
| Malathion | 95.00 | 121-75-5 | 15 mg/m ³ (skin) |

4. FIRST AID MEASURES

If swallowed: Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control center 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 by mouth-to-mouth, if possible. Call a poison control center or doctor for further 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 center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: This product causes cholinesterase inhibition. Atropine is antidotal. 2-PAM may be effective as an adjunct to Atropine. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): 325.4°F / 163°C (PMCC)

FLAMMABLE LIMITS (LFL & UFL): Not established

EXTINGUISHING MEDIA: Foam, dry chemical, carbon dioxide, and water spray (fog).

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition products include dimethyl sulfide, sulfur dioxide, carbon monoxide, carbon dioxide, and phosphorus pentoxide.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full protective clothing. Fight fire from upwind and keep all non-essential personnel out of area. Avoid heavy hose streams.

UNUSUAL FIRE AND EXPLOSION HAZARDS: If water is used to fight fire or cool containers, contain runoff by diking to prevent contamination of water supplies. Containers in fire may burst or explode from excessive heat. Stay well back from fire area.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

For small spills, absorb with an absorbent material such as pet litter. Sweep up and transfer to containers for possible land application according to label use or for proper disposal. Check local or provincial regulations for proper disposal. Flush the area with water to remove any residue.

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

HANDLING: Wash hands 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 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 a safe manner. Store in original container only. Keep container tightly closed when not in use. Store at temperatures not exceeding 77°F/25°C. KEEP AWAY FROM CHILDREN. Do not store diluted spray. Do not store near heat or open flame. 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, chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber or Viton®, shoes plus socks, and protective eyewear. 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: Not normally required.

RESPIRATORY PROTECTION: Not normally required, if vapors or mists exceed acceptable levels, wear a NIOSH approved pesticide respirator.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, shoes with socks. Wear chemical-resistant gloves.

| | | |
|-----------|-----------------------------|-------------------------|
| | OSHA PEL 8 hr TWA | ACGIH TLV-TWA |
| Malathion | 15 mg/m ³ (skin) | 1 mg/m ³ IV* |

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOUR: Straw to amber coloured liquid with a slightly aromatic odor.

SPECIFIC GRAVITY (Water = 1): 1.23 g/ml

VAPOUR PRESSURE: 3.4 x 10⁻⁶ mm/Hg @ 25°C (77°F)

PERCENT VOLATILE (by volume): Not established

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: 1.23 kg/L

BOILING POINT: >300°F / >148.9°C

EVAPORATION RATE: < 1

SOLUBILITY: Emulsifies

pH: 3.7 - 3.8 (50% solution)

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: The active ingredient will decompose rapidly at temperatures above 100°C.

INCOMPATIBILITY: Strong alkalis, amines, and strong oxidizing compounds. The active ingredient can corrode iron, steel, tin plate, lead and copper.

HAZARDOUS DECOMPOSITION PRODUCTS: Dimethyl sulfide, sulfur dioxide, oxides of carbon, and phosphorous pentoxide from combustion.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): 1375 – 2800 mg/kg

Eye Irritation (rabbit): Slight irritation

Inhalation LC₅₀ (male rat): >5.2 mg/L (4 HR)

Carcinogenic Potential: Nothing listed in OSHA, NTP, IARC, or ACGIH.

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

Skin Irritation (rabbit): Slight irritation

Skin Sensitization (Guinea Pig): Not a sensitizer.

12. ECOLOGICAL INFORMATION

Malathion is toxic to fish, aquatic invertebrates, and aquatic life stages of amphibians. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in areas near the application site. Do not contaminate water by cleaning equipment or disposal of wash waters. Highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

13. DISPOSAL CONSIDERATIONS

Do not reuse containers for any purpose. This product is acutely hazardous. Container is recyclable, and is to be disposed of at a container collection site. Contact your local dealer/distributor for the location of the nearest collection site. Before taking container to the collection site: Triple or pressure-rinse the empty container, adding the rinsate to the spray tank. Make the empty container unsuitable for further use. If there is no container collection site in your area, 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

USDOT / TDG Shipping Description: LESS THAN 10.2 GALLONS NOT REGULATED.
US DOT / TDG Shipping Description: RQ ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, UN3082, III (MALATHION) MARINE POLLUTANT ERG GUIDE 171
U.S. Surface Freight Classification: INSECTICIDES, INSECT REPELLENTS, NOI, OTHER THAN POISON (NMFC 102120, CLASS: 60)
IMDG Shipping Description: RQ ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MALATHION 85%), 9, UN3082, III, MARINE POLLUTANT, ERG GUIDE 171

Consult appropriate ICAO/IATA regulations for shipment requirements in the Air shipping modes.

15. REGULATORY INFORMATION

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

SARA Hazard Notification/Reporting

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

Reportable Quantity (RQ) under U.S. CERCLA: Malathion (CAS: 121-75-5): 100 pounds

SARA, Title III, Section 313: Malathion (CAS: 121-75-5) 95.00%

RCRA Waste Code: Not listed

CA Proposition 65: Not listed.

16. OTHER INFORMATION

MSDS STATUS: Sections 1 and 4 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

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***IV:** Measurable as inhalable fraction and vapour

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