

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

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FORMULATED FOR:

Loveland Products, Inc.
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-424-9300
Medical Emergencies: 1-800-301-7976
U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: MALATHION ULV® CONCENTRATE INSECTICIDE
CHEMICAL NAME: Malathion; (0-0-Dimethyl phosphorodithioate of diethyl mercaptosuccinate)
CHEMICAL FAMILY: Organophosphate Insecticide
EPA REG. NO.: 34704-565
MSDS Number: 000565-04b-LPI

MSDS Revisions: See section 16

Date Of Issue: 07/08/04

Supersedes: 01/08/04

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing vapors or spray mist. Avoid contact with skin, eyes, or clothing. Do not contaminate feed or foodstuffs.

This product is clear yellow-amber colored liquid with a mild petroleum odor.

Warning Statements:

NOTE TO PHYSICIAN: This product is a cholinesterase inhibitor. Treat symptomatically. Atropine is an antidote. 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	96.50	121-75-5	15 mg/m ³ (skin)
Inert Ingredients	3.50		

This product is hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

4. FIRST AID MEASURES

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. 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 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 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 immediately with plenty of water for 15-20 minutes. Call a poison control center 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 (°F/Test Method): 325.4°F/163°C (PMCC)

FLAMMABLE LIMITS (LFL & UFL): None established

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, foam, water spray or 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, state and federal 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.

MATERIAL SAFETY DATA SHEET

MALATHION ULV® CONCENTRATE INSECTICIDE

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. Do not use or 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® 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 [40 CFR 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 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 (Inhalable fraction of aerosol); BEI*	

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear yellow-amber colored liquid with a mild petroleum odor.

SPECIFIC GRAVITY (Water = 1): 1.231 g/ml

VAPOR PRESSURE: 3.4 x 10⁻⁶ mm/Hg @ 25°C

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: 10.27 lbs/gal.

BOILING POINT: >300°F/>148.9°C

EVAPORATION RATE: Not established

SOLUBILITY: Emulsifies

pH: 3.7-3.8 (50% solution)

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Excessive heat.

INCOMPATIBILITY: Strong alkalis, amines, and strong oxidizing compounds. Can corrode iron, steel, tin plate, lead and copper. Rapidly hydrolyzed at pH >7.0 or <5.0.

HAZARDOUS DECOMPOSITION PRODUCTS: Dimethyl sulfide, sulfur dioxide, carbon monoxide, carbon dioxide, and phosphorus pentoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): 5500 mg/kg

Eye Irritation (rabbit): Slight irritation

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

Carcinogenic Potential: Not listed by NTP, ACGIH, OSHA, or NIOSH as a carcinogen.

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 empty container. **Metal:** 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 local, state and federal regulations. **Plastic:** Triple rinse (or equivalent), then offer for recycling at an ACRC site (go to <http://www.acrecycle.org/> for locations) or by reconditioning, or puncture and dispose of in a sanitary landfill, or, incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water, food or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT Shipping Description: LESS THAN 10.2 GALLONS NOT REGULATED BY USDOT.

DOT 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)

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

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:		NFPA		HMIS	
2	Health	0	Least	2	Health
1	Flammability	1	Slight	1	Flammability
0	Instability	2	Moderate	0	Reactivity
		3	High	H	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) 96.5%

RCRA Waste Code: Not listed

CA Proposition 65: Not listed

16. OTHER INFORMATION

MSDS STATUS: Format modified to address changes in ANSI Standard Z400.1-2004

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

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**ACGIH® has recommended a Biological Exposure Index for this substance: Acetylcholinesterase Inhibiting Pesticides*

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