

MATERIAL SAFETY DATA SHEET

MALATHION 57 EC

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: 1-866-944-8565

U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: MALATHION 57 EC
CHEMICAL NAME: Malathion; (O-O-Dimethyl phosphorodithioate of diethyl mercaptosuccinate)
CHEMICAL FAMILY: Organophosphate Insecticide
EPA REG. NO.: 34704-108
MSDS Number: 000108-09-LPI

MSDS Revisions: Secs. 1, 4, 7, 12, 13 and 16 Date of Issue: 08/26/09

Supersedes: 08/09/05

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Harmful if swallowed. Avoid contact with skin. Avoid breathing of spray mist. Avoid contamination of feed and foodstuff. Keep out of reach of children. For use in mushroom houses and empty grain storage facilities: Use only with adequate ventilation. After using this product ventilate thoroughly before occupying enclosed spaces. Do not allow contact with treated surfaces until sprays have dried.

This product is straw to amber colored liquid with a mild mercaptan odor.

3. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Ingredients:	Percentage by Weight:	CAS No.	TLV (Units)
Malathion	57.00	121-75-5	15 mg/m ³ (skin)
Inert Ingredients (contains Naphthalene)	43.00	91-20-3	52 mg/m ³
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. Do not give any liquid to the person. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

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 immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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.

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

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: **1-866-944-8565**. 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): 155°F / 68.3°C (TCC)

FLAMMABLE LIMITS (LFL & UFL): None established

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, foam, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition products include oxides of sulfur and phosphorus-containing compounds. Incomplete combustion may lead to formation of carbon monoxide and/or other asphyxiants.

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.

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.

STORAGE: Do not use or store near heat or open flame. Do not store below temperature of 0°F / -17.8°C. If frozen, warm to 40°F/4.4°C and redissolve before using by rolling or shaking the container. Keep container tightly closed when not in use. Do not contaminate water, food or feed by storage or disposal.

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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, 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: 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, hat, 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*	
Naphthalene	50 mg/m ³	52 mg/m ³
Trimethylbenzene		123 mg/m ³

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Straw to amber liquid with mild petroleum odor.

SPECIFIC GRAVITY (Water = 1): 1.0768 g/ml

VAPOR PRESSURE: 28.4 mm/Hg @ 25°C

PERCENT VOLATILE (by volume): > 30%

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: 8.99 lbs/gal.

BOILING POINT: >300°F / >148.9°C

EVAPORATION RATE: Not established

SOLUBILITY: Emulsifies

pH: 4.4 (5% solution)

10. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBILITY: Strong oxidizers, acids, and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of sulfur, oxides of nitrogen and phosphorus-containing compounds. Incomplete combustion may lead to formation of carbon monoxide and/or other asphyxiants.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Excessive heat and ignition sources.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): 550 mg/kg (Technical)

Eye Irritation (rabbit): Slight irritation (Technical)

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

Carcinogenic Potential: Naphthalene has been determined to be a possible human carcinogen (Group 2B) by IARC; not classifiable as a human carcinogen by ACGIH; and a possible human carcinogen with further research needed by US EPA.

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

Skin Irritation (rabbit): Slight irritation (Technical)

Skin Sensitization (Guinea Pig): Not a sensitizer (Technical).

12. ECOLOGICAL INFORMATION

This pesticide 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. Do not contaminate water when disposing of equipment washwaters. Shrimp and crab may be killed at application rates recommended on the label. Do not apply where these are important resources. Apply this product only as specified on the label. This product is 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

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. **CONTAINER DISPOSAL: Non-refillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org. If not recycled, then 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. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **For packages up to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

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For packages greater than 5 gallons or 50 pounds: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

14. TRANSPORT INFORMATION

DOT Shipping Description: LESS THAN 12.5 GALLONS NOT REGULATED BY USDOT.

DOT Shipping Description: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, UN3082, III (MALATHION) RQ 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

2 Health	0 Least
2 Flammability	1 Slight
0 Instability	2 Moderate
	3 High
	4 Severe

HMIS

2 Health
2 Flammability
0 Reactivity
H PPE

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: Malathion (CAS: 121-75-5): 100 pounds

SARA, Title III, Section 313: Malathion (CAS: 121-75-5) 57.0%; Naphthalene (CAS: 91-20-3) 3.46% maximum; 1,2-4 Trimethylbenzene (CAS: 95-63-6) 0.59% maximum

RCRA Waste Code: Not listed

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: Sections 1, 4, 7, 12, 13 and 16 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

®Viton is a registered trademark of DuPont Performance Elastomers

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

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