

# MATERIAL SAFETY DATA SHEET

# MALATHION 8-E INSECTICIDE

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 8-E INSECTICIDE  
**CHEMICAL NAME:** Malathion; (O-O-Dimethyl phosphorodithioate of diethyl mercaptosuccinate)  
**CHEMICAL FAMILY:** Organophosphate Insecticide  
**EPA REG. NO.:** 34704-452  
**MSDS Number:** 000452-10-LPI

**MSDS Revisions:** Sections 1, 2, 4, 5, 7, 13

**Date of Issue:** 09/02/10

**Supersedes:** 06/08/06

## 2. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN – CAUTION –** Harmful if swallowed or absorbed through skin. Causes eye irritation. Avoid contact with eyes, skin, or clothing. May cause sensitization following repeated contact with skin. If sensitization reactions result, contact a physician.

This product is straw to amber colored liquid with a mild petroleum odor. Primary routes of entry are Inhalation, eye contact and skin contact.

## 3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Malathion	79.50	121-75-5	15 mg/m <sup>3</sup> (Skin)
Inert Ingredients, including	20.50		
Aromatic hydrocarbons, contains		64742-94-5	not listed
Naphthalene		91-20-3	52 mg/m <sup>3</sup> (Skin)

## 4. FIRST AID MEASURES

**If swallowed:** Call a poison control center 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 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 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 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.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: **1-866-944-8565**. 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):** 151°F / 66.1°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.  
**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:** None known.

## 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/PPE 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. This product is combustible. Do not use near heat or open flame.

**STORAGE:** Store in a safe manner. Store in original container only. Store in a cool, dry place. Keep container tightly closed when not in use. Do not store near heat or open flame. Do not contaminate water, food, or feed by storage or disposal.

**Personal Protective Equipment (PPE): 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.

	<b>OSHA PEL 8 hr TWA</b>	<b>ACGIH TLV-TWA</b>
Malathion	15 mg/m <sup>3</sup> (Skin)	1 mg/m <sup>3</sup> (Inhalable fraction of aerosol)
Naphthalene	50 mg/m <sup>3</sup>	52 mg/m <sup>3</sup> (Skin)

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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

**SPECIFIC GRAVITY (Water = 1):** 1.177 g/ml

**VAPOR PRESSURE:** 31.0 torr @ 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:** 9.82 lbs/gal.

**BOILING POINT:** Not established

**EVAPORATION RATE:** Not established

**SOLUBILITY:** Emulsifies

**pH:** 3.6 (5% solution)

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Excessive heat, open flame or extreme cold.

**INCOMPATIBILITY:** Strong bases, acids, and oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition – oxides of sulfur and phosphorus-containing compounds.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute Oral LD<sub>50</sub> (rat):** 370 mg/kg (Technical)

**Eye Irritation (rabbit):** Moderate irritant

**Inhalation LC<sub>50</sub> (rat):** >5.12 mg/L (4 hr)

**Carcinogenic Potential:** None listed in OSHA, NTP, IARC or ACGIH

**Acute Dermal LD<sub>50</sub> (rabbit):** 4100 mg/kg

**Skin Irritation (rabbit):** Slight irritant

**Skin Sensitization (Guinea Pig):** Possible sensitizer.

**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 wash waters.

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**

**Nonrefillable 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.acrcycle.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. **For packages greater than 5 gallons and less than 56 gallons: 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 packages greater than 56 gallons:** 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. **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. Do not contaminate water, food, or feed by storage or disposal.

**14. TRANSPORT INFORMATION**

**DOT Shipping Description:** LESS THAN 12.8 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**

<b>NFPA &amp; HMIS Hazard Ratings:</b>	<b>NFPA</b>		<b>HMIS</b>
	2 Health	0 Least	2 Health
	2 Flammability	1 Slight	2 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; Naphthalene (CAS: 91-20-3) 100 pounds  
**SARA, Title III, Section 313:** Malathion (CAS: 121-75-5) 79.50%; Naphthalene (CAS: 91-20-3) 0.82%  
**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, 2, 4, 5, 7, 13 revised  
**PREPARED BY:** Registrations and Regulatory Affairs **REVIEWED BY:** Environmental/ Regulatory Services  
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