

MATERIAL SAFETY DATA SHEET

MALATHION 8 AQUAMUL

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 AQUAMUL
CHEMICAL NAME: Malathion; (O-O-Dimethyl phosphorodithioate of diethyl mercaptosuccinate)
CHEMICAL FAMILY: Organophosphate Insecticide
EPA REG. NO.: 34704-474
MSDS Number: 000474-11-LPI

MSDS Revisions: Sections 7, 8, 12, and 13 **Date of Issue:** 05/23/11

Supersedes: 08/27/09

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

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

Warning Statements:

NOTE TO PHYSICIAN: This product is an organophosphate (cholinesterase-inhibiting) insecticide and may cause cholinesterase inhibition. Atropine is antidotal and should be given in multiple doses as necessary until the patient is atropinized. 2-PAM may be effective as an adjunct to atropine. 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	81.80	121-75-5	15 mg/m ³ (Skin)
Inert Ingredients	18.20		

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): 175°F / 79.4°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 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 8 AQUAMUL

STORAGE: Malathion 8 Aquamul should be stored in the original unopened container in a secure, dry place. Do not contaminate with other pesticides or fertilizers. The product should never be heated above 55 °C (131 °F), and should not be stored for long periods of time at a temperature in excess of 25 °C (77 °F). Store in a cool, dry, well-ventilated area. Store separately from strong alkalis and strong oxidizers. Keep container tightly closed when not in use. Do not contaminate water, food, or feed by storage or disposal.

Personal Protective Equipment (PPE): For all formulations and all use patterns – mixers, loaders, applicators, flaggers, and other handlers must wear: long sleeved shirt and long pants, shoes plus socks, and chemical-resistant gloves. Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, nitrile rubber or Viton®. If you want more options, follow the instructions for Category (F) on an EPA chemical resistance category selection chart. 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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for agricultural pesticides [40 CFR 170.240(d)(6)]. Pilots must wear the PPE required on product labeling for applicators.

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 and vapor)

9. PHYSICAL AND CHEMICAL PROPERTIES

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

SPECIFIC GRAVITY (Water = 1): 1.1934 g/ml

VAPOR PRESSURE: Not established

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: 9.96 lbs/gal.

BOILING POINT: Not established

EVAPORATION RATE: Not established

SOLUBILITY: Soluble

pH: 3.36 (10% v/v)

10. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBILITY: Strong bases, acids, and oxidizers.

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

HAZARDOUS POLYMERIZATION: Will not occur.

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

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: None listed in OSHA, NTP, IARC or ACGIH

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

Malathion is toxic to aquatic organisms, including fish and invertebrates. This product may contaminate water through drift of spray in wind. This product has a high potential for runoff after application. Use care when applying in or to an area which is adjacent to any body of water, and do not apply when weather conditions favor drift from target area. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. 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 washwater or rinsate. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. This pesticide 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 while bees are actively visiting the treatment area. For commercial, industrial, and institutional use products packaged in containers equal or greater than 5 gallons or 50 pounds: Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. For containers 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. For containers 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. If not recycled, then puncture and dispose of in a sanitary landfill. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. 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.

MATERIAL SAFETY DATA SHEET

MALATHION 8 AQUAMUL

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		HMIS			
		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	<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) 81.8%

RCRA Waste Code: Not listed

CA Proposition 65: Not listed.

16. OTHER INFORMATION

MSDS STATUS: Sections 7, 8, 12, and 13 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

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