



SAFETY DATA SHEET

SDS REVISIONS: ALL SECTIONS DATE OF ISSUE: 07/13/2018

MALATHION 57 EC

SUPERSEDES: 05/24/2016

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name MALATHION 57 EC

Other means of identification

Product Code PST-0067
UN/ID no 3082
Synonyms None
Registration Number(s) 34704-108

Recommended use of the chemical and restrictions on use

Recommended Use Insecticide. Not for Home Use.
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
LOVELAND PRODUCTS, INC.
P.O. Box 1286
Greeley, CO 80632-1286

Emergency telephone number

Company Phone Number 1-888-LPI-CUST (574-2878)
Emergency Telephone Chemtrec 1-800-424-9300
Medical Emergencies: 1-866-944-8565
US regulations require reporting spills of this material that could reach any surface waters.
The toll-free phone number for the US Coast Guard National Response Center is 1-800-424-8802

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4 - (H302)
Skin sensitization	Category 1 - (H317)
Germ cell mutagenicity	Category 1B - (H340)
Carcinogenicity	Category 1B - (H350)
Aspiration toxicity	Category 1 - (H304)
Flammable liquids	Category 4 - (H227)

Label elements



Signal word

DANGER

Hazard statements

H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H317 - May cause an allergic skin reaction



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H340 - May cause genetic defects
 H350 - May cause cancer
 H227 - Combustible liquid

Precautionary Statements - Prevention

P201 - Obtain special instructions before use
 P202 - Do not handle until all safety precautions have been read and understood
 P281 - Use personal protective equipment as required
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P280 - Wear protective gloves

Precautionary Statements - Response

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P330 - Rinse mouth
 P331 - Do NOT induce vomiting
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
 P363 - Wash contaminated clothing before reuse

Precautionary Statements - Storage

P405 - Store locked up

Precautionary Statements - Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No	Weight-%	GHS Classification	Trade Secret
Malathion	121-75-5	30 - 60	Acute Tox. 4 (H302) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	*
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	15 - 40	Asp. Tox. 1 (H304)	*
Solvent naphtha (petroleum), light aromatic	64742-95-6	1 - 5	Muta. 1B (H340) Carc. 1B (H350) Asp. Tox. 1 (H304)	*
Benzene, 1-methylethyl-	98-82-8	0.1 - 1	STOT SE 3 (H335) Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411) Flam. Liq. 3 (H226)	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.
 OSHA Hazard Communication 29 CFR 1910.1200



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4. FIRST AID MEASURES

Description of first aid measures

General advice	Get medical attention if symptoms occur.
Eye contact	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin contact	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.
Inhalation	Remove to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
Ingestion	Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms Eye irritation.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed. Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call 1-866-944-8565 for emergency medical treatment information.

Note to physicians No specific antidote. Treat symptomatically.

Antidotes Atropine is antidotal

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use, Dry chemical, Carbon dioxide (CO₂), Water spray (fog), Alcohol resistant foam

Specific hazards arising from the chemical

In the event of fire and/or explosion do not breathe fumes. May cause sensitization in susceptible persons. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Keep product and empty container away from heat and sources of ignition. Risk of ignition.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.



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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges.

Environmental precautions

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. Dam up. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Use with local exhaust ventilation. All equipment used when handling the product must be grounded. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in properly labeled containers.

Incompatible materials

Strong oxidizing agents. Strong bases. Copper. Iron. Steel.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Appropriate engineering controls

Engineering Controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Skin and body protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

Dependent on job function. If vapors or dusts exceed acceptable levels, wear a MSHA/NIOSH approved air-purifying respirator with any cartridges/filters approved for pesticides. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection Standard. Wear a supplied air respirator if exposure concentrations are unknown.

General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear liquid
Color	Straw to amber
Odor	Aromatic
Odor threshold	No data available

<u>Property</u>	<u>Values (Remarks - Method)</u>
pH	3.81 (NEAT)
Melting point / freezing point	No data available
Boiling point	No data available
Flash point	71 °C / 160 °F (Tag Closed Cup)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Flammability Limit in Air	
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Vapor pressure	0.366637
Vapor density	No data available
Specific Gravity	1.07 g/ml
Water solubility	Emulsifies
Solubility in other solvents	No data available
Partition coefficient	log KOW = 2.75
Autoignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

Other Information

VOC Content (%)	No data available
Density	8.97lbs/gal

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.



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10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents. Strong bases. Copper. Iron. Steel.

Hazardous Decomposition Products

None known based on information supplied.



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11. TOXICOLOGICAL INFORMATION

Acute toxicity of the formulated product: > 5000 mg/kg > 5000 mg/kg > 5.1 mg/L (rat) (4-hr)

Chemical Name	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Malathion	= 1390 mg/kg (Rat) = 290 mg/kg (Rat)	= 4100 mg/kg (Rabbit)	= 43790 µg/m ³ (Rat) 4 h
Solvent naphtha (petroleum), heavy aromatic	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h
Solvent naphtha (petroleum), light aromatic	= 8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3400 ppm (Rat) 4 h
Benzene, 1-methylethyl-	= 1400 mg/kg (Rat)	= 12300 µL/kg (Rabbit)	> 3577 ppm (Rat) 6 h = 39000 mg/m ³ (Rat) 4 h

Chemical Name	Skin corrosion/irritation	Eye damage/irritation	Respiratory sensitization	Skin sensitization
Malathion 121-75-5				Category 1

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Germ cell mutagenicity

No information available.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Malathion 121-75-5	-	Group 3	-	X
Benzene, 1-methylethyl- 98-82-8	-	Group 2B	Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A4 - Not Classifiable as a Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Not classifiable as a human carcinogen

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Chronic toxicity

Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects

blood, Central nervous system, Central Vascular System (CVS), Eye damage/irritation, Gastrointestinal tract (GI), liver, Respiratory system, Skin.

Aspiration hazard

May pose an aspiration pneumonia hazard.

Information on likely routes of exposure

Product Information

No data available

Inhalation

No data available.

Eye contact

No data available.

Skin contact

Mild irritant.

Ingestion

No data available.



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12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a marine pollutant according to DOT.

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Malathion 121-75-5	EC50 4.06 mg/L 72 h Pseudokirchneriella subcapitata	LC50 12.3 - 16.1 mg/L 96 h Pimephales promelas LC50 6.45 - 11.5 mg/L 96 h Pimephales promelas LC50 10.1 mg/L 96 h Pimephales promelas LC50 0.24 - 1.24 mg/L 96 h Cyprinus carpio LC50 0.085 mg/L 96 h Cyprinus carpio LC50 0.002 mg/L 96 h Cyprinus carpio LC50 0.34 mg/L 96 h Lepomis macrochirus LC50 0.010 - 0.088 mg/L 96 h Lepomis macrochirus LC50 0.089 mg/L 96 h Lepomis macrochirus LC50 0.028 mg/L 96 h Oncorhynchus mykiss LC50 0.094 - 0.146 mg/L 96 h Oncorhynchus mykiss LC50 0.0022 - 0.0074 mg/L 96 h Oncorhynchus mykiss LC50 9.7 mg/L 96 h Oryzias latipes LC50 1.2 mg/L 96 h Poecilia reticulata LC50 3.1 mg/L 96 h Poecilia reticulata	EC50 0.00014 - 0.014 mg/L 48 h Daphnia magna
Solvent naphtha (petroleum), heavy aromatic 64742-94-5	EC50 2.5 mg/L 72 h Skeletonema costatum	LC50 19 mg/L 96 h Pimephales promelas LC50 2.34 mg/L 96 h Oncorhynchus mykiss LC50 1740 mg/L 96 h Lepomis macrochirus LC50 45 mg/L 96 h Pimephales promelas LC50 41 mg/L 96 h Pimephales promelas	EC50 0.95 mg/L 48 h Daphnia magna
Solvent naphtha (petroleum), light aromatic 64742-95-6	-	LC50 9.22 mg/L 96 h Oncorhynchus mykiss	EC50 6.14 mg/L 48 h Daphnia magna
Benzene, 1-methylethyl- 98-82-8	EC50 2.6 mg/L 72 h Pseudokirchneriella subcapitata	LC50 6.04 - 6.61 mg/L 96 h Pimephales promelas LC50 4.8 mg/L 96 h Oncorhynchus mykiss LC50 2.7 mg/L 96 h Oncorhynchus mykiss LC50 5.1 mg/L 96 h Poecilia reticulata	EC50 0.6 mg/L 48 h Daphnia magna EC50 7.9 - 14.1 mg/L 48 h Daphnia magna

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available



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13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Wastes may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent), adding rinse water to spray tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by appropriate authorities. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at <http://www.acrecycle.org/>. Do not contaminate water, food or feed by storage or disposal.

Contaminated packaging

Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Benzene, 1-methylethyl-98-82-8	-	-	-	U055

14. TRANSPORT INFORMATION

Note:

19.5 GALLONS AND LESS: NOT REGULATED BY DOT

DOT

UN/ID no	3082
Proper shipping name	RQ Environmentally hazardous substance, liquid, n.o.s. (Malathion)
U.S. Surface Freight Classification:	INSECTICIDES, INSECT REPELLENTS, NOI, OTHER THAN POISON (NMFC 102120, CLASS 60)
Hazard Class	9
Packing Group	III
Reportable Quantity (RQ)	100
Marine pollutant	This product contains a chemical which is listed as a marine pollutant according to DOT.
Emergency Response Guide Number	171



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15. REGULATORY INFORMATION

<u>NFPA</u>	Health hazards 2	Flammability 2	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 2	Flammability 2	Physical hazards 0	Personal protection X
	0 - Least	1 - Slight	2 - Moderate	3 - High
				4 - Severe

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Malathion - 121-75-5	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Malathion 121-75-5	100 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Malathion 121-75-5	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ
Benzene, 1-methylethyl- 98-82-8	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Benzene, 1-methylethyl- - 98-82-8	Carcinogen

US EPA Waste Number U055

U.S. EPA Label Information

EPA Registration Number 34704-108

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

WARNING

Difference between SDS and EPA Pesticide label

Causes substantial but temporary eye injury. Harmful if swallowed. Harmful if abrobed through skin. Do not get in eye or on



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clothing. Avoid contact with skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

16. OTHER INFORMATION

Prepared By Product Stewardship and Regulatory Affairs

Reviewed By Safety, Health and Environment

Issue Date 07/13/2018

Revision Date 07/13/2018

Revision Note

16 SDS sections updated

MALATHION 57 EC is a trademark of Loveland Products, Inc.

Disclaimer

This safety data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and LOVELAND PRODUCTS, INC. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.

End of Safety Data Sheet