

Safety Data Sheet

Section 1 – Product Identification

Product Name: Malathion 57% EPA Registration #: 67760-40-53883
Manufacturer: Control Solutions Inc. EPA Establishment #: 53883-TX-002
5903 Genoa- Red Bluff
Pasadena, TX 77507
281-892-2500
Recommended Usage: Apply only as directed by product label.
Restrictions: Refer to product label for usage restrictions.

Section 2 – Hazard Identification

Health: Malathion is a cholinesterase inhibitor. Neurotoxic effects include staggering gait, muscle tremors, convulsions, and neuropathy. See **section 10** for more information.
Environmental: Malathion is very toxic to aquatic environments. See **section 11** for more information.
Physical: Combustible liquid.
Unclassified: None.
GHS Classification: Environmental toxicity: Acute aquatic, Category 1 (severe)
Flammable liquid: Category 3 (moderate)
Eye irritation: Category 2b (mild)

Section 3 – Chemical Composition

Material	CAS #	% by Weight	OSHA PEL
Malathion	121-75-5	57%	15 mg/m ³
Inert Ingredients	-	43%	Petroleum distillates 2000 mg/m ³

Section 4 – First Aid

IF SWALLOWED	Immediately call a poison control center or doctor. Do not induce vomiting unless told to by a poison control center or doctor. Do not give any liquid to the person. 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 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 for treatment advice if irritation persists.
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.

Notes/Physician's Information:

Malathion is a cholinesterase inhibitor affecting the central and peripheral nervous systems and producing cardiac and respiratory depression. Antidote: Administer atropine sulphate in large doses, TWO to FOUR mg intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5 to 10 minute intervals until signs of atropinization appear. 2-PAM chloride is a pharmacological antidote and may be administered as an adjunct to, but not a substitute for, atropine, which is a symptomatic and often lifesaving antidote. DO NOT GIVE MORPHINE OR TRANQUILIZERS. At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Continued absorption of malathion may occur and relapse may occur after initial improvement. VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS. Contains Petroleum Distillate. May pose an aspiration pneumonia hazard.

Section 5 – Firefighting Measures

Flash Point: Not applicable.
Extinguishing Media: Water fog, CO₂, foam, dry chemical.
Procedures: Use self-contained breathing apparatus. Cool fire exposed areas and equipment.
Unusual Fire Hazards: Chemical fires have potential to emit hazardous decomposition products. Refer to **Section 10** for more information.

Section 6 – Accidental Release Measures

Absorbent Materials: Universal absorbent pads, vermiculite, absorbent booms, or clay granules.
Containment: Do not discharge into municipal wastewater or public storm drains. Eliminate runoff as much as possible.
Waste Disposal: Sweep contaminated absorbent material into suitable container. Seal container and dispose of all contaminated waste material in municipal land-fill or through licensed TSD. Open dumping is prohibited. Whole material is considered an ignitable hazardous waste: waste code D001.
Reporting: Report all major spills and uncontrolled releases to proper local, state, and federal agencies.
Emergency Contact #: Chemtrec: 1-800-424-9300

Section 7 – Handling and Storage Instructions

Storage Conditions: Store upright at room temperature. Avoid exposure to extreme temperatures. Do not store near heat or open flame. Store away from foodstuffs, feed, and children.
Special Handling Considerations: Avoid dermal contact. Take precautions to avoid damaging containers. Avoid cross contamination. Always wash hands thoroughly after handling pesticides and before eating, drinking, or smoking. Clean water should be available to rinse eyes and skin in case of chemical exposure.

Section 8 – Engineering Controls and Protective Equipment

Engineering Controls:	Use only in adequately ventilated areas.
Eye Protection:	ANSI approved goggles or safety glasses with side shields are recommended.
Respiratory Protection:	Use NIOSH or MSHA approved P-class filtering face piece (dust mask) or air purifying respirator with p-class cartridges to minimize aerosol inhalation in areas with inadequate ventilation.
Dermal Protection:	Chemical resistant gloves, pants, long sleeves, shoes and socks.
Other Precautions:	Wash thoroughly after handling. Remove and wash clothing before reuse.

Section 9 – Physical and Chemical Properties

Odor:	Mercaptan (skunk-like) odor.	Melting Point:	Not determined.
Physical State:	Liquid	Flash Point:	See Section 10.
Color:	Light amber, yellow	Specific Gravity:	0.958 (g/ml)
Bulk Density:	8.91 (lbs/gal)	pH:	5.50 – 6.50
Vapor Pressure:	Not determined.	Water Solubility:	Dispersible.
Viscosity:	Not determined.	Refractive Index:	Not determined.

Section 10 – Stability and Reactivity

Flash Point:	67°C (152.6 F)
Lower Flammability Limit:	Not determined.
Upper Flammability Limit:	Not determined.
Hazardous Polymerization:	Will not occur.
Decomposition Products:	May release irritating and toxic gases due to thermal decomposition. Products of combustion include CO, and CO ₂ .
Conditions to Avoid:	Stable under normal storage conditions. Avoid exposure to extreme temperatures.
Incompatible Materials:	Strong oxidizers.

Section 11 – Toxicity and Symptoms of Overexposure

Routes of Exposure:	Dermal, eye, inhalation, ingestion.
Skin Contact:	Slight irritant. Symptoms reversible within 72 hrs.
Eye Contact:	Irritant. May cause redness and tearing. Symptoms reversible within 7 days.
Ingestion:	Ingestion may induce neurotoxic symptoms including diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity to touch or sound.
Inhalation:	May cause nasal and respiratory tract irritation.
Oral LD ₅₀ :	>4000 mg/kg
Dermal LD ₅₀ :	>2000 mg/kg
Inhalation LC ₅₀ :	>5 mg/L
Carcinogenicity:	IARC: Group 3 (not carcinogenic).
Teratogenicity:	Not a teratogen.
Embryo toxicity:	None.
Reproductive Effects:	None.

Mutagenicity: None.
Other Chronic Effects: Animal studies suggest malathion may cause various disruptions of the endocrine system at high dosages.

Section 12 – Ecological Data*

Aquatic: LC₅₀: 0.2 mg/L (rainbow trout).
(malathion)
Avian: LD₅₀: 400 mg/kg (bobwhite quail).
(malathion)
Bioaccumulation: Unlikely to bioaccumulate.

Section 12 – Ecological Data* (continued from page 3)

Environmental Fate: Reported half-lives in soil range from 1 to 17 days. Malathion is considered to be very mobile in most soil types, including sand, loam, sandy loam, and silt loam soils
Summary: This pesticide is toxic to fish, aquatic invertebrates, and aquatic life stages of amphibians. For terrestrial uses, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.

Section 13 – Disposal Considerations*

Pesticide Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility.☐

Container Disposal: **For Containers equal to or less than 5 Gallons:** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. 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. Offer for recycling if available. If recycling is not available: then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Containers greater than 5 Gallons: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Offer for recycling if available. If recycling is not

available: then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Bulk containers: (Refillable Container) Refill this container with pesticides 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 re-filler. 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 re-circulate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Section 14 – Transportation*

DOT:	Non bulk: not regulated. Bulk: RQ, UN1993, flammable liquid, n.o.s. (contains petroleum distillates, 57% malathion), Class 3, PG III, marine pollutant
IATA:	UN1993, flammable liquid, n.o.s. (contains petroleum distillates, 57% malathion), Class 3, PG III
IMDG:	UN1993, flammable liquid, n.o.s. (contains petroleum distillates, 57% malathion), Class 3, PG III, marine pollutant

Section 15 – Regulatory*

Section 302/TPQ: (emergency planning)	Not regulated under section 302.
Section 304/EHS RQ: (release notification)	Not regulated under section 304.
CERCLA RQ: (release notification)	Malathion RQ = 100 lbs (175 lbs as a mixture)
Section 311/Tier II: (MSDS submission)	Fire hazard. Acute health hazard. Chronic health hazard.
Section 313/TRI Chemicals:	Malathion - CAS #: 121-75-5
RCRA Haz-Waste Code(s):	Free liquid: D001, Ignitable.
CAA TQ: (air emissions)	Not subject to CAA.
EPA/FIFRA Toxicity Category:	II
EPA Signal Word:	WARNING
State Specific Regulations:	Not established
International Regulations:	Not established

Section 16 – Other

HMIS/NFPA Classification: Fire - 2 Health - 1

Reactivity - 1

Special - none

Date of Last Revision: October 14, 2011

Training Necessary: Yes.

NFPA and HMIS ratings assigned to this product are based on the hazards of its ingredient (s). Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product MSDS.

DISCLAIMER

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*Section is not required by 29 CFR 1910.1200 the Hazcom standard, but is provided for compliance with United Nations Globally Harmonized System (GHS).