



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Formulator: Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569
(928) 783-8844

Emergency Phone: (928) 783-3803
For 24-Hour Emergency Assistance (Spill, Leak, Fire, or Exposure), Call CHEMTREC®: **Inside the U.S.:** (800) 424-9300
Outside the U.S.: (703) 527-3887
For MEDICAL Emergency: (888) 478-0798

Product: Malathion 5 Dust
EPA Signal Word: Caution
Active Ingredient: Malathion (5.0%)
Chemical Name: O, O-Dimethyl dithiophosphate of diethyl mercaptosuccinate
Chemical Class: Organophosphorous pesticide

EPA Registration No.: 10163-142
CAS No.: 121-75-5

2. HAZARDS IDENTIFICATION

Physical Properties

Appearance: Off-white powder
Odor: Mild, sulfurous odor

Symptoms of Overexposure

May cause headaches, nausea, vomiting, cramps, weakness, blurred vision, pin-point pupils, tightness in chest, labored breathing, nervousness, sweating, watering of eyes, drooling or frothing of nose and mouth, and muscle spasms.

Medical Conditions Likely to be Aggravated by Exposure

Skin contact may aggravate preexisting skin conditions. Inhalation of mists may aggravate preexisting respiratory conditions.

Primary Routes of Exposure

Harmful if inhaled, ingested or skin contact occurs.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide, sulfur dioxide, phosphorus trioxide, methyl mercaptan, hydrogen sulfide, and dimethyl sulfide.

Unusual Fire, Explosion, and Reactivity Hazards

Product is slightly combustible. Product may support combustion at elevated temperatures. Malathion decomposes rapidly at temperatures above 150°C.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	OSHA – PEL	ACGIH – TLV	OTHER	NTP/IARC/OSHA CARCINOGEN
Malathion (5.0%)	15.0 mg/m ³	10.0 mg/m ³	Not established	No
Talc (27.3%) CAS# 14807-96-6	see Quartz	2.0 mg/m ³	Not established	No
Other Nuisance Particles (≥11.7%)	5.0 mg/m ³ (TWA)	10.0 mg/m ³	Not established	No
Silica, Amorphous (30.0%) CAS# 61790-53-2	None	10.0 mg/m ³	Not established	No
Quartz (10.8%) CAS# 14808-60-7	10.0 mg/m ³	0.1 mg/m ³	Not established	No

Only the identities of the active ingredient(s) and any *hazardous* inert ingredients are listed. Specific information on all of this product's ingredients can be obtained by the treating medical professional or spill emergency responder for the management of exposures, spills, or safety assessments.

4. FIRST AID MEASURES

If poisoning is suspected, immediately contact a physician, the nearest hospital, or the nearest Poison Control Center. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

Ingestion: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

Inhalation: Remove victim to fresh air.

Eye Contact: Flush eyes with plenty of clear water.

Skin Contact: Wash skin with soap and water.

Note to Physician

Administer the antidote atropine sulfate at 2 to 4 mg doses intravenously or intramuscularly. Repeat at 15 minute intervals until signs of atropinization appear. 2-PAM chloride is a pharmacologic antidote and may be administered as an adjunct to, but not a suitable substitute for, atropine. Morphine, theophylline, phenothiazines and reserpine are probably contraindicated. Malathion is a cholinesterase inhibitor affecting the central and peripheral nervous system and producing cardiac and respiratory depression. At the first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Continued absorption of the poison may occur and fatal relapses have been reported after initial improvement. Very close supervision of the patient is indicated for at least 48 hours.

FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE: (888) 478-0798

5. FIRE FIGHTING MEASURES

Flashpoint (test method): > 290°F, TOC

Flammable Limits (% in air): Not applicable

Autoignition Temperature: Not available

Appropriate Extinguishing Media

Use soft stream water fog, foam, CO₂, or dry chemical.

Fire Fighting Guidance

Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke or vapor generated.

Unusual Fire, Explosion, and Reactivity Hazards

Product is slightly combustible. Product may support combustion at elevated temperatures. Malathion decomposes rapidly at temperatures above 150°C

6. ACCIDENTAL RELEASE MEASURES

In Case of Spills or Leaks

Isolate and post spill area. Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons. Keep material out of streams and sewers. Large spills should be covered to prevent dispersal. Vacuum or shovel wastes into an approved drum. To decontaminate spill area, tools, and equipment, wash with a suitable solution (i.e., organic solvent, detergent, bleach, or caustic), and add the solution to the drums of wastes already collected. Label drums for contents. Dispose of drummed wastes, including decontamination solution, according to the method outlined in Section 13 – Disposal Considerations.

7. HANDLING AND STORAGE

Precautions in Storing

DO NOT contaminate water, food or feed by storage or disposal. Store in a cool, dry, well-ventilated place. Avoid excess heat. Store in original containers only. Keep out of reach of children and animals. Do not contaminate other pesticides or fertilizers by storage or disposal.

Storage

Store in a cool, dry, well-ventilated place. Avoid excess heat. Store in original containers only. Keep out of reach of children and animals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Thoroughly ventilate all transport vehicles prior to unloading. Use local exhaust at all process locations to control employee exposure.

Eye/Face	Not required; use normal safety precautions.
Skin Protection	Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks.
Respiratory Protection	Not required; however, to avoid inhalation of excess airborne dust, wear a dust/mist filtering respirator.
Additional Protection Information	Inspect gloves regularly for leaks. Emergency eye wash fountain should be located nearby. Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.
Applicators/Handlers	Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks.
User Safety Recommendations	Users should 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white powder
Odor:	Mild, sulfurous odor
Melting Point:	2.85°C for Malathion Technical
Boiling Point:	156-157°C for Malathion Technical
Specific Gravity/ Density:	40 lbs/ft ³
Solubility in H₂O	
Malathion	145 mg/l (25°C)
Vapor Pressure	
Malathion	5.3 mPa (30°C)

10. STABILITY AND REACTIVITY

Stability:	Relatively stable.
Hazardous Polymerization:	Will not occur
Decomposition Products:	Carbon monoxide, carbon dioxide, sulfur dioxide, phosphorus trioxide, methyl mercaptan, hydrogen sulfide, and dimethyl sulfide.
Hazardous Mixtures:	Avoid strong oxidizers and alkalis
Conditions To Avoid:	Excessive heat and fire, oxidizers, alkalis and iron. Thermal decomposition and burning may produce highly toxic by-products. Do not store above 120°F.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies

Ingestion:	Oral rat LD ₅₀ 1375-2800
Dermal:	Acute percutaneous LD ₅₀ (24h) for rabbits 4100 mg/kg
Inhalation:	Not available
Eye Contact:	Not available
Skin Contact:	Not available
Skin Sensitizer:	Weak sensitizer

Carcinogenic Potential

None

12. ECOLOGICAL INFORMATION

Summary of Effects

Malathion

This pesticide is toxic to fish, aquatic invertebrates, and aquatic life stages of amphibians. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in areas near the application site. 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 CONSIDERATION

Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

DOT Classification

Not regulated

International Maritime Organization

Not regulated

International Civil Aviation Organization

Not regulated

15. REGULATORY INFORMATION

SARA Title III Classification

Section 302/304:	Not applicable
Section 311/312:	Immediate (acute) health hazard
	Delayed (chronic) health hazard
	Fire hazard
Section 313 chemical(s):	Malathion, Xylene

Proposition 65

Not applicable

CERCLA Reportable Quantity (RQ)

2000 lbs. product (100 lbs. Malathion)

RCRA Classification

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA Status

Exempt from TSCA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 0
Reactivity: 0

0	Least
1	Slight
2	Moderate
3	High
4	Severe

Notice: The information and recommendations contained herein are provided in good faith and are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information herein.

Prepared By:

Gowan Company
(928) 783-8844