

MALATHION 50% EC

MATERIAL SAFETY DATA SHEET

Manufacturer's Name & Address

Southern Agricultural Insecticides, Inc.
PO Box 218, Palmetto, Fla. 34220

Phone: 941-722-3285
Chemtrec: 800-424-9300

I NOMENCLATURE

Product Name: MALATHION 50% EC
Chemical Name: O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate
Synonyms: Malathion, FYFANON
Chemical Family: Organophosphate pesticide

EPA Reg. No. 829-282

II INGREDIENTS

	CAS No.	Nominal %	OSHA PEL	ACGIH TWA	Subpart Z
Malathion 95%	121-75-5	52.5%	10 mg/m ³	10 mg/m ³	listed
Light aromatic naphtha	64742-95-6	28.5%	300 ppm	300 ppm	
Xylene Range Aromatics	1330-20-7	12.0%	435 mg/m ³	434 mg/m ³	listed
1,2,4 trimethyl benzene	95-63-6	3.0		25 ppm	
Emulsifiers		3.0%	Not hazardous		

III PHYSICAL PROPERTIES

Boiling Point: > 300°F
Percent Volatile: not available
Evaporation Rate: (not available)
Reactivity in Water: Hydrolyzes
Appearance/Odor: Liquid with brownish tint, kerosene like odor.

Specific Gravity: 1.04
Vapor Density: (air=1) >3.5
Solubility In Water: Product Emulsifies.
Malathion Solubility in Water: 148 mg/l @ 25°C

IV FIRE AND EXPLOSION DATA

Flash Point: 100°F Min
Extinguishing Media: CO₂, dry chemical, foam, Water spray may be used to cool containers. A water stream may spread flames.
Special Fire Fighting Procedures: Fight fire upwind. Dike to prevent water runoff. Firemen should wear self contained breathing apparatus and rubber clothing. After fire, firemen should shower and change clothing. Decontaminate used clothing with liquid chlorine bleach.
Unusual Fire & Explosion Hazards: Vapors and fumes are hazardous. Evacuate people downwind from fire. Vapors can form explosive mixtures with air. Heavier than air vapors can flow along surfaces to distant ignition sources and flash back.
Thermal Decomposition Products: Dimethyl sulfide, SO₂, CO₂, CO, and phosphorous pentoxide. Avoid breathing smoke and fumes. Malathion rapidly decomposes above 100°C significantly increasing risk of explosion.

Flammable Limits: Not available

V FIRST AID

First Aid for EYE Exposure: Flush eyes with a gentle stream of clean water for at least 15 minutes. Hold eye lids apart to ensure washing underside of lids. Remove contact lenses while rinsing. Seek medical attention.
First Aid for SKIN Exposure: Wash with soap and water. Change to clean clothing. Scrub finger nails clean with soap and water. Seek medical attention if skin irritation occurs.
First Aid for INHALATION: Remove victim to fresh air. Restore breathing if necessary. Seek medical attention if symptoms persist or exposure severe.
First Aid If SWALLOWED: Seek medical attention immediately. Do not induce vomiting without advice of physician. (contains petroleum solvent) Cautious gastric lavage may be indicated.
SYMPTOMS of OVEREXPOSURE: Weakness, headache, tightness of chest, blurred vision, pin-point pupils, excessive salivation, excessive sweating, nausea, vomiting, diarrhea, and abdominal cramps. If symptoms of poisoning occur, seek prompt medical attention.
Note to physician: Malathion is a cholinesterase inhibitor. **ANTIDOTE:** Administer atropine sulfate 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. Do not give morphine or tranquilizers. At first sign of pulmonary edema, patient should be given supplemental oxygen and treated symptomatically. Continued absorption of Malathion may occur after initial improvement. Very close supervision of patient is indicated for at least 48 hours.

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VI TOXICITY DATA (data for Malathion technical)

Route of Entry: Ingestion, skin and inhalation.

Ingestion: LD50 oral (rat) >5500 mg/kg

Skin: LD50 dermal (rat) > 2000 mg/kg

Inhalation: LC50 inhalation, rat, > 5.2 mg/l 4 hr

Irritancy: Slightly irritating to eyes & skin. Not a sensitizer to guinea pigs.

Carcinogenicity of Malathion: IARC group 3 Not classifiable as to carcinogenicity for humans

Malathion is not listed as a carcinogen by OSHA, IARC, NTP.

VII REACTIVITY

Stability: Slow decomposition above 120°F. Rapid decomposition above 100°C. Decomposition is dependent on time as well as temperature due to exothermic and autocatalytic reactions. The reactions involve rearrangements and polymerization releasing volatile and malodorous compounds such as dimethyl sulfide. Inappropriate storage may induce the formation of the more toxic and synergistic isomalathion.

Conditions to Avoid: Moisture and high temperatures.

Materials to Avoid: Strong alkalis, amines, and strong oxidizers Product can corrode iron, steel, tin plate, lead and copper.

VIII SPILL OR LEAK PROTECTION

Steps To Be Taken If Spilled: Eliminate ignition sources. Contain in smallest area by diking with absorbent material. Do not allow to enter sewer or drain. Provide ventilation or respiratory protection during clean up. Treat contaminated area with liquid bleach. Let stand for 15 minutes. Repeat procedure, then flush area with water. Wear protective clothing (section IX) during clean up.

Waste Disposal: Absorb on clay or soda ash and place in waste disposal container. Dispose of absorbed material in accord with Federal, State, and local regulations.

Note: User should follow label instructions for disposal of unused product and container disposal.

IX SPECIAL PROTECTION

Respiratory: Type/Conditions: Avoid breathing vapors or spray mist. For repeated, prolonged, or commercial use wear a NIOSH-approved chemical cartridge or full face respirator with pesticide canisters.

Ventilation: General (acceptable) Local Exhaust (Preferable)

Gloves: Chemical resistant, such as barrier laminate, butyl rubber, nitrile rubber, or Viton.

Eye Protection: Chemical goggles or safety glasses with side shields.

Other Protective Equipment: Freshly laundered body covering clothing, shoes and socks. Launder clothing separately from household laundry.

X SPECIAL PRECAUTIONS

Handling Precautions: Avoid damage to containers. Do not handle damaged or leaking containers without protective equipment. Wash thoroughly after handling and before eating or smoking.

Storing Precautions: Store in a cool, safe, place away from feed or food-stuffs. Do not store in warehouses where temperatures exceed 100°F for extended periods. Keep storage area free from ignition sources. KEEP AWAY FROM CHILDREN

XI TRANSPORTATION AND SELECTED REGULATORY

Freight classification: Insecticides NOI O/T Poison NMFC 102120

Shipments of 12 x 8 oz, 12 x 1 Pt., 12 x 1 Qt, 4 x 1 Gal

Hazardous Material description on shipping papers: None.

Case Marking: consumer commodity ORM-D **2x2 ½ gal:** Hazardous Material description on shipping papers and package marking Flammable Liquid NOS (Petroleum Naphtha), 3, UN 1993. PG III. Hazard Label Flammable liquid: SARA TITLE III Malathion, CAS# 12175-5 Sec 304 CERCLA RQ 100 lb., Xylene Range Aromatics, CAS #1330-20-7 Sec 304, CERCLA RQ 1000 lb, Section 313, RCRA U239, D001

This information relates solely to the designated product and is not inclusive for combinations with other materials.

This information is given without warranty or representation. Information is based on data we believe to be correct as of the date hereof. This information is furnished solely for your consideration, investigation, and verification. Before using any product READ THE LABEL.

Ref.: Cheminova, MSDS Fyfanon 2/95,
CFR 49 parts 171-172-173 5/97

CFR 29 1910.1200 7/95, CFR 40 370/372 1/95
J J Keller Regulatory Cross Ref.: 10/94