



MATERIAL SAFETY DATA SHEET
ARMALA : MALATHION 50% E.C.

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND SUPPLIER

PRODUCT NAME : MALTHION 50% E.C.
CHEMICAL GROUP : Organophosphate pesticide
RECOMMEDED USE : A liquid insecticide for agricultural use only
FORMULATION : Emulsifiable Concentrate

CORPORATE ADDRESS : Arbuda Agrochemicals Pvt. Ltd.
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Ashok Chakravarti Road, Kandivali-East,
Mumbai-400101, Maharashtra, India
Customer Care No- +91 9076907642
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MANUFACTURER ADDRESS : Arbuda Agrochemicals Pvt Ltd
Plot No-281-283, GIDC, Taluka –Talod ,
District- Sabarkantha, Gujarat – 383215.

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Components contributing to hazard:	CAS No.	Percentage
Malathion 95%	121-75-5	52.5%
Light aromatic naphtha	64742-95-6	28.5%
Xylene Range Aromatics	1330-20-7	12.0
1,2,4 trimethyl benzene	95-63-6	3.0
Emulsifiers 3.0%		

3. HAZARDS IDENTIFICATION

Hazard statements : Harmful if swallowed.
Harmful if inhaled.
Causes eye irritation.
May be fatal if swallowed and enters airways.
Causes damage to nervous system.
May cause damage to nervous system through prolonged or repeated exposure.
Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

4. FIRST AID MEASURES

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 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 atropinisation 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. Very close supervision of patient is indicated for at least 48 hours.

5. FIRE-FIGHTING MEASURES

Flash Point: 100°F Min.

Flammable Limits: Not available

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

6. ACCIDENTAL RELEASE MEASURES

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.

7. HANDLING AND STORAGE

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 CHILDRENS.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION:

VENTILATION :- General air replacement or dilution ventilation is sufficient for material handling and storage but local ventilation should be used when removing this product from containers. Ventilate all transport vehicles prior to unloading.

PERSONAL HYGIENE :- Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

WORK CLOTHING: Depending upon concentrations encountered, wear coveralls or long sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover suit, such as rubber rain suit, Leather items such as shoes. Belts and watchbands that becomes contaminated should be removed and hold destroyed. Launder all work clothing before refuse (separately from house laundry).

RESPIRATORY PROTECTION :- For splash, mist, vapor or dust exposure wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

EYE PROTECTION: For splash, mist vapor or dust exposure wear chemical protective goggles as a face shield.

GLOVES: Wear chemical protective gloves made of materials such as rubber, Neoprene, or PVC. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	:	> 3000F
Specific Gravity	:	1.04 Percent
Volatile	:	not available Vapor
Density	:	(air=1)>3.5
Evaporation Rate	:	(Not Available) Solubility in water. Product Emulsifier
		Reactivity in water : Hydrolyzes Malathion
Solubility in Water	:	148 mg/l @ 25 °C
Appearance/Odor	:	Liquid with brownish tint, kerosene like odor.

10. STABILITY AND 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, 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.

11. TOXICOLOGICAL INFORMATION

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		

12. ECOLOGICAL INFORMATION

Ecotoxicity effects	: Extremely toxic to fish and aquatic invertebrates. Highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply or allow drift to blooming crops or weeds if bees are visiting treatment area.
Persistence and degradability	: Inherently biodegradable.
Bioaccumulative potential	: Does not bioaccumulate.
Mobility	: Water contaminating.
Aquatic toxicity	: Toxic to fish and other water organisms.
Additional ecological information	: Do not contaminate water sources when disposing of equipment washwaters. Do not apply directly to lakes, streams, or ponds.

13. DISPOSAL CONSIDERATION

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.

14. TRANSPORT INFORMATION

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- D2x2 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.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

EPA: •

EPA FIFRA INFORMATION: This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemical. The hazard information required on the pesticide label is listed out below. The pesticide label also includes other important information, including directions for use.

- EPA/CERCLA Reportable Quantity: Malathion: (CAS: 121-75-5): 100 pounds

SARA/TITLE III:

- Section 302. Extremely Hazardous Substance Notification: This material is not known to contain any Extremely Hazardous Substances.
- Section 311/312. Hazard Categories: Fire Hazard Immediate health hazard Chronic health hazard
- Section 313. (Toxic chemicals): Acute Malathion (CAS: 121-75-5)
- RCA Waste Code: Not applicable

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

- This product is listed. Toxic Substances Control Act (TSCA):
- All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

16. OTHER INFORMATION

MSDS PREPARATION DATE	01.03.2024
REVISION DATE	28.02.2026

The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to Date information. The information given in this data sheet does not constitute or Replace the user's own assessment or work risk as required by other health and Safety legislation.