

# MATERIAL SAFETY DATA SHEET

## MALATHION

### 1. PRODUCT INFORMATION

**Chemical Identity:** Malathion: S-1,2-bis(ethoxycarbonyl)ethyl O, O-dimethyl phosphorodithioate (IUPAC).

Cythion, Fyfanon - organophosphate.

**Product Use:** Insecticide

### 2. HAZARDOUS INGREDIENTS

#### Hazardous Ingredients

Malathion (CAS: 121-75-5) 500 g/L 1375-2800 mg/kg > 4100 mg/kg 84.6 mg/m<sup>3</sup>/4H

### 3. PHYSICAL INFORMATION

**Appearance & Odour:** Clear yellow coloured liquid with an aromatic solvent and slight mercaptan odour.

**Specific Gravity:** 1.035 @ 20° C **Boiling**

**Pt°C:** n/e **Vapour Density (air = 1):** 0.029

**Density (g/mL):** n/a **Freezing Pt°C:** n/e

**Vapour Pressure (mm):** 28.4 mm Hg (Reid-ASTM D323)

**pH:** 4.5 **Solubility in Water:** Emulsifies

**Evaporation Rate:** < Butyl Acetate

### 4. FIRE or EXPLOSION HAZARD

**Flammability (Specify Conditions):** n/a

**Flash Pt °C (method):** 61.5 (TCC)

**Means of Extinction:** Dry chemical, foam, CO<sub>2</sub>, water spray or fog.

**Special Fire Fighting Procedures:** Wear self contained breathing apparatus and full protective clothing. Fight fire from upwind side. If water is used to fight fire, avoid using heavy streams. After fire, firemen should shower, change to clean clothing, and decontaminate used clothing and equipment by washing with liquid chlorine bleach solution.

**Hazardous Combustion Products:** Some hazardous phosphorous and/or sulphur products may be formed. Incomplete combustion may lead to formation of carbon monoxide.

#### Unusual Fire & Explosion Hazards:

Vapours and fumes from fire may be hazardous; evacuate people downwind. If water is used to fight fire, dike area to contain run-off and prevent contamination of water supplies.

### 5. REACTIVITY INFORMATION

**Stability (Conditions to avoid):** Stable (excessive heat).

**Reactivity & Under What Condition:** Will not occur. Conditions to avoid: none known.

**Incompatibility (Materials to avoid):** Strong oxidizers, bases.

**Hazardous Decomposition Products:** Some hazardous phosphorous and/or sulphur products may be formed. Incomplete combustion may lead to formation of carbon monoxide.

### 6. HEALTH HAZARD INFORMATION

**Routes of Entry:** Skin and eye contact, acute inhalation and ingestion.

**Effects of Overexposure:** Malathion is an organophosphate compound which inhibits cholinesterase activity. Signs and symptoms may include weakness, tightness in chest, headache, blurred vision, non-reactive pin point pupils, excessive salivation, excessive sweating, nausea, vomiting, diarrhoea, abdominal cramps, muscular fibrillation, convulsions, pulmonary edema, possible cardiac arrest and death.

**Exposure Limits:** TLV 435 mg/m<sup>3</sup>

**Irritancy of Product:** n/e

**Sensitization of Material:** n/e

**Carcinogenicity:** Neither Malathion nor other components of this product are listed as a carcinogen.

## 7. PREVENTATIVE MEASURES

**Respiratory Protection:** Not normally required. If vapours may exceed acceptable levels, wear MSHA/NIOSH approved respirator or mask for protection against pesticide dusts, mists and vapours.

**Eyes:** Goggles/Face Shield **Gloves:** Rubber or Impervious **Footwear:** Rubber or Impervious

**Clothing:** Coveralls or Impervious apron when handling concentrate. **Other:** Work in well ventilated area.

**Engineering Control:** Use if ventilation is not adequate.

**Leak & Spill Procedures:** Contain spill; absorb liquids by covering with clay or other absorbent material; vacuum, scoop or sweep up wastes and place in container for disposal. Decontaminate area by washing with household bleach, as it comes from container, and absorb liquids as above. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**Waste Disposal:** For more information on the disposal of unused, unwanted product and the cleanup of spills, contact the provincial regulatory agency or the manufacturer.

**Storage Requirements:** Store below 40°C.

### TRANSPORTATION OF DANGEROUS

**GOODS:** Not regulated by ground or rail transport. Regulated for Marine Transport only. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Malathion 46%) Class 9, UN 3082, P.G. III \*MARINE POLLUTANT\*

## 8. FIRST AID MEASURES

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**If On Skin:** Remove all contaminated clothing. Wash skin and hair thoroughly with soap and water. Wash clothing before reuse. If irritation persists, get medical attention.

**If In Eyes:** Flush with running water for at least 15 minutes while holding eyelids open to help flush out material. Get medical attention.

**Ingestion:** DO NOT induce vomiting.

Contains a petroleum solvent. Call physician immediately or contact a poison control centre.

**Inhalation:** Remove to fresh air. If breathing is difficult, administer oxygen; if breathing stops administer artificial respiration. Get medical attention immediately.

Note to Physician: This product is an organic phosphate insecticide. If symptoms of cholinesterase inhibition appear, atropine sulphate by injection is antidotal. 2-PAM is also antidotal and may be administered, but only in conjunction with atropine.

All information contained in this Material Safety Data Sheet is furnished free of charge and is intended for your evaluation. In our opinion the information is, as of the date of this Material Safety Data Sheet, reliable, however, it is your responsibility to determine the suitability of the information for your use. You are advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional or variable conditions or circumstances exist or because of applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information gathered by you, and you must make independent determinations of the suitability and completeness of the information from all sources to assure both proper use of the material described herein and the safety and health.