

Agrium Advanced Technologies

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MATERIAL SAFETY DATA SHEET**PRODUCT:** Malathion 3% Residual Insecticide**Transportation Emergencies:** 1-800-792-8311**Medical Emergencies:** 1-877-615-0015**SECTION 1 - PRODUCT INFORMATION****P.C.P. Act Registration No.:** 14265**Code:** 5180060, 5180071**Chemical Name:** Malathion: O,O-dimethyl-S-(1,2(diethoxycarbonyl)-ethyl) phosphorodithioate**Synonyms:** Fyfanon**Chemical Family:** Organophosphate**Product Use:** Insecticide**TDG Classification:** Not Regulated by Road/Rail Transport. Regulated by Marine Transport: Environmentally Hazardous Substance – Liquid – NOS (Malathion Solution) – Class 9 – UN 3082 – PG III (Marine Pollutant)**SECTION 2 - HAZARDOUS INGREDIENTS**

HAZARDOUS INGREDIENTS	WEIGHT %	CAS REG #	LD50 (mg/Kg)	T.W.A. - T.L.V.
Malathion	3.0	121-75-5	Oral, rat 1375 Dermal, rat >2000	LC50 5.2 mg/L
Petroleum Distillates	5 - 15	64742-94-5	Oral, rat 10 mL/Kg	3800 mg/m3/4hrs
Petroleum Distillates	75 - 85	64742-47-8	Oral, rat >5000 Dermal, rabbit >3000	300 ppm
Calculated LD50 for mixture			45,800	

SECTION 3 - PHYSICAL DATA**Physical State:** Liquid**Specific Gravity:** 0.810**Boiling Point:** No Data**Vapour Pressure:** No Data**% Volatiles:** 97 %**Solubility in Water:** Insoluble**Appearance/Odour:** Pale yellow liquid with hydrocarbon odour**pH:** No Data**Freezing/Melting Point:** Approx. 3 °C**Vapour Density:** No Data**Evaporation Rate:** No Data**SECTION 4 - FIRE AND EXPLOSION****Flash Point:** >62 °C T.C.C.**Lower Explosion Limit %:** 1%**Fire Extinguishing Media:** Foam, Carbon Dioxide, Dry Chemical, Water Fog**Fire Fighting Procedures:** Wear self-contained Breathing Apparatus and impervious clothing. Minimize the amount of water used and contain the run-off.**Other Fire or Explosion Hazards:** Malathion should never be heated above 55 °C. Vapour is heavier than air, may travel long the ground to ignition sources and flash back.**Autoignition Temperature:** No Data**Upper Explosion Limit %:** 7 %**SECTION 5 - REACTIVITY DATA****Stability:** Stable**Conditions to Avoid:** Elevated temperatures, will decompose rapidly at 100 °C and above.**Incompatibility (Materials to Avoid):** Strong alkalis and oxidizers.**Hazardous Polymerization:** Will Not Occur

Malathion 3% résiduel Insecticide

Hazardous Decomposition Products: Thermal decomposition may produce dimethylsulfide, sulphur oxides, carbon oxides, phosphoropentoxide, hydrogen sulfide and nitrogen oxides.

Decomposition is dependent on time as well as temperature due to exothermic and autocatalytic reactions. The reactions involve rearrangements and polymerization releasing volatile malodorous and inflammable compounds such as dimethyl sulfide.

SECTION 6 - HEALTH HAZARD DATA

Acute Effects of Overexposure: May cause headache, nausea, vomiting, abdominal cramps, weakness, blurred vision, pin-point pupils, tightness in chest, laboured breathing, sweating, muscle spasms and coma.

Effects of Chronic Exposure: Prolonged exposure may cause dermatitis.

Other Health Effects: Malathion is a cholinesterase inhibitor. **NOTE TO PHYSICIAN:** Administer atropine sulphate in large doses. Large doses at 2 to 4 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, but not a substitute for atropine. Do not give morphine or tranquilizers.

SECTION 7 - FIRST AID PROCEDURES

Inhalation: Move victim to fresh air and restore breathing if required. **OBTAIN MEDICAL ADVICE.**

Skin Contact: Flush skin with running water and thoroughly wash with soap and water. If irritation persists seek medical attention.

Ingestion: Give 1 to 2 glasses water (200 to 500 ml) to dilute material. Do Not Induce Vomiting. **OBTAIN MEDICAL ADVICE.** Never give anything by mouth to an unconscious person.

Eye Contact: Flush eyes with running water for 20 minutes. Hold eyelids open during flushing. If irritation persists seek Medical Attention.

SECTION 8 - PREVENTIVE MEASURES

Respiratory Protection: NIOSH/MSHA approved respirator.

Eye Protection: Chemical safety glasses.

Skin Protection: Chemical resistant gloves.

Other Personal Protective Equipment: Coveralls.

Engineering Controls: Local exhaust or ventilation.

Handling Procedures and Equipment: Avoid breathing vapours, contact with eyes, skin and clothing. Wash thoroughly after use.

Storage Requirements: Store in cool, dry, ventilated area. Keep out of reach of children and pets.

Storage Temperature: Min: 0 °C Max: 40 °C

SECTION 9 - ENVIRONMENTAL PROTECTION DATA

Spill and Leak Procedures: Stop leak, contain spill by diking and absorb with suitable absorbent and transfer into waste container for disposal. Clean area with detergent and water, absorb wash and place in waste container. Remove any contaminated soil for proper disposal.

Waste Disposal: Dispose of empty container in household garbage. Dispose of waste product in accordance with Local, Provincial or Federal government regulations.

Environmental Effects: Do not contaminate local water supplies or environments.

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Prepared by: Technical Department

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