

MATERIAL SAFETY DATA SHEET**DATED: 03-14-03****Product: Hi-Yield® 55% Malathion Insect Spray****SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Name: Voluntary Purchasing Groups, Inc. P.O. Box 460, Bonham, Texas 75418Emergency Telephone: (903) 583-5501 or (800) 424-9300 (Chemtrec)For Additional Information Contact: Product Manager or ChemtrecCommon Name (used on label): Hi-Yield® 55% Malathion Insect SprayEPA # 7401-10-34911Formula: Mixture of Malathion, petroleum distillates, and emulsifiers**SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS Number	% (Typical)	TLV (Units)	PEL (Units)
Malathion	151-75-5	55.0	10 mg/m ³	10 mg/m ³
Petroleum distillates PPM	64742-95-6	Proprietary	300 PPM	400

PEL: Permissible Exposure Limit established by the Occupational Safety and Health Administration

TLV: Threshold Limit Value recommended by the American Conference of Governmental Industrial Hygienists.

SECTION 3 – PHYSICAL DATABoiling Point: 156 C (Malathion)Vapor Pressure (mm Hg): 0.00004 (Malathion)Vapor Density (Air = 1): > 1Solubility in Water: Forms emulsionSpecific Gravity (H₂O = 1): 1.05Percent Volatile by Volume (%): Not determinedEvaporation Rate (ethyl ether = 1): NegligibleReactivity in Water: Will not evolve flammable or
Toxic gasesAppearance and Odor: Clear/Amber liquid, Characteristic mercaptan odor**SECTION 4 – FIRE AND EXPLOSION DATA**Flash Point: < 100 FFlammable Limits in Air (% by volume):

Lower: Not determined Upper: Not determined

Extinguishing Media: Water, foam, CO₂, or dry chemicalUnusual Fire and Explosion Hazards: Thermal decomposition may produce hydrogen sulfide, oxides of carbon, sulfur dioxide, phosphorous trioxide, methyl mercaptan, dimethyl sulfide, and other organic decomposition products.Special Fire Fighting Procedures: Wear self-contained, positive pressure breathing apparatus and full fire fighting protective clothing. Alert medical personnel to be ready to treat poisoning cases. Decontaminate when leaving fire area. Keep unnecessary people away. Fight fire upwind. Dike area of fire to prevent pesticide runoff. Use as little water as possible. Hot containers may explode, use water to keep containers cool.

SECTION 5 – HEALTH INFORMATION

PRIMARY ROUTES OF EXPOSURE AND TARGET ORGANS:

Ingestion, skin absorption, inhalation, eye and skin contact. May affect the central nervous system, respiratory system, eyes, skin, liver, blood cholinesterase, and gastrointestinal tract.

SIGNS AND SYMPTOMS OF EXPOSURE:

- (1) ACUTE OVEREXPOSURE: Malathion is an anticholinesterase agent. Signs and symptoms of intoxication by an anticholinesterase agent are caused by the inactivation of the enzyme cholinesterase, which results in the accumulation of acetylcholine at synapses in the nervous system, skeletal and smooth muscle, and secretory glands. Signs and symptoms may include irritation of the skin after skin contact. Entry into the body may result in eye and skin irritation, aching eyes, blurred vision, lacrimation, calivataion, anorexia, nausea, vomiting, abdominal cramps, diarrhea, giddiness, confusion, ataxia, rhinorrhea, hyperirritability, headache, lightheadedness, laryngeal spasm, convulsions, miosis with loss of accommodation, hyperhidrosis, muscle fasciculation's, sphincter failure, comma, death.
- (2) CHRONIC OVEREXPOSURE: In addition to the above, prolonged and repeated exposures may result in damage to the liver.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Disorders of the central nervous system, respiratory system, eyes, skin, liver, blood and gastrointestinal tract.

CHEMICAL/COMPONENT LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None

NTP: No

IARC: No

OSHA: No

OTHER EXPOSURE: Not determined

EMERGENCY AND FIRST AID PROCEDURES:

INGESTION: Do not induce vomiting. Induction of vomiting may result in aspiration of solvent into the lungs, which could be fatal. Call a physician to have stomach emptied by lavage. Parasympathomimetic agent. Erythrocyte cholinesterase activity should be measured. If signs or symptoms are present, give atropine, 4 mg. I.V. Repeat every 10 minutes until atropinized. Observe for at least 48 hours. Opiates and phenothiazine tranquilizers are contraindicated. **SKIN OR EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. Wash skin thoroughly with plenty of soap and water. Wash clothing before reuse. Toxic components of this product may be absorbed through the skin. Seek medical attention. **INHALATION:** Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

SECTION 6 – REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Store below 48.8 C. Heating Above 50 C will result in decomposition

INCOMPATIBILITY (Materials to Avoid): Strong alkalis and strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce hydrogen sulfide, oxides of carbon, sulfur dioxide, phosphorous trioxide, methyl mercaptan, dimethyl sulfide, and other organic decompositions products.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 7 – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS LEAKED OR SPILLED

Eliminate sources of ignition. Ventilate area of spill. Wear impervious boots, gloves and chemical splash goggles. Absorb spilled material with Dri-Rite, sand or other inert absorbent. Sweep-up and place in a properly labeled container, and seal. Flush area with water.

WASTE DISPOSAL MEHTOD

Dispose of in accordance with Federal, State and local regulations.

SECTION 8 – PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Utilize NIOSH/MSHA approved respiratory protection to protect against organic vapors and pesticides.

VENTILATION: General or local exhaust to maintain exposure below TLV/PEL

PROTECTIVE GLOVES: Nitrile, or other impervious material

EYE PROTECTION: Chemical splash goggles (ANSI Z87.1)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Utilize apron, boots, long sleeve shirt and full length pants (or coveralls), as necessary to prevent skin contact. Emergency eyewash facility should be available. Workers whose clothing may been contaminated should change into uncontaminated clothing before leaving the work premises. Contaminated clothing, including shoes that cannot be decontaminated should be discarded.

SECTION 9 – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE

Areas containing this material should conform to the codes (such as, NFPA 30 and 70) governing Class 1 flammable liquid. Segregate from incompatible materials. Do not store near food, feed, or other pesticides. Keep out of reach of children and pets. Storage area should be maintained below 48.8 C, and well ventilated.

OTHER PRECAUTIONS:

Wash hands with soap and water before eating, smoking, or using the toilet. Shower after completion of work period. Launder clothing prior to reuse. Do not contaminate feed, foodstuffs, or water, by use or storage.

The information contained within was obtained from authoritative sources and is believed to be accurate for the manner in which the product is intended to be used. Other uses could result in ramifications which are not included within this document.