

# Material Safety Data Sheet

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Infosafe No. 3NU60 Issue Date : April 2007 ISSUED by CRPCARE

Product Name : **HY-MAL INSECTICIDE**

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** HY-MAL INSECTICIDE  
**Product Code** 1306  
**Product Type** Group 1B Insecticide  
**Company Name** Crop Care Australasia Pty Ltd (ABN 53 061 362 347)  
**Address** Unit 15/16 Metroplex Avenue Murarrie  
Queensland 4172 Australia  
**Emergency Tel.** 1800 033 498  
**Telephone/Fax Number** Tel:  
(07) 3909 2000  
Fax:  
(07) 3909 2010  
**Recommended Use** Controls adult mosquitoes, Queensland fruit fly and chewing and sucking insect pests of citrus, grape vines, lucerne, oilseed crops, ornamentals, pastures, peas, pome and stone fruits, rice, tobacco and vegetables as per the Directions for Use table on the label.  
**Other Information** This MSDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

## 2. HAZARDS IDENTIFICATION

**Hazard Classification** HAZARDOUS SUBSTANCE.  
NON-DANGEROUS GOODS.  
Hazard classification according to the criteria of NOHSC.  
Dangerous goods classification according to the Australia Dangerous Goods Code.  
**Risk Phrase(s)** R22 Harmful if swallowed.  
**Safety Phrase(s)** S13 Keep away from food, drink and animal feeding stuffs.  
S2 Keep out of reach of children.  
S24 Avoid contact with skin.  
**Other Information** Poisons Schedule S6

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Characterization** Liquid  
**Ingredients**

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Malathion (maldison)	121-75-5	1150 g/L
Emulsifiers		0-10 %

**Synonyms** Malathion

## 4. FIRST AID MEASURES

**Inhalation** Remove patient to fresh air and, if required, give one atropine tablet every five minutes until dryness of the mouth occurs.  
If breathing is difficult, oxygen may be given by a trained person.  
Obtain medical attention urgently.  
**Ingestion** If product has been swallowed and symptoms are evident and medical assistance is not immediately available, give one atropine tablet (0.6 mg) every five minutes until dryness of the mouth occurs. Preferably, carry out treatment under the direction of medical advice obtained by phone.  
Do not give anything by mouth to a semi-conscious or unconscious person.  
Rinse mouth and then drink plenty of water.  
**Skin** If poisoned by skin absorption, remove contaminated clothing, wash skin thoroughly with soap and water and give one atropine tablet every five minutes until dryness of the mouth occurs.  
Obtain medical advice immediately.

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<b>Eye</b>	If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
<b>First Aid Facilities</b>	If Hy-Mal is regularly used, it may be wise to keep a supply of atropine tablets (0.6 mg) (check State Regulations). If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.
<b>Advice to Doctor</b>	An anticholinesterase compound. Artificial respiration should be started at the first sign of respiratory failure. Cautious administration of fluids is advised, as well as general supportive and symptomatic pharmacological treatment and absolute rest. As early as possible, administer 2 mg of atropine sulfate i.v. and 1000-2000 mg of pralidoxime chloride or 250 mg of obidoxime chloride (adult dose) i.v. to patients suffering from severe respiratory difficulties, convulsions, and unconsciousness. Repeated doses of 2 mg of atropine sulfate should be given, as required, based on the respiration, blood pressure, pulse frequency, salivation, and convulsion conditions. The dose and the frequency of atropine varies with each patient, but the patient should remain fully atropinised (signs include dilated pupils, dry mouth, skin flushing). Diazepam should be given in all but the mildest cases in doses of 10 mg, s.c. or i.v., which may be repeated as required. For children, the doses are 0.04-0.08 mg of atropine/kg body weight, 250 mg of pralidoxime chloride per child, or 4-8 mg of obidoxime chloride/kg body weight. Morphine, barbiturates, phenothiazine derivatives, tranquillizers, and all kinds of central stimulants are contraindicated.

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## 5. FIRE FIGHTING MEASURES

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<b>Suitable Extinguishing Media</b>	Water fog, foam, carbon dioxide or dry chemical.
<b>Hazards from Combustion Products</b>	Avoid using large volumes of water which would spread the product. If involved in a fire, it will emit oxides of carbon, oxides of sulfur, oxides of phosphorus and possibly dimethyl sulfide.
<b>Special Protective Equipment for fire fighters</b>	Breathable air apparatus should be worn when fighting a fire in which this product is involved.
<b>Specific Hazards</b>	
<b>Hazchem Code</b>	2X
<b>Emergency Action in case of Fire</b>	If exposed to fire, keep container cool by spraying with water. If possible, remove other containers from the area of fire.
<b>Other Information</b>	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

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## 6. ACCIDENTAL RELEASE MEASURES

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<b>Spills &amp; Disposal</b>	Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. On-site disposal of concentrate is not acceptable.
<b>Personal Protection</b>	For appropriate personal protective equipment (PPE), refer Section 8.
<b>Clean-up Methods - Large Spillages</b>	Place damaged containers in recovery bins (if available) and return to manufacturer. If large liquid spills occur, attempt to recover as much spilt material from sumps and bunded areas before absorbing remaining material into vermiculite or other absorbent.

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## 7. HANDLING AND STORAGE

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<b>Conditions for Safe Storage</b>	Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight. Ideally, the product should be stored at temperatures below 30°C. Properties of the product may change if stored above this temperature for extended periods.
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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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<b>National Exposure Standards</b>	NOHSC has set the following exposure standard for malathion (maldison) : TLV (TWA) 10 mg/m <sup>3</sup> , STEL -. SK 'SK' notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.
<b>Engineering Controls</b>	Use in a well ventilated area only.
<b>Personal Protective Equipment</b>	When opening the container and preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles. When using the prepared spray, wear face shield.
<b>Hygiene Measures</b>	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.
<b>Requirements Concerning Special Training</b>	NSW regulations require that people who use pesticides in their job or business must have training in the application of the materials. By 1st September, 2005 all users must have received such training.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Form</b>	Liquid
<b>Appearance</b>	Clear amber liquid.
<b>Odour</b>	Mild aromatic odour.
<b>Melting Point</b>	3°C
<b>Boiling Point</b>	Decomposes >100°C
<b>Solubility in Water</b>	Solubility of malathion (maldison) in water is 145mg/L @ 25°C
<b>Specific Gravity</b>	1.230
<b>Vapour Pressure</b>	5.3mPa @ 30°C
<b>Octanol/Water Partition Coefficient</b>	Kow Log P is 2.75
<b>Flash Point</b>	163°C
<b>Flammability</b>	Combustible liquid C2.

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## 10. STABILITY AND REACTIVITY

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<b>Chemical Stability</b>	Malathion (maldison) is stable at temperatures below 55°C.
<b>Incompatible Materials</b>	Avoid contact with strong alkalis, amines and oxidizing compounds.
<b>Hazardous Reactions</b>	Storage at temperatures too high may induce formation of more toxic and synergistic impurity in malathion.
<b>Hazardous Polymerization</b>	Hazardous polymerisation is not possible.

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## 11. TOXICOLOGICAL INFORMATION

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<b>Inhalation</b>	Inhalation of excessive amounts of spray may cause cholinesterase inhibition. Symptoms may include dizziness, pupillary constriction, muscle cramps, excessive salivation, sweating and laboured breathing. Symptoms may be delayed.
<b>Ingestion</b>	Possible symptoms of exposure to the concentrate include: nausea, vomiting and abdominal pains. Also diarrhoea and other symptoms as described under 'inhalation'.
<b>Skin</b>	Malathion (maldison) can be absorbed through the skin, so any contamination has to be immediately washed off. See symptoms as described under 'inhalation'.
<b>Eye</b>	May irritate the eyes.
<b>Chronic Effects</b>	Regular exposure may result in lowering of cholinesterase activity which will recover within a few days after exposure ceases.
<b>Reproductive Toxicity</b>	No such effects have been observed in the absence of maternal toxicity.

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<b>Mutagenicity</b>	Data indicates no mutagenic effects.
<b>Carcinogenicity</b>	IARC (International Agency for Research on Cancer) has determined that the available data provide no evidence that malathion (maldison) is likely to present a carcinogenic risk to humans.
<b>Acute Toxicity - Oral</b>	LD50 (rat) 1375 - 5500 mg/kg for malathion (maldison)
<b>Acute Toxicity - Dermal</b>	LD50 (rat) >2000 mg/kg for malathion (maldison)
<b>Acute Toxicity - Inhalation</b>	LC50 (rat) (4hr) >5.2 mg/l for malathion (maldison)
<b>Eye Irritation</b>	Mild eye irritant.
<b>Skin Irritation</b>	Mild skin irritant.
<b>Skin Sensitisation</b>	Product is not a skin sensitiser.
<b>Other Information</b>	The Australian Acceptable Daily Intake (ADI) for malathion (maldison) for a human is 0.02 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 2 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, 'ADI List', TGA, September 2006).

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## 12. ECOLOGICAL INFORMATION

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<b>Persistence / Degradability</b>	Half life in soil is typically 1-2 days.
<b>Known Harmful Effects on the Environment</b>	The product is a marine pollutant for sea transport. Highly toxic to fish and aquatic organisms.
<b>Other Precautions</b>	Do not spray on vegetation where honeybees are foraging. Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
<b>Acute Toxicity - Fish</b>	The following is data for the active ingredient, malathion (maldison). Toxic to fish. LC50 (96hr) for bluegill sunfish is 0.1 mg/l. LC50 (96 hr) for bass is 0.28 mg/l.
<b>Acute Toxicity - Daphnia</b>	LC50 (48hr) for daphnia magna is 1.0 µg/l
<b>Acute Toxicity - Algae</b>	LC50 (96 hr) for algae 13 mg/l.
<b>Acute Toxicity - Other Organisms</b>	Bees: Toxic to bees. LD50 0.71 µg/bee.

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## 13. DISPOSAL CONSIDERATIONS

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<b>Product Disposal</b>	On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).
<b>Container Disposal</b>	Do not use this container for any other purpose. Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMuster symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

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## 14. TRANSPORT INFORMATION

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<b>U.N. Number</b>	None Allocated
<b>Proper Shipping Name</b>	None Allocated
<b>DG Class</b>	None Allocated
<b>Hazchem Code</b>	2X
<b>Packing Group</b>	None Allocated
<b>Storage and Transport</b>	Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.
<b>UN Number (Sea Transport)</b>	3082
<b>IMO Class/Packing Group</b>	Class 9; Packing Group III
<b>IMO Marine Pollutant</b>	Marine Pollutant
<b>IMO Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains malathion)

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## 15. REGULATORY INFORMATION

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<b>Poisons Schedule</b>	S6
<b>Packaging &amp; Labelling</b>	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
<b>Hazard Category</b>	Harmful
<b>AICS (Australia)</b>	All of the components in this product are listed on the Australian Inventory of Chemical Substances.

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## 16. OTHER INFORMATION

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<b>Contact Person/Point</b>	Normal Hours: Mr Volker Maier	Phone: (03) 9282 1000
	After Hours: Shift Supervisor	Phone: 1800 033 498
<b>Revisions Highlighted</b>	The MSDS was reviewed. Minor changes were made to the information.	
	...End Of MSDS...	