

Infosafe No™ 3NUZE	Issue Date : June 2017	ISSUED by NUFARM
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 Product Name **HY-MAL INSECTICIDE**

Classified as hazardous

1. Identification

GHS Product Identifier	HY-MAL INSECTICIDE
Product Code	1306
Product Type	Group 1B Insecticide
Company Name	NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
Address	103-105 Pipe Road Laverton North Victoria 3026 Australia
Telephone/Fax Number	Tel: +61 3 9282-1000 Fax: +61 3 9282-1001
Emergency phone number	1800 033 498 (24hr Australia)
Recommended use of the chemical and restrictions on use	This product 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 Safety Data Sheet describes the properties of the concentrated product. The physical properties and the assessments may not apply to the properties of the product once it has been diluted for application.

2. Hazard Identification

GHS classification of the substance/mixture	OT4 Acute Toxicity - Oral: Category 4 SS-1 Sensitization - Skin: Category 1
Signal Word (s)	AC1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1 WARNING
Hazard Statement (s)	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H410 Very toxic to aquatic life with long lasting effects.
General Precautionary Statement (s)	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use.
Pictogram (s)	Exclamation mark, Environment, The below pictograms are GHS Hazard symbols for workplace use only. See SECTION 14 for Dangerous Goods information.



Precautionary statement – Prevention	P264 Wash hands and exposed skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P261 Avoid breathing vapours/spray. P272 Contaminated work clothing should not be allowed out of the workplace.
Precautionary statement – Response	P280 Wear protective gloves, clothing, eye and face protection. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P363 Wash contaminated clothing before reuse.
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

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Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Emulsifiers		0-10 %

4. First-aid measures

Inhalation	Remove patient to fresh air. Obtain medical advice. If breathing is difficult, oxygen may be given by a trained person.
Ingestion	Do not give anything by mouth to a semi-conscious or unconscious person. Rinse mouth and then drink plenty of water. If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label. Make every effort to prevent vomit from entering the lungs by careful placement of the patient.
Skin	Remove contaminated clothing and wash skin thoroughly with soap and water. Obtain medical advice immediately.
Eye contact	If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
First Aid Facilities	If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.
Advice to Doctor	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.

5. Fire-fighting measures

Suitable extinguishing media	Water fog, foam, carbon dioxide or dry chemical. Avoid using large volumes of water which would spread the product.
Hazards from Combustion	If involved in a fire, it will emit oxides of carbon, oxides of sulfur, oxides of phosphorus and possibly dimethyl sulfide.
Special Protective Equipment for fire fighters	Breathable air apparatus should be worn when fighting a fire in which this product is involved.
Other Information	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

6. Accidental release measures

Spills & Disposal	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.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.
Clean-up Methods - Large Spillages	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 banded areas, as possible, before absorbing remaining material into vermiculite or other absorbent.

7. Handling and storage

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Conditions for safe storage, including any incompatibilities	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.
Other Information	Always read the label and any attached leaflet before use.

8. Exposure controls/personal protection

Occupational exposure limit values	Safe Work Australia has set the following exposure standard for malathion (maldison) : TLV (TWA) 10 mg/m ³ , 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. Use in a well ventilated area only.
Appropriate engineering controls	
Personal Protective Equipment	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.
Hygiene Measures	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.
Requirements Concerning Special Training	Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

9. Physical and chemical properties

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

10. Stability and reactivity

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

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat) 1375 - 5500 mg/kg for malathion (maldison)
Acute Toxicity - Dermal	LD50 (rat) >2000 mg/kg for malathion (maldison)
Acute Toxicity - Inhalation	LC50 (rat) (4hr) >5.2 mg/l for malathion (maldison)

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Ingestion	Possible symptoms of exposure to the concentrate include: nausea, vomiting and abdominal pains.
Inhalation	Also diarrhoea and other symptoms as described under 'inhalation'. 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.
Skin	Malathion (maldison) can be absorbed through the skin, so any contamination has to be immediately washed off. See symptoms as described under 'inhalation'.
Eye	May irritate the eyes.
Skin Sensitisation	Prolonged and repeated skin contact may result in skin sensitisation due to the presence of malathion (maldison).
Carcinogenicity	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.
Reproductive Toxicity	No such effects have been observed in the absence of maternal toxicity.
Chronic Effects	Regular exposure may result in lowering of cholinesterase activity which will recover within a few days after exposure ceases.
Serious eye damage/irritation	Mild eye irritant.
Mutagenicity	Data indicates no mutagenic effects.
Skin corrosion/irritation	Mild skin irritant.
Other Information	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: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', December 2015).

12. Ecological information

Persistence and degradability	Half life in soil is typically 1-2 days.
Known Harmful Effects on the Environment	The product is a marine pollutant for sea transport. Highly toxic to fish and aquatic organisms.
Other Precautions	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.
Acute Toxicity - Fish	The following is data for the active ingredient, malathion (maldison). Toxic to fish. LC50 (96hr) for bluegill sunfish is 0.1 mg/l. LC50 (96hr) for bass is 0.28 mg/l.
Acute Toxicity - Daphnia	EC50 (48hr) for daphnia magna is 0.0007 mg/l.
Acute Toxicity - Algae	LC50 (96 hr) for algae 13 mg/l.
Acute Toxicity - Other Organisms	Bees: Toxic to bees. LD50 0.71 µg/bee.

13. Disposal considerations

Product Disposal	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®).
Container Disposal	Do not use this container for any other purpose. Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. Break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a

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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.

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.

14. Transport information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
Storage and Transport	Considered non dangerous for road and rail transport (in packaging, including IBCs not greater than 3000 Lt each) by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01.
UN Number (Sea Transport)	For bulk shipments as Class 9, use UN 3082, HazChem code 2Z. 3082
IMO Class/Packing Group	Class 9; Packing Group III
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains malathion)

15. Regulatory information

Regulatory Information	Australia: WHS regulations (2011) - Schedule 11: classification not listed.
Poisons Schedule	S6
Packaging & Labelling	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Other Information	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 48992.

16. Other Information

Date of preparation or last revision of SDS	29/06/2017
Contact Person/Point	Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000 After Hours: Shift Supervisor Phone: 1800 033 498
Revisions Highlighted	The SDS was reviewed. Minor changes were made to the information and product has been rebranded. ...End Of MSDS...

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