

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

GHS Product identifier: Pharmachemical Maldison 50 Insecticide
 Other means of identification: Maldison 50
 Recommended use of the product: Insecticide for the control of lice, poultry mites, lice and fowl tick, dog fleas, brown dog tick and sarcoptic mange.
 Supplier's Details: Pharmachem Australia Pty Ltd
 Unit 6, 70 Fison Ave West
 Eagle Farm QLD 4009
 Telephone: (07) 3868 0333

 Emergency phone number: **13 11 26 (Poisons Information Hotline)**

SECTION 2 HAZARDS IDENTIFICATION

Classification of Product:
 This product is classified as a health hazard and an environmental hazard in accordance with the following classification criteria of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Eighth Revised Edition.

Health hazards: May be fatal if swallowed and enters airways, may cause an allergic skin reaction, causes mild skin irritation, harmful if swallowed.

Aspiration hazard Category 1
 GHS label elements, including precautionary statements:
 Pictogram:



Signal word: Danger
 Hazard statement: May be fatal if swallowed and enters airways.
 Repeated exposure may cause skin dryness and cracking
 Precautionary statements:
 Prevention: Do not eat drink or smoke while using the product
 Response: If swallowed do NOT induce vomiting
 Immediately call a Poisons Information Centre or doctor

Skin sensitisation Category 1
 GHS label elements, including precautionary statements:
 Pictogram:



Signal word: Warning
 Hazard statement: May cause an allergic skin reaction

 Precautionary statement
 Prevention: Wear protective gloves and clothing.
 Response: If on skin wash with plenty of soap and water.
 If skin irritation or rash occurs get medical advice.

Wash contaminated clothing before re-use.

Skin corrosion/irritant Category 3

GHS label elements, including precautionary statements:

Pictogram:

Signal word: Warning

Hazard statements: Causes mild skin irritation

Precautionary statements:

Prevention: Keep out of reach of children
 Wear suitable protective clothing and gloves
 Do not eat drink or smoke when using this product
 Wash hands thoroughly after handling
 Response: If on skin wash with plenty of soap and water
 If skin irritation occurs get medical advice/attention

Acute toxicity, oral Category 4

GHS label elements, including precautionary statements:

Pictogram:



Signal word: Warning

Hazard statements: Harmful if swallowed

Precautionary statements:

Prevention: Keep out of reach of children
 Wear suitable protective clothing and gloves
 Do not eat drink or smoke when using this product
 Wash hands thoroughly after handling
 Response: If swallowed, call a Poisons Information Centre or doctor if you feel unwell
 Rinse mouth

Other Health Hazards: Repeated minor exposure may have a cumulative poisoning effect.
 Maldison is a cholinesterase inhibitor

Environmental Hazard: Very toxic to aquatic life

Acute aquatic toxicity Category 1

GHS label elements, including precautionary statements:

Pictogram:



Signal word: Warning

Hazard statements: Very toxic to aquatic life

Precautionary statements:

Prevention: Read label before use.
 Avoid release to the environment.
 Response: Collect spillage

Chronic aquatic toxicity Category 1

GHS label elements, including precautionary statements:

Pictogram:



Signal word: Warning
Hazard statements: Chronic: Very toxic to aquatic life with long lasting effects.
Precautionary statement
Prevention: Read label before use.
Avoid release to the environment.
Response: Collect spillage

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Cas No.	Proportion % W/V
Maldison (Malathion)	121-75-5	50
High boiling aromatic solvent	64742-94-5	30-50
Alkyl phenol propylene oxide/ethylene oxide condensate	37251-69-7	<3
Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	<3
Proprietary non-hazardous ingredients	Not applicable	QS

SECTION 4 FIRST AID MEASURES

The following First Aid directions have been set on the basis of advice provided by the Office of Chemical Safety (OCS) of the Commonwealth Department of Health to the Australian Pesticides and Veterinary Medicines Authority (APVMA) as part of the assessment for registration:

If swallowed, splashed on skin or in eyes, or inhaled, contact a Poisons Information Centre (Phone Australia 13 11 26, New Zealand 0800 764 766) or a doctor at once. Remove any contaminated clothing and wash skin thoroughly. If swallowed, activated charcoal may be advised. Give atropine if instructed.

First Aid Facilities: Obtain an emergency supply of Atropine tablets (0.6 mg)
Eyewash facility

SECTION 5 FIRE FIGHTING MEASURES

Suitable extinguishing media: Water fog, dry chemical, foam or carbon dioxide.
Hazards from combustion products: Toxic gases of hydrogen chloride, phosgene and carbon monoxide may be evolved if involved in fires or exposed to extreme heat. Stay upwind.
Special protective precautions and equipment for fire fighters: Self-contained breathing apparatus may be required in confined areas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures: Contain spills and absorb with sand, vermiculite or proprietary absorbent material.
Methods and materials for containment and clean up: Prevent from entering drains, waterways or sewers. Collect absorbed material in sealed open top containers for disposal.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling:

The following Safety Directions have been set on the basis of advice provided by the Office of Chemical Safety (OCS) of the Commonwealth Department of Health to the APVMA as part of the assessment for registration:

Poisonous if absorbed by skin contact, inhaled or swallowed. May irritate the eyes and skin. Repeated minor exposure may have a cumulative poisoning effect. Avoid contact with eyes and skin. Do not inhale spray mist. When opening the container and preparing the spray, wear cotton overalls buttoned to the neck and wrist, washable hat and elbow-length P.V.C gloves. When using in enclosed areas wear a face shield. If product is on skin, immediately wash area with soap and water. After use and before eating drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield and contaminated clothing.

Conditions for safe storage, including any incompatibilities:

The following Storage Directions have been set by the APVMA as part of the assessment for registration:

Store below 30°C (Room Temperature) in the closed original container away from children, animals, food, feedstuffs, seed and fertilisers. Do not store in direct sunlight.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

National exposure standards:

For Maldison:	10mg/m ³ (TWA) skin
For Solvent:	None set. However, the supplier recommends an occupational exposure limit of 100ppm, TWA as total hydrocarbon
Engineering controls:	Natural ventilation only except in confined spaces where a local exhaust should be provided

Personal protective equipment:

When opening the container of concentrate and preparing the spray, wear cotton overalls buttoned to the neck and wrist, washable hat and elbow-length PVC gloves. When using in an enclosed area wear face shield. After each day's use, wash gloves, face shield and contaminated clothing.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, amber liquid
Odour:	Characteristic odour
Vapour pressure:	5-3 mPa for Maldison @ 30°C
Vapour density:	>1
Boiling point/range:	183-210°C for solvent
Freezing/melting point (specify which):	<0°C
Specific gravity or density:	1.072
Flash point:	64°C actual - or 66°C for solvent

SECTION 10 STABILITY AND REACTIVITY

Chemical stability:	Stable
Conditions to avoid:	The material will decompose non-violently when exposed to strong acids or alkalis or extreme heat.
Incompatible materials:	Avoid oxidising materials such as chlorine or inorganic peroxides.
Hazardous decomposition products:	Oxides of carbon and sulphur
Hazardous reactions:	Hazardous polymerisation will not occur

SECTION 11 TOXICOLOGICAL INFORMATION

Routes of Exposure:

Exposure to Maldison 50 can occur through ingestion and eye or skin contact. The major routes of exposure are expected to be eye and skin contact. There are no toxicology data available for Maldison 50. Information has been provided for maldison.

Signs and symptoms of exposure:

Symptoms of maldison poisoning can include headache, nausea, vomiting, abdominal cramps, diarrhoea, generalized muscle weakness and twitching, slurred speech, pinpoint pupils, excessive secretions, and shortness of breath.

Summary of Toxicology:

Maldison inhibits acetylcholinesterase and alters cholinergic synaptic transmission at neuroeffector junctions (muscarinic effects), at skeletal myoneural junctions and autonomic ganglia (nicotinic effects), and in the central nervous system. Inhibition occurs when malaoxon, a metabolite of maldison, binds to acetylcholinesterase; thus, symptoms may be delayed after exposure. Signs and symptoms of poisoning vary according to age, dose, and concentration. Most systemic effects are secondary to inhibition of acetylcholinesterase.

Acute toxicity:

Acute oral LD ₅₀	Rats	1375-2800 mg/kg *
	Mice	775-3321 mg/kg *
	Cattle	500 mg/kg
Acute dermal LD ₅₀	Rabbits	4100 mg/kg
	Rats	>2000 mg/kg
Inhalation LC ₅₀	Rats	>5.2 mg/L (4 hr)

* Variations due to purity of substance and carrier used to contain the substance when dosing.

The Australian Acceptable Daily Intake (ADI) for 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 0.26 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity:

Fish:	Toxic to fish (LC ₅₀ for bluegill sunfish: 0.1 mg/L)
Bees:	Toxic to bees
Birds:	Moderately toxic to birds (Some acute oral LD ₅₀ values are: mallards, 1485 mg/kg; pheasants, 167 mg/kg; blackbirds and starlings, over 100 mg/kg; and chickens, 525 mg/kg)
Aquatic invertebrates:	Highly toxic to aquatic invertebrates
Aquatic stages of amphibians:	Highly toxic

Persistence and degradability:

In water, maldison has a half-life of approximately one week and is more stable in acidic aquatic conditions. Maldison is thought to not bioconcentrate in aquatic species.

Mobility:

Maldison is soluble in water and can be highly mobile in soil.

Environmental precautions:

Do not contaminate dams, rivers or streams with pesticide or used container.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal methods for product and containers:

The following Disposal Directions have been set by the APVMA as part of the assessment for registration:

[For containers less than 1L]: Wrap empty container in paper and place in garbage.

SAFETY DATA SHEET

[For 5L containers]: Do not use container for any other purpose. Containers should be triple rinsed with water immediately when empty, adding rinse to the spray. Crush empty containers after piercing top, sides and bottom and dispose of by burying under 500 mm of soil where contamination of water sources will not occur. Addition of lime to contaminated soils will increase the rate of maldison destruction.

Dispose of unwanted concentrate in an approved local authority landfill. Where no approved local authority landfill is available, dilute the product to minimum spraying strength and dispose of as for 5L containers. Product which has been contained and retrieved from spillages should be disposed of in an approved local authority landfill or as indicated above if no approved local authority landfill is available. Do not wash spilled material into sewers, drains or other waterways.

Special precautions for landfill or incineration:

Consult your local government authority before disposing of this product. Do not burn product or containers. Observe precautions applicable for storage and clean-up of accidental spills.

SECTION 14 TRANSPORT INFORMATION

Maldison 50 is considered to be dangerous goods for transport under The Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) and IATA Dangerous Goods Regulations

UN Number: 3082

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S.
(MALDISON)

Class and subsidiary risk Class: 9

Packing Group Packaging Group: III

Hazchem Code: 2X

SECTION 15 REGULATORY INFORMATION

This product has been registered by the APVMA. In granting registration to any product, the APVMA has exercised its legislative responsibility to ensure that the product is suitably formulated and properly labelled and, when used according to instructions is:

- safe to the host, the user, consumers and the environment;
- efficacious (that is, the product does the job it claims it shall do); and
- not unduly prejudicial to trade.

The APVMA uses the services of a number of Australian and State government agencies as advisers to help with some of these evaluations of applications for registration of agricultural and veterinary chemical products. These include:

- the Office of Chemical Safety of the Commonwealth Department of Health which:
 - evaluates and reports on toxicology and metabolism studies; proposes first aid and safety directions; determines poison schedule classifications; and establishes acceptable daily intakes (ADIs) and acute reference doses (ARfD); and
 - evaluates the occupational health and safety aspects of an application and recommends safety directions and occupational controls on use and advises on a Safety Data Sheet (SDS);
- the Commonwealth Department of Agriculture, Water and the Environment which evaluates environmental data and recommends appropriate use controls and instructions for the product that will protect the environment; and
- State and Territory departments responsible for agricultural and primary industries which evaluate and reports on efficacy and target crop or animal safety data for new agricultural chemicals and new uses of registered products. In some cases the APVMA contracts this work out to other agencies such as universities, the CSIRO or to other experts.

Maldison has been assessed under the Australian Industrial Chemicals Introduction Scheme (AICIS) within the tier I Human Health assessment framework and the agency has indicated that regulatory control of this material is exercised under legislation administered by other regulatory bodies including the APVMA and the Therapeutic Goods Administration (TGA).

The high boiling aromatic solvent, alkyl phenol propylene oxide/ethylene oxide condensate and calcium dodecylbenzene sulfonate have been assessed under AICIS within the Human Health tier II assessment framework and the agency has determined that no further health assessments are necessary, provided the requirements of the GHS are observed.

Maldison as presented in this context is listed in Schedule 6 of Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) and the product is required to be labelled in accordance with these, as well as APVMA requirements.

SECTION 16 OTHER INFORMATION

References:

1. FAISD Handbook, Handbook of First Aid Instructions, Safety Directions, Warning Statements, and General Safety Precautions for, Agricultural and Veterinary Chemicals, (as updated), APVMA (Australian Pesticides and Veterinary Medicines Authority), <https://apvma.gov.au/node/26586>
2. Code of Practice – Preparation of safety data sheets for hazardous chemicals, Safe Work Australia, May 2018, <https://www.safeworkaustralia.gov.au/doc/model-code-practice-preparation-safety-data-sheets-hazardous-chemicals>
3. Australian Inventory of Industrial Chemicals (as updated), AICIS (Australian industrial Chemicals Introduction Scheme), Australian Government Department of Health, <https://www.industrialchemicals.gov.au/search-inventory>
4. APVMA Registrations and Permits, <https://apvma.gov.au/node/1060>
5. ADI [Acceptable Daily Intake] List (as updated), Commonwealth Department of Health, TGA (Therapeutic Goods Administration), <https://apvma.gov.au/sites/default/files/publication/74511-acceptable-daily-intakes-adi-for-agricultural-and-veterinary-chemicals-used-in-food-producing-crops-or-animals-edition-4-2020.pdf>
6. The Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code), Edition 7.7, 2020, https://www.ntc.gov.au/sites/default/files/assets/files/ADG%20Code%207.7_0.pdf
7. SUSMP (Standard for the Uniform Scheduling of Medicines and Poisons) (as updated), Chemicals and Medicines Scheduling Secretariat (MD122), Scheduling and Committee Governance, TGA, Commonwealth Department of Health, <https://www.tga.gov.au/publication/poisons-standard-susmp>
8. Hazardous Chemical Information System (HCIS), Safework Australia (as updated), <http://hcis.safeworkaustralia.gov.au/>
9. Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Eighth Revised Edition, United Nations, New York and Geneva, 2019, <https://unece.org/ghs-rev8-2019>
10. NIOSH Pocket Guide to Chemical Hazards
11. Chemical Classification and Information Database (CCID) (as updated), New Zealand Environmental Protection Authority, <http://www.epa.govt.nz/search-databases/Pages/HSNO-CCID.aspx>

All information contained in this Safety Data Sheet is as accurate and up to date as possible. Since Pharmachem cannot anticipate or control the conditions under which this information may be used, each user should review the information in the specific context of the intended application. Pharmachem will not be responsible for damages of any nature resulting from use of or reliance upon the information. No expressed or implied warranties are given other than those implied as mandatory by Commonwealth State or Territory legislation.