



DAVID GRAY & CO PTY LIMITED

A.C.N. 008 671 127

2 Rawlinson Street O'Connor PO Box 2084 Palmyra DC
Western Australia 6961

Ph (08) 9337 4933 Fax (08) 9337 8316

Emergency Telephone Number (08) 9337 4933 (During Office Hours)

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Page 1 of 6

MATERIAL SAFETY DATA SHEET

IDENTIFICATION

HAZARDOUS ACCORDING TO CRITERIA OF WORKSAFE AUSTRALIA

PRODUCT NAME:	David Grays Malathion Garden Spray
OTHER NAME:	Maldison, Fyfanon, IUPAC O,O-Dimethyl-S-(1,2-di(ethoxycarbonyl)-ethyl) phosphorodithioate
MANUFACTURERS CODE:	9445(200ml), 9551(500ml), 24592(5L), 24672(20L)
PROPER SHIPPING NAME (ADG Code):	Not applicable
UN NUMBER:	Not applicable
DANGEROUS GOODS CLASS:	Not applicable
SUBSIDIARY-RISK:	Not applicable
PACKAGING GROUP:	Not applicable
HAZCHEM CODE:	Not applicable
POISONS SCHEDULE:	S6 Poison
USE:	Control of aphids, mites, scales, cabbage moth & loopers on plants as per the directions for use.

PHYSICAL DESCRIPTION / PROPERTIES

APPEARANCE:	Pale yellow clear liquid, pungent odour.
MELTING POINT:	Not determined for mixture, Malathion = 2.85°C
BOILING POINT:	Not determined for mixture, Solvent = 178 – 209°C
VAPOUR PRESSURE:	Not determined for mixture, Solvent = 0.074kPa @ 20°C
SPECIFIC GRAVITY:	1.03 – 1.04
FLASH POINT:	> 62°C
FLAMMABILITY LIMITS:	0.6 – 7.0 % volume in air
SOLUBILITY IN WATER:	Will emulsify readily in water
CORROSIVENESS:	Corrosive to iron

INGREDIENTS

CHEMICAL NAME	CAS.NO.	PROPORTION
Malathion	121-75-5	500g/L
Hydrocarbon solvent	64742-94-5	488g/L
Ingredients determined to be non hazardous	-	To 100%

HEALTH HAZARD INFORMATION

HEALTH EFFECTS

HAZARD CLASSIFICATION (In accordance with criteria of Worksafe Australia):

Xn – Harmful

Carcinogenicity : Category 2

Signal word: Warning

Hazard statements

Harmful if swallowed.

Suspected of causing cancer.



Other hazards This product contains an cholinesterase inhibitor.

GHS Signal word: DANGER HAZARD STATEMENT:

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H320: Causes eye irritation. H335: May cause respiratory irritation.

H410: Very toxic to aquatic life with long lasting effects.

PREVENTION

P261: Avoid breathing fumes, mists, vapours or spray.

P264: Wash contacted areas thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves, protective clothing and eye or face protection.

RESPONSE

P362: Take off contaminated clothing and wash before reuse.

P363: Wash contaminated clothing before reuse.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313: If skin irritation occurs: Get medical advice.

P337+P313: If eye irritation persists: Get medical advice. P391: Collect spillage.

Malathion 500/Malathion Garden Spray

Page 3 of 6

P370+P378: Not combustible. Preferred extinguishing media are carbon dioxide, dry chemical, foam, water fog.

STORAGE

P402+P404: Store in a dry place. Store in a closed container.

P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL P501: Dispose of contents and containers to landfill.

RISK PHRASES:

R22 – Harmful if swallowed

R65 – Harmful, may cause lung damage if swallowed

SAFETY PHRASES:

S24 – Avoid contact with skin

S16 – Keep away from sources of ignition-no smoking

S25 - Avoid contact with eyes

S29 – Do not empty into drains

GENERAL:

Excessive exposure may cause organophosphorus cholinesterase inhibition. Poisoning symptoms include headaches, dizziness, nausea, diarrhoea, incoordination, muscle twitching, tremors, abdominal cramps, tightness in chest, sweating, blurred vision, salivation, excessive urination and convulsions.

ACUTE

SWALLOWED:

Malathion is of low to moderate oral toxicity to mammals. LD50 oral rat 1300 - 2800mg/kg (pure malathion). Ingestion of the concentrate may cause symptoms of poisoning detailed above. If aspirated (concentrate enters lungs while vomiting) may cause lung damage due to chemical pneumonia caused by petroleum like solvents.

EYE:

Product is a moderate eye irritant. Malathion rapidly enters the body through the eye.

SKIN:

Malathion is of moderate dermal toxicity. LD50 dermal rat >2000mg/kg. Malathion rapidly enters the body through skin contact. Repeated skin contact may cause allergic reactions or dermatitis from the hydrocarbon solvent contained within the formulation.

INHALED:

The acute inhalation toxicity is moderate. Excessive exposure to spray mist may be harmful. Prolonged exposure to the concentrate vapour may cause eye and respiratory irritation, dizziness, headaches and narcotic effects. Aspiration of liquid into the lungs can cause serious (even fatal) pneumonitis.

Inhalation LD50 (rat) = 5200 mg/m³ (4 hours).

CHRONIC:

Repeated exposure may cause cholinesterase inhibition.

Avoid prolonged or repeated skin contact as the solvent in the product may cause dermatitis.

FIRST AID

GENERAL:

In every case of suspected poisoning contact a doctor or a Poisons Information Centre immediately (Ph 131 126).

SWALLOWED:

Seek medical attention immediately. If more than 15 minutes from medical assistance, give one atropine tablet every 5 minutes until dryness of mouth occurs then seek medical attention immediately. **NOTE:** Do not give fluids/tablets if patient is unconscious or convulsing. Do not induce vomiting. It is also recommended to give a slurry of activated charcoal to absorb the product swallowed.

EYE:

Hold eyelids open and flush eyes with water for at least fifteen minutes. Seek medical attention immediately.

SKIN:

Immediately remove contaminated clothing and wash skin thoroughly with soap and water for at least fifteen minutes. If symptoms of poisoning occur give atropine tablets as above and seek medical attention immediately.

INHALED:

Immediately remove patient to fresh air. If difficulty in breathing is experienced, give oxygen and artificial respiration if necessary. If symptoms of poisoning occur, seek medical assistance immediately.

FIRST AID FACILITIES:

Soap, water, Activated charcoal, Atropine tablets.

ADVICE TO DOCTOR:

Malathion is a cholinesterase inhibitor. Preferred antidote: atropine by injection or atrovent/ipratropium by airway puff.

PRECAUTIONS FOR USE

EXPOSURE STANDARDS:

Worksafe Occupational Exposure Standard (TWA – Time Weighted Average)

Malathion – 10mg/m³ Skin

Time Weighted Average (TWA) means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

ENGINEERING CONTROLS:

Prepare spray in a well-ventilated area away from ignition sources. Use only in a well ventilated area. Not recommended for indoor use.

PERSONAL PROTECTION:

When handling the concentrate, preparing and using spray wear chemical resistant overalls with hood (or a washable hat) buttoned to the neck and wrists, elbow length PVC neoprene or nitrile gloves, goggles or faceshield and a half faced respirator with organic vapour cartridge.

Remove contaminated clothing immediately after use and wash separately and thoroughly. Wash hands, face and arms immediately after use and before eating and drinking.

FLAMMABILITY:

Product is not classified as flammable, however is combustible and will burn if involved in a fire.

SAFE HANDLING INFORMATION

STORAGE

Store closed in the original container, in a cool, well dry place out of direct sunlight and out of the reach of children.. Do not store prepared spray. Only mix what is required. Segregate from other classes of dangerous goods in accordance with local government regulations

TRANSPORT

Product is not classified as a dangerous good in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail.

SPILLAGE

Wear appropriate clothing while cleaning up spill (see Personal Protection). Extinguish any ignition sources. Prevent entry into drainage systems, waterways, rivers, etc. Apply absorbent material such as sand, earth or attapulgate to contain the spill. Sweep up the material when absorption is complete. Wash contaminated surfaces with a mild bleach solution (sodium hypochlorite).

DISPOSAL

Disposal of contaminated material must be done in accordance with State and/or Local regulations.

Triple rinse containers with water and add rinsings to tank mix. Dispose of the empty containers at a local authority

landfill. Do not burn empty containers or product. Do not allow chemical containers, spray or washings to contaminate drains, sewers, streams, ponds or any waterway.

FIRE/EXPLOSION HAZARD

Malathion will decompose rapidly when heated to temperatures above 100°C. Explosion may result under certain circumstances. If involved in a fire, volatile, toxic, malodorous and flammable compounds will be formed.

HAZARDOUS DECOMPOSITION PRODUCTS:

If involved in a fire, thermal decomposition products may include dimethyl sulfide, sulphur dioxide, carbon monoxide, carbon dioxide, phosphorous pentoxide and nitrogen oxides.

If store for long periods above 55°C, toxic degradation products such as malaoxon and isomalathion may be formed.

FIRE FIGHTING EQUIPMENT:

Foam, carbon dioxide (CO₂), or dry chemical extinguishers may be used. Run-off must be contained.

Full personal protective equipment, including self-contained breathing apparatus, is required.

OTHER INFORMATION

ECOTOXICITY DATA:

Malathion is toxic to fish and bees.

ENVIRONMENTAL FATE:

Malathion is biodegradable, subject to hydrolysis (breakdown in water) and photodegradation (breakdown in sunlight). Degradation is accelerated in alkaline or acidic conditions. The half-life in soil is reported to be approximately 6 days on average, depending on soil conditions, temperature and pH. It is not expected to bioconcentrate in animal or aquatic organisms. It moderately binds to soils and therefore is not expected to leach into ground water.

CONTACT POINT

TITLE: Technical Department

TELEPHONE NUMBER: (08) 9337 4933

AUTHORISED: Technical Manager

DATE: 26/04/2017

NOTICE:

This Safety Data Sheet has been developed according to the Worksafe Australia Codes of Practice.

Hazard and precautionary statements according to classification under GHS (Globally Harmonised System of Classification and Labelling)

The information contained herein is given in good faith however and is considered to be accurate at the specified issue date. No warranty expressed or implied is made to the accuracy or completeness of the data and information contained herein.

No person, other than an authorised representative of David Gray & Company Pty Ltd, has the authority to make any alterations to this SDS.

Contact David Gray & Co Pty Limited for further product information on (08) 9337 4933 during normal business hours.