



# DAVID GRAY & CO PTY LIMITED

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## MATERIAL SAFETY DATA SHEET

### IDENTIFICATION

HAZARDOUS ACCORDING TO CRITERIA OF WORKSAFE AUSTRALIA

**PRODUCT NAME:** David Grays Malathion 500/Malathion Garden Spray

**OTHER NAME:** Maldison, Fyfanon, IUPAC O,O-Dimethyl-S-(1,2-di(ethoxycarbonyl)-ethyl) phosphorodithioate

**MANUFACTURERS CODE:** 09445(200ml), 09551(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

#### 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/m<sup>3</sup> (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

# Malathion 500/Malathion Garden Spray

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## 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/m<sup>3</sup> 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.

<b>SAFE HANDLING INFORMATION</b>
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**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 attapulgite 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 (CO<sub>2</sub>), 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:** Celine Schnell

**DATE:** 28.06.2010

**NOTICE:**

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

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 MSDS.

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