



Material Safety Data Sheet

*This material is hazardous according to criteria of NOHSC.
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.*

1. Identification of the substance/preparation and of the company/undertaking

Product Name: CROP CARE METHYL PARATHION 500 INSECTICIDE

Synonyms: Crop Care MSDS No. 42375

Supplier: Crop Care Australasia Pty Ltd
ABN: 061 362 347
Street Address: 77 Tingira Street
Pinkenba, Queensland 4008
Australia

Telephone Number: +61 7 3867 9100
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Emergency Telephone: 1 800 033 111 (ALL HOURS)

2. Composition/information on ingredients

Product Description: Organophosphorus insecticide.
Brown liquid with a rotten egg or garlic-like odour.

Methyl parathion 298-00-0	45% (500 g/L)	R28, R24
Solvent naphtha (petroleum), light arom. 64742-95-6	30-60%	R65

3. Hazards identification

Risk Phrases: Very toxic if swallowed. Toxic in contact with skin. Harmful: May cause lung damage if swallowed. Very toxic to aquatic organisms.

Poisons Schedule: S7 Dangerous Poison.

4. First-aid measures

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If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126; New Zealand 03 474 7000). Get to a doctor or hospital quickly.

- Inhalation:** Remove from contaminated area. If poisoned through lungs, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Apply artificial respiration if not breathing. Get to a doctor or hospital quickly.
- Skin Contact:** If skin contact occurs, remove contaminated clothing and wash skin thoroughly. If poisoned by skin absorption, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly.
- Eye Contact:** If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.
- Ingestion:** Rinse mouth with water. If swallowed, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly.

Notes to physician: Anti-cholinesterase effects. Effects may be delayed.
Treatment: Give 2 mg of atropine sulfate intramuscularly or, in severe cases, intravenously, repeated at 10-15 minute intervals until dryness of the mouth occurs. When this response is achieved it is advisable to maintain a mild degree of atropinisation for 24 hours. If stopped too early, pulmonary oedema may develop. Atropine should not be given to a cyanosed patient.
Specific Antidote: 2-PAM (2-Pyridine aldoxime methiodide) should only be given when there is full atropinisation. PAM is administered by slow intravenous injection in 1 g doses, repeated in 30 minutes if necessary. A person who has suffered organophosphate poisoning should be kept under medical supervision, preferably in hospital, for 24-48 hours until all likelihood of relapse has past.

5. Fire-fighting measures

- Specific Hazards:** Flammable liquid. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke. Flameproof equipment is necessary in all areas where this chemical is being used. Nearby equipment must be earthed. Vapour may travel a considerable distance to source of ignition and flash back.
- Fire-fighting advice:** Decomposes on heating emitting toxic fumes, including those of dimethyl sulfide, oxides of sulfur, oxides of carbon, oxides of nitrogen and phosphorous. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.
- Suitable Extinguishing Media:** Foam, dry agent (carbon dioxide, dry chemical powder).

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6. Accidental release measures

SMALL SPILLS: Wear protective equipment to prevent skin and eye contact. Avoid breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers for disposal.

LARGE SPILLS: Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contact. Avoid breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Wash area down with detergent and excess water. If contamination of crops or waterways has occurred advise emergency services or State Department of Agriculture.

7. Handling and storage

Handling advice: Avoid skin and eye contact and breathing in vapour. Keep out of reach of children.

Storage advice: Do NOT store or handle near heat or naked flame. Store in the closed, original container in a cool, well ventilated area. Do NOT store for long periods in direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers.

This material is a Scheduled Poison S7 and must be stored, maintained and used in accordance with the relevant regulations.

8. Exposure controls/personal protection

Occupational Exposure Limits:

No value assigned for this specific material by the National Occupational Health and Safety Commission. However, Exposure Standard(s) for constituent(s):

Methyl parathion: 8hr TWA = 0.2 mg/m³, Sk

As published by the National Occupational Health and Safety Commission.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

'Sk' Notice – absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

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Engineering Control Measures:

IN THE WORKPLACE: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Use with local exhaust ventilation or while wearing organic vapour respirator. Keep containers closed when not in use.

Personal Protective Equipment:

Orica Personal Protection Guide No. 1, 1998: G - OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES (Short), RESPIRATOR.

MANUFACTURE, PACKAGING AND TRANSPORT: Wear overalls, safety glasses and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

PREPARATION AND USE OF PRODUCT: Avoid inhaling vapour or spray mist. Obtain an emergency supply of atropine tablets. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield. Wash hands after use. After each days use, wash gloves, face shield and contaminated clothing.

9. Physical and chemical properties

Physical state:	Liquid
Colour:	Brown
Odour:	Rotten egg or garlic like.
Odour Threshold:	>100
Solubility:	Slightly soluble in water. Soluble in organic solvents.
Specific Gravity:	1.09
Relative Vapour Density (air=1):	N Av
Vapour Pressure (20 °C):	1.3 mPa
Flash Point (°C):	44
Flammability Limits (%):	N Av
Autoignition Temperature (°C):	N Av
% Volatile by Volume:	30-60
Solubility in water (g/L):	0.055-0.060
Melting Point/Range (°C):	N App
Boiling Point/Range (°C):	N Av
Decomposition Point (°C):	>100
Sublimation Point (°C):	N App
pH:	N App
Viscosity:	N Av
Partition Coefficient:	LogPow (Methyl parathion) = 3

10. Stability and reactivity

Stability: Methyl parathion decomposes rapidly when heated to temperatures above 100-120 C, significantly increasing the risk of inducing explosion. It is rapidly hydrolysed by alkali. Incompatible with strong

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oxidising agents. The decomposition is to a considerable extent dependent on the time as well as temperature due to exothermic and autocatalytic reactions. The reactions involve rearrangements and polymerisation releasing volatile malodorous and inflammable compounds such as dimethyl sulfide.

11. Toxicological information

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: The following symptoms, listed in approximate order of appearance, begin within 30-60 minutes and are at a maximum in 2-8 hours:
Mild - Anorexia, headache, dizziness, weakness, anxiety, sub-sternal discomfort, tremors of the tongue eyelids, contraction of the pupil and impairment of visual acuity.
Moderate - Nausea, salivation, tearing, abdominal cramps, vomiting, sweating, slow pulse and muscular fasciculations.
Severe - Diarrhoea, pinpoint and non reactive pupils, respiratory difficulty, pulmonary oedema, cyanosis, loss of sphincter control, convulsions, coma and heart block. Hyperglycemia and possible acute pancreatitis have occurred.
If the victim is showing signs of central system depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs. Breathing in vomit may lead to aspiration pneumonia (inflammation of the lung).

Eye contact: May be an eye irritant. May cause constriction of the pupil.

Skin contact: Contact with skin may result in irritation. Some component/s of this material can be absorbed through the skin. Effects can include those described for 'INGESTION'. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

Inhalation: Breathing in vapour can result in headaches, dizziness and possible nausea. Breathing in high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness. Breathing in high concentrations of vapour may result in the same symptoms described for 'INGESTION'.

Long Term Effects:

Repeated exposures to cholinesterase inhibitors such as methyl parathion may, without warning, cause increased susceptibility to doses of any cholinesterase inhibitor.

Toxicological Data:

No LD50 data available for the product. However, for the constituent METHYL PARATHION

Oral LD50 (rat): 25 mg/kg.
Dermal LD50 (rat): 67-482 mg/kg.
Inhalation LC50 (rat): 0.135 mg/L/4hr (technical).
SKIN: Non-irritant (rabbit). Not a skin sensitiser.
EYES: Non-irritant (rabbit).

Methyl parathion was not carcinogenic in rats that were fed up to 40 ppm or in mice fed up to 125 ppm for their lifetimes. No adverse effects on reproductive performance were observed in rats. No teratogenic effects observed in rats at maternally non-toxic doses.

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ADI (Acceptable Daily Intake) for humans is 0.0002 mg/kg bw/day.

12. Ecotoxicological information

Avoid contaminating waterways.
For METHYL PARATHION:

Environmental fate, persistence and degradation:

Methyl parathion is degraded in the environment mainly by chemical and microbial hydrolysis however some photodegradation also occurs. The major degradation products include nitrophenol and methyl aminoparathion.

Aquatic toxicity:

Very toxic to aquatic organisms. Risk of bioaccumulation in an aquatic species is moderate.

48hr EC50 (Daphnia magna):	0.0073 mg/L.
96hr LC50 (rainbow trout):	2.7 mg/L.
96hr LC50 (golden orfe):	6.9 mg/L.

Terrestrial toxicity:

Toxic to terrestrial species. Toxic to bees.

Dietary LD50 (mallard duck): 1044 mg (EC480)/kg (5 days).

13. Disposal considerations

For 20 & 200L CONTAINERS: Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Break, crush or puncture and bury empty containers in a local authority landfill. If not available bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers and product should not be burnt.
For 1000L CONTAINERS: This minibulk container is reusable and remains the property of Crop Care Australasia Pty. Ltd. Do NOT rinse empty container. Empty contents fully into application equipment. Close all valves and return to the point of supply for refill or storage. No other liquid, solid or pesticide product should be put into it. When empty return to Crop Care Australasia Pty. Ltd. for cleaning, relabelling and refilling.

14. Transport information

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.

UN No:	3017
Class-primary	6.1 Toxic
Subrisk 1:	3 Flammable Liquid
Packing Group:	II
Proper Shipping Name:	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (CONTAINS METHYL

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PARATHION AND XYLENE)

Hazchem Code: 3W
IERG: 6C6

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

This material is classified as a severe Marine Pollutant (PP) according to the International Maritime Dangerous Goods Code.

UN No: 3017
Class-primary: 6.1 Toxic
Subrisk 1: 3.1 Flammable Liquid
Packing Group: II
Proper Shipping Name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (CONTAINS METHYL PARATHION AND XYLENE)

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN No: 3017
Class-primary: 6.1 Toxic
Subrisk 1: 3 Flammable Liquid
Packing Group: II
Proper Shipping Name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (CONTAINS METHYL PARATHION AND XYLENE)

15. Regulatory information

Classification: This material is hazardous according to criteria of NOHSC.

T+ : Very Toxic

Risk Phrase(s): R24: Toxic in contact with skin.
R28: Very toxic if swallowed.
R65: Harmful: May cause lung damage if swallowed.

Safety Phrase(s): S1/2: Keep locked up and out of the reach of children.
S28: After contact with skin, wash immediately with plenty of soap and water.
S36/37: Wear suitable protective clothing and gloves.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

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Poisons Schedule: S7 Dangerous Poison.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS) or are National Registration Authority (NRA) approved active constituents.

In Australia this substance is on a list for which health surveillance is required: Organophosphate pesticides.

16. Other information

Supplier Material Safety Data Sheet; 1997.

In 'Handbook of Pesticide Toxicology'. Ed. Hayes Jr and Laws Jr. Academic Press, 1991.

ADI List, Commonwealth Department of Health and Family Services. 2001.

In: 'The Pesticide Manual'. 12th Edition. Ed. CDS Tomlin. British Crop Protection Society, 2000.

Reason(s) for Issue:

Product name change

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Crop Care Australasia Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Crop Care representative or Crop Care Australasia Pty Ltd at the contact details on page 1.

Crop Care Australasia's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

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