

AMBER



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MATERIAL SAFETY DATA SHEET

Product Name **DAVID GRAYS MALATHION AND WHITE OIL INSECTICIDE**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name DAVID GRAY & CO PTY LIMITED
Address 2 Rawlinson Street, O'Connor, WA, AUSTRALIA, 6961
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Web Site <http://www.davidgray.com.au/>
Synonym(s) 09245 (12X200ML) - MANUFACTURER'S CODE • MALATHION AND WHITE OIL INSECTICIDE
Use(s) INSECTICIDE
MSDS Date 21 Jun 2010

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC CRITERIA

RISK PHRASES

R20/21 Harmful by inhalation and in contact with skin.

SAFETY PHRASES

S25 Avoid contact with eyes.

S29 Do not empty into drains.

S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show container or label.

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No. None Allocated **DG Class** None Allocated **Subsidiary Risk(s)** None Allocated
Packing Group None Allocated **Hazchem Code** None Allocated

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC	Not Available	64742-94-5	30-60%
MINERAL OIL - HIGHLY REFINED (LIGHT PARAFFINIC)	Not Available	64741-89-5	40%
MALATHION	C10-H19-O6-P-S2	121-75-5	10%
ADDITIVE(S)	Not Available	Not Available	Not Available

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4. FIRST AID MEASURES

- Eye** If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
- Inhalation** If inhaled, remove from contaminated area. If poisoning occurs, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or doctor. Apply artificial respiration if not breathing.
- Skin** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
- Ingestion** For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If poisoned by skin absorption or through lungs, remove any contaminated clothing, wash skin thoroughly. If swallowed, do not induce vomiting. Give a glass of water. Get to a doctor or hospital quickly.
- Advice to Doctor** Malathion is a cholinesterase inhibitor. The preferred antidote is atropine by injection or atrovent/ipratropium by airway puff.
- First Aid Facilities** Eye wash facilities should be available.

5. FIRE FIGHTING MEASURES

- Flammability** Combustible. May evolve toxic gases (phosphorus/ carbon/ nitrogen/ sulphur oxides, hydrocarbons) when heated to decomposition.
- Fire and Explosion** Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.
- Extinguishing** Dry agent, carbon dioxide or foam. Prevent contamination of drains or waterways.
- Hazchem Code** None Allocated

6. ACCIDENTAL RELEASE MEASURES

- Spillage** Contact emergency services where appropriate. Use personal protective equipment. Clear area of all unprotected personnel. Ventilate area where possible. Use water spray to reduce vapours. Contain spillage, then cover / absorb spill with non-combustible absorbant material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Prevent spill entering drains or waterways. For small spills, wear recommended PPE and absorb with sand or similar (non-combustible) & place in sealable containers for disposal. Wash contaminated area with mild bleach solution

7. STORAGE AND HANDLING

- Storage** Store in a cool, dry, well ventilated area, removed from oxidising agents, acids, alkalis, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate fire protection systems. Store as a Class C1 Combustible Liquid (AS1940).
- Handling** Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Stds

Ingredient	Reference	TWA		STEL	
Malathion	ASCC (AUS)	--	10 mg/m3	--	--
Oil mist, refined mineral	ASCC (AUS)	--	5 mg/m3	--	--

Biological Limits No biological limit allocated.

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Engineering Controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE Wear splash-proof goggles, rubber boots, nitrile or PVC gloves and a Type A (Organic vapour) respirator. Avoid contact with eyes and skin and avoid inhaling spray mist. When handling the concentrate, preparing and using spray we recommend the use of rubber, PVC or nitrile gloves and safety eye wear. When spraying the product in addition to the gloves and eyewear we recommend the use of a mist respirator. Remove gloves and contaminated clothing immediately after use and wash separately and thoroughly. Wash hands, face and arms immediately after use and before eating, drinking or smoking. If spraying, wear: a Type A-Class P1 (Organic gases/vapours and Particulate) respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	CLEAR YELLOW LIQUID	Solubility (Water)	EMULSIFIES
Odour	SLIGHT ODOUR	Specific Gravity	0.90 - 0.92
pH	NOT AVAILABLE	% Volatiles	NOT AVAILABLE
Vapour Pressure	NOT AVAILABLE	Flammability	CLASS C1 COMBUSTIBLE
Vapour Density	NOT AVAILABLE	Flash Point	> 62°C (Solvent)
Boiling Point	178°C (Solvent)	Upper Explosion Limit	NOT AVAILABLE
Melting Point	NOT AVAILABLE	Lower Explosion Limit	NOT AVAILABLE
Evaporation Rate	NOT AVAILABLE		
Appearance	CLEAR YELLOW LIQUID	Odour	SLIGHT ODOUR

10. STABILITY AND REACTIVITY

Material to Avoid Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid), alkalis (eg. hydroxides), heat and ignition sources.

Hazardous Decomposition Products May evolve toxic gases (phosphorus/ carbon/ nitrogen/ sulphur oxides, hydrocarbons) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary Toxic - irritant. This product has the potential to cause adverse health effects. Use safe work practices to avoid eye or skin contact and inhalation. Cholinesterase inhibitor resulting in the accumulation of acetylcholine, causing rapid twitching of voluntary muscles and finally paralysis. Chronic exposure to some solvents may result in central nervous system (CNS), liver and kidney damage. The potential for adverse health effects may be reduced upon dilution. Adverse health effects are not anticipated when the product is used in accordance with label directions.

Eye Irritant. Contact may result in irritation, lacrimation, pain, redness and blurring or dimness of vision.

Inhalation Toxic. Over exposure may result in irritation of the nose and throat, coughing, weakness, nausea, headache, vomiting and mild chest pain. High level exposure may result in dizziness, incoordination, excessive salivation, sweating, and breathing difficulties. Cholinesterase inhibitor.

Skin Irritant - toxic. Contact may result in irritation, redness, pain and rash. May be absorbed through skin with harmful effects. The dermal LD50 (rat) is > 26300 mg/kg for this product.

Ingestion Toxic. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, fatigue, and sweating and/or salivation. Ingestion of large quantities may result in breathing difficulties, muscle spasms and convulsions. Aspiration may result in chemical pneumonitis and pulmonary oedema. The oral LD50 (rat) is 17900 mg/kg for this product.

Toxicity Data SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC (64742-94-5)

LC50 (Inhalation): > 590 mg/m³/4 hours (rat)

LD50 (Skin): > 2 mL/kg (rabbit)

LDLo (Ingestion): 5 mL/kg (rat)

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MINERAL OIL - HIGHLY REFINED (LIGHT PARAFFINIC) (64741-89-5)

LD50 (Ingestion): > 15 g/kg (rat)

LD50 (Skin): > 5 g/kg (rabbit)

MALATHION (121-75-5)

Health Surveillance: Required [NOHSC:1005(1994)]

LC50 (Inhalation): 43790 ug/m3/4hrs (rat)

LCLo (Inhalation): 1200 ug/m3/4hrs (rat)

LD50 (Ingestion): 190 mg/kg (mouse)

LD50 (Intraperitoneal): 193 mg/kg (mouse)

LD50 (Intravenous): 50 mg/kg (rat)

LD50 (Skin): 2330 mg/kg (mouse)

LD50 (Subcutaneous): 221 mg/kg (mouse)

12. ECOLOGICAL INFORMATION

Environment Organophosphates are highly toxic to birds, mammals and fish. Bioaccumulation is unlikely as these chemicals would kill the organism before it would be taken into the tissues. Even when these chemicals are taken up by fish, they seldom persist for more than a week.

13. DISPOSAL CONSIDERATIONS

Waste Disposal For small amounts absorb with sand, vermiculite or similar and dispose to approved landfill. For larger amounts incinerate where available or; expose to ultraviolet light & moisture; or dilute with water, absorb with lime and dispose to approved landfill site. Triple wash containers with detergent (absorb waste with sand or similar), crush or perforate container to prevent reuse and dispose of, with wash residue to approved landfill site.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION**NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE**

Shipping Name None Allocated

UN No. None Allocated **DG Class** None Allocated **Subsidiary Risk(s)** None Allocated

Packing Group None Allocated **Hazchem Code** None Allocated

15. REGULATORY INFORMATION

Poison Schedule Classified as a Schedule 5 (S5) Poison using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information ORGANOPHOSPHATES-CARBAMATE PESTICIDES-LARVICIDES: These agents act by combining with and inactivating the enzyme acetylcholinesterase (an enzyme involved in nerve muscle coordination). The inhibition of the cholinesterase appears to be reversible following cessation of exposure at sub lethal concentrations (acute exposure). The principal manifestations of poisoning with cholinesterase inhibitor pesticides are visual disturbances, respiratory difficulty and gastrointestinal hyperactivity.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

ABBREVIATIONS:

ADB - Air-Dry Basis.

BEI - Biological Exposure Indice(s)

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CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.
CNS - Central Nervous System.
EC No - European Community Number.
IARC - International Agency for Research on Cancer.
M - moles per litre, a unit of concentration.
mg/m³ - Milligrams per cubic metre.
NOS - Not Otherwise Specified.
NTP - National Toxicology Program.
OSHA - Occupational Safety and Health Administration.
pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm - Parts Per Million.
RTECS - Registry of Toxic Effects of Chemical Substances.
TWA/ES - Time Weighted Average or Exposure Standard.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

COLOUR RATING SYSTEM: RMT has assigned all Chem Alert reports a colour rating of Green, Amber or Red for the sole purpose of providing users with a quick and easy means of determining the hazardous nature of a product. Safe handling recommendations are provided in all Chem Alert reports so as to clearly identify how users can control the hazards and thereby reduce the risk (or likelihood) of adverse effects. As a general guideline, a Green colour rating indicates a low hazard, an Amber colour rating indicates a moderate hazard and a Red colour rating indicates a high hazard.

While all due care has been taken by RMT in the preparation of the Colour Rating System, it is intended as a guide only and RMT does not provide any warranty in relation to the accuracy of the Colour Rating System. As far as is lawfully possible, RMT accepts no liability or responsibility whatsoever for the actions or omissions of any person in reliance on the Colour Rating System.

Report Status

This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ('MSDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this MSDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this MSDS.

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SDS Date 21 Jun 2010**End of Report**