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## SAFETY DATA SHEET

PRODUCT NAME DAVID GRAYS MALATHION GARDEN SPRAY

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Supplier name** DAVID GRAY & CO PTY LIMITED  
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**Synonym(s)** 09445 (12X200ML) - MANUFACTURER'S CODE • 09551 (6X500ML) - MANUFACTURER'S CODE • DAVID GRAYS MALATHION 500/MALATHION GARDEN SPRAY  
**Use(s)** INSECTICIDE  
**SDS date** 18 April 2018

### 2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

#### Risk Phrases

R22 Harmful if swallowed.  
R43 May cause sensitisation by skin contact.  
R65 Harmful: May cause lung damage if swallowed.

#### Safety Phrases

S16 Keep away from sources of ignition - No smoking.  
S24/25 Avoid contact with skin and eyes.  
S29 Do not empty into drains.

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

<b>UN Number</b>	None Allocated	<b>Transport Hazard Class</b>	None Allocated
<b>Packing Group</b>	None Allocated	<b>Hazchem Code</b>	None Allocated

### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	CAS Number	EC Number	Content
SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC	64742-94-5	265-198-5	30 to 60%
MALATHION	121-75-5	204-497-7	50%
EMULSIFIER(S)	-	-	<10%

### 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).

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### Ingestion

If poisoned by skin absorption or through lungs, remove any contaminated clothing, wash skin thoroughly. If swallowed, do not induce vomiting. Give a drink of water. Get to a doctor or hospital quickly.

### Advice to doctor

This product is a cholinesterase inhibitor affecting the nervous system and producing cardiac and respiratory depression. Administer atropine sulphate. The dose and the frequency of atropine will vary with each patient, but the patient should remain fully atropinised. In severe cases pralidoxime may be administered as well, if given within 24 hours after exposure. Artificial respiration or oxygen may be necessary. Monitor respiratory, cardiac and central nervous system function. Also monitor red blood cell and plasma cholinesterase levels. Watch for pulmonary oedema and delayed neurological symptoms.

Contraindications - Morphine, barbiturates, phenothiazine derivatives, tranquillisers, and all kinds of central nervous system stimulants are contraindicated. Also, large amounts of intravenous fluids are generally contraindicated because of the threat of pulmonary oedema.

### First aid facilities

Eye wash facilities and safety shower should be available.

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## 5. FIRE FIGHTING MEASURES

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### Flammability

Combustible. May evolve toxic gases (carbon/ nitrogen oxides, amines, ammonia, 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 and waterways.

### Hazchem code

None allocated.

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## 6. ACCIDENTAL RELEASE MEASURES

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### Personal precautions

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

### Environmental precautions

Prevent product from entering drains and waterways.

### Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

### References

See Sections 8 and 13 for exposure controls and disposal.

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## 7. STORAGE AND HANDLING

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### Storage

Store in a cool, dry, well ventilated area, removed from incompatible substances, 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.

### 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.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Malathion	SWA (AUS)	--	10	--	--

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## Biological limits

Ingredient	Determinant	Sampling Time	BEI
MALATHION	Cholinesterase activity in red blood cells	Discretionary	70% of individual's baseline

Reference: ACGIH Biological Exposure Indices

## 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

### Eye / Face

Wear splash-proof goggles.

### Hands

Wear PVC or nitrile gloves.

### Body

Wear rubber boots.

### Respiratory

Wear a Type A (Organic vapour) respirator. If spraying, wear a Type A-Class P1 (Organic gases/vapours and Particulate) respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	CLEAR PALE YELLOW LIQUID
Odour	PUNGENT ODOUR
Flammability	CLASS C1 COMBUSTIBLE
Flash point	> 62°C
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Specific gravity	1.03 - 1.05
Solubility (water)	EMULSIFIES
Vapour pressure	NOT AVAILABLE
Upper explosion limit	7.0 %
Lower explosion limit	0.6 %
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE

## 10. STABILITY AND REACTIVITY

Material to avoid	Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), heat and ignition sources.
Hazardous Decomposition Products	May evolve toxic gases (carbon/ nitrogen oxides, amines, ammonia, hydrocarbons) when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Harmful - 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 anaemia and liver, kidney and central nervous system (CNS) damage. The potential for adverse health effects may be reduced upon dilution.
Eye	Irritant. Contact may result in irritation, lacrimation, pain, redness and blurring or dimness of vision.

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<b>Inhalation</b>	Harmful. 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.
<b>Skin</b>	Irritant. Contact may result in irritation, redness, pain and rash. May be absorbed through skin with harmful effects. May cause sensitisation by skin contact.
<b>Ingestion</b>	Harmful. 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 or inhalation may cause chemical pneumonitis and pulmonary oedema.
<b>Toxicity data</b>	SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC (64742-94-5) LD50 (oral) > 2000 mg/kg (rat) LD50 (dermal) > 2000 mg/kg (rat) LC50 (inhalation) > 590 mg/m <sup>3</sup> /4 hours (rat)  MALATHION (121-75-5) LD50 (oral) 190 mg/kg (mouse) LD50 (dermal) 2330 mg/kg (mouse) LC50 (inhalation) 43790 ug/m <sup>3</sup> /4hrs (rat)

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**12. ECOLOGICAL INFORMATION**

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<b>Toxicity</b>	May be harmful to aquatic organisms.
<b>Persistence and degradability</b>	No information provided.
<b>Bioaccumulative potential</b>	No information provided.
<b>Mobility in soil</b>	No information provided.
<b>Other adverse effects</b>	No information provided.

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**13. DISPOSAL CONSIDERATIONS**

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<b>Waste disposal</b>	For small amounts, absorb with sand, vermiculite or similar and dispose of to an approved landfill site. 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.
<b>Legislation</b>	Dispose of in accordance with relevant local legislation.

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**14. TRANSPORT INFORMATION**

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**NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA**

	<b>LAND TRANSPORT (ADG)</b>	<b>SEA TRANSPORT (IMDG / IMO)</b>	<b>AIR TRANSPORT (IATA / ICAO)</b>
<b>UN Number</b>	None Allocated	None Allocated	None Allocated
<b>Proper Shipping Name</b>	None Allocated	None Allocated	None Allocated
<b>Transport Hazard Class</b>	None Allocated	None Allocated	None Allocated
<b>Packing Group</b>	None Allocated	None Allocated	None Allocated

<b>Environmental hazards</b>	No information provided
<b>Special precautions for user</b>	
<b>Hazchem code</b>	None Allocated

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**15. REGULATORY INFORMATION**

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<b>Poison schedule</b>	Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
<b>Inventory Listing(s)</b>	<b>AUSTRALIA: AICS (Australian Inventory of Chemical Substances)</b> All components are listed on AICS, or are exempt.

## 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).

### PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, 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.

### HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; 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 report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

### Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (highly acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

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**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier 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, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, 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 SDS.

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