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SAFETY DATA SHEET

Product Name DAVID GRAYS CARBARYL FLOWABLE INSECTICIDE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier name	**DAVID GRAY & CO PTY LIMITED**
Address	2 Rawlinson Street, O'Connor, WA, 6961, AUSTRALIA
Telephone	(08) 9337 4933
Fax	(08) 9337 8316
Emergency	(08) 9337 4933 (B/H)
Email	general@davidgray.com.au
Web site	http://www.davidgray.com.au/
Synonym(s)	CARBARYL 500 FLOWABLE INSECTICIDE • MANUFACTURER'S CODE: 25600 (1L), 25892 (5L), 25907 (20L)
Use(s)	INSECTICIDE • PESTICIDE
SDS date	14 March 2013

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

RISK PHRASES

R20/22	Harmful by inhalation and if swallowed.
R40	Limited evidence of a carcinogenic effect.
R50	Very toxic to aquatic organisms.

SAFETY PHRASES

S2	Keep out of reach of children.
S36/37	Wear suitable protective clothing and gloves.
S46	If swallowed, contact a doctor or Poisons Information Centre immediately and show container or label.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN number	2992	**DG division**	6.1
Packing group	III	**Subsidiary risk(s)**	None Allocated
Hazchem code	2X		

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Identification	Classification	Content
1-NAPHTHYL-N-METHYLCARBAMATE (CARBARYL)	CAS: 63-25-2 EC: 200-555-0	Xn;R20/22 Carc.;R40 N;R50	50%
ADDITIVE(S)	Not Available	Not Available	Not Available
WATER	CAS: 7732-18-5 EC: 231-791-2	Not Available	Not Available

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 Poison Information Centre on 13 11 26 (Australia Wide) or doctor. Give one atropine tablet every 5 minutes until dryness of the mouth occurs. Apply artificial respiration if not breathing.

Skin If skin contact occurs, remove any contaminated clothing and flush skin with running water. If poisoned, give 1 atropine tablet every 5 minutes until dryness of the mouth occurs. Remove from contaminated area. Seek immediate medical advice.

Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Seek medical attention immediately.

Advice to doctor Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammability Non flammable. May evolve toxic gases (carbon/ nitrogen 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 Use an extinguishing agent suitable for the surrounding fire.

Hazchem code 2X

2 Water Fog (or fine water spray if fog unavailable)
X Full protective clothing including Self Contained Breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Wear Personal Protective Equipment (PPE) as detailed in Section 8 of this SDS. Clear area of all unprotected personnel. 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.

7. STORAGE AND HANDLING

Storage Store in a cool, dry, well ventilated area, removed from fertilizers, moisture, seeds, acids, oxidising agents, alkalis, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Large storage areas should have appropriate fire protection and ventilation 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m³	ppm	mg/m³
Carbaryl	SWA (AUS)	--	5	--	--

Biological limits No biological limit allocated.

Engineering controls Avoid inhalation. Use in well ventilated areas. Maintain vapour levels below the recommended exposure standard.

PPE

Eye / Face	Wear splash-proof goggles.
Hands	Wear PVC or rubber gloves.
Body	Wear coveralls.
Respiratory	Not required under normal conditions of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	VISCOUS LIGHT BROWN LIQUID
Odour	SLIGHT ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Specific gravity	1.14 - 1.16
Solubility (water)	DISPERSIBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Partition coefficient	NOT AVAILABLE
% Volatiles	NOT AVAILABLE

10. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended conditions of storage.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources.
Material to avoid	Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid) and alkalis (eg. hydroxides).
Hazardous Decomposition Products	May evolve toxic gases (carbon/ nitrogen oxides, hydrocarbons) when heated to decomposition.
Hazardous Reactions	Polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Harmful - irritant. This product has the potential to cause adverse health effects with over exposure. Use safe work practices to avoid eye or skin contact and inhalation. Carbamate pesticides may result in reversible cholinesterase enzyme inhibition. Rapidly metabolised and excreted. When handled in small quantities the potential for adverse health effects may be reduced. No adverse health effects are expected 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	Harmful. Over exposure may result in irritation of the nose and throat, coughing, weakness, blurred vision, nausea, vomiting, incoordination, breathing difficulties, excessive salivation and sweating. Due to the low vapour pressure, an inhalation hazard is not anticipated with normal use.
Skin	Irritant. Contact may result in irritation, redness, pain and rash. May be absorbed through skin with harmful effects. Dermal LD50 is 9000 mg/kg.
Ingestion	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. Oral LD50 (rat) is 1908 mg/kg.

Toxicity data 1-NAPHTHYL-N-METHYLCARBAMATE (CARBARYL) (63-25-2)

LD50 (ingestion)	128 mg/kg (mouse)
LD50 (intraperitoneal)	25 mg/kg (mouse)
LD50 (intravenous)	18 mg/kg (rat)
LD50 (skin)	2000 mg/kg (rabbit)
LD50 (subcutaneous)	860 mg/kg (mouse)
LDLo (ingestion)	250 mg/kg (hamster)
TDLo (ingestion)	500 mg/kg (man)

12. ECOLOGICAL INFORMATION

Toxicity Very toxic to aquatic organisms.

Persistence and degradability No information provided.

Bioaccumulative potential No information provided.

Mobility in soil No information provided.

Other adverse effects No information provided.

13. DISPOSAL CONSIDERATIONS

Waste disposal For small amounts absorb with sand, vermiculite or similar and dispose of to an approved landfill site only. Contact the manufacturer for additional information if larger amounts are involved. Triple rinse (or preferably pressure rinse) containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. Break, crush, puncture and bury empty containers in a local authority landfill. If not available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers should not be burnt.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN number	2992	2992	2992
Proper shipping name	CARBAMATE PESTICIDE, LIQUID, TOXIC		
DG class/ Division	6.1	6.1	6.1
Subsidiary risk(s)	None Allocated	None Allocated	None Allocated
Packing group	III	III	III
GTEPG	6A1		
Hazchem code	2X		
EMS	F-A, S-A		

15. REGULATORY INFORMATION

Poison schedule Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Inventory Listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information

This product is used for the control of certain insects in fruit, nuts, vegetables, crops and pastures, and for certain other uses as specified in the directions for use.

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.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this 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.

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 ChemAlert 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
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m^3	Milligrams per Cubic Metre
PEL	Permissible Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
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
TLV	Threshold Limit Value
TWA/OEL	Time Weighted Average or Occupational Exposure Limit

Revision history

Revision	Description
2.0	Standard SDS Review.
1.0	Initial SDS creation

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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End of SDS