

AMBER



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MATERIAL SAFETY DATA SHEET

Product Name **DAVID GRAYS LAWN BEETLE GRANULES**

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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Email general@davidgray.com.au
Web Site <http://www.davidgray.com.au/>
Synonym(s) 26621 (1X3KG) • MANUFACTURER'S CODE: 7351 (12X500G), 7352 (6X500G)
Use(s) INSECT CONTROL • INSECTICIDE
MSDS Date 21 Jun 2010

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC CRITERIA

RISK PHRASES

R21/22 Harmful in contact with skin and if swallowed.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY PHRASES

S1/2 Keep locked up and out of reach of children.
S28 After contact with skin, wash immediately with plenty of 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 where possible).
S61 Avoid release to the environment. Refer to special instructions / safety data sheets.

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
CHLORPYRIFOS	C9-H11-C13-N-O3-P-S	2921-88-2	4%
INERT MATERIAL(S)	Not Available	Not Available	96%

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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. 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 swallowed, do not induce vomiting.
Advice to Doctor	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammability	Non flammable. May evolve toxic gases (carbon/ sulphur/ phosphorus/ nitrogen oxides) when heated to decomposition. May also evolve hydrogen chloride, ethyl sulphide and diethyl sulphide 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	Prevent contamination of drains or waterways.
Hazchem Code	None Allocated

6. ACCIDENTAL RELEASE MEASURES

Spillage	Use personal protective equipment. Wash the contaminated surfaces with a mild bleach (sodium hypochlorite) solution. For small spills, wear required protective equipment, then sweep up, contain and reuse spilt product. Wash contaminated surfaces with a mild bleach solution.
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7. STORAGE AND HANDLING

Storage	Store in a cool, dry, well ventilated area, removed from moisture, oxidising agents, acids, alkalis, iron, mild/galvanised steel, zinc, 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 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 (eg. if container is damaged). Use only according to the label directions.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Stds

Ingredient	Reference	TWA		STEL	
Chlorpyrifos	ASCC (AUS)	--	0.2 mg/m ³	--	--

Biological Limits No biological limit allocated.

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

PPE Wear dust-proof goggles and rubber or PVC gloves. When using large quantities or where heavy contamination is likely, wear: coveralls. Where an inhalation risk exists, wear: a Class P1 (Particulate) respirator.



Product Name DAVID GRAYS LAWN BEETLE GRANULES**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	PALE BROWN GRANULES	Solubility (Water)	INSOLUBLE
Odour	SLIGHT ODOUR	Specific Gravity	NOT AVAILABLE
pH	NOT AVAILABLE	% Volatiles	NOT AVAILABLE
Vapour Pressure	2.5 x 10 ⁻⁶ kPa @ 20°C (Chlorpyrifos)	Flammability	NON FLAMMABLE
Vapour Density	NOT AVAILABLE	Flash Point	NOT RELEVANT
Boiling Point	NOT AVAILABLE	Upper Explosion Limit	NOT RELEVANT
Melting Point	43°C (Chlorpyrifos)	Lower Explosion Limit	NOT RELEVANT
Evaporation Rate	NOT AVAILABLE		
Appearance	PALE BROWN GRANULES	Odour	SLIGHT ODOUR

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), alkalis (eg. hydroxides), iron, zinc, stainless/galvanised steel and heat sources. Chlorpyrifos is considered corrosive to brass and copper.
Hazardous Decomposition Products	May evolve toxic gases (carbon/ sulphur/ phosphorus/ nitrogen oxides) when heated to decomposition. May also evolve hydrogen chloride, ethyl sulphide and diethyl sulphide when heated to decomposition.
Hazardous Reactions	Polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Harmful. 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. Symptoms may include headaches, dizziness, nausea, diarrhoea, muscle twitching, tremors, abdominal cramps, tightness in chest, sweating, blurred vision, salivation, excessive urination and convulsions. Symptoms are often characterised as short acting yet having complete and rapid reversibility. 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	Irritant. Over exposure to dust may result in irritation of the nose and throat, coughing, weakness, nausea, vomiting and diarrhoea. High level exposure may result in dizziness, incoordination, excessive salivation, sweating, and breathing difficulties. Cholinesterase inhibitor.
Skin	Irritant. Contact may result in irritation, redness, pain and rash. May be absorbed through skin with harmful effects. The reported dermal LD50 (skin) is 50000 mg/kg.
Ingestion	Low to moderate toxicity. 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. The reported oral LD50 (rat) is > 3375 mg/kg.
Toxicity Data	CHLORPYRIFOS (2921-88-2) Health Surveillance: Required [NOHSC:1005(1994)] LC50 (Inhalation): 2600-3600 mg/m ³ /4 hours (rat) LD50 (Ingestion): 60 mg/kg (mouse) LD50 (Skin): 202 mg/kg (rat) LDLo (Skin): 100 mg/kg (guinea pig) TDLo (Ingestion): 10 mg/kg (mouse)

12. ECOLOGICAL INFORMATION

Environment	Chlorpyrifos is highly toxic to birds, fish and bees, moderately toxic to pets and livestock, low toxicity to earthworms and does not bioaccumulate. It has a half life of 6 to 280 days depending upon sunlight, soil type and climatic conditions. Chlorpyrifos binds strongly to particles of soil and organic materials. It does not leach in soils and is readily degraded by hydrolysis (12 hours to 6 days), microbial action and is lost by volatilisation.
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13. DISPOSAL CONSIDERATIONS

Waste Disposal For small amounts, the best way of disposing of the product is to use in accordance with the original label directions. Contact the manufacturer if large amounts are involved. Empty containers should be disposed of by wrapping in paper, placing in a plastic bag and putting in the garbage. Empty containers should not be burnt.

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 This product is used for the control of lawn beetles, ants, millipedes, and slaters in turf, garden beds and lawns.

ABBREVIATIONS:

ADB - Air-Dry Basis.
BEI - Biological Exposure Indice(s)
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

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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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End of Report