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SAFETY DATA SHEET

Product Name **DAVID GRAYS GLYPHOSATE 360 BIOACTIVE**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier name DAVID GRAY & CO PTY LIMITED
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Synonym(s) BIOACTIVE • DAVID GRAY GLYPHOSATE 360 BIOACTIVE • GLYPHOSATE 360 BIOACTIVE
Use(s) WEED CONTROL
SDS date 14 March 2013

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

RISK PHRASES

R41 Risk of serious damage to eyes.
R51/53 Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

SAFETY PHRASES

S2 Keep out of reach of children.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S39 Wear eye/face protection.
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 number	None Allocated	DG class	None Allocated
Packing group	None Allocated	Subsidiary risk(s)	None Allocated
Hazchem code	None Allocated		

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Identification	Classification	Content
GLYPHOSATE (ISO) [N-(PHOSPHONOMETHYL)GLYCINE]	CAS: 1071-83-6 EC: 213-997-4	Xi;R41 N;R51/53	36%
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	Remainder

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 Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If

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

First aid facilities Eye wash facilities and safety shower should be available.

5. FIRE FIGHTING MEASURES

Flammability Non flammable. May evolve toxic gases (carbon/ nitrogen/ phosphorus oxides) 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 None Allocated

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Wear Personal Protective Equipment (PPE) as detailed in Section 8 of this SDS.

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 alkalis, iron, steel and zinc containers. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use.

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 No exposure standard(s) allocated.

Biological limits No biological limit allocated.

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended.

PPE

Eye / Face Wear splash-proof goggles.

Hands Wear PVC or rubber gloves.

Body Wear coveralls.

Respiratory Where an inhalation risk exists, wear a Type A-Class P1 (Organic gases/vapours and Particulate) respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance YELLOW LIQUID

Odour SLIGHT ODOUR

NON FLAMMABLE

Flammability	
Flash point	NOT RELEVANT
Boiling point	100°C
Melting point	< 0°C
Evaporation rate	AS FOR WATER
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Specific gravity	1.17
Solubility (water)	SOLUBLE
Vapour pressure	18 mm Hg @ 20°C
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	> 60 % (Water)

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	Solutions may be corrosive to iron, galvanised steel and zinc evolving potentially explosive hydrogen gas (confined areas likely to present a hazard). Alkalis may neutralise.
Hazardous Decomposition Products	May evolve toxic gases (carbon/ nitrogen/ phosphorus oxides) when heated to decomposition.
Hazardous Reactions	Polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Low to moderate toxicity - irritant. This product has the potential to cause adverse health effects with over exposure. Upon dilution, the potential for adverse health effects may be reduced.
Eye	Irritant. Contact may result in irritation, lacrimation, pain and redness. Risk of serious damage to eyes.
Inhalation	Low irritant. Over exposure may result in irritation of the nose and throat, with coughing.
Skin	Low irritant. Prolonged or repeated contact may result in mild irritation, rash and dermatitis.
Ingestion	Low to moderate toxicity. Ingestion may result in gastrointestinal irritation, nausea, vomiting, abdominal pain and diarrhoea.
Toxicity data	GLYPHOSATE (ISO) [N-(PHOSPHONOMETHYL)GLYCINE] (1071-83-6) LC50 (inhalation) > 12200 mg/m ³ /4 hours (rat) LD50 (ingestion) 1214 mg/kg (mouse) LD50 (intraperitoneal) 130 mg/kg (mouse) LD50 (skin) 7940 mg/kg (rabbit) TDLo (ingestion) 1214 mg/kg (man)

12. ECOLOGICAL INFORMATION

Toxicity	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Persistence and degradability	No information provided.
Bioaccumulative potential	No information provided.
Mobility in soil	No information provided.
Other adverse effects	Glyphosate is strongly adsorbed to soil and is unlikely to leach. Readily and completely biodegrades in soil. Average half-life in soil: ~60 days. Does not bioconcentrate in aquatic organisms. Its use as a non-selective herbicide indicates toxicity to plants. Half-life in water is a few days. Sediment is the primary sink for glyphosate in water.

13. DISPOSAL CONSIDERATIONS

Waste disposal	Triple rinse or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return to clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty container in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for the purpose clear of waterways, desirable vegetation and tree roots. Empty containers should not be burned.
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

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	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN number	None Allocated	None Allocated	None Allocated
Proper shipping name	None Allocated	None Allocated	None Allocated
DG class/ Division	None Allocated	None Allocated	None Allocated
Subsidiary risk(s)	None Allocated	None Allocated	None Allocated
Packing group	None Allocated	None Allocated	None Allocated
Hazchem code	None Allocated		

15. REGULATORY INFORMATION

Poison schedule	Classified as a Schedule 5 (S5) 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	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.
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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.

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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