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**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

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**1.1 Product identifier****Product name** BR 100 P**Synonyms** BR100P • POLYURETHANE SOLUTION IN A WATER/2-BUTOXYETHANOL BLEND**1.2 Uses and uses advised against****Uses** INDUSTRIAL APPLICATIONS • SPECIALTY CHEMICAL • SURFACE FINISHING**1.3 Details of the supplier of the product****Supplier name** DUBOIS CHEMICALS AUSTRALIA PTY LIMITED**Address** 305 Frankston Dandenong Rd, Dandenong South, VIC, 3175, AUSTRALIA**Telephone** (03) 9768 3860**Email** [sales@duboischchemicals.com.au](mailto:sales@duboischchemicals.com.au)**Website** <http://duboischchemicals.com.au/>**1.4 Emergency telephone numbers****Emergency** 13 11 26 (Poisons Information Centre)

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**2. HAZARDS IDENTIFICATION**

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**2.1 Classification of the substance or mixture**

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

**Physical Hazards**

Not classified as a Physical Hazard

**Health Hazards**

Skin Corrosion/Irritation: Category 2

Serious Eye Damage / Eye Irritation: Category 2A

**Environmental Hazards**

Not classified as an Environmental Hazard

**2.2 GHS Label elements****Signal word** WARNING**Pictograms****Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

**Prevention statements**

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

**PRODUCT NAME BR 100 P****Response statements**

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 Specific treatment is advised - see first aid instructions.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Storage statements**

None allocated.

**Disposal statements**

None allocated.

**2.3 Other hazards**

No information provided.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content
POLYURETHANE	-	-	<80%
2-BUTOXYETHANOL	111-76-2	203-905-0	12 to 20%
WATER	7732-18-5	231-791-2	<80%

**Ingredient Notes** Polyurethane solution in a water/2-butoxyethanol blend.

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**4. FIRST AID MEASURES**

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**4.1 Description of 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.

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

**4.2 Most important symptoms and effects, both acute and delayed**

See Section 11 for more detailed information on health effects and symptoms.

**4.3 Immediate medical attention and special treatment needed**

Treat symptomatically.

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**5. FIRE FIGHTING MEASURES**

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**5.1 Extinguishing media**

Use an extinguishing agent suitable for the surrounding fire.

**5.2 Special hazards arising from the substance or mixture**

Non flammable. May evolve carbon oxides and hydrocarbons when heated to decomposition.

**5.3 Advice for firefighters**

Treat as per requirements for surrounding fires. Evacuate area and contact emergency services. 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.

**5.4 Hazchem code**

None allocated.

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**6. ACCIDENTAL RELEASE MEASURES**

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**6.1 Personal precautions, protective equipment and emergency procedures**

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.

**6.2 Environmental precautions**

Prevent product from entering drains and waterways.

**6.3 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. Eliminate all sources of ignition.

**6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

**7. HANDLING AND STORAGE**

**7.1 Precautions for safe 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.

**7.2 Conditions for safe storage, including any incompatibilities**

Store tightly sealed 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 be bunded and have appropriate fire protection and ventilation systems.

**7.3 Specific end uses**

No information provided.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameters**

**Exposure standards**

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
2-Butoxyethanol (EGBE)	SWA [AUS]	20	96.9	50	242
2-Butoxyethanol (EGBE)	SWA [Proposed]	10	49	50	242

**Biological limits**

Ingredient	Determinant	Sampling Time	BEI
2-BUTOXYETHANOL	Butoxyacetic acid (BAA) in urine (with hydrolysis)	End of shift	200 mg/g creatinine

Reference: ACGIH Biological Exposure Indices

**8.2 Exposure controls**

**Engineering controls**

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

**PPE**

- Eye / Face**      Wear splash-proof goggles.
- Hands**            Wear butyl or nitrile or neoprene or barrier gloves.
- Body**              Wear coveralls.
- Respiratory**      Where an inhalation risk exists, wear a Type A (Organic vapour) respirator.



**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

Appearance	VISCOUS WHITE LIQUID
Odour	SLIGHT ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	100°C (water component)
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	4 to 7
Vapour density	NOT AVAILABLE
Relative density	1.06
Solubility (water)	SOLUBLE
Vapour pressure	18 mm Hg @ 20°C
Upper explosion limit	NOT AVAILABLE
Lower explosion limit	NOT AVAILABLE
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

**9.2 Other information**

% Volatiles	50 %
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**10. STABILITY AND REACTIVITY**

**10.1 Reactivity**

Carefully review all information provided in sections 10.2 to 10.6.

**10.2 Chemical stability**

Stable under recommended conditions of storage.

**10.3 Possibility of hazardous reactions**

Polymerization is not expected to occur.

**10.4 Conditions to avoid**

Avoid heat, sparks, open flames and other ignition sources.

**10.5 Incompatible materials**

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), aluminium, heat and ignition sources. Will attack some forms of plastic and rubber coatings.

**10.6 Hazardous decomposition products**

May evolve carbon oxides and hydrocarbons when heated to decomposition.

**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Acute toxicity** May be harmful if swallowed.

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
2-BUTOXYETHANOL	~1200 mg/kg (rat) (ECHA)	220 mg/kg (rabbit)	450 mg/L/4hrs (rat)

**Skin** Contact may result in drying and defatting of the skin, rash and dermatitis.

**Eye** Contact may result in irritation, lacrimation, pain and redness.

**Sensitisation** Not classified as causing skin or respiratory sensitisation.

**Mutagenicity** Not classified as a mutagen.

**Carcinogenicity** Not classified as a carcinogen.

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<b>Reproductive</b>	Not classified as a reproductive toxin.
<b>STOT - single exposure</b>	Over exposure may result in irritation of the nose and throat, coughing, nausea and vomiting. High level exposure may result in dizziness and breathing difficulties.
<b>STOT - repeated exposure</b>	Not classified as causing organ damage from repeated exposure. However, repeated exposure to some glycols may result in kidney damage.
<b>Aspiration</b>	Not classified as causing aspiration.

**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

Commercial product: LC50 (Brachydanio Rerio, 96h) > 100 mg/L.  
 Commercial product: EC50 (Algae, 72h) > 100 mg/L.  
 2-Butoxyethanol: EC50 (Daphnia Magna, 48h) = 1550 mg/L (OECD 202).  
 2-Butoxyethanol: EC0 (Pseudomonas Putida, 16h) = 1170 mg/L (DIN 38412).  
 2-Butoxyethanol: NOEC (Danio Rerio, 21d) > 100 mg/L (equivalent or similar to OECD 204).  
 2-Butoxyethanol: NOEC (Daphnia Magna, 21d) = 100 mg/L (OECD 211).

**12.2 Persistence and degradability**

Poorly biodegradable.

**12.3 Bioaccumulative potential**

Bioaccumulation is not expected.

**12.4 Mobility in soil**

No information provided.

**12.5 Other adverse effects**

SOIL: Ethylene glycol monobutyl ether is expected to have high mobility in soil. Volatilisation is not expected to be important from moist soil surfaces, however may be important from dry soil. WATER: Aerobic degradation of ethylene glycol monobutyl ether should occur rapidly in water. ATMOSPHERE: Degradation by reaction with hydroxyl radicals is anticipated (half-life ~20 hours).

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

**Waste disposal** Incinerate where available. For small amounts, absorb with sand, vermiculite or similar and dispose of to an 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, IMDG OR IATA**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	None allocated.	None allocated.	None allocated.
<b>14.2 Proper Shipping Name</b>	None allocated.	None allocated.	None allocated.
<b>14.3 Transport hazard class</b>	None allocated.	None allocated.	None allocated.
<b>14.4 Packing Group</b>	None allocated.	None allocated.	None allocated.

**14.5 Environmental hazards**

Not a Marine Pollutant.

**14.6 Special precautions for user**

**Hazchem code** None allocated.

**15. REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

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<b>Classifications</b>	Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).
<b>Inventory listings</b>	<b>AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)</b> All components are listed on AIIC, or are exempt.

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**16. OTHER INFORMATION**

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<b>Additional information</b>	<p><b>WORK PRACTICES - SOLVENTS:</b> Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS 1020 (The control of undesirable static electricity) and AS 1940 (The storage and handling of flammable and combustible liquids) for control procedures.</p> <p><b>RESPIRATORS:</b> 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.</p> <p><b>EXPOSURE STANDARDS - TIME WEIGHTED AVERAGE (TWA) or WES (WORKPLACE EXPOSURE STANDARD) (NZ):</b> 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).</p> <p><b>PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:</b> 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.</p> <p><b>HEALTH EFFECTS FROM EXPOSURE:</b> 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.</p>
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<b>Abbreviations</b>	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 (high 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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