

# BORAL RECYCLING

## Safety Data Sheet



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### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Product name** RECYCLED CONCRETE

**Synonym(s)** SOLID CONCRETE; CONCRETE WASHOUT; SOLID CONCRETE WASTE; CONSTRUCTION AND DEMOLITION CONCRETE; RECYCLED CONCRETE AGGREGATE; RECYCLED CONCRETE MATERIALS

#### 1.2 Uses and uses advised against

**Use(s)** ENGINEERED AND NON-ENGINEERED CONSTRUCTION MATERIALS SUCH AS: PIPE BEDDING; FILL PRODUCT; DRAINAGE AGGREGATE; CONCRETE AGGREGATE; ROAD BASE

#### 1.3 Details of the supplier of the safety data sheet

**Supplier name** BORAL AUSTRALIA  
**Address** Level 3, 40 Mount Street, Nth Sydney, NSW, 2060, AUSTRALIA  
**Telephone** (02) 9220 6300  
**Email** [sds@rmt.com.au](mailto:sds@rmt.com.au)  
**Website** [www.boral.com.au](http://www.boral.com.au)

#### 1.4 Emergency telephone number(s)

**Emergency** 1800 555 477 (8am – 5pm WST)  
**Emergency (A/H)** 13 11 26 (Poisons Information Centre)

### 2. HAZARDS IDENTIFICATION

HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA  
NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

#### 2.1 Classification of the substance or mixture

**GHS classifications** Skin Sensitization: Category 1  
Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2

#### 2.2 Label elements

**Signal word** WARNING

**Pictograms**



#### Hazard Statement(s)

H317 May cause an allergic skin reaction.  
H373 May cause damage to organs (lungs) through prolonged or repeated exposure (inhalation).

#### Prevention Statement(s)

P260 Do not breathe dust.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

#### Response Statement(s)

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

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P314                                    Get medical advice/attention if you feel unwell.  
P333 + P313                        If skin irritation or rash occurs: Get medical advice/attention.  
P363                                    Wash contaminated clothing before reuse.

**Storage Statement(s)**

None Allocated

**Disposal Statement(s)**

P501                                    Dispose of contents/container in accordance with relevant regulations.

**2.3 Other hazards**

Dust of recycled aggregates may contain crystalline silica some of which may be respirable (particles small enough to go into the deep parts of the lungs when breathed in).

As a result of above **Dust** in/on the supplied product or created when product is **processed, abraded, or crushed**, is classified as **Hazardous** according to the Australian criteria for the classification of chemicals.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

Ingredient	CAS No.	Content
Aggregate, Sand, crush stone or gravel or slag, quartz, VENM containing crystalline silica (quartz),	14808-60-7	30 to 90%
Portland Cement	65997-15-1	1 to 50%
Water	65997-15-1	2 to 30%
Ashes, Residue (Flyash)	68131-74-8	Up to 20%
Gypsum (CaSO <sub>4</sub> .2H <sub>2</sub> O)	6599-69-2	Up to 10%
Limestone (CaCO <sub>3</sub> )	1317-65-3	Up to 10%
Hexavalent Chromium (Contaminant)	Not Available	2 to 20ppm

**Additional Ingredients May Include:**

Ingredient	CAS No.	Content
Pigment (Colouring)	Not Available	Up to 10%
Alkyltrialkoxo silane/siloxane	Not Available	Up to 5%
Fatty Acid salt	Not Available	Up to 5%
Mineral Filler	Not Available	Up to 5%
Other Additives	Not Available	Up to 1%

**Notes:**

1. Depending upon the source material, may contain varying amounts of respirable quartz (crystalline silica).
2. Chromium VI is a trace impurity in Portland Cement.
3. Although rare, may contain trace amounts (<0.01%) of Respirable Elongated Mineral Particulates. The levels detected are determined to be well below the threshold level.

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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.

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**Ingestion**                        For advice, contact a Poisons Information Centre (PIC) or a doctor (at once). Due to product form and application, ingestion is considered unlikely.

**First aid facilities**            Eye wash facilities and safety shower are recommended.

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

Some Individuals may exhibit an allergic response upon exposure to this product, possibly due to the trace amounts of chromium present. Chronic exposure to crystalline silica may result in lung fibrosis (silicosis). Principal symptoms of silicosis include coughing and breathlessness. Crystalline silica and hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1).

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

Treat symptomatically.

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## **5. FIREFIGHTING 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.

**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 this 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, keep moist and place in suitable containers for disposal or reapplication. Within enclosed environments clean spill site using wet methods or an approved industrial vacuum device. Avoid generating dust.

**6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

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## **7. HANDLING AND STORAGE**

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**7.1 Precautions for safe handling**

Before use carefully read the SDS. The use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating.

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

All stockpiles and dumps should be inspected. This product is recycled through the system.

**7.3 Specific end use(s)**

Not applicable.

## 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>
QUARTZ (RESPIRABLE DUST)	SWA (AUS)	--	0.1	--	--
CHROMIUM (VI) COMPOUNDS	SWA (AUS)	--	0.05	--	--
PORTLAND CEMENT	SWA (AUS)	--	10	--	--

#### Biological limits

No biological limit values have been entered for this product.

### 8.2 Exposure controls

#### Engineering Controls

Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain Quartz (Crystalline Silica) levels below the recommended exposure standard.

#### PPE

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

##### Eye / Face

Wear safety glasses or dust-proof goggles when handling material to avoid contact with eyes.

##### Hand

Wear PVC, rubber or cotton gloves when handling material to prevent skin contact.

##### Body

Wear long sleeved shirt and full-length trousers.

##### Respiratory

Where an inhalation risk exists wear a Class P1 (Particulate) respirator, dependent on a site specific risk assessment.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	MOULDABLE GENERALLY GREY MIXTURE
Odour	SLIGHT ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT RELEVANT
Melting point	> 1200°C
Evaporation rate	NOT AVAILABLE
pH	7 – 12 (depending on the nature of recycled materials)
Vapour density	NOT AVAILABLE
Specific gravity	2.32
Solubility (water)	INSOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT EXPLOSIVE
Oxidising properties	NON OXIDISING
Odour threshold	NOT AVAILABLE

### 9.2 Other information

Particle Size	Ranging from dust (<6mm) up to 90mm
Bulk density	1.32 t/m <sup>3</sup>

## 10. STABILITY AND REACTIVITY

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### 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 will not occur.

### 10.4 Conditions to avoid

Avoid wetting product to a point of slurry. Avoid dust generation.

### 10.5 Incompatible materials

Incompatible with oxidising agents (eg. hypochlorites) and strong acids (eg. hydrofluoric acid).

### 10.6 Hazardous decomposition products

May evolve toxic gases if heated to decomposition (>1200°C).

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## 11. TOXICOLOGICAL INFORMATION

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### 11.1 Information on toxicological effects

<b>Acute toxicity</b>	No known toxicity data is available for this product. Based on available data, the classification criteria are not met.
<b>Skin</b>	Contact with powder or wetted form may result in irritation, rash, dermatitis and possible burns with prolonged and repeated contact.
<b>Eye</b>	Contact may result in irritation, lacrimation, pain, redness, corneal burns and possible permanent damage.
<b>Sensitization</b>	Some individuals may exhibit an allergic response upon exposure to this product, possibly due to the trace amounts of chromium present.
<b>Mutagenicity</b>	Insufficient data available to classify as a mutagen.
<b>Carcinogenicity</b>	This product contains crystalline silica and trace amounts of hexavalent chromium compounds which are classified as carcinogenic to humans (IARC Group 1). However, there is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis. Therefore, preventing the onset of silicosis will also reduce the cancer risk.
<b>Reproductive</b>	Insufficient data available to classify as a reproductive toxin.
<b>STOT – single exposure</b>	Over exposure may result in irritation of the nose and throat, with coughing. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated.
<b>STOT – repeated exposure</b>	Repeated exposure to respirable silica may result in pulmonary fibrosis (silicosis). Silicosis is a fibronodular lung disease caused by deposition in the lungs of fine respirable particles of crystalline silica. Principal symptoms of silicosis are cough and breathlessness.
<b>Aspiration</b>	This product is not expected to present an aspiration hazard.

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## 12. ECOLOGICAL INFORMATION

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### 12.1 Toxicity

The main component/s of this product are not anticipated to cause any adverse effects to the environment.

### 12.2 Persistence and degradability

Product is persistent and non-degradable.

### 12.3 Bioaccumulative potential

This product is not expected to bioaccumulate.

**Product name**                    **Recycled Concrete**

#### **12.4 Mobility in soil**

A low mobility would be expected in a landfill situation.

#### **12.6 Other adverse effects**

Prevent contamination of drains or waterways.

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### **13. DISPOSAL CONSIDERATIONS**

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#### **13.1 Waste treatment methods**

**Waste disposal**                    Reuse or recycle where possible. Alternatively, ensure product is kept moist to prevent dust generation and dispose of within an approved landfill site. Contact the manufacturer for additional information.

**Legislation**                        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><u>14.1 UN number</u></b>	None Allocated	None Allocated	None Allocated
<b><u>14.2 UN proper shipping name</u></b>	None Allocated	None Allocated	None Allocated
<b><u>14.3 Transport hazard classes</u></b>			
<b>DG class / division</b>	None Allocated	None Allocated	None Allocated
<b>Subsidiary risk(s)</b>	None Allocated	None Allocated	None Allocated
<b><u>14.4 Packing group</u></b>	None Allocated	None Allocated	None Allocated
<b><u>14.5 Environmental hazards</u></b>	None Allocated		
<b><u>14.6 Special precautions for user</u></b>			
<b>Hazchem code</b>	None Allocated		

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### **15. REGULATORY INFORMATION**

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#### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Poison schedule**                    A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Classifications**                    Xi; Irritant, Xn; Harmful

**Risk phrases**                        R43: May cause sensitisation by skin contact.  
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.

**Safety phrases**                      S22: Do not breathe dust.  
S24/25: Avoid contact with skin and eyes.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
S45: In case of accident or if you feel unwell seek medical advice immediately.

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

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### **16. OTHER INFORMATION**

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**Abbreviations**                      ACGIH - American Conference of Industrial Hygienists.  
ADG - Australian Dangerous Goods.  
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.  
mg/m3 - Milligrams per Cubic Metre.

**Product name****Recycled Concrete**

NOS - Not Otherwise Specified.

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.

STEL - Short Term Exposure Limit.

STOT-RE - Specific target organ toxicity (repeated exposure)

STOT-SE - Specific target organ toxicity (single exposure)

SWA - Safe Work Australia.

TWA - Time Weighted Average.

**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').

The information presented herein is based on data considered to be accurate as of the date of preparation of this SDS. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorisation given or implied to practice any patented invention without a licence. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, without a risk assessment for safe use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the products.

This Safety Data Sheet (SDS) applies only to the formulated material as supplied by Boral. It does not apply where the formulation has been altered. In this case a new SDS may be required to reflect the modified material. Contact Boral for further information.

Printed documents are uncontrolled. Refer to [www.boral.com.au](http://www.boral.com.au) regularly for a more recent copy of the SDS where it exists.

**Prepared by**

Risk Management Technologies

5 Ventnor Avenue, West Perth, Western Australia, 6005.

Phone: +61 8 9322 1711

Facsimile: +61 8 9322 1794

Email: [info@rmt.com.au](mailto:info@rmt.com.au)Web: [www.rmt.com.au](http://www.rmt.com.au)**Revision History**

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Description: Date Review

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