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 CONSTRUCTION MATERIALS LTD.

Address
Level 3, 40 Mount Street, Nth Sydney, NSW, 2060, AUSTRALIA

Telephone
(02) 9220 6300

Email
sds@rmt.com.au

Website
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.
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.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate, Sand, crush stone or gravel or slag, quartz, VENM containing crystalline silica (quartz),</td>
<td>14808-60-7</td>
<td>30 to 90%</td>
</tr>
<tr>
<td>Portland Cement</td>
<td>65997-15-1</td>
<td>1 to 50%</td>
</tr>
<tr>
<td>Water</td>
<td>65997-15-1</td>
<td>2 to 30%</td>
</tr>
<tr>
<td>Ashes, Residue (Flyash)</td>
<td>68131-74-8</td>
<td>Up to 20%</td>
</tr>
<tr>
<td>Gypsum (CaSO₄.2H₂O)</td>
<td>6599-69-2</td>
<td>Up to 10%</td>
</tr>
<tr>
<td>Limestone (CaCO₃)</td>
<td>1317-65-3</td>
<td>Up to 10%</td>
</tr>
<tr>
<td>Hexavalent Chromium (Contaminant)</td>
<td>Not Available</td>
<td>2 to 20ppm</td>
</tr>
</tbody>
</table>

Additional Ingredients May Include:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pigment (Colouring)</td>
<td>Not Available</td>
<td>Up to 10%</td>
</tr>
<tr>
<td>Alkyltrialkoxy silane/siloxane</td>
<td>Not Available</td>
<td>Up to 5%</td>
</tr>
<tr>
<td>Fatty Acid salt</td>
<td>Not Available</td>
<td>Up to 5%</td>
</tr>
<tr>
<td>Mineral Filler</td>
<td>Not Available</td>
<td>Up to 5%</td>
</tr>
<tr>
<td>Other Additives</td>
<td>Not Available</td>
<td>Up to 1%</td>
</tr>
</tbody>
</table>

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.

4. FIRST AID MEASURES

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 (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.

5. FIREFIGHTING MEASURES

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 water fog to cool intact containers and nearby storage areas.

5.4 Hazchem code

None allocated.

6. ACCIDENTAL RELEASE MEASURES

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.

7. HANDLING AND STORAGE

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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA ppm</th>
<th>TWA mg/m3</th>
<th>STEL ppm</th>
<th>STEL mg/mg3</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUARTZ (RESPIRABLE DUST)</td>
<td>SWA (AUS)</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHROMIUM (VI) COMPOUNDS</td>
<td>SWA (AUS)</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PORTLAND CEMENT</td>
<td>SWA (AUS)</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 ODOR
- **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/m3
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 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).

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No known toxicity data is available for this product. Based on available data, the classification criteria are not met.

Skin
Contact with powder or wetted form may result in irritation, rash, dermatitis and possible burns with prolonged and repeated contact.

Eye
Contact may result in irritation, lacrimation, pain, redness, corneal burns and possible permanent damage.

Sensitization
Some individuals may exhibit an allergic response upon exposure to this product, possibly due to the trace amounts of chromium present.

Mutagenicity
Insufficient data available to classify as a mutagen.

Carcinogenicity
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.

Reproductive
Insufficient data available to classify as a reproductive toxin.

STOT – single exposure
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.

STOT – repeated exposure
Repeated exposure to respirable silica may result in pulmonary fibrosis (silicosis). Silicosis is a fibronodular lung disease caused deposition in the lungs of fine respirable particles of crystalline silica. Principal symptoms of silicosis are cough and breathlessness.

Aspiration
This product is not expected to present an aspiration hazard.

12. ECOLOGICAL INFORMATION

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.
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.

13. DISPOSAL CONSIDERATIONS

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.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

<table>
<thead>
<tr>
<th>LAND TRANSPORT (ADG)</th>
<th>SEA TRANSPORT (IMDG / IMO)</th>
<th>AIR TRANSPORT (IATA / ICAO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN number</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>14.2 UN proper shipping name</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>14.3 Transport hazard classes</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>DG class / division</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>Subsidiary risk(s)</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>14.6 Special precautions for user</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>Hazchem code</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

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.

16. OTHER INFORMATION

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 assume 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 regularly for a more recent copy of the SDS where it exists.

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**Revision History**
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Description: Initial Compilation

**SDS Date**: 28 July 2014

**End of Report**