1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

**Product name**: BORAL PRE-MIXED CONCRETE

**Synonyms**: ASPIRE (R) ● BORAL COLORI® ● BORAL EXPOSE® ● BORALSTONE® ● ENFLO ● ENVIROCRETE (R) ● ENVISIA® ● GROUT ● LUMINESQUE (R) ● READY-MIXED CONCRETE ● WET-MIX CONCRETE ● WINTERSLAB (R)

1.2 Uses and uses advised against

**Uses**: CONCRETE ● WET MIX CONCRETE

Boral Pre-mixed Concrete is used for a wide variety of applications in building and civil engineering.

1.3 Details of the supplier of the product

**Supplier name**: BORAL AUSTRALIA

**Address**: Level 18, 15 Blue Street, North Sydney, NSW, 2060, AUSTRALIA

**Telephone**: (02) 9220 6300


1.4 Emergency telephone numbers

**Emergency**: 1800 555 477 (8am – 5pm WST)

**Emergency (A/H)**: 13 11 26 (Poisons Information Centre)

2. HAZARDS IDENTIFICATION

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

**Environmental Hazards**: Not classified as an Environmental Hazard

2.2 GHS Label elements

**Signal word**: DANGER

**Pictograms**: ![Exclamation Mark] ![Shovel]

**Hazard statements**

H315 Causes skin irritation.

H318 Causes serious eye damage.

**Prevention statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response statements

P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.
P310 Immediately call a POISON CENTRE or doctor/physician.
P321 Specific treatment is advised - see first aid instructions.
P332 + P337 + P313 If skin or eye irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before re-use.

Storage statements
None allocated.

Disposal statements
None allocated.

2.3 Other hazards
Skin contact with wet cement, fresh concrete or mortar may cause irritation, dermatitis or burns. May cause damage to products made of aluminium or other non-noble metals.

Boral Premixed Concrete is classified as Non-Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Due to the product form (wet-mix), over exposure via inhalation is not anticipated with normal use. However, if dust is generated via cutting, grinding, machining, etc dry/set product:
* Acute over exposure by inhalation may result in respiratory irritation.
* Chronic over exposure by inhalation to silica quartz dust may result in silicosis (lung disease). Principal symptoms of silicosis are coughing and breathlessness.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EC Number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUARTZ (CRYSTALLINE SILICA) (IE. SAND)</td>
<td>14808-60-7</td>
<td>238-878-4</td>
<td>30 to 60%</td>
</tr>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>231-791-2</td>
<td>&gt;10%</td>
</tr>
<tr>
<td>GRAVEL</td>
<td>-</td>
<td>-</td>
<td>30 to 60%</td>
</tr>
<tr>
<td>PORTLAND / SLAG / FLY ASH CEMENT</td>
<td>-</td>
<td>-</td>
<td>10 to 30%</td>
</tr>
<tr>
<td>ADMIXTURE(S) / ACTIVATOR(S)</td>
<td>-</td>
<td>-</td>
<td>&lt;10%</td>
</tr>
</tbody>
</table>

Ingredient Notes
1. Depending upon the source material, it may contain respirable quartz (crystalline silica). Due to the product form (wet-mix), over exposure via inhalation is not anticipated unless dust is generated via cutting, grinding, machining, etc dry/set product.
2. Chromium VI is a trace impurity in Portland Cement (< 20 ppm).
3. Although rare, may contain trace amounts (<0.01%) of naturally occurring respirable Elongated Mineral Particulates. The levels detected are determined to be well below the threshold level for exposure by inhalation.

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
Due to product form / nature of use, an inhalation hazard is not anticipated. However, if exposed to dry product, 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
None allocated.
BORAL PRE-MIXED CONCRETE

4.2 Most important symptoms and effects, both acute and delayed
Irritating and potentially corrosive to the eyes and skin. Due to the product form (wet-mix), over exposure via inhalation is not anticipated with normal use, unless dust is generated via cutting, grinding, machining, etc dry/set product. Chronic over exposure to silica quartz dust may result in silicosis (lung disease). Principal symptoms of silicosis are coughing and breathlessness. Some individuals may exhibit an allergic response upon exposure to this product, possibly due to the trace amounts of chromium present. 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 as for moderate to strong alkali and symptomatically.

5. FIRE FIGHTING 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. May evolve toxic gases if strongly heated.

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.

6. ACCIDENTAL RELEASE MEASURES

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. 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.

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
Where storage is applicable, store in a clean, dry, well ventilated area, removed from incompatible substances and foodstuffs. Ensure containers are adequately labelled.

7.3 Specific end uses
No information provided.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
</tr>
<tr>
<td>Portland Cement</td>
<td>SWA [AUS]</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>Quartz (respirable dust)</td>
<td>SWA [AUS]</td>
<td>--</td>
<td>0.1</td>
</tr>
<tr>
<td>Quartz (respirable dust)</td>
<td>SWA [Proposed]</td>
<td>--</td>
<td>0.05</td>
</tr>
<tr>
<td>Quartz (respirable dust)</td>
<td>WorkSafe VIC</td>
<td>--</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Avoid generating dust. All work should be carried out in such a way as to minimise exposure to dust and repeated skin contact. Where dust could be generated whilst handling, use local mechanical ventilation or extraction in areas where dust could escape into the work environment. Maintain dust 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 splash-proof goggles when handling material to avoid contact with eyes.
- **Hands**: Wear PVC, rubber or cotton gloves when handling material to prevent skin contact.
- **Body**: Wear long sleeved shirt, full-length trousers and rubber boots.
- **Respiratory**: Where an inhalation (when exposed to dry product) 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**: VISCOUS GREY LIQUID
- **Odour**: ODOURLESS
- **Flammability**: NON FLAMMABLE
- **Flash point**: NOT RELEVANT
- **Boiling point**: NOT AVAILABLE
- **Melting point**: NOT AVAILABLE
- **Evaporation rate**: NOT AVAILABLE
- **pH**: 12 to 13
- **Vapour density**: NOT AVAILABLE
- **Specific gravity**: NOT AVAILABLE
- **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**: > 1200°C
- **Viscosity**: NOT AVAILABLE
- **Explosive properties**: NOT AVAILABLE
- **Oxidising properties**: NOT AVAILABLE
- **Odour threshold**: NOT AVAILABLE

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 contact with incompatible substances.

10.5 Incompatible materials
Incompatible with oxidising agents (e.g. hypochlorites), ethanol, interhalogens (e.g. chlorine trifluoride) and acids.

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
Causes skin irritation. Contact may result in irritation, redness, pain, rash and dermatitis. Caution: Prolonged contact with wet-mix may cause serious skin burns.

Eye
Causes serious eye damage. Contact may result in irritation, lacrimation, pain, redness, conjunctivitis and possible alkaline burns. Caution: Prolonged contact with wet-mix may cause serious eye damage.

Sensitisation
Not classified as causing respiratory sensitisation. However, some individuals may exhibit an allergic response upon exposure to cement, possibly due to trace amounts of chromium.

Mutagenicity
Insufficient data available to classify as a mutagen.

Carcinogenicity
This product contains crystalline silica which is 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. Hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1), however due to the trace amounts present, the criteria for classification is not met.

Reproductive
Insufficient data available to classify as a reproductive toxin.

STOT - single exposure
Over exposure to dust (if generated) may result in irritation of the nose and throat, with coughing. High level exposure may result in breathing difficulties.

STOT - repeated exposure
Due to the product form (wet-mix), over exposure via inhalation is not anticipated with normal use. However, if dust is generated via cutting, grinding, machining, etc dry/set product, 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 coughing and breathlessness.

Aspiration
Not expected to present an aspiration hazard.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
May be harmful to the aquatic environment due to the alkaline nature of the product. This product is non-toxic to aquatic organisms when present as a cured solid.

12.2 Persistence and degradability
Product is persistent and would have a low degradability.

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.

12.5 Other adverse effects
Avoid contamination of drains and waterways.
13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

**Waste disposal**
Reuse or recycle where possible. Ensure measures are taken to prevent dust generation. Dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information (if required).

**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)** |
| 14.1 UN Number | None allocated. | None allocated. | None allocated. |
| 14.2 Proper Shipping Name | None allocated. | None allocated. | None allocated. |
| 14.3 Transport hazard class | None allocated. | None allocated. | None allocated. |
| 14.4 Packing Group | None allocated. | None allocated. | None allocated. |

14.5 Environmental hazards
No information provided.

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**
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**
Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

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

16. OTHER INFORMATION

**Additional information**
CEMENT CONTACT DERMATITIS: Individuals using wet cement, mortar, grout or concrete could be at risk of developing cement dermatitis. Symptoms of exposure include itchy, tender, swollen, hot, cracked or blistering skin with the potential for sensitisation. The dermatitis is due to the presence of soluble (hexavalent) chromium.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
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.

HEALTH EFFECTS FROM EXPOSURE:
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.
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>CAS #</td>
<td>Chemical Abstract Service number - used to uniquely identify chemical compounds</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>EC No.</td>
<td>EC No - European Community Number</td>
</tr>
<tr>
<td>EMS</td>
<td>Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>GTEPG</td>
<td>Group Text Emergency Procedure Guide</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration, 50% / Median Lethal Concentration</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose, 50% / Median Lethal Dose</td>
</tr>
<tr>
<td>mg/m³</td>
<td>Milligrams per Cubic Metre</td>
</tr>
<tr>
<td>OEL</td>
<td>Occupational Exposure Limit</td>
</tr>
<tr>
<td>pH</td>
<td>relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts Per Million</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-Term Exposure Limit</td>
</tr>
<tr>
<td>STOT-RE</td>
<td>Specific target organ toxicity (repeated exposure)</td>
</tr>
<tr>
<td>STOT-SE</td>
<td>Specific target organ toxicity (single exposure)</td>
</tr>
<tr>
<td>SUSMP</td>
<td>Standard for the Uniform Scheduling of Medicines and Poisons</td>
</tr>
<tr>
<td>SWA</td>
<td>Safe Work Australia</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
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### Revision history

<table>
<thead>
<tr>
<th>Revision</th>
<th>Description</th>
<th>Date of Issue</th>
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<tbody>
<tr>
<td>3.0</td>
<td>Standard SDS Review</td>
<td>08-06-2020</td>
</tr>
<tr>
<td>2.0</td>
<td>Standard SDS Review</td>
<td>02-05-2016</td>
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<tr>
<td>1.0</td>
<td>Initial SDS Creation</td>
<td>21-05-2015</td>
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### Team Member

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Review Role</th>
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<tbody>
<tr>
<td>National Technical Manager, Cement</td>
<td>Quality</td>
</tr>
<tr>
<td>WHS Advisor, QLD Office</td>
<td>Safety</td>
</tr>
<tr>
<td>Environmental Sustainability Manager, Cement</td>
<td>Environment &amp; Community</td>
</tr>
<tr>
<td>National Compliance Officer, Heavy Vehicles, Logistics</td>
<td>Transport &amp; Dangerous Goods</td>
</tr>
<tr>
<td>National Health &amp; Hygiene Manager</td>
<td>Health &amp; Hygiene</td>
</tr>
<tr>
<td>National Technical Manager, Cement</td>
<td>Product Custodian</td>
</tr>
</tbody>
</table>

### 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.

### Prepared by

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[ End of SDS ]