Safety Data Sheet

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 Triniti T2, Level 3, 39 Delhi Road, North Ryde, NSW, 2113, AUSTRALIA

Telephone (02) 9220 6300

Website http://www.boral.com.au

1.4 Emergency telephone numbers

Emergency 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
Serious Eye Damage / Eye Irritation: Category 1

Environmental Hazards

Not classified as an Environmental Hazard

2.2 GHS Label elements

Signal word **DANGER**

Pictograms

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 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 + P364	Take off contaminated clothing and wash it before reuse.

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

Ingredient	CAS Number	EC Number	Content
QUARTZ (SAND)	14808-60-7	238-878-4	30 to 85%
WATER	7732-18-5	231-791-2	>10%
GRAVEL	-	-	<60%
PORTLAND / SLAG / FLY ASH CEMENT	-	-	10 to 30%
ADMIXTURE(S) / ACTIVATOR(S)	-	-	<10%

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 (< 50 ppm).
3. Although rare, may contain trace amounts (<0.01%) of naturally occuring respirable Elongated Mineral Particulates. The levels detected are determined to be well below the threshold level for exposure by inhalation.
4. Crystalline Silica Content of pre-mixes concrete >1% over exposure via inhalation is not anticipated unless dust is generated via cutting.
5. Changes in admixture and water contents within the overall composition will not change the toxicology of the Pre-Mixed concrete.

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 Eye wash facilities and safety shower should be available.

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

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

Not intended for storage in the pre-mix state.

7.3 Specific end uses

This product contains more than 1% crystalline silica and is considered a Crystalline Silica Substance as specified in Victoria's Occupational Health and Safety Amendment (Crystalline Silica) Regulations 2021, S.R. No. 137/2021.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m³	ppm	mg/m³
Portland Cement	SWA [AUS]	--	10	--	--
Quartz (respirable dust)	SWA [AUS]	--	0.05	--	--

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls

Avoid generating dust. All work with 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.

Avoid generating dust during any cutting, core-sampling or profiling activities (highly recommended to use suitable water suppression/extraction).

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 suitable suppression measures such as mechanical ventilation, water suppression or extraction in areas where dust could escape into the work environment. Maintain dust levels below the recommended exposure standard and where water suppression or extraction is not possible appropriate respiratory PPE must be used.

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 risk exists (when exposed to dry product, or when cutting, core sampling or profiling operation without appropriate water suppression) 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
Relative density	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

9.1 Information on basic physical and chemical properties

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	Contact may result in irritation, redness, pain, rash and dermatitis. Caution: Prolonged contact with wet-mix may cause serious skin burns.
Eye	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 Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

Inventory listings **AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)**
All components are listed on AIIC, 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

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/m³	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

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

Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmtglobal.com

[End of SDS]

Revision Information

Revision History

Revision	Date	Description
4	11/01/2023	Full SDS Review
3	27/06/2022	Standard SDS Review
2	05/06/2020	Standard SDS Review
1	21/04/2015	Initial SDS Creation

Review Team

SME Reviewers	Subject Matter
National Technical Manager - Concrete	Quality
H&S Business Partner - Concrete	Health & Safety
Environmental Sustainability Manager	Environment & Community
Mobile Asset Manager - Concrete	Transport & Dangerous Goods
National Health & Hygiene Manager	Health & Hygiene
National Technical Manager - Concrete	**Product Custodian**