

# Safety Data Sheet



## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### 1.1 Product identifier

**Product name** CEMENT/FLY ASH/LIME BLENDS • FLY ASH/LIME BLENDS • SLAG/LIME BLENDS • SLAG/LIME/FLY ASH BLENDS

**Synonyms** CEMENT/FLY ASH/LIME BLENDS • FLY ASH/LIME BLENDS • LIME BLENDS • ROADPATCH L • SLAG/LIME BLENDS • SLAG/LIME/FLY ASH BLENDS • STABILMENT

### 1.2 Uses and uses advised against

**Uses** CONSTRUCTION • INDUSTRIAL APPLICATIONS • SOIL STABILISATION

### 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

Specific Target Organ Toxicity (Single Exposure): Category 3 (Respiratory Irritation)

#### 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.

H335 May cause respiratory irritation.

#### Prevention statements

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

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

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**Response statements**

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
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 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Storage statements**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

**Disposal statements**

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

**2.3 Other hazards**

This product contains more than 1% Crystalline Silica (Quartz) 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.

Some sensitized individuals may exhibit an allergic skin response upon exposure to Portland Cement (when present) due to the presence of trace levels of Hexavalent Chromium. Contaminated work clothing should not be allowed out of the workplace.

Prolonged exposure to Portland Cement in the wet form can cause serious, potentially irreversible skin or eye damage in the form of chemical burns. The same serious injury can occur if wet or moist skin or eyes have prolonged contact exposure to dry Portland Cement.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content
PORTLAND CEMENT	65997-15-1	266-043-4	<80%
CALCIUM HYDROXIDE	1305-62-0	215-137-3	10 to 50%
QUARTZ (CRYSTALLINE SILICA)	14808-60-7	238-878-4	<5%
HEXAVALENT CHROMIUM	18540-29-9	-	<0.002%
ASHES (RESIDUES)	68131-74-8	268-627-4	<90%
SLAGS, FERROUS METAL, BLAST FURNACE	65996-69-2	266-002-0	<90%
GYPSUM	13397-24-5	603-783-2	<5%

**Ingredient Notes** 1. Depending upon the source material, may contain varying amounts of respirable quartz (crystalline silica).  
2. Hexavalent Chromium (Cr+6) is a trace impurity in Portland Cement.

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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. If available, immediately flush eyes with Diphoterine® solution. The use of Diphoterine® has been shown to significantly reduce the risk of permanent injury.

**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. If available, immediately flush skin and hair with Diphoterine® solution.

**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.

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

Irritating to eyes, skin, and respiratory system. Chronic exposure to respirable crystalline silica may result in lung fibrosis (silicosis), and Chronic Obstructive Pulmonary Disease (COPD). Principal symptoms of silicosis and COPD are cough and breathlessness.

Respirable Crystalline Silica (RCS) and Hexavalent Chromium (Cr+6) are both 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.

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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 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.

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**6. ACCIDENTAL RELEASE MEASURES**

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

If ambient dust is present, wear Personal Protective Equipment (PPE) as detailed in Section 8 of this SDS. Clear area of all unprotected personnel. Ventilate area where possible.

**6.2 Environmental precautions**

Prevent product from entering drains and waterways or coming into direct contact with stormwater or groundwater.

**6.3 Methods of cleaning up**

Contain spillage, then collect and place in suitable containers for reuse or disposal. Do not dry sweep – use wet methods where possible. Clean up residues using Class M or H vacuum.

**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**

Use safe work practices to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking, and smoking in work areas which may have dusty surfaces.

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

Store in a cool, dry, well ventilated area, removed from moisture, incompatible substances and foodstuffs. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use.

**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>
Calcium hydroxide	SWA [AUS]	--	5	--	--
Chromium (VI) compounds (as Cr)	SWA [AUS]	--	0.05	--	--
Gypsum (Calcium sulphate)	SWA [AUS]	--	10	--	--
Portland cement	SWA [AUS]	--	10	--	--
Quartz (respirable dust)	SWA [AUS]	--	0.05	--	--

#### Biological limits

Ingredient	Reference	Determinant	Sampling Time	BEI
HEXAVALENT CHROMIUM	ACGIH BEI	Total chromium in urine	End of shift at end of workweek	25 µg/L
	ACGIH BEI	Total chromium in urine	Increase during shift	10 µg/L
	WEL [UK]	Total chromium in urine	Post shift	10 µmol chromium/mol creatinine in urine
	WES [NZ]	Total chromium in urine	End of shift at end of workweek	30 µg/L
	WES [Proposed]	Total chromium in urine	End of shift at end of workweek	25 µg/L

### 8.2 Exposure controls

#### Engineering controls

All work should be carried out in such a way as to minimise dust generation and reduce potential inhalation to as low as reasonably practicable. Use this product in a well-ventilated area. Where an inhalation risk exists, mechanical extraction ventilation is recommended.

Work areas and equipment should be cleaned regularly. For cleaning, do not use compressed air or dry sweeping. Use wet methods or Class M or H vacuums for cleaning equipment and other surfaces.

Maintain ambient levels of Respirable Dust and Respirable Crystalline Silica levels below the recommended exposure standards. Use Respiratory Protective Equipment (RPE) only where other controls are not effective in control ambient dust levels.

#### PPE

**Eye / Face** Wear safety glasses or dust-proof goggles when handling material to avoid contact with eyes. Refer to AS/NZS 1336.

**Hands** Where hands are subject to "dry skin" or "skin tears", wear PVC, rubber, or cotton gloves. Refer to AS/NZS 2161.

**Body** Wear long sleeved shirt and full-length trousers.

**Respiratory** Personal respiratory protection may be required where dust is airborne. The type of respiratory protection required depends primarily on the concentration of the inhalable and respirable dust in the air, and the frequency and length of exposure time. Wear a well-fitted P2 disposable respirator, or better, when potential exposure to dust exists.

A suitable P2 particulate respirator may be sufficient for many situations, but where high levels of dust are encountered, more efficient cartridge-type or powered respirators or supplied-air helmets may be necessary. Use only respirators that bear the Australian Standards mark and are fitted and maintained correctly. Dust control measures providing respiratory protection against Respirable Crystalline Silica dust will also minimise and control potential exposure to Portland Cement and Hexavalent Chromium.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	FINE GREY POWDER
Odour	SLIGHT ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT RELEVANT
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	11 to 13
Vapour density	NOT AVAILABLE
Relative density	2.1 to 3.0
Solubility (water)	10 g/L (Approximately)
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 AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

### 9.2 Other information

Bulk density	700 kg/m <sup>3</sup> to 1300 kg/m <sup>3</sup>
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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 will not 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), ethanol, acids (e.g. hydrofluoric acid) and interhalogens (e.g. chlorine trifluoride). Water contact may increase product temperature 2°C to 3°C.

### 10.6 Hazardous decomposition products

May evolve toxic gases if heated to decomposition.

## 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.

#### Information available for the ingredients:

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
CALCIUM HYDROXIDE	7300 mg/kg (mouse)	--	--

**Skin** Irritating to the skin. Contact with powder or wetted form may result in irritation, rash and dermatitis.

**Eye** Contact with moisture in the eyes may result in irritation, lacrimation, pain, redness, conjunctivitis and possible alkaline burns aided by mechanical irritation and abrasion.

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<b>Sensitisation</b>	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.
<b>Mutagenicity</b>	Insufficient data available to classify as a mutagen.
<b>Carcinogenicity</b>	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.
<b>Reproductive</b>	Insufficient data available to classify as a reproductive toxin.
<b>STOT - single exposure</b>	Irritating to the respiratory system. Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in breathing difficulties.
<b>STOT - repeated exposure</b>	Not classified as causing organ damage from repeated exposure. Repeated exposure to crystalline silica may cause lung fibrosis (silicosis), however due to the low levels of respirable crystalline silica in this product, adverse health effects are not anticipated with normal use.
<b>Aspiration</b>	This product is a solid and aspiration hazards are not expected to occur.

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## 12. ECOLOGICAL INFORMATION

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### 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.

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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 covered with moist soil to prevent dust generation and 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.

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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

	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

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

<b>Poison schedule</b>	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).
<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.

## 16. OTHER INFORMATION

**Additional information** 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.

<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

**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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**[ End of SDS ]**



## Revision Information

### Revision History

Revision	Date	Description
3.2	14/07/2023	Full SDS Review
3.1	27/06/2022	Full SDS Review

### Review Team

SME Reviewers	Subject Matter
National Technical Manager - Cement	Quality
H&S Business Partner - Cement	Health & Safety
Environmental Sustainability Manager, Cement	Environment & Community
Mobile Asset Manager - Cement	Transport & Dangerous Goods
National Health & Hygiene Manager	Health & Hygiene
<b>National Technical Manager - Cement</b>	<b>Product Custodian</b>