



Material Safety Data Sheet

Product Name **PORTLAND AND BLENDED CEMENT**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	PORTLAND AND BLENDED CEMENT
Supplier Name	ADELAIDE BRIGHTON CEMENT A.B.N. 96 007 870 199
Address	62 Elder Road, Birkenhead, SA 5015
Manufacturing Plant(s)	Birkenhead Works, 62 Elder Road, Birkenhead, SA 5015 Angaston Works, Stockwell Road, Angaston, SA 5353
Telephone	08 8300 0300
Fax	08 8341 1591
Emergency	Bus Hrs 08 8300 0300 A/Hrs 08 8300 0530
Email	orderstodespatch@adbri.com.au
Web Site	http://www.adelaidebrighton.com.au
Synonym(s)	TYPE GP, TYPE HE, TYPE LH, TYPE SR, TYPE GB, TYPE SL CEMENTS, NORMAL PORTLAND, PREMIUM, BLENDED, HIGH EARLY STRENGTH, HES, SULFATE RESISTANT, LOW HEAT, SHRINKAGE LIMITED, BRIGHTONLITE, OFF WHITE CEMENT, AUSTWELL CLASS G (OILWELL), AUSTWELL HTB, HTB, BACKFILL BINDER, BULK CEMENTITIOUS BINDER.
Use(s)	Portland and Blended Cements are used as binders in structural concrete, masonry, renders, mortars and grouts. They are also used as general binders in cementitious backfill in underground mines, in the manufacture of fibre cement products and in soil stabilisation in construction and civil engineering projects.

2. HAZARDS IDENTIFICATION

This product is classified as hazardous according to criteria of NOHSC. Not classified as a dangerous good by the criteria of the ADG Code.

RISK PHRASES

R36/37/38	Irritating to eyes, respiratory system and skin.
R40	Limited evidence of a carcinogenic effect.
R43	May cause sensitisation by skin contact.
R48/20	Harmful : danger of serious damage to health by prolonged exposure through inhalation.

SAFETY PHRASES

S20/21	When using do not eat, drink or smoke.
S22	Do not breathe dust.
S24/25	Avoid contact with skin and eyes.
S36/37	Wear suitable protective clothing and gloves.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.

UN No	None Allocated	Hazchem Code	None Allocated	Pkg Group	None Allocated
DG Class	None Allocated	Subsidiary Risk(s)	None Allocated	EPG	None Allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Formula	Conc.	CAS No.
PORTLAND CEMENT	Not Available	< 97%	65997-15-1
*FLY ASH	Not Available	0 - 60%	68131-74-8
*SILICA FUME	SiO ₂	0 - 10%	69012-64-2
*GYPSUM	CaSO ₄ 2H ₂ O	3 - 8%	10101-41-4
*LIMESTONE	CaCO ₃	0 - 5%	1317-65-3
*SILICA FLOUR	Quartz SiO ₂	0 - 50%	14808-60-7
CHROMIUM (VI)	Cr ⁶⁺	< 10 ppm	18540-29-9

*NOTE: Cements may contain 0.1%-35% crystalline silica (CAS No. 14808-60-7) depending on the proportions and crystalline silica content of the ingredients. All ingredients may contain crystalline silica.

4. FIRST AID MEASURES

Eye	Flush thoroughly with flowing water for at least 15 minutes. Seek medical attention if symptoms persist.
Inhalation	Remove from dusty area to fresh air. If symptoms persist, seek medical attention.
Skin	Wash thoroughly with water. A shower may be required.
Ingestion	Rinse mouth and lips with water. Do not induce vomiting. Give water to drink to dilute stomach contents. If symptoms persist, seek medical attention.
Advice to Doctor	Treat symptomatically.
First Aid Facilities	Eye wash station.

Additional Information - Aggravated Medical Conditions

Inhalation	Inhalation of dust through prolonged, repeated exposure can cause bronchitis, silicosis (scarring of the lung.) It may also increase the risk of scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels and internal organs) and lung cancer. Epidemiological studies have shown that smoking increases the risk of bronchitis, silicosis (scarring of the lung) and lung cancer.
Skin	Prolonged and repeated skin contact with cement in wet concrete, mortars and slurries may cause both irritant dermatitis and allergic (contact) dermatitis. The latter is due to the presence of traces of water soluble hexavalent chromium in cement.

5. FIRE FIGHTING

Flammability	Non flammable. Does not support combustion of other materials.
Fire and Explosion	Non flammable. Does not cause dust explosions.
Extinguishing	Non flammable.
Hazchem Code	None.

6. ACCIDENTAL RELEASE MEASURES

Spillage	If spilt (bulk), contact emergency services if appropriate. Wear dust-proof goggles, PVC/rubber gloves, a Class P2 respirator (where an inhalation risk exists), coveralls and rubber boots. Clear area of all unprotected personnel. Prevent spill entering drains or waterways. Collect and place in sealable containers for disposal or reuse. Avoid generating dust.
Emergency Procedures	Follow safety requirements for personal protection under Section 8 Exposure Controls/Personal Protection.

7. HANDLING AND STORAGE

Storage	Store in cool, dry, well ventilated area, removed from moisture, oxidising agents (eg. Hypochlorites, phosphorus oxide), acids, (eg hydrochloric acid), ethanol, interhalogens (eg. chlorine trifluoride) and foodstuffs. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use.
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.
Property/ Environmental	Refer to Section 13.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Do not inhale dust/powder. Use with adequate ventilation. Where a dust inhalation hazard exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

Exposure Standards

CALCIUM HYDROXIDE (1305-62-0)
 ES-TWA: 5 mg/m³
 WES-TWA: 5mg/m³

CHROMIUM (VI) (18540-29-9)
 ES-TWA: 0.05 mg/m³ (Chromium VI compounds)

SILICA, CRYSTALLINE – QUARTZ (14808-60-7)
 ES-TWA: 0.1 mg/m³ (Silica Quartz, respirable, NOHSC)
 ES-TWA: 0.1 mg/m³ (QLD); 0.15 mg/m³ (NSW)
 WES-TWA: 0.1 mg/m³

PORTLAND CEMENT (65997-15-1)
 ES-TWA: 10 mg/m³ Portland Cement
 ES-TWA: 0.05 mg/m³ Chromium (VI) Compounds (contaminant)
 WES-TWA: 10 mg/m³

SILICA, AMORPHOUS – FUME (69012-64-2)
 ES-TWA: 2 mg/m³ Silica fume (thermally generated) (respirable)

GYPSUM (10101-41-4)
 ES-TWA: 10 mg/m³ Inhalable dust

CALCIUM CARBONATE (1317-65-3)
 ES-TWA: 10mg/m³
 WES-TWA: 10mg/m³

FLYASH (68131-74-8)
 ES-TWA: 10mg/m³

PPE Wear dust-proof goggles and rubber or PVC gloves. Where an inhalation risk exists, wear a Class P2 respirator. If there is potential for prolonged and/or excessive skin contact, wear coveralls. At high dust levels, wear a Class P3 respirator or a Powered Air Purifying Respirator (PAPR) with Class P3 filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Fine powder ranging in colour from grey to off-white	Solubility (water)	Slight, hardens on mixing with water
Odour	Odourless	Specific Gravity	2.5 to 3.2
pH	Approximately 12	% Volatiles	Not Available
Vapour Pressure	Not Available	Flammability	Non Flammable
Vapour Density	Not Available	Flash Point	Not Relevant
Boiling Point	Not Available	Upper Explosion Limit	Not Relevant
Melting Point	> 1200°C	Lower Explosion Limit	Not Relevant
Evaporation Rate	Not Available	Autoignition Temperature	Not Available
Bulk Density	1200 - 1600 kg/m ³		
Particle Size	20 - 40% of particles are < 7 µm, ie in the respirable range		

10. STABILITY AND REACTIVITY

Reactivity Incompatible with oxidising agents (eg hypochlorites), ethanol, acids (eg hydrofluoric acid) and interhalogens (eg chlorine trifluoride). Water contact may increase product temperature 2-3°C.

Decomposition Products Unlikely to evolve toxic gases when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Slightly corrosive. Avoid eye or skin contact or dust inhalation. This product has the potential to cause acute and chronic health effects with over exposure. Crystalline silica can cause silicosis (lung disease) with chronic over exposure, however due to low levels present and product application, adverse health effects are not anticipated. Crystalline silica and hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1).
Eye	Corrosive. Severe irritant upon contact with powder/dust. Over exposure may result in pain, redness, corneal burns and ulceration with possible permanent damage.
Inhalation	Slightly corrosive. Over exposure may result in severe mucous membrane irritation and bronchitis. Hexavalent chromium is reported to cause respiratory sensitisation, however due to the trace amount present, a hazard is not anticipated under normal conditions of use.
Skin	Slightly corrosive. Prolonged and repeated contact with powder or wetted form may result in skin rash, dermatitis and sensitisation.
Ingestion	Slightly corrosive. Ingestion may result in burns to the mouth and throat, with vomiting and abdominal pain. Due to product form, ingestion is not considered a likely exposure route.
Toxicity Data	SILICA, CRYSTALLINE – QUARTZ (14808-60-7) Carcinogenicity: Classified as a human carcinogen (IARC Group 1) CHROMIUM (VI) (18540-29-9) Carcinogenicity: Confirmed human carcinogen (IARC Group 1) Health Surveillance: Required [NOHSC:1005(1994)]

12. ECOLOGICAL INFORMATION

Environment	Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.
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13. DISPOSAL CONSIDERATIONS

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 for additional information.
Legislation	Dispose of in accordance with relevant local legislation. Keep out of sewer and stormwater drains.

14. TRANSPORT INFORMATION

Not classified as a dangerous good by the criteria of the ADG Code.

Drivers of trucks transporting bagged product should ensure that the bags are properly restrained.

Shipping Name	None Allocated	Hazchem Code	None Allocated	Pkg Group	None Allocated
UN No	None Allocated	Subsidiary Risk(s)	None Allocated	EPG	None Allocated
DG Class	None Allocated				

15. REGULATORY INFORMATION

Poison Schedule AICS	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP). All chemicals listed on the Australian Inventory of Chemical Substances (AICS).
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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.

IARC – GROUP 1 – PROVEN HUMAN CARCINOGEN. This product contains an ingredient for which there is sufficient evidence to have been classified by the International Agency for Research into Cancer as a human carcinogen. The use of products known to be human carcinogens should be strictly monitored and controlled.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES: The Recommendation for protective equipment contained within this MSDS report is provided as a guide only. Factors such as 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: 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 an MSDS report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

ABBREVIATIONS:

mg/m³ – Milligrams per cubic metre

ppm – Parts Per Million

ES-TWA – Exposure Standard - Time Weighted Average

CNS – Central Nervous System

NOS – Not Otherwise Specified

pH – relates to hydrogen ion concentration – this value will relate to a scale of 0 – 14, where 0 is highly acidic and 14 is highly alkaline.

CAS# - Chemical Abstract Service Number – used to uniquely identify chemical compounds.

IARC – International Agency for Research on Cancer.

WES-TWA – Workplace Exposure Standard – Time Weighted Average

Report Status

This document has been compiled by Adelaide Brighton Cement the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ("MSDS").

While Adelaide Brighton Cement has taken all due care to include accurate and up-to-date information in this MSDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, Adelaide Brighton Cement 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 MSDS.



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Product Name **PORTLAND AND BLENDED CEMENT**

Contact Point

For further information on this product contact:

Telephone: Office hours 08 8300 0300
After hours 08 8300 0530
Facsimile: 08 8341 1591
Web site: <http://www.adelaidebrighton.com.au>

Advice Note

The information in this document is believed to be accurate. Please check the currency of this MSDS by contacting:

08 8300 0300
or
<http://www.adelaidebrighton.com.au>

The provision of this information should not be construed as a recommendation to use this product in violation of any patent rights or in breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their particular purposes and specific circumstances. Users should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace and in conjunction with other substances or products.