Safety Data Sheet

HIGH STRENGTH CONCRETE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	**HIGH STRENGTH CONCRETE**
Supplier Name	**ADELAIDE BRIGHTON CEMENT LTD** ABN 96 007 870 199
Address	62 Elder Road, Birkenhead, SA 5015
Manufacturing Plant	Birkenhead Works, 62 Elder Road, Birkenhead, SA 5015
Telephone	08 8300 0300
Emergency	Bus Hrs 08 8300 0300 A/Hrs 08 8300 0530
Email	customerservice@adbri.com.au
Web Site	www.adelaidebrighton.com.au
Synonym(s)	50 MPA CONCRETE
Use(s)	Driveways, paths, mowing strips, borders, post holes, and floor slabs.

2. HAZARDS IDENTIFICATION

This product is classified as hazardous according to Safe Work Australia criteria.
Not classified as a dangerous good by the criteria of the ADG code, IMDG or IATA.

GHS Classifications

Skin Corrosion/Irritation:	Category 2
Skin Sensitization:	Category 1B
Serious Eye Damage / Eye Irritation:	Category 1
Specific Target Organ Systemic Toxicity (Repeated Exposure):	Category 2

SIGNAL WORD **DANGER**

Pictograms



Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to lungs and respiratory tract through prolonged or repeated exposure.

Prevention statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response statements

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position 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.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal statements

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

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

A small proportion of the fine dust associated with this product will contain 'Respirable Crystalline Quartz' (RCQ). While the product is wet and being applied as per the directions on the package the amount of airborne RCQ will be minimal, but it is still recommended that proper PPE is worn. Once dry any residues, grinding or strong abrasive forces may reintroduce RCQ into the air so caution should be taken.

Ingredient	Formula	Conc.	CAS No.
PORTLAND CEMENT	Not Available	Up to 20%	65997-15-1
GROUND GRANULATED BLAST FURNACE SLAG	Not Available	Up to 10%	65996-69-2
GYPSUM	$CaSO_4$ $2H_2O$	1 - 3%	10101-41-4
AGGREGATE	Not Available	Up to 40%	
CRYSTALLINE SILICA (QUARTZ)	SiO_2	Up to 40%	14808-60-7
CHROMIUM (VI) HEXAVALENT	Cr^{6+}	Trace	18540-29-9

*Aggregates used may be siliceous and/or dolomitic stone.

4. FIRST AID MEASURES

Eye Flush thoroughly with flowing water for at least 15 minutes and seek medical attention if symptoms persist. If wet cement is splashed into the eyes flush thoroughly with flowing water for 15 minutes and seek urgent medical attention.

Inhalation Remove from dusty area to fresh air. If symptoms persist, seek medical attention.

Skin Remove heavily contaminated clothing immediately. Wash off skin thoroughly with water. A shower may be required. Seek medical attention for persistant irritation or burning of the skin

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 Over exposure resulting from prolonged and repeated inhalation of dust containing crystalline silica 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 (scaring of the lung) and lung cancer in persons exposed to crystalline silica.

Skin Prolonged and repeated skin contact with cement in wet concrete, mortars and slurries may result in irritant dermatitis or alkaline burns.

Eye Irritating to the eye. If wet cement is splashed into the eye alkaline burns can cause permanent damage.

5. FIRE FIGHTING

Flammability Non flammable. Does not support combustion of other materials.
Fire and Explosion No fire or explosion hazard exists.
Extinguishing Non flammable; use suitable extinguishing agent for surrounding fire.
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 off the floor in the original bags in a cool, dry, well ventilated area, removed from excessive moisture and heat. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use.

Handling

Concrete is supplied in 20 and 30 kg bags. Recognised local safe lifting methods should be used.

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

CHROMIUM (VI) HEXAVALENT (18540-29-9)
ES-TWA: 0.05 mg/m^3 (Chromium VI compounds)
FLYASH (68131-74-8)
ES-TWA: 10 mg/m^3 (Respirable Dust)
GYPSUM (10101-41-4)
ES-TWA: 10 mg/m^3 (Respirable Dust)
PORTLAND CEMENT (65997-15-1)
ES-TWA: 10 mg/m^3 (Respirable Dust)
SILICA, CRYSTALLINE – QUARTZ (14808-60-7)
ES-TWA: 0.05 mg/m^3 (Respirable Dust). Under Model WHS Law adopted in most Australian jurisdictions.

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	A grey cementitious mixture containing fine and coarse aggregate with particles up to 10 mm in size.	**Solubility (water)**	Slight, hardens on mixing with water
Odour	Odourless	**Specific Gravity**	Average Approx 2.3
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	Not Available	**Lower Explosion Limit**	Not Relevant
Evaporation Rate	Not Available	**Autoignition Temperature**	Not Available
Bulk Density	Dry 1500 to 1700 kg/m^3 Compacted (cast) 2250 – 2400 kg/m^3		
Particle Size	Up to nominal 10 mm		

10. STABILITY AND REACTIVITY

Chemical Stability Chemically Stable

Conditions to Avoid Keep free of moisture

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

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

Hazardous Reactions None

11. TOXICOLOGICAL INFORMATION

Acute Toxicity No known toxicity data available for this product.

Eye Irritant upon contact with dust. Over exposure may result in pain, redness, corneal burns and ulceration with possible permanent damage.

Inhalation Irritating to the respiratory system, causing coughing and sneezing. 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. 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.

Skin Irritating to the skin. 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.

Mutagenicity Insufficient data available for this product to classify as a mutagen.

Carcinogenicity Concrete is not classified as a carcinogen by NOHSC. Crystalline silica and hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1), however due to low levels present and product application, the criteria for classification is not met.

12. ECOLOGICAL INFORMATION

Toxicity Product forms an alkaline slurry when mixed with water. This product is non toxic to aquatic life forms when present in cured solid form.

Persistence & Degradability Product is persistent and would have a low degradability.

Mobility in soil A low mobility would be expected in a landfill situation.

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

15. REGULATORY INFORMATION

Poison Schedule 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).
AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

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 SDS 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 SDS report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

ABBREVIATIONS:
SDS – Safety Data Sheet
mg/m^3 – 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.

Report Status

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

While the information in this Safety Data Sheet has been prepared in good faith, Adelaide Brighton Cement Limited does not warrant that the information is accurate, complete or up to date.

Contact Point

For further information on this product contact:

Telephone:	Office hours	08 8300 0300
	After hours	08 8300 0530
Web site:		www.adelaidebrighton.com.au

Advice Note

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

08 8300 0300
or
www.adelaidebrighton.com.au

Each user of any information, or any product referred to, in this Safety Data Sheet must:

- Determine whether the information or product is suitable for their purpose;
- Assess and control any risks associated with the information or product; and
- Obtain professional advice in relation to the use of the information or product.

To the extent permitted by law, Adelaide Brighton Cement Limited:

- Excludes all representations, warranties and guarantees in relation to any information in this Safety Data Sheet; and
- Will not be liable for any direct, indirect, consequential, incidental, special or economic loss (including but not limited to any loss of actual or anticipated profits, revenue, savings, production, business, opportunity, access to markets, goodwill, reputation, publicity, or use) arising from any use of or reliance on any information in this Safety Data Sheet.