

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name</b>	<b>HYDRATED LIME</b>
<b>Supplier Name</b>	<b>ADELAIDE BRIGHTON CEMENT</b> A.B.N. 96 007 870 199
<b>Address</b>	62 Elder Road, Birkenhead, SA 5015
<b>Manufacturing Plant</b>	Angaston Works, Stockwell Road, Angaston, SA 5333
<b>Telephone</b>	08 8300 0300
<b>Fax</b>	08 8341 1591
<b>Emergency</b>	Bus Hrs 08 8300 0300 A/Hrs 08 8300 0530
<b>Email</b>	orderstodespatch@adbri.com.au
<b>Web Site</b>	http://www.adelaidebrighton.com.au
<b>Synonym(s)</b>	CALCIUM HYDROXIDE, SLAKED LIME, LIME HYDRATE, CALCIUM HYDRATE.
<b>Use(s)</b>	Applications such as neutralising agent in water and sewage treatment, a binder in mortars and renders, and soil stabilisation.

## 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.

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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Formula	Conc.	CAS No.
CALCIUM HYDROXIDE	Ca(OH) <sub>2</sub>	85 - 95%	1305-62-0
MAGNESIUM HYDROXIDE	Mg(OH) <sub>2</sub>	0.5 - 1.5%	1309-42-8
SILICON DIOXIDE	SiO <sub>2</sub> Crystalline	0.4 - 0.7%	14808-60-7
ALUMINIUM OXIDE	Al <sub>2</sub> O <sub>3</sub>	0 - 2%	1344-28-1
IRON (III) OXIDE	Fe <sub>2</sub> O <sub>3</sub>	0 - 0.7%	1309-37-1

### 4. FIRST AID MEASURES

<b>Eye</b>	Flush thoroughly with flowing water for at least 15 minutes. Seek medical attention if symptoms persist.
<b>Inhalation</b>	Remove from dusty area to fresh air. If symptoms persist, seek medical attention.
<b>Skin</b>	Quickly, but gently, wipe material off skin. Immediately remove all contaminated clothing and footwear. Wash skin thoroughly with copious amounts of water.
<b>Ingestion</b>	Rinse mouth and lips with water. Do not induce vomiting. Give water to drink to dilute stomach contents. If symptoms persist, seek medical attention.
<b>Advice to Doctor</b>	Treat symptomatically. Contact Poisons Information Centre (131126 Australia wide).
<b>First Aid Facilities</b>	Eye wash station.

### Additional Information - Aggravated Medical Conditions

<b>Inhalation</b>	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.
<b>Skin</b>	Irritating to the skin. Prolonged and repeated skin contact with Hydrated Lime can cause irritant dermatitis.

### 5. FIRE FIGHTING

<b>Flammability</b>	Non flammable. Does not cause dust explosions. Violent reaction with maleic anhydride, nitroethane, nitromethane, nitroparaffin, nitropropane, phosphorous and oxidants.
<b>Fire and Explosion</b>	Non flammable. No fire or explosion hazard exists.
<b>Extinguishing</b>	Non flammable.
<b>Hazchem Code</b>	None.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Spillage</b>	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. Materials should be neutralised with dilute hydrochloric acid, eg 6M, before disposal.
<b>Emergency Procedures</b>	Follow safety requirements for personal protection under Section 8 Exposure Controls/ Personal Protection.

### 7. HANDLING AND STORAGE

<b>Storage</b>	Concrete or steel bins and silos or plastic lined paper sacks are the recommended forms of storage. Store in a cool, dry, well ventilated area, removed from moisture, oxidising agents (eg phosphorous oxide), acids, ethanol, interhalogens (eg chlorine trifluoride) and foodstuffs. Ensure packages are adequately labelled, protected from physical damage, and sealed when not in use. Also store removed from maleic anhydride, nitroethane, nitromethane, nitroparaffin, nitropropane, phosphorus, polychlorinated phenols and potassium nitrate.
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**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**      Avoid generating dust. All work with Hydrated Lime 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 Hydrated Lime, use local mechanical ventilation or extraction in areas where dust could escape into the work environment. For bulk deliveries, closed pumping systems are recommended. For handling of individual bags, follow personal protection instructions if no local exhaust ventilation is available.

**Exposure Standards**

CALCIUM HYDROXIDE (1305-62-0)  
 ES-TWA: 5 mg/m<sup>3</sup>  
 WES-TWA: 5 mg/m<sup>3</sup>

SILICA, CRYSTALLINE – QUARTZ (14808-60-7)  
 ES-TWA: 0.1 mg/m<sup>3</sup> (Silica Quartz, respirable, NOHSC)  
 ES-TWA: 0.1 mg/m<sup>3</sup> (QLD); 0.15 mg/m<sup>3</sup> (NSW)  
 WES-TWA: 0.1 mg/m<sup>3</sup>

ALUMINIUM OXIDE (1344-28-1)  
 ES-TWA: 10 mg/m<sup>3</sup> (total dust)  
 WES-TWA: 10 mg/m<sup>3</sup>

IRON (III) OXIDE (1309-37-1)  
 WES-TWA: 5 mg/m<sup>3</sup>

**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

<b>Appearance</b>	A white or off-white amorphous powder with a typical fineness of less than 1% retained on a 75 micron sieve.	<b>Solubility (water)</b>	Slightly
<b>Odour</b>	Slight Odour	<b>Specific Gravity</b>	2.1 to 2.3
<b>pH</b>	Approximately 12	<b>% Volatiles</b>	Not Available
<b>Vapour Pressure</b>	Not Available	<b>Flammability</b>	Non Flammable
<b>Vapour Density</b>	Not Available	<b>Flash Point</b>	Not Relevant
<b>Boiling Point/Melting Point</b>	Decomposes to Calcium Oxide and water @580°C	<b>Upper Explosion Limit</b>	Not Relevant
<b>Evaporation Rate</b>	Not Available	<b>Lower Explosion Limit</b>	Not Relevant
<b>Bulk Density</b>	300 - 700 kg/m <sup>3</sup>	<b>Autoignition Temperature</b>	Not Available
<b>Particle Size</b>	99% < 75 microns		

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Incompatible with oxidising agents (eg phosphorus oxide), ethanol, interhalogens (eg chlorine trifluoride) and acids. Also incompatible with maleic anhydride, nitroethane, nitromethane, nitroparaffin, nitropropane, phosphorus, polychlorinated phenols and potassium nitrate.
<b>Decomposition Products</b>	May evolve toxic gases if heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

<b>Health Hazard Summary</b>	Corrosive. Use safe work practices to avoid eye – skin contact and dust generation-inhalation. Once water is added, an inhalation hazard is not anticipated. Chronic respiratory effects are not anticipated with over exposure at high levels due to the immediate irritant and/or corrosive effects.
<b>Eye</b>	Corrosive. Severe irritant upon contact with powder/dust. Over exposure may result in pain, redness, corneal burns and ulceration with possible permanent damage.
<b>Inhalation</b>	Corrosive. Over exposure to powder – dust (when mixing) may result in severe mucous membrane irritation of nose and throat, coughing and bronchitis at high levels.
<b>Skin</b>	Irritating and drying to skin. May cause alkaline burns and irritant or allergic dermatitis, especially as an ingredient in plastic (unhardened) wet concrete mortar or slurry.
<b>Ingestion</b>	Corrosive. Ingestion may result in ulceration and burns to the mouth and throat, nausea, vomiting, abdominal pain and diarrhoea.
<b>Toxicity Data</b>	CALCIUM HYDROXIDE (1305-62-0) LD50 (Ingestion): 7300 mg/kg (mouse) SILICA, CRYSTALLINE – QUARTZ (1408-60-7) Carcinogenicity: Classified as a human carcinogen (IARC Group 1) MAGNESIUM HYDROXIDE (1309-43-8) LD50 (Ingestion): 8500 mg/kg (rat, mouse)

## 12. ECOLOGICAL INFORMATION

<b>Environment</b>	The aquatic toxicity of calcium hydroxide is due to its alkalinity. It is neutralised to calcium carbonate by absorption of atmospheric carbon dioxide and is not degraded by oxidation. Calcium hydroxide does not bioaccumulate in the environment.
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## 13. DISPOSAL CONSIDERATIONS

<b>Waste Disposal</b>	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.
<b>Legislation</b>	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.

<b>Shipping Name</b>	None Allocated	<b>Hazchem Code</b>	None Allocated	<b>Pkg Group</b>	None Allocated
<b>UN No</b>	None Allocated	<b>Subsidiary Risk(s)</b>	None Allocated	<b>EPG</b>	None Allocated
<b>DG Class</b>	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).

## 16. OTHER INFORMATION

### Additional Information

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/m<sup>3</sup> – 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.

M – Moles per litre, a unit of concentration.

### 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.



# Material Safety Data Sheet

**Product Name**     **HYDRATED LIME**

## 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:		<a href="http://www.adelaidebrighton.com.au">http://www.adelaidebrighton.com.au</a>

## 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.