



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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| Product Name | HYDRATED LIME |
| Supplier Name | Cockburn Cement Limited A.B.N. 50.008.673.470 |
| Address | PO Box 38, Hamilton Hill, WA 6963 |
| Manufacturing Plant(s) | Munster Works, Lot 242 Russell Road East, Munster, WA 6166 Kwinana Works, Leath Road, Kwinana, WA 6167 Kemerton Operations, Marriott Street, Kemerton, WA 6233 |
| Telephone | 08 9411 1000 |
| Fax | 08 9411 1150 |
| Emergency | Bus Hrs 08 9411 1000 A/Hrs 08 9411 1000 |
| Email | orders@cockburncement.com.au |
| Web Site | http://www.cockburncement.com.au & www.swancement.com.au |
| Synonym(s) | Hylime, Marvelime, Industrial Hydrated Lime, Premium Hydrated Lime, Chemical Hydrated Lime, Calcium Hydroxide, Slaked Lime. |
| Use(s) | Applications such as neutralising agent in water and sewage treatment, a binder in mortars and renders, soil stabilisation and maintaining alkaline conditions for mineral processing. |

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

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| Skin Corrosion/Irritation: | Category 2 |
| Serious Eye Damage / Eye Irritation: | Category 1 |
| Specific Target Organ Systemic Toxicity (Single Exposure): | Category 3 |

SIGNAL WORD

DANGER

Pictograms



Hazard statements

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| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |

Prevention statements

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| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P264 | Wash skin thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |

Response statements

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| 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. |
| P310 | Immediately call a POISON CENTRE or doctor/physician. |
| P332 + P313 | If skin irritation occurs: Get medical advice/attention. |
| P362 | Take off contaminated clothing and wash before re-use. |

Disposal statements

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| P501 | Dispose of contents/container in accordance with relevant regulations. |
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| 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. |
|-----------------------------|--------------------------------|----------|------------|
| CALCIUM HYDROXIDE | Ca(OH) ₂ | 65 - 75% | 1305-62-0 |
| MAGNESIUM HYDROXIDE | Mg(OH) ₂ | 3,5 - 5% | 1309-42-8 |
| CRYSTALLINE SILICA (QUARTZ) | SiO ₂ | 0,5 - 3% | 14808-60-7 |
| ALUMINIUM OXIDE | Al ₂ O ₃ | 0 - 1,5% | 1344-28-1 |
| IRON (III) OXIDE | Fe ₂ O ₃ | 0 - 1% | 1309-37-1 |
| LIMESTONE | CaCO ₃ | 0 - 2% | 1317-65-3 |

- Loss on Ignition accounts for missing concentration

4. FIRST AID MEASURES

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| Eye | Flush thoroughly with flowing water for at least 15 minutes and seek medical attention if symptoms persist. If a lime slurry is splashed into the eyes flush thoroughly for 15 minutes then seek urgent medical attention. |
| Inhalation | Remove from dusty area to fresh air. If symptoms persist, seek medical attention. |
| Skin | Quickly, but gently, wipe material off skin. Immediately remove all contaminated clothing and footwear. Wash skin thoroughly with copious amounts of water. |
| 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. Contact Poisons Information Centre (131126 Australia wide). |
| First Aid Facilities | Eye wash station. |

Additional Information - Aggravated Medical Conditions

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| 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 | Irritating to the skin. Prolonged and repeated skin contact with Hydrated Lime can cause irritant dermatitis or alkaline burns. |
| Eye | Irritating to the eye. If a large volume of lime dust (or slurry) is splashed into the eye alkaline burns can cause permanent damage. |

5. FIRE FIGHTING

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



6. ACCIDENTAL RELEASE MEASURES

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

7. HANDLING AND STORAGE

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| Storage | 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 phosphorus 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. |
| 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

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| 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 | ALUMINIUM OXIDE (1344-28-1) ES-TWA: 10 mg/m ³ (Respirable Dust) CALCIUM CARBONATE (1317-85-3) ES-TWA: 10 mg/m ³ (Respirable Dust) CALCIUM OXIDE (1305-78-8) ES-TWA: 2 mg/m ³ (Respirable Dust; Alkaline) IRON (III) OXIDE (1309-37-1) ES-TWA: 5 mg/m ³ (Respirable Dust) MAGNESIUM OXIDE (1309-48-4) ES-TWA: 10 mg/m ³ (Respirable Dust) SILICA, CRYSTALLINE – QUARTZ (14808-60-7) ES-TWA: 0.1 mg/m ³ (Respirable Dust) |



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

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

10. STABILITY AND REACTIVITY

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| Reactivity | 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. |
| Decomposition Products | May evolve toxic gases if heated to decomposition. |

11. TOXICOLOGICAL INFORMATION

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| 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 | Slightly corrosive. Irritating to the respiratory system causing coughing and sneezing. Over exposure may result in severe mucous membrane irritation and bronchitis. Crystalline silica (found in this product below the reportable limit) 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. Contact may results in skin rash, dermatitis and possible burns. |
| 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 Crystalline silica is carcinogenic to humans (IARC Group 1), however due to low levels present and product application, the criteria for classification is not met.

Toxicity Data CALCIUM HYDROXIDE (1305-62-0)
LD50 (Ingestion): 7300 mg/kg (mouse)
MAGNESIUM HYDROXIDE (1309-43-8)
LD50 (Ingestion): 8500 mg/kg (rat, mouse)
SILICA, CRYSTALLINE – QUARTZ (1408-60-7)
Carcinogenicity: Classified as a human carcinogen (IARC Group 1)

12. ECOLOGICAL INFORMATION

Environment 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.

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.

Transport is by rail or road in bulk or bag form.

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

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|----------------------|----------------|---------------------------|----------------|------------------|----------------|
| 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 | | | | |

14. 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).

15. 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 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:

mg/m³ - Milligrams per cubic metre

ppm - Parts Per Million

ES-TWA - Exposure Standard - Time Weighted Average

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 Cockburn Cement Limited the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ("SDS").

While Cockburn Cement Limited 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, Cockburn Cement Limited 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.

Contact Point

For further information on this product contact:

Telephone: Office hours 08 9411 1000
After hours 08 9411 1000
Facsimile: 08 9411 1150
Web site: <http://www.cockburncement.com.au>

Advice Note

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

08 9411 1000
or
<http://www.cockburncement.com.au> or www.swancement.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 SDS 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.