

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name</b>	<b>QUICKLIME</b>
<b>Supplier Name</b>	<b>COCKBURN CEMENT LIMITED</b> ABN 50 008 673 470
<b>Address</b>	PO Box 38, Hamilton Hill, WA 6963
<b>Manufacturing Plant</b>	Munster Works, Lot 242 Russell Road East, Munster, WA 6166 Dongara Works, Kailis Drive, Dongara, WA 6525
<b>Telephone</b>	08 9411 1111
<b>Emergency</b>	Bus Hrs 08 9411 1111
<b>Email</b>	orders@cockburncement.com.au
<b>Web Site</b>	<a href="http://www.cockburncement.com.au">www.cockburncement.com.au</a> & <a href="http://www.swancement.com.au">www.swancement.com.au</a>
<b>Synonym(s)</b>	CALCIUM OXIDE, CALCIUM MONOXIDE, UNSLAKED LIME, BURNT LIME, ROCK LIME, FLUXING LIME.
<b>Use(s)</b>	Quicklime is used as a flux in the steel industry and in the production/recovery of aluminium, magnesium, uranium gold and silver. It is used to make chemicals such as sodium alkalis, calcium hypochlorite and petrochemicals. It is used in soil stabilisation.

### 2. HAZARDS IDENTIFICATION

This product is classified as hazardous according to Safe Work Australia criteria.  
Only classified as a dangerous good by the criteria of the ADG code when transported by air.

#### GHS Classifications

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

#### SIGNAL WORD Pictograms

#### DANGER



#### Hazard statements

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

#### Prevention statements

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

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.

#### Disposal statements

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

<b>UN No</b>	1910	<b>Hazchem Code</b>	4W	<b>Pkg Group</b>	III
<b>DG Class</b>	8	<b>Subsidiary Risk(s)</b>	None Allocated	<b>EPG</b>	None Allocated

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Formula	Conc.	CAS No.
CALCIUM OXIDE	CaO	80 - 90%	1305-78-8
MAGNESIUM OXIDE	MgO	4.5 - 5.5%	1309-48-4
CRYSTALLINE SILICA (QUARTZ)	SiO <sub>2</sub>	0 - 4 %	14808-60-7
LIMESTONE	CaCO <sub>3</sub>	0 - 2%	1317-65-3
ALUMINIUM OXIDE	Al <sub>2</sub> O <sub>3</sub>	0 - 1.5%	1344-28-1
IRON (III) OXIDE	Fe <sub>2</sub> O <sub>3</sub>	0 - 1%	1309-37-1

### 4. FIRST AID MEASURES

<b>Eye</b>	Flush thoroughly with flowing water for at least 15 minutes and medical attention if symptoms persist. If a lime slurry is splashed into the eyes flush thoroughly for 15 minutes then seek urgent medical attention.
<b>Inhalation</b>	Remove from dusty area to fresh air. If symptoms persist, seek medical attention.
<b>Skin</b>	Promptly wipe material off skin being sure not to generate dust. 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 membrane irritation, bronchitis, pneumonia, 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 in those exposed to crystalline silica.
<b>Skin</b>	Irritating to the skin. Prolonged and repeated skin contact with Quicklime can cause irritant dermatitis.
<b>Eye</b>	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

<b>Flammability</b>	Not flammable. Does not support combustion of other materials, but on contact with water or acids may generate sufficient heat to ignite surrounding materials. DO NOT USE WATER for fire fighting. USE DRY CHEMICAL OR CO <sub>2</sub> TYPE EXTINGUISHERS.
<b>Fire and Explosion Extinguishing</b>	Non flammable. No fire or explosion hazard exists.
<b>Hazchem Code</b>	None Allocated.

### 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. Lime Kiln Dust should be slowly hydrated by SLOW addition to water then neutralised with dilute Hydrochloric Acid e.g. 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>	Steel silos and airtight rail or road tankers are the usual forms of storage and transport. Common storage and handling equipment must NOT be used for Quicklime. Enclosed conveyors with extraction equipment and dust collection are required for safe handling. Quicklime must NOT come into contact with materials containing water or water of crystallisation, eg copper, alum, ferric sulphates. Quicklime must be kept away from moisture, steam, acid or acid fumes to prevent violent reactions.
<b>Handling</b>	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.
<b>Property/ Environmental</b>	Refer to Section 13.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Ventilation</b>	Avoid generating dust. All work with Quicklime 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 Quicklime, use local mechanical ventilation or extraction in areas where dust could escape into the work environment. For bulk deliveries, closed pumping systems are recommended.
<b>Exposure Standards</b>	<p>ALUMINIUM OXIDE (1344-28-1)  ES-TWA: 10 mg/m<sup>3</sup> (Respirable Dust)</p> <p>CALCIUM CARBONATE (1317-85-3)  ES-TWA: 10 mg/m<sup>3</sup> (Respirable Dust)</p> <p>CALCIUM OXIDE (1305-78-8)  ES-TWA: 2 mg/m<sup>3</sup> (Respirable Dust; Alkaline)</p> <p>IRON (III) OXIDE (1309-37-1)  ES-TWA: 5 mg/m<sup>3</sup> (Respirable Dust)</p> <p>MAGNESIUM OXIDE (1309-48-4)  ES-TWA: 10 mg/m<sup>3</sup> (Respirable Dust)</p> <p>SILICA, CRYSTALLINE – QUARTZ (14808-60-7)  ES-TWA: 0.05 mg/m<sup>3</sup> (Respirable Dust).</p> <p>Under Model WHS Law adopted in most Australian jurisdictions.</p>
<b>PPE</b>	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>	Granular off-white amorphous powder	<b>Solubility (water)</b>	Springly soluble, reacts vigorously with water
<b>Odour</b>	Slight Odour	<b>Specific Gravity</b>	3.2 to 3.4
<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</b>	2850 <sup>o</sup> c	<b>Upper Explosion Limit</b>	Not Relevant
<b>Melting Point</b>	2570 <sup>o</sup> C	<b>Lower Explosion Limit</b>	Not Relevant
<b>Evaporation Rate</b>	Not Available	<b>Autoignition Temperature</b>	Not Available
<b>Bulk Density</b>	950 - 1050 kg/m <sup>3</sup>		
<b>Particle Size</b>	50% < 75 microns		

### 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Incompatible with hydrofluoric acid (violently) and phosphorus pentoxide. Reacts (potentially vigorously) with water generating heat and evolving calcium hydroxide.
<b>Decomposition Products</b>	May evolve toxic gases if heated to decomposition.

### 11. TOXICOLOGICAL INFORMATION

<b>Acute Toxicity</b>	No known toxicity data available for this product.
<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.
<b>Ingestion</b>	Corrosive. Ingestion may result in ulceration and burns to the mouth and throat, nausea, vomiting, abdominal pain, and diarrhoea.
<b>Mutagenicity</b>	Insufficient data available for this product to classify as a mutagen.
<b>Carcinogenicity</b>	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.
<b>Toxicity Data</b>	<p>CALCIUM HYDROXIDE (1305-62-0)  LD50 (Ingestion): 7300 mg/kg (mouse)</p> <p>MAGNESIUM HYDROXIDE (1309-43-8)  LD50 (Ingestion): 8500 mg/kg (rat, mouse)</p> <p>SILICA, CRYSTALLINE – QUARTZ (1408-60-7)  Carcinogenicity: Classified as a human carcinogen (IARC Group 1)</p>

### 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.

The aquatic toxicity of calcium oxide is due to its alkalinity. A large concentration of this material resulting from improper handling or disposal can be toxic to aquatic life and plants due to an acute pH change. Calcium oxide does not bioaccumulate in the environment. Mobility in soil is not available but is considered to be low.

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal** For small amounts; VERY SLOWLY, hydrate (add water) and then neutralise with dilute hydrochloric acid (e.g. 6M HCl) to pH of 7-8. Dilute and flush to sewer or landfill. For large amounts, material can be readily recycled. Contact the manufacturer for additional information.

**Legislation** Dispose of in accordance with relevant local legislation.

### 14. TRANSPORT INFORMATION

Only classified as a dangerous good when transported by air (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.

#### IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

<b>Shipping Name</b>	Calcium Oxide				
<b>UN No</b>	1910	<b>Hazchem Code</b>	4W	<b>Pkg Group</b>	III
<b>DG Class</b>	8 (Air transport only)	<b>Subsidiary Risk(s)</b>	None Allocated	<b>EPG</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 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<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.  
ES-TWA – 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.

While the information in this Safety Data Sheet has been prepared in good faith, Cockburn 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 9411 1111

Web site: [www.cockburncement.com.au](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 1111 or [www.cockburncement.com.au](http://www.cockburncement.com.au) or [www.swancement.com.au](http://www.swancement.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, Cockburn 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.