

SAFETY DATA SHEET

Quicklime

Section 1: Identification of the Material and Supplier

Company Details

Cement Australia Pty Limited

ABN 75 104 053 474

18 Station Avenue
Darra, Queensland 4076

Tel: 1300 CEMENT (1300 236 368)

Fax: 1800 CEMENT (1800 236 368)

Website: www.cementaustralia.com.au

Emergency Contact Number: **Contact Person:** Technical Manager
Telephone: 1300 CEMENT (1300 236 368 - Business Hours) or
Poisons Information Centre 13 11 26

Manufacturing Plants

Gladstone: Landing Rd, Fisherman's Landing, Gladstone QLD 4680

Product

Name: Quicklime

Other Names: Burnt Lime, Calcium Oxide, Unslaked Lime

Use: Manufacture of calcium hydroxide (hydrated lime), pH control, soil stabilisation, water, and sewerage treatment, flux in steel industry, sugar refining, alumina refining, minerals processing.

Section 2: Hazards Identification

2.1 Classification

**DANGER**

GHS CLASSIFICATION

Classified as Hazardous according to the Safe Work Australia guidelines for Globally Harmonised System of Classification and Labelling of Chemicals (GHS).

For more information call **1300 CEMENT** (1300 236 368)
or visit www.cementaustralia.com.au

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Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

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. **This product reacts vigorously with water.**

Hazard Class and Category

Skin Corrosion/Irritation: Category 2

Serious Eye Damage / Eye Irritation: Category 1

Specific Target Organ Toxicity (Single Exposure): Category 3

Specific Target Organ Toxicity (Repeated Exposure): Category 2

2.2 GHS Label elements

Pictograms and Signal Words



DANGER

Hazard Statement(s)

- | | |
|-------------|--|
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |

Prevention Statement(s)

- | | |
|--------------------|--|
| P101 | If medical advice is needed, have product container or label at hand. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P103 | Read label before use. |
| P260 + P261 | Do not breathe dust. Avoid breathing dust. |
| P264 | Wash any skin exposed to the product thoroughly after handling. Do not touch eyes until hands are thoroughly washed clean of material. |
| P280 | Wear protective gloves in accordance with AS2161. Wear dust proof eye protection in accordance with (AS/NZS1337.1). |

Response Statement(s)

- | | |
|-----------------------|---|
| P305+P351+P338 | IF IN EYES: Immediately call POISON CENTRE 131126 or Doctor. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P332 + P313 | If skin irritation occurs: Get medical advice/attention. |
| P321 | Specific treatment is advised - see first aid instructions. |
| P362 | Take off contaminated clothing and wash before re-use. |

Storage Statement(s)

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Keep container tightly closed. Store locked up.

Disposal Statement(s)

P501 Dispose of unused contents in accordance with jurisdictional regulations. Dispose of contents and container to an approved waste disposal plant.

2.3 Other hazards

No information provided.

Section 3: Composition/Information on Ingredients

Chemical Entity	Proportion	CAS Number
Calcium Oxide	90-95%	1305-78-8
Magnesium Oxide	0.5-1.5%	1309-48-4
Calcium Carbonate	1.0-5.0%	1317-65-3
Aluminium Oxide	0-1.0%	1344-28-1
Total respirable silica	Below reporting limits	14808-60-7
Silicon Dioxide	1-2.0%	7631-86-9
Hexavalent Chromium Cr (VI)	<1 ppm	18540-29-9
Iron Oxide	<0.5%	1309-37-1

Section 4: First Aid Measures

Swallowed: Wash mouth and lips with copious amounts of water, and give limited amounts of milk or water to drink (150ml). Do not induce vomiting. Seek medical attention.

Eyes: Hold eyes open and flush with copious amounts of water for at least 10 minutes. Seek medical attention.

Skin: Immediately remove all contaminated clothing, including footwear. Wash material off skin, using plenty of water preferably under shower. If effects persist, seek medical attention.

Inhalation: Remove to fresh air away from the dusty area. Seek medical attention.

First Aid Facilities: Eye wash station.

Advice to Doctor: Treat symptomatically as for poisoning with strong alkali.
Contact Poisons Information Centre: Tel 13 11 26 (Australia wide)

Section 5: Fire Fighting Measures

Fire/Explosion Hazard: Quicklime is non-combustible

Hazchem Code: None allocated

Flammability: Not flammable

Extinguishing Media: Fires in areas surrounding quicklime storage must be extinguished using non-water extinguishers. **DO NOT USE WATER**

Hazards from Combustion Products:	None
Special Protective Precautions and equipment for fire fighters:	None required. Refer to PPE
Extinguishing Media	Violent reactions with maleic anhydride, nitroethane, nitromethane, nitroparaffins, nitropropane and phosphorus. Strong exothermic (heat producing) reaction with water.
Evacuate	No

Section 6: Accidental Release Measures

Spills:	PPE must be worn to clean up spillages with broom, shovel, or vacuum equipment. Dry clean-up only. Minimise dust generation. DO NOT USE WATER. Keep product out of storm water and sewer drains.
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Section 7: Handling and Storage

Handling:	When supplied in bags these need to be handled in accordance with manual handling Code of Practice.
Storage:	Quicklime should be stored in a cool protected place away from moisture, strong oxidants or acids and to minimise dust emissions. Storage in steel or concrete bins and silos, or plastic lined bags, is appropriate.

Section 8: Exposure Controls/Personal Protection

Occupational exposure limit values

No exposure standards have been established for this material. However, the available exposure limits for ingredients are listed below:

Calcium hydroxide TWA: 5 mg/m³

Crystalline Silica (Quartz) TWA: 0.05 mg/m³ (i.e. the average airborne concentration of a substance when calculated over a normal eight hour working day, for a five-day week.)

Biological Limit Values

No biological limits allocated.

Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing solid/dust away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of particulates below the exposure standards, suitable respiratory protection must be worn.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure, then an approved respirator with a replaceable dust/ particulate filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

Eye Protection

Safety glasses with full face shield should be used. Eye protection devices should conform to relevant regulations.

Hand Protection

Wear gloves of impervious material such as PVC and conforms to relevant regulations.

Body Protection

Suitable protective work wear, e.g., cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Section 9: Physical and Chemical Properties

Appearance:	A fine powder ranging in colour from grey to off-white
Odour:	No odour
Boiling/Melting Point:	Melting point >2500°C
Vapour Pressure:	Not applicable
Specific Gravity:	3.2 – 3.4
Bulk Density:	900-1400kg/m ³
Flash Point:	Not applicable
Flammability Limits:	Non-combustible
Auto Ignition Temp:	Not Applicable
Solubility In Water:	Reacts vigorously with water generating heat and steam
pH:	Approximately 12
Particle Size:	Reacts violently with water, generating much heat. Quicklime reacts violently with: Boric Oxide (B ₂ O ₃), Calcium Chloride (CaCl ₂), Boron Fluoride (BF ₃), Hydrofluoric Acid (HF), Phosphoric Anhydride (P ₂ O ₅), Fluorine Gas (F ₂) and Chlorine Trifluoride (ClF ₃)

Section 10: Stability and Reactivity

An alkaline material that reacts vigorously with acids, with the generation of much heat. Reacts vigorously with water producing heat and caustic steam.

May absorb carbon dioxide from the atmosphere forming calcium carbonate.

Soluble in glycerol, aqueous solution of sucrose and ammonium chloride.

Incompatible with maleic anhydride, nitroparaffins, and phosphorus.

Section 11: Toxicological Information

Acute Toxicity – Oral:	For calcium hydroxide: LD50 (rat): 7,340 mg/kg
Ingestion:	Ingestion of this product may irritate the gastric tract causing nausea and vomiting.
Inhalation:	May cause respiratory irritation. Inhalation of product dust can cause irritation of the nose, throat and respiratory system. Repeated exposure to respirable crystalline silica dust may lead to silicosis, or other serious delayed lung injury. The onset of silicosis is usually slow and lung damage may occur even when no symptoms or signs of ill-health have occurred. Silicosis can develop to a more serious degree even after exposure has ceased and may also lead to other diseases including heart disease and scleroderma. Exposure by inhalation may aggravate pre-existing upper respiratory and lung disorders such as bronchitis, emphysema and asthma. Chronic exposure to this material may aggravate existing respiratory disorders and lung disorders such as bronchitis, emphysema and asthma. Onset and progression are related to dust concentrations and duration of exposure.
Skin:	Causes skin irritation. Skin contact will cause redness, itching and swelling. Repeated exposure may cause skin dryness and cracking and may lead to dermatitis.

Eye:	Causes serious eye damage. On eye contact this product will cause tearing, stinging, blurred vision, and redness. For calcium hydroxide - Eye Irritation (rabbit): Severe (Standard Draize Test, 10 mg)
Germ cell mutagenicity:	Not considered to be a mutagenic hazard.
Carcinogenicity:	This product contains crystalline silica which is classified as carcinogenic to humans (IARC Group 1). However, RSC is below reporting limits.
Reproductive Toxicity:	Not considered to be toxic to reproduction.
STOT-single exposure:	Not expected to cause toxicity to a specific target organ.
STOT-repeated exposure:	May cause damage to organs through prolonged or repeated exposure by inhalation.
Aspiration Hazard	Not expected to be an aspiration hazard.

Section 12: Ecological Information

Ecotoxicity:	Because of the high pH of this product, it would be expected to produce significant acute ecotoxicity upon exposure to aquatic organisms and aquatic systems.
Bio accumulative potential:	This product is not expected to bioaccumulate.
Persistence and Degradability:	Product has no bioaccumulation or food chain toxicity potential.
Mobility:	Soluble in water (as hydroxide) to form alkaline solution. Low mobility in most ground conditions.

Section 13: Disposal Considerations

Material should be recycled, or for small amounts it may be neutralised with dilute hydrochloric acid to a pH of 6-9, before disposal in accordance with local authority guidelines.

Keep out of sewer, storm water drains, and natural waterways.

Measures should be taken to prevent dust generation during disposal and exposure and personal precautions should be observed (see above).

Section 14: Transport Information

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN Number:	None allocated
Proper Shipping Name:	None allocated
Class and Subsidiary Risk:	None allocated
Packing Group:	None allocated
Special precautions for user:	Avoid generating and breathing dust

Hazchem Code:

None allocated

Section 15: Regulatory Information

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

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

Section 16: Other Information

For further information on this product contact:

Telephone: 1300 CEMENT (1300 236 368) (Business Hours)

Facsimile: 1800 CEMENT (1800 236 368)

Previous Edition: 2019 – GHS Compliance edits made, and supplementary compliance edits added.

2020 – Format updates

2022/2023 – Format updates

Next Review Date for this SDS: 31 December 2026.

Australian and New Zealand Standards:

AS 2161: Industrial Safety Gloves and Mittens (excluding electrical and medical gloves).

AS/NZ 1336: Recommended Practices for Occupational Eye Protection.

AS/NZS 1715: Selection, use and maintenance of respiratory protective devices.

AS/NZS 1716: Respiratory protective devices.

AS/NZS 4501: Occupational protective clothing.

Advice Note:

Cement Australia believes the information in this document to be accurate as at the date of preparation, but, to the maximum extent permitted by law, Cement Australia accepts no responsibility for any loss or damage caused by any person acting or refraining from action because of this information.

The provision of this information should not be construed by anyone as a recommendation to use this product. No one should use any product in violation of any patent or other intellectual proprietary rights or in breach of any statute or regulation.

Users should rely on their own knowledge and inquiries and make their own determination as to the applicability of this information in relation to their particular purposes and specific circumstances. Each user 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.

[SDS Ends]