

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

- Product Name**      **QUICKLIME**
- Supplier Name**    **NORTHERN CEMENT LIMITED**    A.B.N. 22 009 593 515
- Address**            P O Box 39631, Winnellie, NT 0821
- Manufacturing Plant** Mataranka Lime Pty Ltd, NT 0852
- Telephone**        08 8984 0600
- Fax**                08 8984 0610
- Emergency**        Bus Hrs 08 8984 0600    A/Hrs 08 8984 0607
- Email**             [ntorders@adbri.com.au](mailto:ntorders@adbri.com.au)
- Web Site**         <http://www.northerncement.com.au>
  
- Synonym(s)**      CALCIUM OXIDE, CALCIUM MONOXIDE, UNSLAKED LIME, BURNT LIME, ROCK LIME, FLUXING LIME.
  
- Use(s)**            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.
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<b>UN No</b>	1910	<b>Hazchem Code</b>	4W	<b>Pkg Group</b>	III
<b>DG Class</b>	NA	<b>Subsidiary Risk(s)</b>	None Allocated	<b>EPG</b>	None Allocated

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Ingredient</b>	<b>Formula</b>	<b>Conc.</b>	<b>CAS No.</b>
CALCIUM OXIDE	CaO	75 - 85%	1305-78-8
MAGNESIUM OXIDE	MgO	4 - 5%	1309-48-4
CRYSTALLINE SILICA (QUARTZ)	SiO <sub>2</sub>	1 - 5%	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>	If a lime dust or 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>	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. Ingestion is not considered a likely exposure route. 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. Quicklime can cause irritant dermatitis or even alkaline burns depending upon the concentration and duration of exposure.
<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**

**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. Quicklime should be slowly hydrated by SLOW addition to water then 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**

**Storage** 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.

**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 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.

**Exposure Standards**

ALUMINIUM OXIDE (1344-28-1)  
ES-TWA: 10 mg/m<sup>3</sup> (Respirable Dust)

CALCIUM CARBONATE (1317-85-3)  
ES-TWA: 10 mg/m<sup>3</sup> (Respirable Dust)

CALCIUM OXIDE (1305-78-8)  
ES-TWA: 2 mg/m<sup>3</sup> (Respirable Dust; Alkaline)

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

MAGNESIUM OXIDE (1309-48-4)  
ES-TWA: 10 mg/m<sup>3</sup> (Respirable Dust)

SILICA, CRYSTALLINE – QUARTZ (14808-60-7)  
ES-TWA: 0.1 mg/m<sup>3</sup> (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**

<b>Appearance</b>	Granular off-white amorphous powder	<b>Solubility (water)</b>	1.6g/L @ 20°C, 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>0</sup> c	<b>Upper Explosion Limit</b>	Not Relevant
<b>Melting Point</b>	2570 <sup>0</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 - 1100 kg/m <sup>3</sup>		
<b>Particle Size</b>	10% < 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 burns to the mouth and throat, with vomiting and abdominal pain. Due to product form, ingestion is not considered a likely exposure route.
<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.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal** For small amounts; VERY SLOWLY, hydrate (add water) and then neutralise with dilute hydrochloric acid (eg 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>Hazchem Code</b>	4W	<b>Pkg Group</b>	111
<b>UN No</b>	1910	<b>Subsidiary Risk(s)</b>	None Allocated	<b>EPG</b>	None Allocated
<b>DG Class</b>	8				

**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:**

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.

M – Moles per litre, a unit of concentration.

**Report Status**

This document has been compiled by Northern Cement the manufacturer of the product and serves as the manufacturer’s Safety Data Sheet (“SDS”).

While Northern Cement 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, Northern 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 SDS.

**Contact Point**

For further information on this product contact:

Telephone:	Office hours	08 8984 0600
	After hours	08 8984 0607
Facsimile:		08 8984 0610
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 SDS by contacting:

08 8300 0300  
or  
<http://www.northerncement.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.

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