

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name QUICKLIME
Synonym(s) BURNT LIME • CALCIUM OXIDE • LIME KILN DUST • QUICK LIME • QUICKLIME • RK LIME • UNSLAKED LIME • HEBEL LIME

1.2 Uses and uses advised against

Use(s) FLUX • MANUFACTURE OF HYDRATED LIME • MANUFACTURE OF PAPER • MANUFACTURE OF STEEL • MINERAL PROCESSING • NEUTRALISING AGENT • PH CONTROL • RECOVERY OF METALS • SOIL STABILISATION • SUGAR REFINING • WATER TREATMENT

1.3 Details of the supplier of the product

Supplier name BORAL CONSTRUCTION MATERIALS LTD.
Address Level 3, 40 Mount Street, Nth Sydney, NSW, 2060, AUSTRALIA
Telephone (02) 9220 6300
Email sds@rmt.com.au
Website <http://www.boral.com.au>

1.4 Emergency telephone number(s)

Emergency 1800 555 477 (8am – 5pm WST)
Emergency (A/H) 13 11 26 (Poisons Information Centre)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

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

2.2 Label elements

Signal word DANGER

Pictogram(s)



Hazard statement(s)

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

Prevention statement(s)

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

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Response statement(s)

P302 + P352	IF ON SKIN: Flush skin and hair with Diphoterine® solution.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P321	IF IN EYES: The use of Diphoterine® has been shown to significantly reduce the risk of permanent injury. It is essential that the Diphoterine® is used as quickly as possible (ie. within 10 seconds of contact with lime) in order to obtain the maximum benefit from its absorbent and neutralising properties.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
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	Store locked up.

Disposal statement(s)

P501	Dispose of contents/container in accordance with relevant regulations.
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2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
CALCIUM OXIDE	1305-78-8	215-138-9	>88%
QUARTZ (CRYSTALLINE SILICA)	14808-60-7	238-878-4	<3%
CALCIUM CARBONATE	471-34-1	207-439-9	<3%
ALUMINIUM OXIDE	1344-28-1	215-691-6	<1%
MAGNESIUM OXIDE	1309-48-4	215-171-9	<1%
IRON OXIDE (FE ₂ O ₃)	1309-37-1	215-168-2	<0.5%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes. If available, immediately flush eyes with Diphoterine® solution. The use of Diphoterine® has been shown to significantly reduce the risk of permanent injury.
Inhalation	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor. If available, immediately flush skin and hair with Diphoterine® solution.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
First aid facilities	Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed

Calcium oxide is not considered acutely toxic via the oral, dermal, or inhalation route. The substance is classified as irritating to skin and the respiratory tract, with a potential risk of serious damage to the eye. Adverse systemic effects are not anticipated with local effects (due to alkaline pH) the major health hazard.

4.3 Immediate medical attention and special treatment needed

Treat as for moderate to strong alkali and symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Do not use water for fire fighting as contact will increase heat generation. Use dry agent or carbon dioxide extinguishers only.

5.2 Special hazards arising from the substance or mixture

Non flammable. May generate heat in contact with water. Reaction with water may release enough heat to ignite combustible materials.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Do NOT use water. May generate heat upon contact with water; sufficient heat may be generated to ignite surrounding combustible materials.

5.4 Hazchem code

None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then collect and place in suitable containers for reuse or disposal. Avoid generating dust. DO NOT GET WATER on spilled material or inside containers.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe 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.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, removed from water or moisture, incompatible substances and foodstuffs. Ensure packages or storage tanks are adequately labelled, protected from physical damage and sealed when not in use. Caution: Swells when moist and may burst containers. Materials containing water of crystallisation (e.g. aluminium or copper sulphate) should NOT be stored in the same containers as those previously used to store Quicklime.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Aluminium oxide (a)	SWA (AUS)	--	10	--	--
Calcium carbonate (Limestone, Marble, Whiting)	SWA (AUS)	--	10	--	--
Calcium oxide	SWA (AUS)	--	2	--	--
Iron oxide fume (Fe ₂ O ₃) (as Fe)	SWA (AUS)	--	5	--	--
Magnesium oxide (fume)	SWA (AUS)	--	10	--	--
Quartz (respirable dust)	SWA (AUS)	--	0.1	--	--

Biological limits

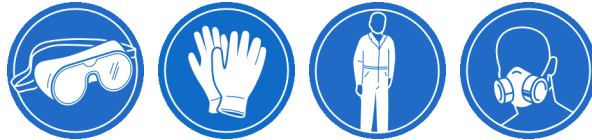
No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

PPE

- Eye / Face** Wear safety glasses or dust-proof goggles when handling material to avoid contact with eyes.
- Hands** Wear PVC or rubber gloves when handling material to prevent skin contact.
- Body** Wear long sleeved shirt and full-length trousers.
- Respiratory** Where an inhalation risk exists, wear a Class P1 (Particulate) respirator. At high dust levels, wear a Powered Air Purifying Respirator (PAPR) with Class P3 (Particulate) filter or a Class P3 (Particulate) respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	WHITE LUMPS, GRANULES OR POWDER
Odour	ODOURLESS
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	> 2500°C
Evaporation rate	NOT AVAILABLE
pH	13
Vapour density	NOT AVAILABLE
Specific gravity	3.3 to 3.5
Solubility (water)	1.6 g/L (Approximately)
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

10. STABILITY AND REACTIVITY

10.1 Reactivity

Calcium oxide reacts exothermically with water to form Calcium dihydroxide.

10.2 Chemical stability

Stable under recommended conditions of storage. Moisture sensitive.

10.3 Possibility of hazardous reactions

Hazardous polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources. Avoid exposure to moisture.

10.5 Incompatible materials

Incompatible with hydrofluoric acid (violently) and phosphorus pentoxide. Reacts (potentially vigorously) with water generating heat and evolving calcium hydroxide. Also violently incompatible with boron oxide and calcium chloride, boron trifluoride, chlorine trifluoride, fluorine, hydrogen fluoride and phosphorus pentoxide.

10.6 Hazardous decomposition products

May evolve calcium oxides when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	No known toxicity data is available for this product. Based on available data, the classification criteria are not met.
Skin	Irritating to the skin. Contact may result in irritation, redness, pain, rash, dermatitis and possible skin burns. Severe irritant upon contact with powder/ dust due to its vigorous reaction with water on moist skin.
Eye	Irritating to the eyes. Contact may result in irritation, lacrimation, pain, redness, corneal burns and possible permanent damage. Severe irritant upon contact with powder/ dust due to its vigorous reaction with water in eyes.
Sensitization	This product is not known to be a skin or respiratory sensitiser.
Mutagenicity	Insufficient data available to classify as a mutagen.
Carcinogenicity	Crystalline silica is classified as carcinogenic to humans (IARC Group 1). However, there is insufficient respirable silica in this product to be classified as a carcinogen.
Reproductive	Insufficient data available to classify as a reproductive toxin.
STOT – single exposure	Irritating to the respiratory system. Over exposure to dust may result in severe mucous membrane irritation of nose and throat, coughing and bronchitis. Exposure to high levels may result in burns, with perforation of the nasal septum, abdominal pain, nausea and vomiting.
STOT – repeated exposure	Chronic exposure to respirable silica may result in pulmonary fibrosis (silicosis). However, given the low levels present, over exposure is not anticipated.
Aspiration	This product does not present an aspiration hazard.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

The aquatic toxicity of calcium oxide is due to its alkalinity.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

Calcium oxide does not bioaccumulate in the environment.

12.4 Mobility in soil

Not available, but considered low.

12.5 Other adverse effects

No information provided.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal	For small amounts; VERY SLOWLY, hydrate (add water) and then neutralise with dilute hydrochloric acid (e.g. 6N HCl) to pH of 7-8. Dilute and flush to sewer or landfill. For large amounts material can be readily recycled. Contact the manufacturer/supplier for additional information (if required).
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD (IN ACCORDANCE WITH IATA ONLY)

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	None Allocated	None Allocated	1910
14.2 Proper Shipping Name	None Allocated	None Allocated	CALCIUM OXIDE
14.3 Transport hazard class	None Allocated	None Allocated	8
14.4 Packing Group	None Allocated	None Allocated	III

14.5 Environmental hazards No information provided

14.6 Special precautions for user

Hazchem code None Allocated

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes Xi Irritant

Risk phrases R37/38 Irritating to respiratory system and skin.
R41 Risk of serious damage to eyes.

Safety phrases S22 Do not breathe dust.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S38 In case of insufficient ventilation, wear suitable respiratory equipment.

Inventory listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this 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 a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PRODUCT NAME QUICKLIME**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Revision history

Revision	Description
2.0	Converted to GHS
1.0	Initial Release

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

The information presented herein is based on data considered to be accurate as of the date of preparation of this SDS. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorisation given or implied to practice any patented invention without a licence. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, without a risk assessment for safe use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the products.

This Safety Data Sheet (SDS) applies only to the formulated material as supplied by Boral Cement. It does not apply where the formulation has been altered. In this case a new SDS may be required to reflect the modified material. Contact Boral Cement for further information.

Printed documents are uncontrolled. Refer to www.boral.com.au regularly for a more recent copy of the SDS where it exists.

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Revision: 2
SDS date: 21 January 2015

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