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
Pictogram(s):
- DANGER

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.
### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

#### 3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EC Number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM OXIDE</td>
<td>1305-78-8</td>
<td>215-138-9</td>
<td>&gt;88%</td>
</tr>
<tr>
<td>QUARTZ (CRYSTALLINE SILICA)</td>
<td>14808-60-7</td>
<td>238-878-4</td>
<td>&lt;3%</td>
</tr>
<tr>
<td>CALCIUM CARBONATE</td>
<td>471-34-1</td>
<td>207-439-9</td>
<td>&lt;3%</td>
</tr>
<tr>
<td>ALUMINIUM OXIDE</td>
<td>1344-28-1</td>
<td>215-691-6</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>MAGNESIUM OXIDE</td>
<td>1309-48-4</td>
<td>215-171-9</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>IRRON OXIDE (FE2O3)</td>
<td>1309-37-1</td>
<td>215-168-2</td>
<td>&lt;0.5%</td>
</tr>
</tbody>
</table>

#### 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. If skin irritation occurs: Get medical advice/ attention.

**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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium oxide (a)</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>10</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Calcium carbonate (Limestone, Marble,</td>
<td></td>
<td></td>
<td>10</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Whiting)</td>
<td>SWA (AUS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Iron oxide fume (Fe2O3) (as Fe)</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>5</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Magnesium oxide (fume)</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>10</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Quartz (respirable dust)</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>0.1</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
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

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

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)

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

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.
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 assume 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.

Prepared by
Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au

Revision: 2
SDS date: 21 January 2015

[ End of SDS ]