Safety Data Sheet

Infosafe No™ 1CH1O Issue Date: February 2019 RE-ISSUED by CHEMSUPP

Product Name: CALCIUM OXIDE

Classified as hazardous

1. Identification

GHS Product Identifier CALCIUM OXIDE

Company Name CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

Address 38 - 50 Bedford Street GILLMAN
SA 5013 Australia

Telephone/Fax Number Tel: (08) 8440-2000
Fax: (08) 8440-2001

Emergency phone number CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

Recommended use of the chemical and restrictions on use

Refractory, flux in steel manufacture, pulp and paper, manufacture of calcium carbide and other calcium salts, sulfur dioxide removal from stack gases, sewerage treatment (phosphate removal, pH control), water treatment, neutralisation of acid waste effluents, insecticides, fungicides, dehairing of hides, sugar refining, poultry feeds, food additive, glass manufacture, sodium carbonate by Solvay process, building and construction materials (bricks, plaster, mortar, stucco and cement), aluminium and magnesium manufacture, flotation of non-ferrous ores, drilling fluids, lubricants, carbon dioxide absorbant and laboratory reagent.

Other Names

Name Burnt lime, Unslaked lime, Quicklime, Fluxing lime, Lime, Caustic lime

Product Code CL625

Other Information

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded.

This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture

Eye Damage/Irritation: Category 1
Skin Corrosion/Irritation: Category 2
Specific Target Organ Toxicity - Single Exposure Category 3 (respiratory tract irritation)
DANGER

Hazard Statement (s)

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

Pictogram (s)

Precautionary statement – Prevention

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.

Precautionary statement – Response

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
CS: 1.7.2

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Precautionary statement – Storage
P310 Immediately call a POISON CENTER or doctor/physician.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary statement – Disposal
P501 Dispose of contents/container to an approved waste disposal plant.

Other Information
This substances is classified as Dangerous Goods for air transport only.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical Characterization</th>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
<th>Hazard Symbol</th>
<th>Risk Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredients</td>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>90-100 %</td>
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<tr>
<td></td>
<td>Impurities include calcium carbonate and magnesium, iron and aluminum oxides.</td>
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</tbody>
</table>

4. First-aid measures

Inhalation
If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.

Ingestion
Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Skin
Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice/attention depending on the severity.

Eye contact
Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.

First Aid Facilities
Maintain eyewash fountain and safety shower in work area.

Advice to Doctor
Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information
For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Specific Methods
When material is not involved in fire. Do NOT use water on material itself.

Small fire: Use CO2, dry chemical, dry sand or flooding quantities of water. If safe to do so, move undamaged containers from the fire area.

Large fire: Flood fire with large quantities of water while knocking down vapours with water fog. If insufficient water supply, knock down vapours only.

Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.

Specific hazards arising from the chemical
Does not burn but may produce poisonous and/or corrosive fumes upon heating. Heat of reaction may be enough to ignite combustible materials. Will react with water (some violently) releasing flammable, poisonous and/or corrosive gases and runoff. Contact with metals may evolve flammable hydrogen gas. Fire will produce irritating, poisonous and/or corrosive gases. Runoff may pollute waterways. May be transported in a molten form. Containers may explode when heated or contaminated with water.

Hazchem Code
2X

Precautions in connection with Fire
Wear SCBA and acid-resistant chemical splash suit. Structural firefighter's uniform is NOT effective for these materials.

6. Accidental release measures

Spills & Disposal
Do not touch or walk through this product. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Vapour-suppressing foam may be used to control vapours - Water spray may be used to knock down or divert vapour clouds.

DO NOT GET WATER INSIDE CONTAINERS.

Small Spill: Cover with DRY earth, sand or other non-combustible material followed by a plastic sheet to minimize spreading or contact with rain. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal.

Personal Precautions
Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
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Personal Protection
Use personal protective equipment listed in Section 8.

Clean-up Methods - Small Spillages
Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

Clean-up Methods - Large Spillages
Seek expert advice on handling and disposal.

Environmental Precautions
Prevent from entering into drains, ditches, rivers or the sea.

7. Handling and storage
Precautions for Safe Handling
Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry place. Store in well ventilated area. Store away from heat. Keep containers closed at all times. Aluminium containers should not be used for moist material.

Corrosiveness
Solutions may corrode aluminium.

Storage Regulations
Refer Australian Standard AS 3780 - 1994 ‘The storage and handling of corrosive substances’.

8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Occupational exposure limit values</th>
<th>Name</th>
<th>STEL</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium oxide</td>
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Other Exposure Information
These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

A time weighted average (TWA) has been established for Calcium oxide (Work Safe Australia) of 2 mg/m3. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.

Appropriate engineering controls
In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment.

Respiratory Protection
Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

Eye Protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Hand Protection
Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. RECOMMENDATION: Excellent: Nitrile, Neoprene, PVC. Poor: NR latex.

Personal Protective Equipment
Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

Footwear
Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection
Clean clothing or impervious, protective clothing should be worn, preferably with an apron, to prevent skin contact. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hygiene Measures
Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties
Classified as hazardous

Form: Solid
Appearance: White or colourless lumps or granular powder. Occasionally has a yellowish or brownish tint, due to the presence of iron.
Odour: Odourless.
Melting Point: 2580 °C
Boiling Point: 2850 °C
Solubility in Water: Slightly soluble (1.65 g/l @ 20 °C) - rigorous reaction: reacts to form calcium hydroxide with evolution of heat.
Specific Gravity: ~ 12.6 (saturated solution, H2O, 20 °C)
pH: ~ 12.6 (saturated solution, H2O, 20 °C)
Flammability: Non combustible material.
Molecular Weight: 56.08

10. Stability and reactivity
Chemical Stability: Stable under ordinary conditions of use and storage. Hygroscopic
Conditions to Avoid: Exposure to moisture. Exposure to air. Incompatibles.
Incompatible Materials: Air, acids, alcohols, aluminium, ammonium compounds, boric oxide, boron, chlorine, fluorine, halogenated compounds, hydrofluoric acid, hydrogen fluoride, organic materials, metals, moisture, strong bases, phosphorus pentoxide, trifluoride, and water.
Possibility of hazardous reactions: Calcium oxide combined with water reacts to form calcium hydroxide whilst generating heat. Contact with metals may emit flammable hydrogen gas.
Hazardous Polymerization: Will not occur.

11. Toxicological Information
Ingestion: Corrosive. May attack the esophagus. May result in abdominal pain, and cramps, nausea, vomiting, diarrhoea and collapse. May cause serious alkali burns in mouth, throat, oesophagus and stomach. Swallowing may become painful and difficult. A burning pain extends down the oesophagus to the stomach. May affect respiration. Vomitus is thick and slimy due to mucous. Later is may contain blood shread of mucous membrane due to necrosis.
Inhalation: Inhalation of dust is highly irritating and possibly corrosive to the upper respiratory tract. May cause burning sensation, sore throat, sneezing, coughing, choking, dyspnea, laboured breathing, possibly burns with perforation of the nasal septum and variable symptoms of headache, dizziness and weakness. Intense exposures may result in tightness in the chest, and delayed pulmonary edema. The solubility of the substance allows further penetration that may continue for several days.
Skin: Causes skin irritation. Symptoms may include dry skin, redness, burning sensation and pain. During prolonged skin contact the substance can penetrate the unprotected skin slowly, producing soft, necrotic, deeply penetrating areas on contact. The solubility allows further penetration that may continue for several days. The extent of damage depends on duration of contact.
Eye: Severe eye irritant. Corrosive. May damage eye tissues. May cause redness, tearing, blurred vision, severe deep burns and pain. Direct contact with the solid or aqueous solutions may cause conjunctival edema and corneal destruction which can lead to and may cause blindness.
Carcinogenicity: No evidence of carcinogenic properties.
Chronic Effects: Repeated or prolonged skin contact may result in dermatitis. Chronic inhalation of dust may cause inflammation of the respiratory passages, ulcers of the mucous membranes, possible perforation of the nasal septum, bronchial irritation with chronic cough. Symptoms of overexposure include pneumonia and silicosis.
Mutagenicity: No evidence of mutagenic properties.

12. Ecological information
Ecotoxicity: Harmful effect due to pH shift. A harmful effect on aquatic organisms cannot be excluded in the event of improper handling or disposal.
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Information on
Ecological Effects
Acute Toxicity - Fish

Toxic to aquatic life.

LC50 (Cyprinus carpio): 1070 mg/l/96h.

13. Disposal considerations
Disposal
Considerations
Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and
dispersed of according to relevant local, state and federal government regulations.

14. Transport information
Transport
Information
Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous
Goods by Road and Rail (ADG); by the IATA Air Transport Dangerous Goods Regulations; or by the

This substance is classified as dangerous for air transport only. See ICAO Rules or IATA Regulations.

Hazchem Code
2X

UN Number (Air
Transport, ICAO)
1910

IATA/ICAO Packing
Group
III

IATA/ICAO Hazard
Class
8

IATA/ICAO Proper
Shipping Name
CALCIUM OXIDE

15. Regulatory information
Regulatory
Information
Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation
2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Poisons Schedule
Not Scheduled

Hazard Category
Irritant

16. Other Information
Literature
References
'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons,
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous
Chemicals', 2011.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Chemical Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances
(2011)'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational

Contact
Person/Point
Paul McCarthy Ph. (08) 8440 2000

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Empirical Formula &
Structural Formula
CaO

...End Of MSDS...
Product Name: CALCIUM OXIDE

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