

Calcium Oxide

SECTION 1. IDENTIFICATION

Product Identifier	Calcium Oxide
Other Means of Identification	Burnt lime, Calcium monoxide, Quicklime
Product Code(s)	CA3810
Product Family	Inorganic Solid
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	0263

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Skin corrosion - Category 1; Serious eye damage - Category 1; Specific target organ toxicity (single exposure) - Category 3; Specific target organ toxicity (repeated exposure) - Category 2

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Causes severe skin burns and eye damage.
Causes damage to organs through prolonged or repeated exposure.
May cause respiratory irritation.
Fatal if swallowed.

Precautionary Statement(s):

Do not allow contact with air.
Do not allow contact with water.
Do not breathe dust/fume/gas/mist/vapours/spray.
Do not get in eyes, on skin, or on clothing.
Wash hands and skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of water/

If skin irritation occurs: Get medical advice/attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTRE or doctor.

Store locked up.

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Calcium oxide	1305-78-8	90 - 100	Burnt lime, Calcium monoxide

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor.

Skin Contact

Quickly and gently blot or brush away excess chemical. Immediately rinse skin with lukewarm, gently flowing water for at least 60 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Avoid direct contact. Wear chemical protective gloves if necessary. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 60 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a Poison Centre or doctor. Specific treatment is required.

Ingestion

Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Rinse mouth with water.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

If on skin: contact can cause pain, redness, burns, and blistering. Permanent scarring can result. If in eyes: contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

DO NOT use carbon dioxide, or other agents that smother the flames.

Product Identifier: Calcium Oxide

Date of Preparation: December 08, 2015

Page 02 of 06

Specific Hazards Arising from the Product

Forms corrosive chemicals on contact with water. Closed containers may rupture violently when heated releasing contents.

Corrosive chemicals. Calcium Oxide.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Knock down vapours or gases with water fog or fine water spray. Dike and recover contaminated water for appropriate disposal. Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, flammable or explosive atmosphere, sufficient oxygen.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Store recovered product in suitable containers that are: covered, corrosion-resistant.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Obtain special instructions before use. Do not breathe in this product. Do not get in eyes, on skin or on clothing. Avoid generating dusts. Only use where there is adequate ventilation. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Prevent accidental contact with incompatible chemicals. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, dry, separate from incompatible materials (see Section 10: Stability and Reactivity), secure and separate from work areas. Keep amount in storage to a minimum. Store in the original, labelled, shipping container. Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Protect product from contact with water, including humidity. Prevent rainwater and ground water from reaching storage area. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Calcium oxide	2 mg/m3		5 mg/m3			

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use a corrosion-resistant exhaust ventilation system separate from other ventilation systems. Exhaust directly to the outside, taking any necessary precautions for environmental protection. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Product Identifier: Calcium Oxide

Date of Preparation: December 08, 2015

Page 03 of 06

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

No specific guidelines are available. Contact chemical manufacturer/supplier for advice.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with N100, R100, or P100 filter(s), wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Basic Physical and Chemical Properties**

Appearance	White crystals.
Odour	Odourless
Odour Threshold	Not available
pH	12.5 - 12.8 (saturated solution)
Melting Point/Freezing Point	2570 °C (4658 °F) (melting)
Initial Boiling Point/Range	2850 °C (5162 °F)
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not applicable
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	3.25 - 3.38 at 20 °C
Solubility	0.185 g/100 mL (Slightly soluble) in water; Soluble in all proportions in acids (e.g. acetic acid).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not applicable
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not applicable (kinematic); Not applicable (dynamic)
Other Information	
Physical State	Solid

SECTION 10. STABILITY AND REACTIVITY**Reactivity**

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Water, moisture or humidity. Generation of dust. Exposure to air.

Incompatible Materials

Strong acids (e.g. hydrochloric acid), water, inorganic acids (e.g. hydrofluoric acid), alcohols (e.g. ethanol).

Hazardous Decomposition Products

Corrosive chemicals. calcium Oxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

LC50: No information was located.

LD50 (oral): No information was located.

LD50 (dermal): No information was located.

Skin Corrosion/Irritation

Human experience shows skin corrosion. Contact can cause pain, redness, burns, and blistering. Permanent scarring can result. Reacts with water to form corrosive material.

Serious Eye Damage/Irritation

Human experience shows serious eye damage. May irritate or burn the eyes. Permanent damage including blindness may result.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause severe nose and throat irritation.

Skin Absorption

Not harmful.

Ingestion

May cause severe irritation or burns to the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Dermatitis. Symptoms may include dry, red, cracked skin (dermatitis). Irritation of the respiratory system. May cause respiratory tract injury.

Respiratory and/or Skin Sensitization

Not known to be a skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Calcium oxide	Not evaluated	Not designated	Not Listed	

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1910	Calcium Oxide	8	III
US DOT	UN1910	Calcium Oxide	8	III

Environmental Hazards Environmentally Hazardous Substance

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating Health - 3 Flammability - 0 Instability - 1

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

Date of Preparation December 08, 2015

Date of Last Revision May 04, 2016

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). GRAYMONT database.

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