



GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table border="1"> <tr><td>Hazardous</td><td style="text-align: center;">3</td></tr> <tr><td>Flame</td><td style="text-align: center;">0</td></tr> <tr><td>Reactivity</td><td style="text-align: center;">2</td></tr> </table>	Hazardous	3	Flame	0	Reactivity	2	 See Section 15.
Hazardous	3							
Flame	0							
Reactivity	2							

Section 1. Chemical Product and Company Identification		<i>Page Number: 1</i>
Common Name/ Trade Name	Calcium oxide	CAS# 1305-78-8
Manufacturer	ProChem, Inc. 826 Roosevelt Rd. Rockford, IL 61109	RTECS EW3100000 TSCA TSCA 8(b) inventory: Calcium oxide
Commercial Name(s)	Not available.	CI# Not applicable.
Synonym	Quicklime; Lime	IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 815-398-1788
Chemical Name	Calcium oxide	
Chemical Family	Alkalino terreous metal salt. (Contains Be, Mg, Ca, Sr, Ba or Ra) (Salt.)	
Chemical Formula	CaO	
Supplier		

Section 2. Composition and Information on Ingredients					
		<i>Exposure Limits</i>			
Name	CAS #	TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	% by Weight
1) Calcium oxide	1305-78-8	5			100
Toxicological Data on Ingredients	Calcium oxide LD50: Not available. LC50: Not available.				

Section 3. Hazards Identification	
Potential Acute Health Effects	<p>Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.</p>

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Potential Chronic Health Effects	<p>CARCINOGENIC EFFECTS: Not available.</p> <p>MUTAGENIC EFFECTS: Not available.</p> <p>TERATOGENIC EFFECTS: Not available.</p> <p>DEVELOPMENTAL TOXICITY: Not available.</p> <p>Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.</p>
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Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Not applicable.
Special Remarks on Fire Hazards	Chlorine Trifluoride reacts violently with calcium oxide producing flame.
Special Remarks on Explosion Hazards	Not available.

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Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.
Large Spill	Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions	Keep container dry. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as organic materials, acids, moisture.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	TWA: 2 (mg/m ³) from ACGIH (TLV) [United States] TWA: 2 (mg/m ³) [Canada] TWA: 5 (mg/m ³) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid. (Crystalline solid.)	Odor	Odorless.
Molecular Weight	56.08 g/mole	Taste	Not available.
pH (1% soln/water)	10 [Basic.]	Color	White.
Boiling Point	2850°C (5162°F)		
Melting Point	2572°C (4661.6°F)		
Critical Temperature	Not available.		
Specific Gravity	3.33 (Water = 1)		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	Not available.		

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Solubility	Soluble in acids, glycerol, sugar solution. Practically insoluble in alcohol. Very slightly soluble in cold water, hot water. Insoluble in methanol, diethyl ether, n-octanol.
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Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatible materials
Incompatibility with various substances	Reactive with organic materials, acids, moisture.
Corrosivity	Not available.
Special Remarks on Reactivity	Absorbs CO ₂ from air. Reacts with fluorine to evolve much heat and some light. Reacts with water. Addition of water to Quicklime has generated temperatures as high as 800 C. Some reports describe the reaction as violent. In water, calcium oxide forms calcium hydroxide generating a large quantity of heat. Ignition of sulfur, gunpowder, wood, and straw by heat of Quicklime-water reaction has been reported. Liquid hydrofluoric acid and calcium oxide react very violently. Calcium reacts with phosphorous pentoxide extremely violently when initiated by local heating. Lime becomes incandescent when heated to near its melting point (2500 C).
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	Not available.
Other Toxic Effects on Humans	Very hazardous in case of skin contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive).
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation and burns. Eyes: Causes eye irritation and burns. Inhalation: Material is irritating to respiratory tract and mucous membranes and upper respiratory tract. Ingestion: May be harmful if swallowed. Irritates gastrointestinal tract with possible burns. Swallowing may become painful, and difficult. A burning pain extends down the esophagus to the stomach. May affect respiration. Vomitus is thick and slimy due to mucous. Later it may contain blood shred of mucous membrane due to necrosis.

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Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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Section 14. Transport Information

DOT Classification	Class 8: Corrosive material
Identification	: Calcium Oxide UNNA: 1910 PG: III
Special Provisions for Transport	Not available.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations	Connecticut hazardous material survey.: Calcium oxide Illinois toxic substances disclosure to employee act: Calcium oxide Rhode Island RTK hazardous substances: Calcium oxide Pennsylvania RTK: Calcium oxide Minnesota: Calcium oxide Massachusetts RTK: Calcium oxide California Director's List of Hazardous Substances: Calcium oxide TSCA 3(b) inventory: Calcium oxide TSCA 8(a) chemical risk rules: Calcium oxide		
California Proposition 65 Warnings	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.		
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.		
Other Classifications	WHMIS (Canada)	CLASS E: Corrosive solid.	
	DSCL (EEC)	R38- Irritating to skin. R41- Risk of serious damage to eyes.	S2- Keep out of the reach of children. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S39- Wear eye/face protection. S46- If swallowed, seek medical advice immediately and show this container or label.

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Calcium oxide

HMIS (U.S.A.)

Health Hazard	3
Fire Hazard	0
Reactivity	2
Personal Protection	i

National Fire Protection Association (U.S.A.)

Health



Flammability

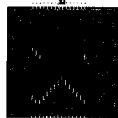
Reactivity

Specific hazard

WHMIS (Canada)
(Pictograms)



DSCL (Europe)
(Pictograms)



TDG (Canada)
(Pictograms)



ADR (Europe)
(Pictograms)



Protective Equipment



Gloves.



Synthetic apron.



Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information**References**

-Hawley, G.G., The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.
-Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec.
-SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.
-The Sigma-Aldrich Library of Chemical Safety Data, Edition II.
-Guide de la loi et du règlement sur le transport des marchandises dangereuses au Canada. Centre de conformité international Ltée. 1986.

Other Special Considerations

Not available.

PREPARATION DATE: JULY 2005

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, ProChem Chemicals, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.