Material Safety Data Sheet
May be used to comply with
OSHA's Hazard Communication Standard
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY Quicklime, CaO, Lime
Calcium oxide (all sizes including granular) (UN1910)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name and Address
Chemical Lime Company
3724 Hulen Street
Fort Worth, Texas 76107

Emergency Telephone Number
Chemtrec 800-424-9300

Information Phone Number
817-732-8164

Date Prepared
3/30/2006

Section II - Hazardous Ingredients/Identity Information

Hazardous Components	CAS	Common Name	OSHA PEL	ACGIH TLV	Other Limits	% (optional)
Calcium oxide	1305-78-8	Quicklime	5 mg/m3	2 mg/m3	5 mg/m3	>90%
Magnesium oxide	1309-48-4	Periclase	10 mg/m3	10 mg/m3	6 mg/m3	<5%
Calcium carbonate	1317-65-3	Limestone	15 mg/m3	10 mg/m3	6450 mg/kg	<3%
Silicon dioxide	14808-60-7	Quartz	*see note below	0.025 mg/m3	4 mg/m3	<2%

**SiO2 OSHA PEL: 10 mg/m3 divided by (the percentage of silica in the dust plus 2) (respirable)*

Section III - Physical/Chemical Characteristics

Boiling Point	2850 °C	**Melting Point**	2570 °C	**Specific Gravity**	1.6 - 2.8 g/cc
Vapor Pressure (mm Hg)	N.A.	**Vapor Density**	N.A.	**Evaporation Rate**	N.A.

Solubility in Water Reactive with water to produce $Ca(OH)_2$ with large amounts of heat. pH = 12.4@25°C

Appearance and Odor White or gray lumps or powder, odorless

Section IV - Fire and Explosion Hazard Data

Flash Point	LEL/UEL	Flammable Limits	Extinguishing Media
N.A.	N.A.	N.A.	Not Combustible -- Use extinguishing agent for surrounding fire

Special Firefighting Procedures/Unusual Fire and Explosion Hazards
In large amounts, calcium oxide will react with water to produce heat and possibly steam.
Flood with excess water to remove heat.

Section V - Reactivity Data

Stability	Conditions to Avoid (stability - related)
Unstable	Reacts with water to form $Ca(OH)_2$ and large amounts of heat. Reacts with CO_2 to form $CaCO_3$.

Incompatibility (Materials to Avoid)
Acids: Reacts vigorously and produces heat. Maleic Anhydride: May react explosively. Nitro Organic Compounds: May react to form explosive salts. Phosphorous: May form flammable products when heated. Aluminum: May react in presence of water to form hydrogen gas.

Hazardous Polymerization/Hazardous Decomposition of Byproducts Will not occur (none)

Section VI - Health Hazard Data

Route(s) of Entry: Inhalation, Ingestion

Health Hazards (Acute and Chronic)
Avoid skin and eye contact as irritation will occur. Contact lenses should not be worn when working with lime products. Inhalation can cause coughing, sneezing or breathing problems. Material in contact with wet skin could cause severe irritation and/or burning.

Carcinogenicity: **OSHA?** SiO_2 **NTP/IARC Monographs?** SiO_2

Respirable crystalline silica from occupational sources is classified by IARC as a Group I Carcinogen.
California Proposition 65: Silica is on the Governor's Proposition 65 list. Components used in this product may contain trace amounts of inherent naturally occurring elements (such as, but not limited to arsenic, cadmium) that are on the Governor's Proposition 65 list.

Section VI - Health Hazard Data (continued)

Signs and Symptoms of Exposure

Skin or eye irritation; coughing or breathing problems.

Medical Conditions Generally Aggravated by Exposure

Respiratory problems, asthma, dermatitis or skin or eye sensitivity.

Emergency and First Aid Procedure

Flush contaminated area with excess water. If eye contact , rinse eye with eye wash solution or excess water and seek medical attention immediately.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled

Protect skin and eyes from contact and avoid inhalation of dust. If material is dry pick up and keep away from acids or organic materials. Place in steel drums. If wet add excess water to remove heat and place in steel drums.

Waste Disposal Method

Carefully add water in excess of 20 parts water to 1 part lime and flush to sewer. Consult local, state, or federal regulations.

Precautions to be Taken in Handling and Storage

Store in tightly closed containers and keep dry and away from acids or other incompatible substances.
Do not store or ship in aluminum containers.

Shipping and Handling Restrictions for Quicklime

When being transported by air, calcium oxide is classified in the Department of Transportation (DOT) regulations as a hazardous material. Because express carriers (for example, Federal Express, Airborne Express, and United Parcel Service) ship by air, quicklime presented to these carriers for shipment should be packaged, marked, and labeled accordingly, and be accompanied by the appropriate shipping documentation. Only personnel trained and certified under applicable DOT Hazardous Materials Regulations (contained in Title 49 of the Code of Federal Regulations) may prepare quicklime for air transport. For additional information, contact the DOT website, www.text-trieve.com/dotrspa, or the Research and Development Department of Chemical Lime Company at (817)732-8164.

Other Precautions

Keep material dry. If material gets wet, flood with excess water to remove heat. Avoid eye contact and breathing dust.

NFPA Rating:	HEALTH: 3	FLAMMABILITY: 0	REACTIVITY: 1
HMIS Rating:	HEALTH: 2	FLAMMABILITY: 0	REACTIVITY: 1
WHMIS Rating:	D2A, E		

Section VIII - Control Measures

Respiratory Protection (Specify Type)

Dust masks meeting the NIOSH N95 rating are sufficient for casual exposure. (42 CFR)

Ventilation	**Local Exhaust** Vent to dust collector	**Special**	Do not dispose of dust with combustible materials.
	Mechanical (General) Vent to meet TLV requirements	**Other**	

Protective Gloves	**Other Protective Clothing or Equipment**
Dry cloth or leather gloves	Full clothing to cover arms and legs, safety glasses or face shield.

Work/Hygienic Practices

Eye wash and shower station should be readily available.

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References: Sax, N.I. & R.J. Lewis Sr. (1989) "Dangerous Properties of Industrial Materials", New York: Van Nostrand Reinhold Co. Ltd.
Lewis, R.J. (1997) "Hazardous Chemicals Desk Reference", New York: Van Nostrand Reinhold Co. Ltd. KSA