




Section 1: Product & Company Information

Product Name: Quick Lime
Chemical Family: Calcium Oxide
Product Use: Drilling Fluid Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-A	Materials Causing Other Toxic Effects - Very Toxic	Toxic effects
	E	Corrosive Materials	Corrosive

Manufacturer Name: HiTech Fluid Systems
Address: #1800, 505 3rd Street SW, Calgary, AB T2P 3E6 Canada
General Phone Number: (403)547-2906
General Fax Number: (403)547-3129
MSDS Revision Date: June 1, 2008
Supercedes: June 23, 2005
Prepared By: HiTech Fluid Systems
Preparer's Phone: (403)547-2906

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Crystalline Silica, Quartz	>0.1%	14808-60-7
Calcium Oxide	>90%	1305-78-8

Section 3: Hazards Identification

Emergency Overview: Consult a doctor for all exposures, except minor instances of inhalation.

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: Yes
Inhalation: Yes
Ingestion: Yes

Potential Health Effects:

Skin:	Irritation, burning, and corrosion of mucous and skin. Dehydration of tissues.
Eye:	Severe eye irritant. Intense watering of the eyes, possible lesions. Possible blindness when exposed for prolonged period. (Draize >80)
Inhalation:	If inhaled in form of dust, nose and throat irritation, coughing, sneezing, inflammation of respiratory tract, ulceration and perforation of nasal septum, bronchitis, possible pneumonia.
Ingestion:	If ingested, possible burning and edema of digestive tracts, abundant salivation, difficulties in swallowing and breathing, vomiting blood, drop in blood pressure (indicates perforation of esophagus or stomach.)

Section 4: First Aid Measures

Eye Contact:	Immediately rinse contaminated area with gently running lukewarm water for at least 15 minutes. In all cases, seek immediate medical attention.
Skin Contact:	Carefully brush the contaminated body surfaces in order to remove all traces of lime. Remove all clothing. Rinse contaminated areas with lukewarm water for 15 minutes. Seek medical attention.
Inhalation:	Remove patient to fresh air. If breathing has stopped, administer artificial respiration. Seek immediate medical attention.
Ingestion:	DO NOT induce vomiting. If patient is conscious, administer 300ml of water, followed by diluted vinegar (1 part vinegar to 2 parts water) or fruit juice to neutralize the alkali. Seek immediate medical attention.
Other First Aid:	Consult a doctor for all exposures, except minor instances of inhalation.

Section 5: Fire Fighting Measures

Conditions Of Flammability:	Non-flammable
Extinguishing Media:	Avoid using water, unless necessary for other materials, in which case, flood to absorb heat generated. (Contact with water will evolve heat and could cause paper and cardboard to ignite.)
Flashpoint:	N/A
Upper Flammable Limit:	N/A
Lower Flammable Limit:	N/A
Autoignition Temperature:	N/A
Protective Equipment:	Firefighters must wear appropriate breathing apparatus and clothing.
Sensitivity To Impact or Static Discharge:	N/A
Hazardous Combustion Products:	N/A

Fire Comment:

Section 6: Accidental Release Measures

Personnel Precautions: Use proper personal protective equipment as listed in section 8.

Spill Cleanup Measures: Use appropriate safety equipment. Small spills, sweep up and put into approved DOT containers for disposal or re-use. Large spills, do not allow to enter waterways, sweep or shovel into approved DOT containers for re-use or disposal.

Section 7: Handling & Storage

Handling: Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.

Storage: Store in a cool, dry, well ventilated place. Keep container tightly closed and away from incompatible materials.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.

Personal Protective Equipment: Chemical-resistant clothing is recommended, including gloves, apron, and goggles. Do not wear contact lenses when handling this material.

Respiratory Protection: Recommend NIOSH-approved dust respirator.

Exposure Limits: Not determined

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Crystalline Silica, Quartz	0.05 mg/m ³	0.1 mg/m ³
Calcium Oxide	2	5

Section 9: Physical & Chemical Properties

Physical State: Solid

Odour And Appearance: White powder; odourless

Odour Threshold: N/A

Boiling Point: 2850°C

Evaporation Rate: N/A

Melting Point: 2580°C

Freezing Point: N/A

Specific Gravity:	3.2-3.4
Solubility in Water:	0.125g/100g Sat.soln
Vapour Density:	N/A
Vapour Pressure:	N/A
pH:	12.45
Flash Point:	N/A
Volatility (% by volume):	N/A
Coefficient of Water to Oil distribution:	N/A

Section 10: Stability & Reactivity

Chemical Stability:	No
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	Absorbs moisture and carbon dioxide in air to form calcium hydroxide and calcium carbonate.
Incompatible Substances:	Boron tri-flouride, chlorine tri-fluoride, ethanol, fluorine, hydrogen flouride, phosphorus pentoxide, water and acids (violent reaction with generating heat and possible explosion in confined area)
Special Decomposition Products:	None

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
Crystalline Silica, Quartz	Not Available	Not Available	Not Available
Calcium Oxide	Not Available	Not Available	Not Available

Effects Of Acute Exposure:	Not determined
Effects Of Chronic Exposure:	Contact dermatitis
General Irritancy Of Product:	Severe to moist tissue
Sensitization:	Not determined
Carcinogenicity:	Could contain crystalline silica, a known carcinogen.
Reproductive Toxicity:	N/A
Teratogenicity:	N/A
Embryotoxicity:	Not Available
Mutagenicity:	N/A
Synergistic Products:	N/A

Section 12: Ecological Information

Ecotoxicity: Not Available

Environmental Fate: Not Available

Section 13: Disposal Considerations

Waste Disposal: All waste should be disposed of according to federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.

Section 14: Transport Information



TDG Classification: Not regulated

DOT UN Number: Not regulated

Shipping Notes: No special requirements

Section 15: Regulatory Information

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This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: June 1, 2008

MSDS Revision Notes:

MSDS Author: HiTech Fluid Systems

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