



**SECTION 1: IDENTIFICATION**

PRODUCT IDENTIFIER: **Processed Lime**  
OTHER MEANS OF IDENTIFICATION: **Quicklime; Calcium Oxide**  
RECOMMENDED USE: **Oilwell drilling fluid additive**  
RESTRICTIONS ON USE: **None known**  
SUPPLIER IDENTIFIER: **Prairie Mud Service**  
**738 6th Street**  
**Estevan, SK S4A 1A4**  
**306-634-3411**  
EMERGENCY PHONE NUMBER: 306-634-3411

**SECTION 2: HAZARD IDENTIFICATION**

CLASSIFICATION: Skin corrosion/irritation – Category 2  
Serious eye damage/eye irritation – Category 1  
Carcinogenicity (inhalation) – Category 1A  
STOT (single exposure) (respiratory tract irritation) – Category 3  
STOT (repeated exposure) – Category 1

LABEL SYMBOLS:



SIGNAL WORD:

**DANGER**

CLASSIFICATION INFORMATION:

Causes serious eye damage.  
Causes skin irritation.  
May cause cancer if inhaled.  
May cause respiratory irritation.  
Causes damage to organs through prolonged or repeated exposure.

PRECAUTIONARY STATEMENTS:

Obtain special instruction before use.  
Avoid breathing dust.  
Wash hands, face and exposed skin thoroughly after handling.  
Use only outdoors or in well-ventilated area.  
Wear protective gloves/clothing and eye/face protection.  
IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
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 CENTER or doctor.  
Store locked up in a well-ventilated place.  
Dispose of contents/container in accordance with local, provincial and federal requirements.  
OTHER HAZARDS: None known.



## SAFETY DATA SHEET PROCESSED LIME

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Calcium Oxide	1305-78-8	90-100
Crystalline silica, quartz	14808-60-7	0.0001-1.0

Any concentration shown as a range is due to batch variation.

### SECTION 4: FIRST AID MEASURES

SKIN CONTACT:	Quickly and gently brush away excess chemical. Thoroughly flush with running water while removing contaminated clothing. If large area exposed or irritation or burning persists obtain medical attention.
EYE CONTACT:	Flush with gently flowing warm water for minimum 30 minutes, or until irritation ceases; hold eyelids open to ensure thorough flushing. Neutral saline may be used as soon as it is available. Obtain medical attention when flushing is complete and no further irritation is felt, or permanent damage may result.
INGESTION:	Do not induce vomiting. Obtain immediate medical attention. If immediate medical attention is not available; rinse mouth thoroughly with water then give one glass of water followed by one glass of milk if available. If spontaneous vomiting occurs keep head below hips to prevent aspiration of the vomit into the lungs. Never give anything by mouth if patient is unconscious, rapidly losing consciousness or convulsing.
INHALATION:	Move to area free from dust. Obtain immediate medical attention. If victim is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

### SECTION 5: FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:	Use media appropriate for packaging and surrounding materials.
UNSUITABLE 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 ignition of paper, cardboard, etc.
SPECIFIC FIRE HAZARDS:	Bulk powder calcium oxide may heat spontaneously when damp. Humidity or contact with water may generate sufficient heat to ignite flammable and combustible materials.
HAZARDOUS COMBUSTION PRODUCTS:	Not available.
SPECIAL PROTECTIVE EQUIPMENT & PRECAUTIONS:	Self-contained breathing apparatus and chemical resistant clothing required for firefighting personnel.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use appropriate safety equipment. Keep spilled material away from organic materials and other incompatible materials. Do not use floor sweep or sawdust to absorb this product, or solutions of this product, as sufficient heat may be generated to self-ignite (Danger: Ignition may be delayed).

#### METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP

Vacuum up, if possible, to avoid generating airborne dust. Collect uncontaminated material for repackaging. Collect contaminated material in approved containers for disposal. Flush spill area with copious quantities of water.



### SECTION 7: HANDLING AND STORAGE

#### PRECAUTIONS FOR SAFE HANDLING

This product is corrosive. Wear appropriate protective equipment. Avoid creating dust. Avoid breathing dust. Avoid skin and eye contact. After handling lime, employees must shower. If exposed daily, use oil, Vaseline, silicone base crème etc. to protect exposed skin, particularly neck, face and wrists. Launder contaminated clothing before reuse. Discard contaminated leather articles. Clean spills promptly to avoid making dust.

#### CONDITIONS FOR SAFE STORAGE & INCOMPATIBILITIES

Store in cool, dry area away from incompatibles. Keep containers away from contact with water. Dry all equipment before use. Wash all equipment thoroughly with water when handling is completed. Empty packages contain residual hazardous material and should be handled as if full.

### SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

#### EXPOSURE LIMITS:

Calcium oxide: ACGIH TLV TWA = 2 mg/m<sup>3</sup>/8hr

Crystalline Silica Quartz: ACGIH TLV TWA = 0.025 mg/m<sup>3</sup>/8hr

#### ENGINEERING CONTROLS:

Use only with adequate ventilation. If user operations generate dust use process enclosure, local exhaust ventilation or other engineering controls to keep worker exposure below limits.

#### RESPIRATORY PROTECTION:

Use a properly fitted particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.

#### PROTECTIVE GLOVES:

Rubber gauntlets recommended.

#### EYE PROTECTION:

Wear tight fitting chemical goggles. Do not wear contact lenses.

#### OTHER PROTECTIVE EQUIPMENT (SPECIFY):

Protective clothing as required to prevent contact. Ensure eye-wash station and emergency shower are available.

#### PERSONAL PROTECTIVE MEASURES

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### APPEARANCE:

White powder

#### ODOUR:

Slight earthy odour

#### ODOUR THRESHOLD:

Not available

#### pH:

12.45 (saturated solution at 25°C)

#### MELTING POINT / FREEZING POINT:

2570 – 2625°C

#### BOILING POINT / RANGE:

2850°C

#### FLASH POINT:

Not applicable

#### EVAPORATION RATE:

Not available

#### FLAMMABILITY:

Not applicable

#### FLAMMABILITY / EXPLOSIVE LIMITS:

Not applicable

#### VAPOUR PRESSURE:

Not available

#### VAPOUR DENSITY:

Not available

#### RELATIVE DENSITY:

3.25 – 3.28

#### SOLUBILITY:

0.125 g/ 100 g water @ 20°C

#### PARTITION COEFFICIENT:

Not available

#### AUTO-IGNITION TEMPERATURE:

Not applicable

#### DECOMPOSITION TEMPERATURE:

Not applicable



## SAFETY DATA SHEET PROCESSED LIME

VISCOSITY: Not available

### SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Reacts violently with water to form calcium hydroxide, generating heat.

CHEMICAL STABILITY: Stable.

POSSIBILITY OF HAZARDOUS REACTIONS: Exothermic reaction to water.

CONDITIONS TO AVOID: Water, acids, reactive fluoridated compounds, reactive brominated compounds, reactive powdered metals, organic acid anhydrides, nitro-organic compounds, reactive phosphorous compounds, interhalogenated compounds.

INCOMPATIBLE MATERIALS: Oxidizing materials, acids and moisture.

HAZARDOUS DECOMPOSITION PRODUCTS: None.

### SECTION 11: TOXICOLOGICAL INFORMATION

PRODUCT TOXICITY: Calcium oxide: CDC IDLH = 25 mg/m<sup>3</sup>

COMPONENT	COMPONENT TOXICITY		
	LD50 ORAL	LD50 DERMAL	LC50 INHALATION
Calcium oxide	Not available	Not available	Not available
Crystalline Silica Quartz	Not available	Not available	Not available

SKIN CONTACT: If skin is moist, this product will cause severe irritation and burning. Can penetrate skin slowly, producing soft, necrotic, deep chemical burns. Prolonged or repeated contact may cause eczema.

EYE CONTACT: Corrosive solid. Will cause severe irritation. Solid will react exothermically with water to produce corrosive calcium hydroxide. Direct contact may cause conjunctival edema and corneal destruction; can lead to, and may cause, blindness.

INGESTION: Can cause burning and edema of digestive tract, abundant salivation, difficulties in swallowing and breathing, vomiting blood, drop in blood pressure (indicates perforation of esophagus or stomach).

INHALATION: Dust, or mists formed from concentrated solutions, is very irritating to the upper respiratory tract. Inflammation of the respiratory passages, ulceration and perforation of the nasal septum and pneumonia have been attributed to the inhalation of calcium oxide dust. Limited solubility of the product in water means that effects may continue for several days. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Long-term inhalation of crystalline silica may cause silicosis; a progressive, disabling and sometimes fatal lung disease. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Chronic inhalation exposure to crystalline silica quartz has been observed to cause lymph node effects, kidney effects and auto-immune disease.

CARCINOGENICITY: Calcium oxide is not listed by IARC, NTP, OSHA or ACGIH. However, processed lime could contain crystalline silica, which when inhaled in the form of quartz from occupational sources is carcinogenic to humans: IARC has concluded that this chemical is carcinogenic to humans (Group 1); ACGIH has designated this chemical as a suspected human carcinogen (A2); NTP has listed this chemical as a known human carcinogen.

TERATOGENICITY: No information available.



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REPRODUCTIVE TOXICITY:	No information available.
MUTAGENICITY:	Crystalline silica has been shown to cause mutagenic effects in human cells in-vitro.
CHRONIC TOXICITY:	Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Long-term inhalation of crystalline silica may cause silicosis; a progressive, disabling and sometimes fatal lung disease. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Chronic inhalation exposure to crystalline silica quartz has been observed to cause lymph node effects, kidney effects and auto-immune disease.
TARGET ORGAN EFFECTS:	Not available.

### SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:	No data available.
PERSISTENCE AND DEGRADABILITY:	No data available.
BIOACCUMULATIVE POTENTIAL:	Low potential for bioaccumulation.
MOBILITY IN SOIL:	Not available.
OTHER ADVERSE EFFECTS:	No known significant effects or critical hazards.

### SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with federal, provincial and local regulations. It is the responsibility of the end-user to determine if material meets the criteria of hazardous waste at the time of disposal. Empty containers, which have not been cleaned and purged, contain residual hazardous material and must be recycled, or disposed of, in accordance with local regulations.

### SECTION 14: TRANSPORTATION INFORMATION

TDG	Not regulated
DOT	Not regulated
IATA	Regulated
UN NUMBER:	UN1910
PROPER SHIPPING NAME:	Calcium Oxide
CLASS:	8
PACKING GROUP:	III
IMDG HAZARDS:	Not regulated
BULK TRANSPORT:	Not regulated
SPECIAL PRECAUTIONS:	None

### SECTION 15: REGULATORY INFORMATION

DSL:	Listed
WHMIS CLASS:	D2A, E
TSCA:	Listed

### SECTION 16: OTHER INFORMATION

REVISION DATE:	April 1, 2016
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