



WesternLime

MSDS – Material Safety Data sheet
High Calcium Pebble Lime
(Calcium Oxide)

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I. Product and Company Information **Reviewed on 08/07/09**

Manufacturer: Western Lime Corporation Information: 800-433-0036
206 N. 6th Avenue
West Bend, WI 53095

Chemical Name Calcium Oxide	Chemical Family Alkaline earth oxide	Chemical Formula Mostly CaO
Molecular weight CaO = 56.08	Trade Names/Synonyms Quicklime, (Pebble)Lime, Calcium Oxide	Material Use Flux, Caustic agent, pH adjustment, absorption

II. Composition and Information on Ingredients

Component	CAS#	Exposure Limits	% by weight
Calcium Oxide	1305-78-8	OSHA PEL: 5 mg/m ³ ACGH TLV: 2mg/m ³	> 90%
Magnesium Oxide	1309-48-4	OSHA PEL: 15 mg/m ³ ACGIH TLV: 10 mg/m ³	< 2.0%
Crystalline Silica	14808-60-7	OSHA PEL: 10 mg/m ³ (% SiO ₂ resp +2) ACGIH TLV: 0.025 mg/m ³	N/A

III. Hazards Identification

Emergency Overview: Quicklime is an odorless white or greyish-white granular powder. Contact can cause irritation to eyes, skin, respiratory system, and gastrointestinal tract. Quicklime reacts violently with water, releasing sufficient heat to ignite combustible materials.

Eyes:	Contact can cause severe irritation or burning of eyes, including permanent damage.
Skin:	Contact can cause severe irritation or burning of skin, especially in the presence of moisture.
Ingestion:	This product can cause severe irritation or burning of gastro-intestinal tract if swallowed
Inhalation:	This product can cause severe irritation of the respiratory system. Long-term exposure may cause permanent damage. Quicklime is not listed by MSHA, OSHA, or IARC as a carcinogen, but this product may contain crystalline silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled in the form of quartz or cristobalite. Inhalation of silica can cause a chronic lung disorder, silicosis.

Medical Conditions Aggravated by Exposure: Contact may aggravate disorders of eyes, skin, gastrointestinal tract, and respiratory system.

Potential Environmental Effects: This material is alkaline and if released into water or soil will cause and increase in its pH.

IV. First Aid Measures

Eyes:	Immediately flush eyes with large amounts of water for at least 15 minutes. Pull back the eyelid to make sure all the lime dust has been washed out.
Skin:	Flush exposed area with large amounts of water. Seek medical attention immediately.
Inhalation:	Remove to fresh air. Seek medical attention if necessary. If breathing has stopped, give artificial respiration.
Ingestion:	Give large quantities of water or fruit juice. Do not induct vomiting. Seek medical attention immediately. Never give anything by mouth if victim is rapidly losing consciousness or is unconscious or convulsing.

Note to Physicians: Provide general supportive measures and treat symptomatically.



V. Fire Fighting Measures	
Fire Hazards:	Quicklime is not combustible or flammable. However, quicklime reacts violently with water, releasing sufficient heat to ignite combustible materials in certain instances. Quicklime is not an explosion hazard, although reaction with water or other incompatible materials causes the material to swell and may rupture containers.
Hazardous Combustion Products:	None Identified.
Extinguishing Media:	Use dry chemical fire extinguisher. Do not use water or halogenated compounds, except that water may be used to deluge small amounts of quicklime.
Fire Fighting Instructions:	Keep personnel removed from and upwind of fire. Wear full fire-fighting turn-out gear(full Bunker gear), and respiratory protection (SCBA)

VI. Accidental Release Measures	
Spill/Leak Procedures:	DO NOT use water on bulk material spills. Lime Reacts violently with water, producing heat. Use proper protective equipment.
Small Spills:	Use dry methods to collect spilled materials. Do not clean up with compressed air. Store spilled materials in dry, sealed plastic or metal containers. Surfaces contaminated with residual amounts may be water washed.
Large Spills:	Use dry methods to collect spilled materials. Evacuate area down wind of clean-up operations to avoid dust exposure. Store spilled materials in dry, sealed plastic or metal containers.
Containment:	For large spills, as much as possible avoid the generation of dusts. Do not release into sewers or waterways.
Cleanup:	Residual amounts can be flushed with large amounts of water. Equipment can be decontaminated by washing with either a mild vinegar and water solution, or detergent and water solution.

VII. Handling and Storage	
Handling:	Keep in tightly closed containers. Protect from physical damage. Avoid direct contact with material.
Storage:	Store in a cool, dry and well ventilated location. Do not store near incompatible materials. Keep away from moisture. Do not store or ship in aluminum containers.

VIII. Exposure controls/Personal Protection Equipment	
Personal Protective Equipment (PPE)	Wear clean, dry gloves, full length pants over boots, long sleeved shirt buttoned at the neck, head protection and approved eye protection selected for the working conditions.
Gloves	Gauntlets cuff style
Respiratory	NIOSH approved filtering anti-dust mask
Eyes	Tight fitting goggles/glasses with side shield
Footwear	Resistant to caustics
Clothing	Fully covering skin



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IX. Physical and chemical properties

Physical State: Solid	Appearance: White granular substance	Odor: No Odor	Specific Gravity: 3.2 – 3.4
Boiling Point: 5162 F, 2850 C	Vapor Pressure: N/A	pH (25° C): Sat Soln CaO: 12.45	Density (kg/m3): 720 - 1130
Melting Point: 4658 F, 2570 C	Vapor Density: N/A	Solubility in Water: 0.125/100 g Sat.soln	Freezing Point: 2580 C

X. Stability and Reactivity

Stability:	Chemically stable, but reacts rapidly with water to form calcium hydroxide, generating heat.
Incompatibility/Conditions to avoid:	Quicklime should not be mixed or stored with the following materials, due to the potential for violent reaction and release of heat. Water, Acids, Reactive Fluorinated Compounds, Reactive Brominated Compounds, Reactive Powdered Metals, Organic Acid Anhydrides, Nitro-Organic Compounds, Reactive Phosphorous Compounds.
Hazardous Decomposition Products:	None
Hazardous Polymerization:	None

XI. Toxicological Information

No LD50/LC50 have been identified for this products components. Quicklime is not listed by MSHA, OSHA, or IARC as a carcinogen, but this product may contain crystalline silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled in the form of quartz or cristobalite.

XII. Ecological Information

Ecotoxicity:	Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.
Environmental Fate:	This material shows no bioaccumulation or food chain toxicity potential.

XIII. Disposal Considerations:

Dispose of in accordance with all applicable federal, state, and local environmental regulations. If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation Act

XIV. Transportation Information

Quicklime is not classified as a hazardous material by DOT when transported
When being transported by air, quicklime is classified in the Department of Transportation (DOT) regulations as a hazardous material. (49 CFR 172, Table 172.101:Calcium Oxide by aircraft only. Class 8 Corrosives. PIN UN1910. Packing Group III. Maximum Net per package – passenger vehicles, 25 kg.)



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XV. Regulatory Information	
<u>EPA Regulations</u>	
RCRA Hazardous Waste Number (40 CFR 261.33)	Not Listed
RCRA Hazardous Waste Classification (40 CFR 261)	Not Listed
CERCLA Hazardous Substance (40 CFR 261)	Not Listed
CERLA Reportable Quantity (RQ)	Not Listed
SARA 311/312 codes	Not Listed
Sara Toxic Chemical (40 CFR 372.65)	Not Listed
SARA EHS (Extremely Hazardous Substance) (40 CFR 355)	Not Listed
Threshold Planning Quantity (TPQ)	Not Listed
All components are listed on the USEPA TSCA Inventory List	
<u>OSHA/MSHA Regulations</u>	
Air Contaminant (29 CFR 1910.1000, Table Z-1)	Not Listed
MSHA	Not Listed
OSHA Specifically Regulated Substance (29CFR 1910)	Not Listed
State Regulations: Consult state and local authorities for guidance	
<u>Canadian Environmental Protection Act (CEPA)</u>	
Domestic Substances List	Listed

XVI. Other Information		
HMIS	Health Risks	1
	Flammability	0
	Reactivity	1
	Personal Protection	E
NFPA	Health Hazard	3
	Fire Hazard	0
	Reactivity	1
WHIMS Classification	"E" Corrosive Materials	
WHIMS Classification	"D2A" Materials Causing Other toxic effects	

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