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

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

Chemical Name	Chemical Family	Chemical Formula
Calcium Hydroxide	Alkaline earth hydroxide	Mostly $Ca(OH)_2$
Molecular weight CaO = 74.10	Trade Names/Synonyms Pure Cal, Hydrated Lime, Hydrate, Calcium Hydroxide	Material Use Water Treatment, Flux, Caustic agent, pH adjustment, absorption

II. Composition and Information on Ingredients

Component	CAS#	Exposure Limits	% by weight
Calcium Hydroxide	1305-62-0	OSHA PEL: 5mg/m3 ACGH TLV: 5mg/m3	>90%
Magnesium Oxide	1309-48-4	OSHA PEL: 10 mg/m3 ACGIH TLV: 10 mg/m3	< 2.0%
Calcium Oxide	1305-78-8	OSHA PEL: 5 mg/m3 ACGH TLV: 2mg/m3	<1.0%
Crystalline Silica	14808-60-7	OSHA PEL: 10 mg/m3 (% SiO2 resp +2) ACGIH TLV: 0.025 mg/m3	N/A

III. Hazards Identification

Emergency Overview: Hydrated lime 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. Hydrated Lime 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 crystobalite. 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:	Hydrated Lime is not combustible or flammable. Hydrated Lime is not an explosion hazard.
Hazardous Combustion Products:	None Identified.
Extinguishing Media:	Use dry chemical fire extinguisher or water
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:	Use proper protective equipment. Hydrated Lime is a fine powder which can easily be entrained into the air.
Small Spills:	Wash area with water. Neutralize with dilute vinegar solution.
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

IX. Physical and chemical properties			
Physical State: Solid	Appearance: White powder substance	Odor: No Odor	Specific Gravity: 2.2 – 2.4 g/cc
Boiling Point: 5162 F, 2850 C	Vapor Pressure: N/A	pH (25^{o} C): Sat Soln CaO: 12.45	Density (kg/m3): 400 - 700
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 slowly with carbon dioxide to form calcium carbonate.
Incompatibility/Conditions to avoid:	Hydrated Lime should not be mixed or stored with the following materials, due to the potential for violent reaction and release of heat. Acids, Reactive Fluorinated Compounds, Reactive Brominated Compounds, Reactive Powdered Metals, Organic Acid Anhydrides, Nitro-Organic Compounds, Reactive Phosphorous Compounds.
Hazardous Decomposition Products:	Hydrated lime wil decompose at 540 C to form calcium Oxide and water
Hazardous Polymerization:	None

XI. Toxicological Information
No LD50/LC50 have been identified for this products components. Hydrated Lime 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 crystobalite.

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
Hydrated Lime is not classified as a hazardous material by DOT when transported

XV. Regulatory Information

EPA Regulations	
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	
OSHA/MSHA Regulations	
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	
Canadian Environmental Protection Act (CEPA)	
Domestic Substances List	Listed

XVI. Other Information

HMIS	Health Risks Flammability Reactivity Personal Protection	1 0 0 E
NFPA	Health Hazard Fire Hazard Reactivity	1 0 0
WHIMS Classification	“E” Corrosive Materials	
WHIMS Classification	“D2A” Materials Causing Other toxic effects	

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