

MATERIAL SAFETY DATA SHEET

SECTION I - NAME AND PRODUCT

Manufacturer: **WESTERN LIME, INC.**
 Emergency Telephone: (661) 631-2618
 Address: 301 ESPEE STREET, P.O. BOX 471 BAKERSFIELD, CA 93302
 Trade Name, Common Name: **CALCIUM HYDROXIDE**

CALCIUM HYDROXIDE, Ca(OH)₂, Hydrated Lime, Slaked Lime, CAS #1305-62-0

High Calcium Hydroxide, Type N Lime

Specification: ASTM C51, C206, C207, C911, C977

Chemical Family: Alkaline Earth Hydroxide

SECTION II - COMPOSITION

Chemical Name	%	Common Name	REG* (Y/N)	CAS No.	OSHA Permissive Exposure Limit	ACGIH TLV/TWA	Carcinogen? (Y/N)
Calcium Hydroxide	>95	Hydrated Lime	N	1305-62-0	--	5 mg/cu.m.	N
Calcium Carbonate	< 5	Limestone	N	1317-65-3	--	10 mg/cu.m.	N
Magnesium Hydroxide	< 5	Brucite	N	1309-42-8	--	--	N
Silicon Dioxide	< 3	Quartz	Y	14808-60-7	0.1 mg/cu.m.	0.1 mg/cu.m.	N
Other (Fe ₂ O ₃ , Al ₂ O ₃)	< 3	--	N	--	--	--	N

Purity depends on the limestone starting material and the manufacturing, handling and storage techniques. WESTERN LIME, INC. strives to maintain high purity and production quality standards.

SECTION III - PHYSICAL AND CHEMICAL DATA

Appearance and Odor: Soft, white crystalline powder; Odorless. WESTERN LIME, INC. High Calcium Hydrated Lime or WESTERN LIME, INC. Type N Hydrated Lime is available in bags or bulk as a fine powder, generally 95% passing 200 mesh.

Melting Point: dehydrates at 580°C Particle Specific Gravity: 2.3 - 2.4 g/cc Bulk Density: 25-35 lbs/cu.ft.
 Boiling Point: 5162°F/2850°C
 Vapor Pressure: N/A
 Vapor Density: N/A
 Evaporation Rate: N/A
 % Volatile by Vol: N/A
 Solubility in Alcohol: NAIF**
 Solubility in other solvents: Calcium hydroxide reacts with acids, forming calcium salts which may be soluble.

WATER SOLUBILITY: SLIGHT		AQUEOUS SOLUTION BEHAVIOR:
TEMP.	SOLUBILITY	pH (sat'd sol'n)
0°C	1.85 g Ca(OH) ₂ /l	13.42
25°C	1.59	12.44
50°C	1.28	11.71
100°C	0.71	--

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Special Fire Fighting Procedures: Hydrated lime decomposes to calcium oxide (quicklime) and steam at 580°C (1079°F). If these temperatures prevail, wear self-contained breathing apparatus approved by NIOSH. Protect eyes from dust. The presence of hydrated lime in a fire does not hinder the use of any standard extinguishing medium.

Flashpoint: Not Flammable **Flammable Limits:** N/A **Extinguishing Media:** Not Flammable **Explosion Potential:** None

SECTION V - HEALTH, FIRST AID AND MEDICAL DATA

Threshold Limit Value (TLV): 5 mg/cu.m. Calcium hydroxide is an alkaline material. In presence of moisture, contact with skin and eyes will cause irritation and possible severe corrosion damage. Inhalation of dust may cause coughing, sneezing or inflammation of the respiratory passages. While short-term exposure and irritation are generally without permanent effects, untreated contact and irritation can cause dermatitis and chemical burns. Prevention of contact and exposure under good working conditions is much preferred to first aid after injury. See Section VIII below.

FIRST AID:

Inhalation: Remove from exposure to dust and get prompt medical help.
Eye Contact: Wash eyes Immediately with running water for 15 minutes, including under eyelids. Get prompt medical attention!
Skin Contact: Wash exposure area with large amounts of water. Remove and wash contaminated clothing.
Ingestion: Immediately dilute the chemical by drinking large amounts of water or milk. Then neutralize by drinking dilute vinegar or fruit juice.

SECTION VI - CORROSIVITY AND REACTIVITY DATA

Stability: STABLE. Hazardous polymerization will NOT occur.
Incompatibilities: Calcium hydroxide is incompatible with acids, ammonium salts, phosphorous and some organic compounds. Hydrated lime is stable in sealed containers at normal temperatures.
Decomposition Products: When exposed to air, this strongly alkaline compound will absorb and react with carbon dioxide, producing calcium carbonate. This forms lumps, reduces the chemical activity and results in a limited shelf life. Calcium salts are normal reaction products with other materials.
Conditions to be Avoided: Handling procedures which may generate dust. Contact with nitroparaffins, maleic anhydride or phosphorus.

SECTION VII - STORAGE, HANDLING AND USE PROCEDURES

Normal Storage and Handling: Dry area, out of weather and flood danger. Avoid dusting in handling.
Normal Use: Standard equipment for hydrated lime use. Make adequate provision for dust free operations.
Steps to be Taken in Case of Leaks or Spills: Those involved in clean up must protect against skin contact and inhalation of dust or mist. See Section VIII. Carefully pick up the powder with a minimum of dusting and collect in metal containers with covers for disposal. The small amounts of residue after shoveling and sweeping can be flushed to the drain using plenty of water.
Waste Disposal Method: Several methods may be suitable:
a) Spread in a protected area to permit reaction with carbon dioxide in air. (Prevent air current dusting.)
b) Neutralize with acid or waste acid.
c) Use as a soil amendment.
d) Use to stabilize clay soils. Follow Federal, State and Local regulations.

SECTION VIII - PERSONAL PROTECTION INFORMATION

Respiratory Protection: NIOSH approved dust filter respirator in dusty conditions. In absence of dust, mechanical exhaust is adequate.
Eye Protection: Approved tight-fitting safety goggles.
Protective Gloves: Clean dry rubber gloves.
Clothing: Clean, body-covering protective clothing such as long-sleeve shirt with buttoned collar; long pants extending over tops of work shoes.
Ventilation: Provide general ventilation and local exhaust ventilation with appropriate dust collection to meet TLV requirements for lime dust.
Other Equipment: An eyewash station and safety shower should be readily available near the work area.

SECTION IX - SPECIAL PRECAUTIONS

Store materials in sealed containers in a dry place. Avoid contact with acids and other incompatible materials. Exposure to air lowers the available calcium hydroxide reactivity over time.

SPECIAL REFERENCE: LIME HANDLING, APPLICATION AND STORAGE, Nat. Lime Assoc. Bull. 213, 6th ed., 1994.
Rev. 06/15/98 HSC