

MATERIAL SAFETY DATA SHEET

SECTION I—NAME AND PRODUCT

Manufacturer: **CHEMSTAR, Inc.**
Emergency Telephone: (702) 565-8995 Contact: Dr. Starr Curtis
Address: P.O. Box 127, Henderson, NV 89015
Trade Name, Common Name: **CALCIUM HYDROXIDE**

CALCIUM HYDROXIDE, Ca(OH)₂, Hydrated Lime, Slaked Lime, CAS # 1305-62-0
Chemstar High Calcium Hydroxide, Chemstar Type N Lime
Chemical Family: Alkaline Earth Hydroxide

SECTION II—IDENTIFICATION OF INGREDIENTS

Chemical Name	%	Common Name	REG* (Y/N)	CAS No.	OSHA Permissible 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	<1	Quartz	Y	14808-60-7	0.1 mg/cu.m.	0.1 mg/cu.m.	Y
Other (Fe ₂ O ₃ , Al ₂ O ₃)	<1	—	N	—	—	—	N

Purity depends on the limestone starting material and manufacturing, handling, and storage techniques. Chemstar strives to maintain high purity and production quality. Calcium hydroxide is NOT listed by NTP, IARC, or OSHA as containing carcinogens; however, it contains detectable amounts of chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

SECTION III— PHYSICAL AND CHEMICAL CHARACTERISTICS

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

Melting Point: partially 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	Water Solubility: Slight	Aqueous Solution Behavior:
Vapor Pressure: N/A	Temp.	pH (sat'd sol'n)
Vapor Density: N/A	0 C	-1.85
Evaporation Rate: N/A	25 C	-1.59
-Volatile by Vol: N/A	50 C	-1.28
Solubility in Alcohol: NAIF**	100 C	-0.71

Solubility in other solvents: Calcium Hydroxide reacts with acids, forming calcium salts which may be soluble.

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 upper 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 lime 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 VII below. Calcium hydroxide is NOT listed by NTP, IARC, or OSHA as containing carcinogens; however, it contains detectable amounts of chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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.

*Regulated on lists: OSHA 29CFR 1910, subpart Z; ACGIH, HHS/NTP & IARC. **NAIF—No Applicable Information Found

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 phosphorous.

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 with lime and inhalation of dust or mist. See Section VIII. Carefully pick up the solid 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 to meet TLV requirements for lime dust.
Other Equipment:	An eyewash station 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, 4th ed., 1982.

CHEMSTAR, Inc.

also produces the following quality products;

Type S Hydrated Lime $\text{Ca(OH)}_2\text{-Mg(OH)}_2$

Dolomitic Quicklime, CaO-MgO

High Calcium Quicklime, CaO

Mortartek, a portland cement-lime mortar mix

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