

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **CALCIUM HYDROXIDE**
Synonym(s) HIGH CALCIUM HYDRATED LIME, LIME, SLAKED LIME, LIME PUTTY, LIME SLURRY,
MILK OF LIME, CALCIUM HYDROXIDE

1.2 Uses and uses advised against

Use(s) NEUTRALIZATION, FLOCCULATION, STABILIZATION, ABSORPTION

1.3 Details of the supplier of the product

Supplier name **SUPAGAS**
Address 5 Benson Road, Ingleburn, NSW, 2565
Telephone 13 78 72 or (02) 8788 4444
Fax (02) 8788 4445
Website <http://www.supagas.net.au>

1.4 Emergency telephone number(s)

Emergency 1300 651 106

2. COMPOSITION/ INFORMATION ON INGREDIENTS

2.1 Substances / Mixtures

Ingredient	CAS Number	Content (v/v)
Calcium Hydroxide	1305-62-0	92-100%
Crystalline Silica, Quartz	14808-60-7	0-1%

3. HAZARDS IDENTIFICATION

Inhalation Low concentrations may cause sore throat, coughing, choking, dyspnea, and variable symptoms of headache, dizziness, and weakness. Intense exposures may result in tightness in the chest and delayed pulmonary edema. The solubility of substance allows penetration that may continue for several days.

Skin Contact / Absorption Can penetrate the skin slowly, producing soft, necrotic, deeply penetrating areas on contact. The extent of damage depends on the duration of contact. Removes natural skin oils.

Eye Contact Severe eye irritation, intense watering of the eyes, possible lesions, possible blindness when exposed for prolonged period.

Ingestion Causes gastrointestinal tract burns. May cause circulatory system failure.
May cause perforation of the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock. Effects may be delayed.

Exposure Limits ACGIH/TLV-TWA: 5mg/m³ (calcium hydroxide)
NIOSH/REL-TWA: 5mg/m³ (calcium hydroxide)
OSHA/PEL-TWA: 15mg/m³ (total dust as calcium hydroxide)
5mg/m³ (respirable fraction as calcium hydroxide)
ACGIH/TLV-TWA: 0.025mg/m³ (silica dust)
NIOSH/REL-TWA: 0.05mg/m³ (free silica)

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.
Skin Contact / Absorption	Remove contaminated clothing. Wash affected area with lukewarm water. Seek medical attention if irritation occurs or persists.
Eye Contact	Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention
Ingestion	If victim is conscious, give 300mL of water, followed by diluted vinegar (1 part vinegar, 2 parts water) or fruit juice to neutralize the alkali. Do not induce vomiting. Contact a physician immediately.
Additional Information	Consult a physician for all exposures except minor instances of inhalation.

5. FIRE FIGHTING MEASURES

Conditions of Flammability	Product does not burn.
Means of Extinction	Calcium hydroxide does not burn. Use extinguishing media appropriate to surrounding fire conditions.
Flash Point	Not applicable
Auto-ignition Temperature	Not applicable
Upper Flammable Limit	Not applicable
Lower Flammable Limit	Not applicable
Hazardous Combustible Products	None
Special Fire Fighting Procedures	Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
Explosion Hazards	Not applicable

6. ACCIDENTAL RELEASE MEASURES

Leak / Spill	Wear appropriate personal protective equipment. Ventilate area. Stop or reduce leak if safe to do so. Use industrial vacuums for large spills. Prevent material from entering sewers.
Deactivating Materials	Dilute vinegar or hydrochloric acid.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry and well-ventilated place. Keep container tightly closed, and away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

PPE

Eye / Face	Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
Respiratory	Respiratory protection is not normally required. If use creates dust formations, then a NIOSH-approved respirator with a dust cartridge is recommended.
Hands	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Clothing	Body suits, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Footwear	No special footwear is required other than what is mandated at place of work.

8.2 Engineering controls

Ventilation Requirements: Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems. ventilated areas. Vapours may also travel some distance to an ignition source and flash back.

Other: Emergency shower and eyewash should be in close proximity.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State	SOLID
Odour & Appearance	GREYISH WHITE POWDER WITH A SLIGHT EARTHY ODOR
Odour Threshold	NOT APPLICABLE
Specific Gravity (Water=1)	2.3-2.4
Vapor Pressure (mm Hg, 20C)	NOT APPLICABLE
Vapor Density (Air=1)	NOT APPLICABLE
Evaporation rate	NOT APPLICABLE
Boiling Point	NOT APPLICABLE
Freeze/Melting Point	NOT APPLICABLE
pH	12.45 (saturated solution at 25°C)
Solubility (water)	0.018 L/L
Water/Oil Distribution Coefficient	NOT AVAILABLE
Bulk Density	320-690 kg/m ³
% Volatiles by Volume	NOT AVAILABLE
Solubility in Water	1.85 g/L at 0°C
Molecular Formula	Ca(OH) ₂
Molecular Weight	74.096 (anhydrous)

10. STABILITY AND REACTIVITY

10.1 Stability

Stable under normal conditions. Will absorb carbon dioxide from the air to form calcium carbonate.

10.2 Incompatibility

Boron tri-fluoride, chlorine tri-fluoride, ethanol, fluorine, hydrogen fluoride, phosphorus pentoxide and acids

10.3 Hazardous decomposition products

Thermal decomposition at 540°C will produce calcium oxide and water. Reacts violently with strong acids. Reacts chemically with acids and many other compounds and chemical elements to form calcium based compounds. Explosive when mixed with nitro organic compounds.

10.4 Polymerization

Will not occur

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Irritancy	Severe to moist skin tissue and eyes. Irritant also to respiratory system, nasal passages and exposed cuts.
Sensitization	Not available
Chronic/Acute Effects	Repeated or prolonged contact of the skin can cause redness, desquamation and fissures. Excessive inhalation of product may cause respiratory disease (silicosis, pneumoconiosis and pulmonary fibrosis) as product may contain trace amounts of crystalline silica.
Synergistic Materials	Not available
Animal Toxicity Data	LD ₅₀ (Oral, Mouse)= 7300mg/kg LD ₅₀ (Oral, Rat)= 7340mg/kg
Carcinogenicity	Calcium Hydroxide is not listed on the MSHA, OSHA or IARC lists of carcinogens. However, hydrated lime could contain crystalline silica, which inhaled in the form of quartz or cristobalite from occupational sources, is classified by IARC as (Group 1) carcinogenic to humans.

Reproductive Toxicity	Not available
Teratogenicity	Not available
Mutagenicity	Not available

12. ECOLOGICAL INFORMATION

12.1 Fish Toxicity

Not available.

12.2 Biodegradability

Not available.

12.3 Environmental Effects

Not available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal	Cylinders should be returned to the manufacturer or supplier for disposal of contents.
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

Class	Not regulated
Group	Not regulated
PIN Number	Not regulated
Other	Secure containers (full and/or empty) with suitable hold down devices during shipment.

15. REGULATORY INFORMATION

WHMIS Classification D2, E

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE NOHSC PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

NSF Certification Product is certified by Underwriters Laboratories to NSF/ANSI Standard 60 for use in drinking water treatment as a pH adjuster, softening and precipitation up to a maximum of 650 mg/L.

16. OTHER INFORMATION

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.