

Product Name: CALCIUM HYDROXIDE -Super Hydrated Lime-super

It is used in water purification, water treatment, sea-water desalination, sugar manufacturing, mining industry, leather industry, building material industry, plastering, masonry mortar, chemical industry & so many others.

SECTION 1-PRODUCT AND COMPANY IDENTIFICATION

| | |
|---|---|
| Classification / Type | Hydrates / Hydrated Lime -Calcium hydroxide. |
| Appearance | White powder |
| Molecular formula / Molecular Weight | Ca (OH)₂ / 74.1 gm/mole |
| CAS No. | 1305-62-0 |
| Bulk Density | 400-650 kg/m³ |
| Packaging Detail | Bulk and jumbo bags (0.4-0.65) ton |
| PH value | 14 |
| Melting Point | 580 °C |
| Solubility | Very slightly soluble in cold water & hot water. Soluble in ammonium salts, glycerol, sugar or ammonium chloride solution & acids. Solubility in water: 0.185g/100 ml at 0 deg. 0.077 g/100 ml at 100 deg. 1.73 g/1000 ml at 20 °C Insoluble in alcohols |

Company contact:

| | |
|-----------------------------|--|
| Company name | Saudi lime industries company (SAUDILIME) |
| Location | KSA, Riyadh, 2nd industrial city, Al-Kharj road. |
| Telephone | 00966112651929 |
| Website & E-mail | www.saudilime.com - info@saudilime.com |

SECTION 2-COMPOSITION AND INFORMATION ON INGREDIENTS

| Name | Calcium hydroxide | Calcium oxide | Magnesium oxide | Silicon dioxide | Iron oxide | Aluminum oxide | Sulphur trioxide |
|-------------|----------------------|---------------|-----------------|------------------|--------------------------------|--------------------------------|------------------|
| Symbol | Ca (OH) ₂ | CaO Free | MgO | SiO ₂ | Fe ₂ O ₃ | Al ₂ O ₃ | SO ₃ |
| % by weight | 93.00 % | 71.00 % | 0.50 % | 0.60 % | 0.15 % | 0.40 % | 0.15 % |
| Range | Min. | Min. | Max. | Max. | Max. | Max. | Max. |
| CAS No. | 1305-62-0 | 1305-78-8 | 1309-48-4 | 14808-60-7 | 1309-37-1 | 1344-28-1 | 7446-11-9 |

SECTION 3- HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Hazardous in case of eye contact (irritant).

Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

Repeated skin exposure can produce local skin destruction.

SECTION 4- FIRST AID MEASURES

Eye Contact:

Check for and remove any contact lenses.

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.

Cold water may be used and get medical attention.

Skin Contact:

In case of contact, immediately flush eyes with plenty of water for at least 15minutes, Cover the irritated skin with an emollient and get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream and get medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention immediately.
Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel.
Never give anything by mouth to an unconscious person.
Loosen tight clothing such as a collar, tie, belt or waistband.
Get medical attention if symptoms appear.
Serious Ingestion: Not available.

SECTION 5- FIRE FIGHTING MEASURES

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Alkaline hydroxides boiled with phosphorus yields mixed phosphines which may ignite spontaneously in air.

Special Remarks on Explosion Hazards: Not available

SECTION 6- ACCIDENTAL RELEASE MEASURES**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

If necessary: neutralize the residue with a dilute solution of acetic acid.

Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Corrosive solid. Stop leak if without risk.

Do not get water inside container.

Do not touch spilled material.
Use water spray to reduce vapors.
Prevent entry into sewers, basements or confined areas, dike if needed.
Call for assistance on disposal.
Neutralize the residue with a dilute solution of acetic acid.
Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.
Be careful that the product is not present at a concentration level above TLV.
Check TLV on the MSDS and with local authorities.

SECTION 7- HANDLING AND STORAGE

Precautions:

Keep container dry, do not ingest, do not breathe dust & Avoid contact with eyes.
Wear suitable protective clothing.
If ingested, seek medical advice immediately and show the container or the label.
Keep away from incompatibles such as acids.

Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C or (77°F).

SECTION 8- EXPOSURE CONTROLS/ PERSONAL PROTECTION

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.
If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles, Lab coat, Gloves & Dust respirator.
Be sure to use an approved/certified respirator or equivalent.

Personal Protection in Case of a Large Spill:

Splash goggles, Full suit, Dust respirator, Boots & Gloves.
A self-contained breathing apparatus should be used to avoid inhalation of this product.
Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 5 (mg/m³) from ACGIH (TLV) [United States] TWA: 5 (mg/m³) [Canada]
TWA: 5 (mg/m³) from NIOSH Consult local authorities for acceptable exposure limits.

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance: Powder - **Odor:** Odorless.
Taste: Bitter. Slightly alkaline. - **Color:** White.
Molecular Weight: 74.1 g/mole - **Boiling Point:** Not available.
PH (1% soln./water): 14 basics - **Critical Temperature:** Not available.
Melting Point: 580°C (1076°F). - **Vapor Pressure:** Not applicable.
Specific Gravity: 2.24 (Water = 1) - **Volatility:** Not available.
Vapor Density: Not available. - **Odor Threshold:** Not available.
Water/Oil Dist. Co-eff.: Not available. - **Ionicity (in Water):** Not available.
Dispersion Properties: Not available.
Solubility:
Very slightly soluble in cold water & hot water. Soluble in ammonium salts, glycerol, sugar or ammonium chloride solution & acids.
Solubility in water:
0.185g/100 ml at 0 deg., 0.077 g/100 ml at 100 deg. & 1.73 g/1000 ml at 20 °C.
Insoluble in alcohols

SECTION 10- STABILITY AND REACTIVITY DATA

Stability: The product is stable. - **Instability Temperature:** Not available.
Conditions of Instability: Incompatible Materials, air.
Incompatibility with various substances: Reactive with acids.
Corrosivity: Non-corrosive in presence of glass.
Special Remarks on Corrosivity: Not available.
Special Remarks on Reactivity:
Incompatible with maleic anhydride, phosphorous, nitro ethane, nitromethane, nitroparaffins, nitropropane, polychlorinated.
When chlorinated phenols are heated for analytical purposes with calcium hydroxide-potassium nitrate mixtures, chlorinated benzo dioxins analogous to extremely toxic tetra-Chlorodibenzodioxin may be formed.
Readily absorbs CO₂ from air forming calcium carbonate.
Polymerization: Will not occur.

SECTION 11- TOXICOLOGICAL INFORMATION**Routes of Entry:**

Absorbed through skin, Inhalation & Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 7300 mg/kg [Mouse].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans:

Extremely hazardous in case of eye contact (irritant) Hazardous in case of skin contact (irritant), of eye contact (corrosive), of ingestion, inhalation Slightly hazardous in case of skin contact (corrosive, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

Mutagenicity: Cytogenic analysis [Rat]: Cell type: Ascites tumor; Dose: 1200 mg/kg

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: Causes skin irritation.

Alkalis penetrate skin slowly.

The extent of damage depends on the duration of contact.

Eyes: Causes severe irritation of the eyes.

Can cause "Lime Burns" of the eye.

Clumps may lodge deep in the recesses of the eye, releasing calcium hydroxide over a long period of time. Severe burns of the cornea with possible damage to corneal nerves can occur.

Ingestion:

Causes gastrointestinal tract irritation with vomiting, diarrhea, severe pain.

Vomit may contain blood and desquamated mucosal lining.

May cause delayed gastrointestinal burns and perforation (gastric or esophageal) with severe abdominal pain and rapid fall in blood pressure.

Inhalation: Causes severe irritation of the respiratory tract (nose, throat, lungs), and mucous membranes with coughing, wheezing and/or shortness of breath.

Material is destructive to tissue of the mucous membranes and upper respiratory tract.

Chronic Potential Health Effects: Prolonged or repeated skin contact may produce severe irritation or dermatitis.

SECTION 12- ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short-term degradation products are not likely.
However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

SECTION 13- DISPOSAL CONSIDERATIONS

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

SECTION 14- TRANSPORT INFORMATION

Identification: Calcium Hydroxide, bulk or jumbo bags

Special Provisions for Transport: Not available.

SECTION 15- OTHER REGULATORY INFORMATION

Federal and State Regulations: TSCA 8(b) inventory: Calcium hydroxide

Other Regulations:

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

1- Hazardous Material Identification System (HMIS) In USA:

Health Hazard: 2 - Fire Hazard: 0 - Reactivity: 0 - Personal Protection: j

2- National Fire Protection Association (NFPA) In USA:

Health: 2 - Flammability: 0 - Reactivity: 0

Protective Equipment:

- * Gloves, Synthetic apron Vapor and dust respirator.
- * Be sure to use an approved/certified respirator or equivalent.
- * Wear appropriate respirator when ventilation is inadequate & Splash goggles.

SECTION 16- OTHER INFORMATION

**SAUDI LIME INDUSTRIES COMPANY
(SAUDI LIME)**



An industrial edifice making an exceptional mark in adapting technology & a closed joint stock company founded by a group of businessmen in the Kingdom of Saudi Arabia and Kuwait with the participation of the Public Authority for Social Insurance in the Kingdom to form an integrated system for producing:

Calcium carbonate, Quick Lime, Hydrated Lime, Dolomite, Burnt dolomite, Dolomitic Hydrated lime and Sand Lime Bricks.

All mentioned data is considering a common data.

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