



Technical Data Sheet (TDS)

Hydrated Lime (Calcium Hydroxide)

Chemical Name: Calcium Hydroxide

Common Name: Hydrated Lime / Slaked Lime / Builders' Lime

Chemical Formula: Ca(OH)_2

CAS No.: 1305-62-0

EC No.: 215-137-3

HS Code: 2522.20

Appearance: Fine white powder

1. Product Description

Hydrated Lime (Calcium Hydroxide) is produced by the controlled hydration of high-quality quicklime (Calcium Oxide). It is a highly alkaline inorganic compound widely used in water treatment, environmental protection, construction, mining, steel, sugar refining, chemical manufacturing, leather processing, pulp & paper, and flue gas treatment.

2. Typical Chemical Properties

Parameter	Specification
Calcium Hydroxide (Ca(OH)_2)	$\geq 90.0\%$
Available Ca(OH)_2	$\geq 92.0\%$ (Typical)
Calcium Oxide (CaO)	72–75%
Magnesium Oxide (MgO)	$\leq 2.5\%$
Silicon Dioxide (SiO_2)	$\leq 1.5\%$
Iron Oxide (Fe_2O_3)	$\leq 0.3\%$
Aluminum Oxide (Al_2O_3)	$\leq 0.5\%$
Acid Insoluble Matter	$\leq 2.0\%$
Carbon Dioxide (CO_2)	$\leq 3.5\%$
Moisture	$\leq 1.5\%$

Values may vary depending on the limestone source and manufacturing process.



3. Physical Properties

Property	Typical Value
Appearance	Fine White Powder
Odor	Odorless
Bulk Density	450–700 kg/m ³
True Density	2.24 g/cm ³
Specific Gravity	2.24
Solubility in Water	Slightly soluble (≈ 1.7 g/L at 20°C)
pH (Saturated Solution)	12.4–12.8
Particle Size	90–95% passing 325 mesh (45 μ m) (<i>or as required</i>)
Whiteness	90–96%
Melting Point	Decomposes above 580°C

4. Typical Particle Size Distribution

Mesh Passing

100 Mesh 100%

200 Mesh $\geq 98\%$

325 Mesh $\geq 90\%$

(Custom particle sizes are available.)

5. Applications

Hydrated Lime is extensively used in:

- Water and wastewater treatment
- Drinking water purification
- Flue Gas Desulfurization (FGD)
- Sugar refining
- Steel manufacturing
- Mining and mineral processing
- Gold extraction
- Chemical manufacturing
- Leather tanning
- Paper & pulp industry
- Soil stabilization

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- Construction mortar and plaster
 - Asphalt modification
 - Agriculture (soil pH adjustment)
 - Effluent neutralization
 - Environmental pollution control
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6. Packaging

Available in:

- 25 kg PP laminated bags
- 40 kg bags
- 50 kg bags
- 500 kg Jumbo Bags
- 1000 kg Jumbo Bags
- Bulk tanker loading (on request)

Private label and OEM packaging available.

7. Storage

- Store in a cool, dry, and well-ventilated place.
- Keep bags tightly sealed.
- Protect from moisture, rain, and atmospheric carbon dioxide.
- Avoid contact with acids.
- Keep away from food products.

Shelf Life:

12 months under recommended storage conditions.

8. Safety Information

Hydrated Lime is strongly alkaline. So Avoid:

- Inhalation of dust
- Contact with eyes
- Prolonged skin contact

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Recommended PPE:

- Safety goggles
- Dust mask (N95 or equivalent)
- Chemical-resistant gloves
- Protective clothing

First Aid:

Eyes: Flush immediately with plenty of clean water for at least 15 minutes and seek medical attention.

Skin: Wash thoroughly with soap and water.

Inhalation: Move to fresh air.

Ingestion: Do not induce vomiting. Rinse mouth and seek immediate medical advice.

9. Regulatory Information

- CAS Number: **1305-62-0**
- REACH: Applicable where required
- GHS Classification: Skin Irritation Category 2, Serious Eye Damage Category 1, STOT SE Category 3 (Respiratory Irritation)
- UN Number: Not regulated for transport under most international regulations.

10. Quality Assurance

Each batch is tested for:

- Chemical Composition
- Purity
- Moisture
- Particle Size
- Whiteness
- Available Calcium Hydroxide
- Insoluble Matter

Certificate of Analysis (COA) is supplied upon request.

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11. Typical Uses by Industry

Industry	Application
Water Treatment	pH adjustment, coagulation, softening
Sugar	Juice purification
Steel	Slag conditioning
Mining	Ore flotation, cyanidation
Construction	Mortar, plaster, whitewash
Chemical	Calcium-based chemical production
Environmental	Flue gas desulfurization, waste treatment
Agriculture	Soil conditioning and pH correction
Leather	Dehairing and liming
Paper	Causticizing and pulp processing