



MEHRAN LIME INDUSTRIES

TECHNICAL DATA SHEET (TDS)

Product Name: Quicklime (Calcium Oxide)

Chemical Formula: CaO

CAS Number: 1305-78-8

HS Code: 2522.10

1. Product Description

Quicklime, also known as Calcium Oxide (CaO), is a highly reactive, alkaline inorganic compound produced by the thermal decomposition of high-purity limestone (CaCO₃). It is widely used in steel manufacturing, water treatment, construction, sugar refining, and chemical processing industries.

2. Typical Chemical Composition

Parameter	Specification (%)
Calcium Oxide (CaO)	90 – 96%
Magnesium Oxide (MgO)	1 – 4%
Silica (SiO ₂)	0.5 – 2.0%
Alumina (Al ₂ O ₃)	0.2 – 1.0%
Iron Oxide (Fe ₂ O ₃)	0.1 – 0.8%
Loss on Ignition (LOI)	≤ 3.0%

3. Physical Properties

Property	Value
Appearance	White to off-white lumps/powder
Odor	Odorless
Bulk Density	0.9 – 1.2 g/cm ³
Specific Gravity	~3.3
Melting Point	~2570°C
Solubility	Reacts with water (exothermic)

Plot # 19/B , SITE, Hyderabad, Pakistan. Landline # 022-3886198, Cell # 0333-2616656,

Email: sales@mehranlime.com, Website: www.mehranlime.com



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4. Particle Size

- Lumps: 10 – 50 mm / 20 – 80 mm (customizable)
 - Powder: As per customer requirement
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5. Reactivity

- Highly reactive with water forming Calcium Hydroxide (Ca(OH)_2)
 - Generates significant heat during hydration
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6. Applications

- Steel & Metallurgy (fluxing agent)
 - Water & Wastewater Treatment
 - Sugar Industry
 - Construction & Soil Stabilization
 - Chemical Manufacturing
 - Environmental Applications (flue gas treatment)
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7. Packaging

- 25 kg / 50 kg PP Bags
 - 1 MT Jumbo Bags
 - Bulk shipments available
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8. Storage & Handling

- Store in a dry, moisture-free environment
 - Protect from humidity and water exposure
 - Use appropriate PPE (gloves, goggles, dust mask)
 - Avoid direct contact with skin and eyes
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9. Safety Information

- Highly alkaline and corrosive
 - Causes irritation to skin, eyes, and respiratory system
 - Refer to Material Safety Data Sheet (MSDS) for detailed safety guidelines
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10. Shelf Life

- 3–6 months under proper storage conditions
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11. Disclaimer

The information provided is based on typical values and should not be considered as a guarantee of product performance. Customers are advised to conduct their own testing to ensure suitability for specific applications.