

CALCIUM HYDROXIDE

1. Basic Information

Product Name	Calcium Hydroxide
Structural Formula	Ca^{2+} $\text{HO}^- \text{ HO}^-$
Molecular Formula	H_2CaO_2
CAS No.	1305-62-0
EC No.	215-137-3
Description	Hydrated lime is widely used to adjust the pH of water to prepare it for further treatment. Lime is also used to combat "red water" by neutralizing the acid water, thereby reducing corrosion of pipes and mains from acid waters. The corrosive waters contain excessive amounts of carbon dioxide. Lime precipitates the CO_2 to form calcium carbonate, which provides a protective coating on the inside of water mains. Lime is used in conjunction with alum salts for coagulating suspended solids incident to the removal of turbidity from "raw" water. It serves to maintain the proper pH for most satisfactory coagulation conditions. In some water treatment plants, alum sludge is treated with lime to facilitate sludge thickening on pressure filters.

2. Physical Properties

Property Description	Property Value/Quality
$\text{Ca}(\text{OH})_2$ Appearance	Powder
Passing 30 Mesh sieve	100%
Passing 85 Mesh sieve	99.9%

3. Chemical Analysis

Constitutes	Composition
Silica (as SiO_2)	0.45
Iron as Fe_2O_3	0.07
Aluminium as Al_2O_3	0.08
Calcium Oxide	73.03

TECHNICAL SPECIFICATION

Magnesium Oxide	0.92
Available lime as CaO	71.97
Available lime as Ca(OH) ²	80.00
Carbon Dioxide	0.81
Lead	<5ppm
Arsenic, Chromium	<0.001%
Cadium, Barium	<0.001%
Copper	0.02%

4. Additional Information

Handling / Safety	The handling of any chemical requires care. Anyone responsible for using or handling Calcium Hydroxide should familiarise themselves with the full safety precautions outlined in our Material Safety Data Sheet.
Storage	Store in a dry, cool, well ventilated area.