

# VIGYAN LIME

G-37 RACE COURSE DEHRA DUN - 248 001

## QUALITY ASSURANCE DEPARTMENT PRODUCT DATA SHEET

### PHYSICAL AND CHEMICAL PROPERTIES:

Technical Name of Material	:	CALCIUM HYDROXIDE
Common Name	:	HYDRATED LIME / SLAKED LIME
Molecular Formula	:	Ca(OH) <sub>2</sub>
Molecular Weight	:	74.09
Physical State	:	POWDER
Appearance	:	WHITE
Odor	:	ODOURLESS
pH	:	12.4 (SAT. SOLN. @ 25OC)
Boiling Point	:	DECOMPOSES
Freezing/Melting Point	:	580° C
Solubility in water	:	SOLUBLE
Specific Gravity/Density	:	2.2400 G/CM <sup>3</sup> / 25-35 LB./CU. FT.
CAS #	:	1305-62-0

### SYNONYMS:

Biocalc; Calcium Hydrate; Calcium Dihydroxide; Caustic Lime; Hydrated Lime; Slaked Lime; Kalkhydrate; Lime Milk

### DESCRIPTION:

Calcium hydroxide, traditionally called slaked lime, hydrated lime, slack lime or lime, is a chemical compound with the chemical formula Ca(OH)<sub>2</sub>. It is a colourless crystal or white powder, and is obtained when calcium oxide (called lime or quicklime) is mixed, or "slaked" with water. It can also be precipitated by mixing an aqueous solution of calcium chloride and an aqueous solution of sodium hydroxide. The name of the natural, mineral form is portlandite. It is relatively rare mineral, known from some volcanic, plutonic and metamorphic rocks. It has also been known to arise in burning coal dumps. When heated to 512 °C, the partial pressure of water in equilibrium with calcium hydroxide reaches 101 kPa and decomposes into calcium oxide and water. A suspension of fine calcium hydroxide particles in water is called milk of lime. The solution is called lime water and is a medium strength base that reacts violently with acids and attacks many metals in presence of water. It turns milky if carbon dioxide is passed through, due to precipitation of CaCO<sub>3</sub>.

### USES:

- Most Cost Effective medium of obtaining CALCIUM for processing various Calcium Compounds & Drugs
- Best CALCIUM supplement for Pharmaceuticals, Nutraceuticals & Mineral Fortified Formulas
- In the Food Industry for Confectioneries, Baking and Packed Foods and other Ingredients, etc.

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- In the Food Industry for Processing Water (for Alcoholic and Soft Drinks)
- In the Bio-Science, Bulk Drugs and Health-Care Industries
- In the Beauty Industry, used in Cosmetics, Hair Straighteners, Relaxers, Colors, Removers, Creams
- For Clearing a Brine of Carbonates of Calcium/Magnesium in the Manufacture of Salt for Food & Pharmacopoeia
- In Chewing Betel Nut or Coca Leaves, it is usually chewed alongside to keep the Alkaloid Stimulants Chemically available for absorption by the Body, In parts of Asia & India, Hydrated Lime is used in Betel Nut Chewing
- In Dentistry, it is used as Dressing & Filling in Paste Form used for anti-microbial effect during a dental root canal procedure. It is known to have a strong anti-microbial effect and is a bone-regeneration stimulant
- A Flocculent, in Water and Sewage treatment and Improvement of Acid Soils
- An Ingredient in Whitewash, Mortar and Plaster
- In Bordeaux Mixture to Neutralize the Solution and Form a Long Lasting Fungicide
- In Tanning industry for Neutralization of Acid, the Liming of Hides & skins and the Flocculation of Waste Water
- In the Petroleum Refining Industry for the Manufacture of Additives to Oils (Salicatic, Sulphatic & Senatic)
- In the Separation of Sugar from Sugar Cane in the Sugar Industry
- A Filler in the Petrochemical Industry for manufacturing Solid Oil of Various Marks
- A Chemical vastly used for Oil Drilling Process, Concrete Cutting, Mining & Demolition
- A Filler in the Manufacture of Brake Pads & Linings, Greases, Ebonite, etc.
- For Preparation of Dry Mixes for Painting and Decorating
- In Manufacturing Mixes for Pesticides, Chemicals, etc.
- In Manufacturing an Antifungal & Antimicrobial Preservative for Vegetables & Fruits in storage
- It is added to Sea Water in great quantities to reduce Atmospheric CO<sub>2</sub> and fight the Greenhouse Effect
- Used as Acid Suppressor in the Production of Metals. Lime is injected into the Waste Gas Stream to Neutralize Acids such as Fluorides and Chlorides prior to being released to Atmosphere
- In Waste Management for Effluent Treatment
- One of the Cheapest Chemical Reagent available in the Market

<b>PDS Creation Date</b>	<b>30/06/2001</b>
<b>Revision #14 Date</b>	<b>01/07/2015</b>

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