

# INDUSTRIAL HYDRATED LIME

## PRODUCT DESCRIPTION

Cockburn Cement produces Industrial Hydrated Lime at its Kwinana Works in Kwinana, Western Australia. Industrial Hydrated Lime is manufactured by treating Quicklime with enough water to satisfy its chemical affinity for water, before being ground and air classified to produce a fine white powder.

### What is lime?

Hydrated lime (Calcium hydroxide) is an important material for use in the chemical processing industry, in the building industry, and in water treatment processes.

The manufacture of hydrated lime starts by calcining high quality limestone (Calcium carbonate) at elevated temperatures to produce Quicklime (Calcium oxide), a volatile powder.

Hydrated lime in turn is produced by reacting Quicklime with a controlled amount of water to form a dry white powder.

Reactions are as follows:

- $\text{Limestone} + \text{heat (800 } ^\circ\text{C)} = \text{Calcium oxide} + \text{Carbon dioxide}$   
 $\text{CaCO}_3 + \text{heat} = \text{CaO} + \text{CO}_2$
- $\text{Quicklime} + \text{water} = \text{Hydrated lime} + \text{heat}$   
 $\text{CaO} + \text{H}_2\text{O} = \text{Ca(OH)}_2$

## SUPPLY

Industrial Hydrated Lime is available in bulk, nominal 1 tonne bulk bags, and 20 kg multi-walled paper bags from the Kwinana Works and the Customer Service Centres in regional areas. Paper bags are palletised and stretch wrapped.

## SPECIFICATION

Cockburn Industrial Hydrated Lime is a high Calcium Lime complying with the Australian Standard Specification AS 1672.1 (Limes for Building).

All products are manufactured under a third party certified manufacturing and supply quality assurance system to AS/NZS ISO 9001 (BSI Certification No FS 604665).

## SAFETY INFORMATION

For safety information refer to the Safety Data Sheet for Industrial Hydrated Lime.

## HANDLING AND STORAGE

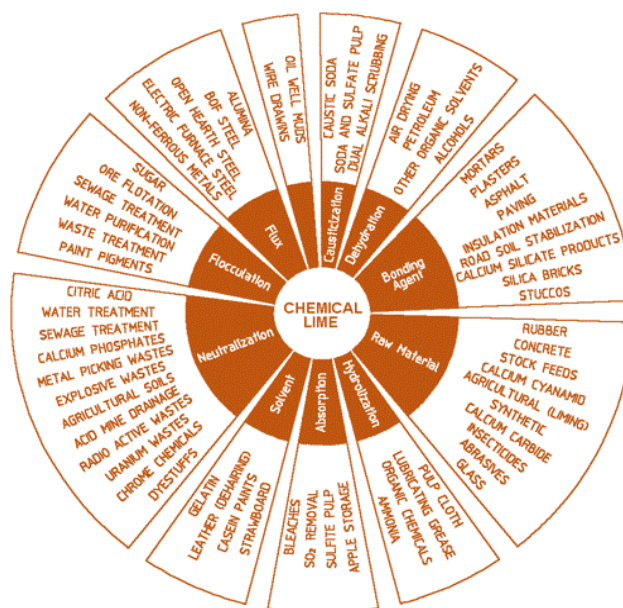
Transportation may be in bulk road or rail tankers, in bulk bags, or in paper bags. Hydrated lime can be stored in fit-for-purpose silos, or in bulk or paper bags for up to one (1) year, provided suitable protection against moisture ingress.

## TYPICAL PROPERTIES

| Oxide                               | AS 1672.1-1997 Requirement | Typical Analysis %          |
|-------------------------------------|----------------------------|-----------------------------|
| SiO <sub>2</sub>                    | No Requirement             | 6.3                         |
| Al <sub>2</sub> O <sub>3</sub>      |                            | 0.5                         |
| Fe <sub>2</sub> O <sub>3</sub>      |                            | 0.3                         |
| CaO                                 |                            | 64.5                        |
| MgO                                 |                            | 4.1                         |
| Loss On Ignition                    |                            | 22.5                        |
| CO <sub>2</sub>                     | ≤4%                        | 0.9                         |
| Available lime: Ca(OH) <sub>2</sub> | ≥65%                       | 82.0                        |
| Fineness by wet sieving             | ≤5% on 600 μm              | <3% on 75μm<br><1% on 300μm |
| Free moisture                       | ≤2.5%                      | 1.1                         |
| Soundness (Le Chatelier)            | ≤10 mm                     | 0 mm                        |
| Bulk density                        | No requirement             | 380-520 kg/m <sup>3</sup>   |

## APPLICATIONS

Hydrated Lime is an extremely versatile material, which is suitable for a range of chemical applications, some of which are detailed below:





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## CONTACT POINTS

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