



CHEMEMAN AUSTRALIA PTY LTD

61 Carpentaria Link, Hope Valley, WA 6165

ABN 73 134 283 060

P: (08) 9437 4800 | (08) 9437 3975 | (08) 9437 4617

PRODUCT DATA SHEET

QUICKLIME

PRODUCT DESCRIPTION

Chememan Quicklime is a calcium oxide (CaO) produced by the calcination of high-purity limestone in lime kilns. It is low in impurities and possesses a high degree of reactivity making it suitable for use in chemical processes. It is manufactured as a granular product, and it is off-white in colour.

Quicklime is highly reactive with water and generates considerable heat in the hydration process.

PROCESSING OF LIME

Lime is one of man's oldest and most vital chemicals and is often confused with limestone, from which it is derived. Quicklime is manufactured by calcining high-quality limestone at elevated temperatures, which causes volatilizing of nearly half of the stone's weight as carbon dioxide. The reaction is as follows:

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|-----------------------------------|---|--------------------------------|
| 1. Limestone + Heat (>800°C) | = | Calcium Oxide + Carbon Dioxide |
| $\text{CaCO}_3 + \text{Heat}$ | = | $\text{CaO} + \text{CO}_2$ |
| 2. Quicklime + Water | = | Calcium Hydroxide + Heat |
| $\text{CaO} + \text{H}_2\text{O}$ | = | Ca(OH)_2 |

Chememan's Quicklime is entirely produced in modern shaft kilns and rotary kilns using high-purity limestone from its own quarry as the only raw material.

SUPPLY

Chememan Quicklime is available in various sizes ranging from lump, pebble and powder forms. Our products are delivered to customers' sites in pneumatic bulk tankers or 1.0 – 1.5 MT bulk bags.

STANDARDS AND CERTIFICATION

Chememan Quicklime is a high Calcium Lime complying with Australian Standard AS 4489-1997 Test Methods for Limes and Limestone.

All products are manufactured under a third-party certified manufacturing and supply quality assurance system to ISO 9001:2000 (SGS Certification No TH05/0564QM).

SAFETY INFORMATION

Quicklime is caustic. Workers handling Quicklime must be adequately protected to avoid burns. The problem of Quicklime burns is serious, particularly in hot weather when workers perspire more than usual. Therefore, protective clothing must be used.

Because of the heat of hydration of Quicklime, care should be taken to avoid accidental contact with moisture or with chemicals possessing water of crystallization, in order to avoid excessive heat generation which might lead to the combustion of flammable products in proximity.

For more information, refer to the Safety Data Sheet for Quicklime.

HANDLING AND STORAGE

Chememan's Quicklime is classified as a granular material and lends itself to pneumatic and mechanical conveying systems. Due to Quicklime's affinity with water, the material should be stored in a dry waterproof enclosure.

Quicklime can be stored in conventional steel or concrete bins. In the case of bulk bag packaging, it must be kept in an enclosed warehouse with adequate prevention from moisture.



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Chemical Analysis	Method	Units	Typical	Specification/Range
Available CaO	AS4489-1997	%	89.11	88% min
Total CaO	XRF	%	93.10	90% min
MgO	XRF	%	0.500	3.0% max
Fe ₂ O ₃	XRF	%	0.277	0.5% max
Al ₂ O ₃	XRF	%	0.311	0.5% max
SiO ₂	XRF	%	0.711	1.5% max
P ₂ O ₅	XRF	%	0.015	0.010-0.020
SO ₃	XRF	%	0.045	0.020-0.690

Physical Analysis	Units	Typical	Range
Slaking by method AS4489-1997			
T= 60°C	mins	3.13	1.06-11.50
Temperature rise at 30 S	°C	25.64	11.40-34.00
Total temperature rise	°C	43.11	37.40-47.30
Total active slaking time	mins	5.18	4.00-7.50
Residue on slaking / grit	%	2.88	0.20-9.68

Sieve Analysis (ASTM C110)	Sieve		Units	Cumulative Passing	
	Mesh	µm		Typical	Range
	30	600	%	93.37	90.00-99.81
	60	250	%	80.35	67.35-99.27
	100	150	%	67.79	41.57-95.80
	200	75	%	49.38	22.05-76.47

Bulk Density	950 – 1100 kg/m ³
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For further information, please contact:

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