COCKBURN CEMENT

Product Data Sheet

HYLIME

PRODUCT DESCRIPTION

Cockburn Cement produces Hylime at its Kwinana Works in Kwinana, Western Australia. Hylime 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.

Hylime incorporates a carefully measured amount of air-entraining agent to further enhance its ability to impart excellent water retention and plasticity to mortar.

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:

1. Limestone + heat (800 ^{o}C) = Calcium oxide + Carbon dioxide
   $CaCO_3$ + heat = $CaO + CO_2$

2. Quicklime + water = Hydrated lime + heat
   $CaO + H_2O = Ca(OH)_2$

SUPPLY

Hylime is available in 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

Hylime 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 Hylime.

HANDLING AND STORAGE

Transportation may be in paper bags. Hylime can be stored in paper bags for up six months provided protection against ingress of moisture is observed throughout the storage of the product.

TYPICAL PROPERTIES

Oxide	AS 1672.1-1997 Requirement	Typical Analysis %
SiO_2	No Requirement	6.9
Al_2O_3		0.5
Fe_2O_3		0.3
CaO		64.7
MgO		4.1
Loss On Ignition		21.7
CO_2	≤4%	0.5
Available lime: $Ca(OH)_2$	≥65%	82.9
Fineness by wet sieving	≤5% on 600 µm	<3% on 75µm <1% on 300µm
Free moisture	≤2.5%	0.7
Soundness (Le Chatelier)	≤10 mm	0 mm
Bulk density	No requirement	405-455 kg/m^3

APPLICATIONS

Principally formulated for mortar, Hylime is also ideally suited for plastering applications.

RENDER GUIDE – Internal walls

Use [3]	Substrate	Mix ratio (volume) [2]		
		Cement	Hylime	Sand
Float/ base coat	Clay brick	1	1	7
	Calcium silicate	1	1.5	6
	Concrete block	1	1	6
Sand finish base coat		1	1	5[1]
Sand finish topcoat		1	1	6[1]
Cement Dado		Use Plasterers Dark Cement		

[1] For external application, sand volumes should be reduced to 4.5 and 5 respectively.

[2] Quantities suggested based on typical industry usage and will vary according to individual requirements.

[3] Hylime is not a plaster finishing lime and should not be used in set coats.

MORTAR GUIDE

Mix	Mix ratio (volume)
M4	Walls up to 1 km from a surf coastline or up to 100 m from a non-surf coastline, e.g. estuary and coastal river zones. Walls in contact with saline water or the ground in aggressive soils. Internal walls subject to saline wetting and drying.
M3	Walls between 1 km and 10 km of a surf coastline or between 100 m and 1 km of a non-surf coastline, e.g. estuary and coastal river zones. Walls in contact with fresh water or the ground in non-aggressive soils. Internal walls subject to non-saline wetting and drying.
M2	External above ground walls greater than 10 km of a surf coastline or greater than 1 km of a non-surf coastline, e.g. estuary and coastal river zones. Interior walls not subject to wetting and drying.

Mix design – parts by volume

Mix	Cement	Hylime	Brickies sand
M4	1	0.5	4.5
M3	1	1	6
M2	1	2	9

* Any admixtures used should be in accordance with the manufacturer's instructions.

** Hylime contains an air-entraining agent, additional air entrainment is not required.

*** Please refer to AS 3700 – Masonry Structures for more detailed information.

CONTACT POINTS

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