

MORTAR SPECIFICATION

COMPLIANT MORTAR MIXES FOR INSTALLATION OF NATURAL BRICK PTY LTD MASONRY

Natural Brick Pty Ltd specifies that all mortar mixes are in strict adherence with the AS3700 (Masonry structures). Utilising compliant mortar types and applications prevents unnecessary onsite issues related to mortar strength, cracking, movement and durability.

Mortar Types

There are 2 types of Mortar that can be used with Natural Brick Pty Ltd masonry:

1. M3 Mortar - General Purpose applications with moderate exposure.
2. M4 Mortar - High Durability applications with severe exposure.

Additives, Aggregates & Admixtures

All additives, aggregates and admixtures should comply with the building code and Concrete Masonry Association of Australia's recommendations. It is important to note that not all sand is the same. When working with concrete masonry, it is important that the clay content of the sand, used in mortar, is reduced. This will work to prevent hairline cracking and shrinkage of mortar on beds and pers.

Do not use dishwashing detergent or coke (sugar) in mortar to increase workability or curing periods.

Mortar Mix Recommendations

The following mortar mixes are recommended by Natural Brick Pty Ltd.

Mortar Type	Portland Cement	Hydrated Lime	Washed Sand (Sydney Sand)	Brickie Sand	Mortarshield or Effseal	Methylcellulose	Oxide
M3	1	1	3	3	As specified on packaging	Optional	Optional
M3	1	1		6	As specified on packaging	Optional	Optional
M3	1	1	5		As specified on packaging	Optional	Optional
M3	1	0	5		As specified on packaging	Necessary	Optional
M4	1	0.5	2.5	2	As specified on packaging	Optional	Optional
M4	1	0.5		4.5	Optional	Optional	Optional
M4	1	0	4		As specified on packaging	Necessary	Optional

All raw materials should be bucket dosed and additives should be accurately measured on site.

Mortar Crack Prevention

Water Dosing

It is important to not add too much water to the mortar while in the mixer. In order to increase the workability of mortar, additives such as methylcellulose or bycol can be added to the mix.

'Knocking Up' Mortar

Knocking up mortar increases the likelihood of mortar cracking. It is better to reduce the batch sizing to prevent the need for rewetting mortar while on mudboards.

Jointing

Compressing joints with a rake, round iron or trowel will increase the durability of mortar and reduce hairline cracking associated with standard contraction of concrete masonry.

Control Joints

Concrete masonry contracts over time. It is integral that control joints are included in the design and construction of concrete masonry walls. The building code specifies control joints at maximum 6m intervals. We would recommend control joints on external walls to be inserted at 5m intervals.

Lintel Coursing

Brick and block coursing requires a minimum 3 courses above openings to prevent mortar cracking from movement. It is also beneficial to insert control joints at either side of wide openings to allow for movement.

Hydrated Builders Lime

By including Lime in mortar, workability and hairline crack self healing can be increased.

Brick Storage

When bricks arrive on site, ensure that bricks remain protected from rain, preventing excessive water absorption that can cause shrinkage and mortar adhesion problems during bricklaying.

Keep bricks stored on pallets or plastic before load out. During load out, ensure bricks are not stacked on dirt/mud and not used as mud board props. Failure may result in staining of the brick faces. Cover loadouts with plastic to prevent bricks getting wet before laying.

Moisture During Construction

At the end of each day, cover brickwork and load out stacks to protect walls from rain which

may cause efflorescence or other leaching issues. Excessive moisture may result in newly constructed brickwork to discolour or become patchy in areas.

- Ensure storm water is shed so as to clear masonry below. Where downpipes are yet to be installed, direct water away from walls.
- All copings and sills should project a minimum of 10mm beyond the brick face.

For any technical inquiries or concerns, please contact the Natural Brick Co team directly.

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