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Castle Moderately Hydraulic Lime Mortar technical specification

Castle Moderately Hydraulic Lime Mortar complies with the durability requirements of BS5628 : Part 3 : 2001.

Produced using dried sands and Castle Natural Hydraulic Lime (NHL), it is suitable for use in brick and block laying, stonemasonry and as a backing or final coat render/plaster.

Applications

Moderately Hydraulic Lime Mortar has excellent workability and good water retention when applied to most bricks, blocks and surfaces to be bedded, rendered or plastered. The lower strength of Moderately Hydraulic Lime Mortar compared with Portland cement based mortars compliments the lower strengths of many natural stone and soft brick applications whilst improving plasticity and retaining a high level of cohesion with low shrinkage.

Moderately Hydraulic Lime Mortar has high resistance to sulfates in either ground waters or in masonry and good resistance to freezing and thawing actions.

Technical guidance on the use of Moderately Hydraulic Lime Mortar is obtainable from Castle's Technical Helpline on 0845 722 7853.

Characteristics

- More flexible than Portland cement based mortars which means that expansion joints are not necessary in many cases
- Offers good vapour permeability which enables the building to breathe
- Formulated to meet the requirements of compressive strength and durability
- Consistent mix proportions
- Consistent quality of mortar
- Correct choice of sand
- Mortar can be re-worked for up to 24 hours
- Productivity savings as there is no need to allocate one individual to mixing
- A reduction in wastage as mortar is produced as and when needed
- Hydraulic Lime Mortar is a specialist product with different setting, strength development and application characteristics to Portland cement. If you are not experienced in the use of these products, we strongly recommend that you contact Castle's Technical Helpline for advice before use.

Quality

Moderately Hydraulic Lime Mortar is manufactured using factory batching techniques with the end product being subject to regular quality control procedures and testing. Raw materials are weighed and mixed under computer controlled conditions with rigorous quality control procedures. Although mortar is traditionally specified by volume, it is generally accepted that batching by weight produces mortar of a greater consistency.

Strength

Moderately Hydraulic Lime Mortar will reach HLM 1 (class IV) at 28 days and HLM 2.5 (class III) at 91 days. Mortar strengths are measured at 91 days as opposed to 28 days, as lime mortars gain strength more gradually compared to Portland cement based mortars.

Mortar class	Lime: sand (vol/vol)	BS5628 mortar mix durability designation (equivalent)	Hydraulic lime mix designation	Typical compressive strength (N/mm ² @ 91 days)	Mortar durability class
Moderately hydraulic	1: 2/4	(iv) @ 28 days (iii) @ 91 days	HLM 2.5	2.5	5-6

Mixing

Mixing can be undertaken using a conventional drum mixer although a rollpan or paddle mixer is preferable. Water added on site should be clean and free from impurities. The addition of water to the mix should be controlled to ensure that the mix does not become saturated.

For best results add the water sparingly, waiting for the water to thoroughly disperse throughout the mix before adding more. Once the desired consistency is reached continue mixing for a further 20 minutes.

Under certain circumstances results can be improved by re-mixing the mortar after allowing it to stand for up to 8 hours after the initial mixing process.

Work should not be carried out if the temperature is below 5°C. If, after application, the temperature is expected to fall below 5°C some form of protection must be given to the area of work. Without adequate protection there is a risk of frost damage during the curing process. Protection should also be given from wind, rain and direct sunlight.

Admixtures and additions

Moderately Hydraulic Lime Mortar is a pre-packed lime: sand mortar. The addition of admixtures is not recommended and could adversely affect the performance of the finished product.

Shelf life

Not applicable under the Chromium (VI) Directive.

Availability

Available in 25kg bags.

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For further information please contact:

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