

Limetec® Hydraulic Lime Mortars

Product Datasheet

1. Introduction

Limetec® Hydraulic Lime Mortars are factory produced mortars using dried sands and hydraulic lime. The dry mortar is available in 25kg bags, 1T bulk bags or 20T bulk silos.

2. Suitable Uses

Limetec® Hydraulic Lime Mortars are suitable for blocklaying, bricklaying, stonemasonry.

3. Composition

Limetec® Hydraulic Lime Mortars are manufactured using natural hydraulic limes in grades of 5 or 3.5 or 2 (NHL), which are produced by burning argillaceous or siliceous limestone, high calcium lime (CL 90) and specially graded sand and aggregates.

4. Authority

Limetec® Hydraulic Lime Mortars comply with the durability requirements of BS5628: Part 3:2001. 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.

Materials used conform to the following standards:

Sand BS EN 13139: 2002
Natural Hydraulic Lime (NHL) BS EN 459: Part 1: 2001
Calcium Lime (CL90) BS EN 459: Part 1: 2001
Pigments BS EN 12874

Admixtures, where used, do not contain calcium chloride.

5. General Advantages

Limetec® Hydraulic Lime Mortars offer several usage and mix advantages over cement and site mixed lime mortars:

- Reduces the need for expansion joints
- Uses less energy to produce than cement
- Re-absorbs CO₂ when it cures and sets
- Allows masonry to be recycled at end of life
- Provides a breathable form of construction
- Provides a water shedding barrier for walls
- Aesthetically enhances masonry
- Consistent mix proportions.
- Consistent quality and colour of mortar.
- Correct choice of sands.
- Mortars can be re-worked for up to 24 hours.
- Deterrent against pilfering and reduction in wastage with silo use.
- Productivity savings as no need to allocate one individual for .
- Mortar is produced as and when needed when using silos.

6. Manufacture

Limetec® Hydraulic Lime Mortars are manufactured using factory batching techniques.

Raw materials and end products are subject to regular quality control procedures and testing.

The 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.

7. Storage

Dry and protected, if properly stored can use for 1 year

8. Quality Assurance

The product constantly undergoes third party and in-house monitoring, using tested and certified quality management systems conforming to the current international standard EN ISO 9001 and the environment standard EN ISO 14001

9. Health and Safety

See separate Health and Safety sheet

10. Mortar Mix Proportions

Limetec® Eminently Hydraulic Mortar

Mix proportion 1:2. Limetec® Eminently Hydraulic Mortar will reach HLM2.5 (class III) at 28 days and HLM5 (class II) at 91 days (high resistance to freezing & thawing, high resistance to sulphates).

Mortar class	Lime : sand (vol/ vol)	BS 5628 Mortar Durability Designation	Hydraulic lime Mix designation	Compressive strength N/mm2 @ 91 days	Mortar Durability Class
Eminently hydraulic	1 : 2	(iii) at 28 days (ii) at 91 days	HLM5	5.0	7-8

Limetec® Moderately Hydraulic Mortar

Mix proportion 1:2¼. Limetec® Moderately Hydraulic Mortar will reach HLM1 (class IV) at 28 days and HLM2.5 (class III) at 91 days (good/high resistance to freezing & thawing, high resistance to sulphates).

Mortar class	Lime : sand (vol/ vol)	BS 5628 Mortar mix Durability Designation	Hydraulic lime Mix designation	Typical Compressive strength (N/mm2 @ 91 days)	Mortar Durability Class
Moderately hydraulic	1 : 2¼	(iv) at 28 days (iii) at 91 days	HLM2.5	2.5	5-6

Limetec® Feebly Hydraulic Mortar

Mix proportion 1:2¾. Limetec® Feebly Hydraulic Mortar will reach HLM0.5 (class V) at 28 days and HLM1 (class IV) at 91 days (poor resistance to freezing & thawing, good resistance to sulphates).

Mortar class	Lime : sand (vol/ vol)	BS 5628 Mortar mix Durability Designation	Hydraulic lime Mix designation	Typical Compressive strength (N/mm2 @ 91 days)	Mortar Durability Class
Feebly hydraulic	1 : 2¾	(v) at 28 days (iv) at 91 days	HLM1	1	3-4

11. Performance

Limetec® Hydraulic Lime Mortars are more flexible than Portland cement based mortars, which means that expansion joints are not necessary in many circumstances.

Limetec® Hydraulic Lime Mortars offer good vapour permeability, which enables the building to “breathe”.

Limetec® Hydraulic Lime Mortars are formulated to meet the requirements of compressive strength and durability for masonry.

12. Coverage

For brick laying a 25kg bag of Limetec® Hydraulic Lime Mortars will lay approximately 25 bricks with a 10mm joint for a single brick skin, (20m² per tonne) or (1000 bricks per tonne of mortar). For re-pointing of brickwork a 25 kg bag will give 2.8m² of 10mm joint.

13. Sitework

See separate Limetec Method Sheets for Conventional Mixing and Laying Masonry with Limetec Hydraulic Lime Mortars.

When using 25kg bags, mixing can be undertaken using a conventional drum mixer. The addition of water to the mix should be controlled to ensure that the mix does not become saturated.

Under certain circumstances results can be improved by re-mixing the mortar after allowing it to stand for 30 minutes 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 such as dry layers of hessian or bubble pack must be given to the area of work. Without adequate protection there is a risk of frost damage during the curing process. Protect from rain and snow with polythene sheets or tarpaulin or similar.