

EcoRight HYDRAULIC LIME MORTARS

1.0 Identification

1.1 Introduction

EcoRight mortars are produced in a variety of strengths and earth tone colours using dried sands, natural hydraulic lime, calcium lime and natural pigments.

The dry mortar is available in 25kg bags, bulk IBC's or silo options.

EcoRight mortars are suitable for use in block laying, bricklaying, stonemasonry or as a backing or final coat render/plaster.

1.2 Authority

EcoRight 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	BS EN 459: Part 1: 2001
Pigments	BS EN 12874

Water added on site should be clean and free from impurities. (Admixtures should not be used)

1.3 General Advantages

EcoRight mortars offer several mix advantages:

- Consistent mix proportions and quality of mortar.
- Aesthetically enhances the character of brickwork.
- Correct choice of sands.
- Improved workability, mortars can be re-worked for up to 24 hours.
- Reduction in wastage, savings on material cost.
- Improved productivity, savings on labour cost

2.0 Description

2.1 Manufacture

EcoRight mortars are manufactured using factory batching techniques.

Raw materials and finished products are subject to routine quality control procedures and testing throughout the weighing and mixing process.

Whilst mortar is traditionally specified by volume, batching by weight produces mortar of a greater consistency.

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Tel: 01189 469 153 (head office) +44 (0)845 873 3888 (orders) 01189 946 9176 (fax). Company Reg no: 6561874.

EcoRight Ltd is a member of **The Building Limes Forum**, a charitable organisation which works Internationally to promote research and education and to encourage expertise and understanding in the use of building limes.

2.2 Mortar Mix Proportions

EcoRight M5 Hydraulic Mortar

This is often referred to as an **eminent** mix but now designated as M5 with the following proportion 1:2 lime: sand. **EcoRight M5** Hydraulic Lime Mortar will reach HLM2.5 (class III) at 28 days and HLM5 (class II) at 91 days (high resistance to freezing & thawing and a high resistance to sulphates).

Often used where a higher level of durability is required and in areas subject to potential severe weathering such as chimneys, copings as well as areas below dpc.

Mortar class	Lime : sand By volume	BS 5628 Mortar mix Durability Designation	Hydraulic lime Mix designation	Typical Compressive strength (N/mm ² @ 91 days)	Mortar Durability Class
Eminent hydraulic M5	1 : 2	(iv) at 28 days (iii) at 91 days	HLM 5	5.0	7-8

EcoRight M2.5 Hydraulic Mortar

This is often referred to as a **moderate** mix but now designated as M2.5 with the following proportion 1:2¼. **EcoRight M2.5** Hydraulic Lime 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).

Ideal for normal applications in brick, block & stone masonry in cavity wall construction

Mortar class	Lime : sand By volume	BS 5628 Mortar mix Durability Designation	Hydraulic lime Mix designation	Typical Compressive strength (N/mm ² @ 91 days)	Mortar Durability Class
Moderately hydraulic M2.5	1 : 2¼	(iv) at 28 days (iii) at 91 days	HLM 2.5	2.5	5-6

The above is meant as a guide only; if you wish to discuss a specific application in further depth please call our sales office.

2.4 Performance

EcoRight mortars are more flexible than Portland cement based mortars, which means that expansion joints are not necessary in many circumstances. (See EcoRight Design Guide for further information)

EcoRight mortars offer good vapour permeability, which enables the building to “breathe”.

EcoRight mortars are formulated to meet the requirements of compressive strength and durability. Lime based mortars create a stronger bond in brick and blockwork

2.5 Coverage

EcoRight mortars can be used for scratch coat and floating coat plasters and renders and have a coverage rate of 1.25m² per 25kg bag (50m² per tonne) @ 9mm thick.

For brick laying a 25kg bag will lay 25 bricks with a 10mm joint and a single brick skin, (1000 bricks per tonne of mortar)

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3.0 Site work

EcoRight mortars can be delivered to site in 25kg bags, ½ or 1 ton IBC's. Silo options are also available.

EcoRight mortars can be stored for up to 18 months if kept dry and protected from adverse weather and damp conditions.

When using 25kg bags or IBC's, 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.

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.

It is possible to lay brickwork in lifts of 1.5metres per day.

Note: 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 high risk of frost damage during the lime curing process. Protect from rain and snow with polythene sheets or tarpaulin or similar.

4.0 Health & Safety

Refer to health and safety data sheet for hydraulic lime mortar.

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