

Lime hemp plaster

Application Guide

Courtesy: S.Frost

Description

Tŷ-Mawr Fat Lime Hemp Plasters are made from a high calcium lime (also known as a fat/air/putty or nonhydraulic lime) blended with the hemp fibres and a pozzolan to aid the set. The Tŷ-Mawr product is entirely made from British materials. It requires exposure to Carbon Dioxide in the presence of moisture to harden, however, it can be applied in thicker coats than conventional lime plasters. It has good flexural strength and is breathable, which makes it suitable for use in the restoration of old 'solid wall' construction buildings as well as ecological new builds, it also provides additional insulation, is easier to use and is ideal for patching and improving air tightness. It should not be used in damp situations e.g. basements or on wet substrates. Good practice should be taken to ensure that the building structure is 'breathing' e.g. removal of external cement renders/plastic paints etc.

Time needs to be given for previously wet walls to dry out if cementitious renders have been removed.

Please note

The application of lime plaster is more involved than using conventional plaster. It is highly recommended to use a plasterer experienced in the use of lime plasters or at the very least some practical experience is essential e.g. by attending a lime course, as it is not possible to cover every point in detail here. However, should you experience difficulties in applying our products after following the advice given, please contact our Product Support Team at tymawr@lime.org.uk.

Preparing the mix

- the plaster needs to be 'knocked-up' - a process of chopping, beating and turning which will release some water. Water should be added cautiously to make a workable mix.
- a bell mixer is the ideal way to 'knock-up' the lime hemp plaster. It should be left turning for long enough to achieve a suitable consistency (20-30 minutes). Smaller quantities can be 'knocked-up' with a whisk and bucket if no mixer is available. If preparing the fine hemp & superfine 50/50 mix, empty 1 bag of each in to the mixer and "knock-up".



Assessing the workability of the lime hemp plaster and deciding whether or not to add water



Preparing the surface

- it is important that the hemp plaster is not applied to a damp wall as this can extend setting times dramatically especially during winter months. If in doubt please refer to manufacturer for guidance.
- Sometimes there is no need for extensive pre-wetting of backgrounds (but please assess first) before applying lime hemp plasters as they hold more water than standard lime plasters – just a mist down should suffice. The suction created by differences in background moisture will help. Onto high absorption backgrounds these will definitely need pre-wetting.
- if Celenit wood wool boards or wood-fibre boards are being used as the background, they do not require damping down. N.B. do not put scrim or mesh directly onto the boards.



Courtesy: www.traditionalbuilding.com



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Building Material	Site Type	Suggested Base Coat / Levelling Coat	Suggested Build-up	Suggested Top Coat – please note the top coat should not be stronger than the base coat	Suggested Build-up
Cob, Rammed Earth, Strawbale	Internal	Lime Hemp Plaster (medium)	1 x 15mm	Lime Hemp Plaster (fine) or Superfine 50/50 mix	1 x 6mm**
Lath, Reed Mat, Reed Board	Internal	Lime Hemp Plaster (medium)	1 x 15mm	Lime Hemp Plaster (fine) or Superfine 50/50 mix	1 x 6mm**
Celenit Wood Wool Boards	Internal	Lime Hemp Plaster (fine)	1 x 6mm	Lime Hemp Plaster (fine)	1 x 6mm**
	Ceilings Heavy Stress Light Stress	Lime Hemp Plaster (fine) (coarse mesh) Lime Hemp Plaster (fine)	1 x 6mm	Lime Hemp Plaster (fine)	1 x 6mm**
Woodfibre Board	Internal	Levelling coat: level background with standard hydraulic lime plaster (min 2 x 10mm), for adhering boards 5mm to back of board. Base coat Lime Hemp Plaster (fine)	1 x 6mm	Lime Hemp Plaster (fine)	1 x 6mm**
Soft Stone, Brick	Internal	Lime Hemp Plaster (medium)	1 x 15-25mm ^{°°}	Lime Hemp Plaster (fine)	1 x 6mm**
Hard Stone, Hard Engineering Brick, Concrete Blocks	Internal	Lime Hemp Plaster (medium)	1 x 15-25mm	Lime Hemp Plaster (fine)	1 x 6mm**
Insulation Blocks*	Internal	Lime Hemp Plaster (medium)	1 x 10-15mm	Lime Hemp Plaster (fine)	1 x 6mm**

*May require more coats due to waviness of bales. ^{°°}Depending on suction. Could be greater on well keyed, high suction backgrounds. **For a smoother finish, a Lime Top Coat Plaster (standard) can be applied in 1 x 3mm coat. *Insulation blocks have very high suction, be careful to control the suction. N.B. Drying times will be extended with thickness.

Application of lime hemp plaster

- lime hemp plaster is suitable for base coats, dubbing-out and textured top coats.
- unlike standard lime plasters, lime hemp plasters can be applied in single coats 15-25mm thick (thickness will depend on the substrate and application, see above, remember, the thicker the coat, the slower the drying).
- a dry premix is now available for more extreme conditions e.g. if the substrate is damp, during the winter months, please seek advice and see notes below.
- lay on and trowel up with a steel trowel.
- wet the surface of the plaster before working it over with trowels or floats, by splashing with water. Over-wetting should be avoided.
- feather edge and soft brush the base coat to give a key then apply a top coat of fine lime hemp plaster at 6mm For a finer finish fine lime hemp can be mixed 50/50 with superfine top coat. It is advisable that test panels are made to ensure the desired finish is achieved prior to the works commencing. Following good practice, this should be applied before the base coat is completely hard.
- 10cm wide jute scrim should be trowelled into the basecoat Lime Hemp Plaster at corners or at wall/ceilings junctions. This will help counteract shrinkage in these areas.
- after 3-4 weeks, it is possible to finish the plaster with a limewash or breathable paint if required.



Application on ceilings

- for ceilings (heavy stress), onto 25mm Celenit wood wool boards, it is best to apply a 6mm coat of fine grade lime hemp plaster, then the render mesh can be trowelled in, followed by a 6mm top coat of fine grade lime hemp plaster or 3mm Finish Plaster.
- for ceilings (light stress) onto 25mm Celenit wood wool boards, apply 6mm coat (with no mesh) of the fine grade lime hemp plaster, followed by a 6mm coat of fine grade lime hemp plaster or 3mm Finish Plaster.



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- lime hemp plasters hold more moisture than sand/glass lime plasters and therefore do not require as much tending.
- it can take anything from a week, a month or more to completely dry depending upon the substrate, thickness of application, wetness of material and the environmental conditions.
- monitor new work - as much care needs to be provided to encourage drying with lime hemp as to protecting against rapid drying.
- to encourage drying - good ventilation is vital and possibly the gentle use of dehumidifiers, blowers and/or gentle heat (please consult manufacturer before using). Care should be taken in winter months as drying is slower.
- to slow drying down - gentle spraying may be required.

Please note

Failure to provide adequate ventilation can lead to temporary mould growth whilst carbonation is taking place. Immediate action should be taken to remedy this situation. Call 01874 611350.

Storage

- store airtight, dry and frost-free.
- premixed lime hemp plaster will become hard over time and require more 'knocking-up', therefore, use as soon as possible after purchase.
- Use within 4 weeks of purchase.

After care

Your finished plaster will care for your building for years to come as well as helping to control the humidity of the internal environment. It will give a beautiful finish that no 'conventional' plaster can replicate. We highly recommend that if you paint it, that you should finish it with a 'breathable' and preferably a natural paint, your choice will depend on the level of durability, required vapour control and the desired aesthetic.



Tŷ-Mawr Training Centre - plastered internally with lime hemp plaster.

Please note

Refer to specific manufacturer's instructions for detailed notes on plastering and rendering with lime hemp plaster onto different substrates.

Health and Safety Information

WARNING



Skin Irritation 2 H315 Causes skin irritation.

STOT SE 3 H335 May cause respiratory problems.

DANGER



Eye Damage 1 H318 Causes serious eye damage.

Precautionary Statements

P102 Keep out of reach of children.

P280 Wear protective gloves, eye protection/face mask.

P305 + P351 + P310 If in eyes rinse cautiously with water for several minutes and immediately get medical assistance.

P352 + P352 If on skin, wash affected parts immediately with plenty of soap and water.

For further information about the whole subject and illustrated diagrams of lime plastering and pointing techniques, see [The Lime Handbook](#) now available to order on www.lime.org.uk

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