



Tim Massa applying hydraulic hemp

Hydraulic Hemp plaster

Application Guide

Description

Tŷ-Mawr Hydraulic Hemp Plasters are made from hydraulic lime blended with the hemp fibres. In situations where a faster set is required, a dry premixed hemp lime plaster can be a good alternative to the fat lime hemp plaster. The Tŷ-Mawr product is entirely made from British hemp. 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.

Structural defects can not be overcome with plasterwork, not even hemp plaster! 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

A bell mixer is an ideal way to mix the lime hemp plaster. Place the dry plaster in the mixer and approximately 2/3rds of the water, for each 25 kg dry mix add approximately 10-14 litres of water. It should be left to turn for approximately 20-30 mins before adding any more water. Over mixing can cause air bubbles to become trapped in the mix, which will affect the final finish and might result in undue shrinkage of the plaster. The mix should be left turning long enough to achieve a suitable consistency.

For the plaster to have more body and a feel similar to a fat lime hemp plaster then it should be allowed to steep over night once it has been mixed. It can then be 'knocked-up' again the following day. This will aid in the application onto ceilings.

Hydraulic Hemp Plaster Selection

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)	1 x 6mm**
Lath, Reed Mat, Reed Board	Internal	Lime Hemp Plaster (medium)	1 x 15mm	Lime Hemp Plaster (fine)	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 ^{oo}	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. ^{oo}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.



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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.
- there is usually no need for pre-wetting backgrounds (but please assess first) before applying lime hemp plasters as they hold more water than standard lime plasters. The suction created by differences in background moisture will help bond the lime hemp plaster to the background.
- 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. Ensure that the background is clean and free from dust by brushing the surface.

Application of lime hemp plaster/render

- 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).
- lay on and trowel up with a steel trowel.
- feather edge and soft brush the base coat to give a key then apply a top coat of fine lime hemp plaster at 6mm or 3mm of standard lime top coat plaster. Following good practice, this should be applied before the base coat is completely hard. Lightly mist the following day and lightly trowel or rub with a sponge float to achieve the desired finish.
- 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.
- finish 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.

Protection of the work

- 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. 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.
- store airtight, dry and frost-free. 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.

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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