



Tradical® PF 80 M

Aerial lime formulated as a render based on mineral and organic aggregates in compliance with the French Building Code (DTU 26.1) and the French Professional Rules for the Construction of Hempcrete Structures

Definitions and areas of use

Tradical® PF 80 M is a binder based on aerial lime (85%), hydraulic binders (15%) and mineral fillers suitable for:

1- Mixing with aggregates (sand) and water to form a traditional base coat, brown coat, and single-mass render in compliance with the French Building Code (DTU 26.1).

2- Mixing with Chanvribat® organic aggregate to form a render for interior and exterior insulating walls, suitable for any type of clean and sound substrate, in compliance with the French Professional Rules for the Construction of Hempcrete Structures, section on Render Application.

Storage

Store in its original bag (20 kg) in a sheltered place. Tradical® PF 80 M binder can be stored for 12 months.

Design of structures and application

Refer to the French Building Code or French Professional Rules for the Construction of Hempcrete Structures in force for the type of structure.

- Brown coat and mechanical render: DTU 26.1

- Hemp render: French Professional Rules for the Construction of Hempcrete Structures: section on Render Application.

Performance	
Coefficient of thermal conductivity λ	≤ 0.18
Density	$= 0.9$ to 1
Soluble silica (hydraulicity)	$\leq 7.2\%$
CO ₂ content	$\leq 13\%$
Additives (organic colloids and surfactants)	$< 0.8\%$
Water retention	$\geq 73\%$
Particle size distribution	$\leq 90 \mu\text{m}$
Pulling/bending	$\geq 0.3 \text{ N/mm}^2$
Compression	$\geq 1 \text{ N/mm}^2$

1- Mechanical render

• Substrates

For brown coats and renders, moisten the substrate the day before until the saturation point is reached. Re-moisten if required and leave to dry.

Do not apply to frozen, thawing, overheated or streaming substrates.

The substrates must be suitable as per the specifications.

• Preparation

Mix the sand according to the proportions listed, without adding any hydraulic binders. Then mix to form the desired consistency by adding clean water.

Mix for 3 to 5 minutes in a concrete mixer.

• Application

Apply at a temperature of between +5 °C and +35 °C, away from sunlight, strong winds and heavy rainfall.

Mechanical application or by pneumatic projection:

→ Refer to the material manufacturer for the amount of sand to use.

→ Apply in the same manner as a traditional mortar.

• Mix proportions

The mix proportion of lime in relation to sand depends on:

a) the type of structure rendered, and

b) the sand used (particle size distribution, type, and moisture content)

	For renovating : 1 coat in 2 layers	Bag of lime Tradical® 80 M	+	0/4 sand 10 l bucket	For new builds with - Firm and Hard substrates - Level masonry elements	Bag of lime Tradical® Bâtir	Bag of lime Tradical® 80 M	+	0/4 sand 10 l bucket
First layer	1		+	5,5 to 6	Base coat	1		+	5
Second layer	1		+	6 to 7	Single-mass render		1	+	5 to 7

• Guarantee

Within the scope of the company's civil liability insurance.

Manufacturer's civil liability, SMABTP contract:

ALPHA-BAT Fabricants no. 512806 E.

Tradical® PF 80 M includes

Tradical® "Masonry and Rendering with lime"

- Tradical® PF 55
- Tradical® Maçonner
- Tradical® Bâtir
- Tradical® PF 80
- Tradical® PZ
- Tradical® Premium Naturel



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Tradical® PF 80 M (continued)

2 - Formulated lime for Tradical® hygrothermal render

Lime + aggregate blend approved by the *Construire en Chanvre* association

The Construire en Chanvre association has approved the Chanvribat®+Tradical® Bâtir blend as meeting the threshold performances measured in certified external laboratories, as required by the French Professional Rules.

Test reference details

CRDA test no. 2013-17 report: BCB Tradical® PF 80 M+Chanvribat® render formula dated 04 12 2013

Characteristics	
Mass density	925 kg/m ³
Thermal conductivity	$\lambda = 0.17$ to 0.15 W/m.k
Compression strength	0.4 MPa (after 28 days)
Elastic modulus	25 MPa (after 28 days)
Fire resistance rating for the Tradical® PF 80 M + Chanvribat® blend	A2-s1, d0

• Mixing method

Mixing can be performed in a concrete mixer or mixing machine.

Add the following in the order indicated:

- All of the water
- Tradical® PF 80 M, mixing until a homogeneous paste is obtained (3 to 5 min).
- Chanvribat®, mixing slowly until all aggregates are entirely and evenly coated, by adjusting the quantity of water if necessary.

The mortar can be used immediately, but it will be easier to use after letting it rest (better adherence).

The consistency of the mortar can be adjusted by adding water progressively, as and when it is used, depending on application conditions (substrate, desired thickness, speed of execution, atmospheric conditions, etc.).

• Application

Must be applied in accordance with the French Professional Rules for the Construction of Hempcrete Structures, section on Render Application. Tradical® Hemp Renders may be applied to a base coat and are suitable for indoor and outdoor use.

For outdoor use, a finishing coat consisting of lime render + sand must be applied.

• Base coat:

Base coats can be prepared with Tradical® PF 80 M + Chanvribat® mixed at 900 kg/m³.

• Brown coat:

- Can be applied to a wet base coat to improve bonding.
- Use a trowel or finishing trowel to apply successive coats of 2 to 4 cm, waiting for each coat to start setting before applying the next (20 to 60 min depending on conditions).
- Smoothen using a float or smoothing board if required.
- Leave to set and then use the float to achieve the desired finish.

MIX PROPORTION

Water	Tradical® PF 80 M	Chanvribat®
100 à 110 l	5,5 bags	1 bag

• Finishing:

- Interior render: After using the float to achieve the desired appearance, the Tradical® PF 80 M + Chanvribat® brown coat can be kept as is or coated with a limewash to obtain the desired colouring. It can also be whitewashed or a finishing coat can be applied.
- Exterior render: Tradical® PF 80 M + Chanvribat® exterior renders must be finished with a whitewash or an aerial lime mortar. This mortar must be prepared with Tradical® PF 80 M + sand (particle size distribution 0/1, 0/2 or 0/3), mixed at 600 kg/m³.
- Mechanical application: please contact us.

• Precautionary measures for application

Do not apply at temperatures below +5 °C or above +35 °C.

• Guarantee

Tradical® Hemp Renders prepared in accordance with the requirements of this document have successfully met the tests required by the French Professional Rules for the Construction of Hempcrete Structures, section on Render Application.

Users can benefit from all the guarantees that apply within the scope of this text and the company's civil liability insurance, and must contact their insurance company about this matter.

Manufacturer's civil liability, SMABTP contract: ALPHA-BAT Fabricants no. 512806 E.

3- Miscellaneous

- Testing

Each production batch is lab-tested. A sample is stored and the corresponding reference is noted on each bag.

Tradical® PF 80 M includes

Tradical® Hempcrete

- Tradical® Thermo
- Tradical® PF 70
- Tradical® Bâtir
- Tradical® Chanvribat®
- Tradical® Premium Naturel