

**BATICHANVRE ® for Eco Build Hemp Construction**

**St Astier Limes and Mortars**

Low density binder based on St. Astier Natural Hydraulic Limes for the production of hemp mortars. Its use has been validated by tests conducted by ENTPE (*French public works national school*) and conforms to the hemp construction general rules.

*Dry density (average) 700g.l*

*Packing : 25 kg. bags. Pallets of 50 bags (1.25T).*

*Do not work in temperatures below 5°C or above 30°C.*

*Protect fresh mortars from frost, rain or strong direct sun.*

*Whiteness index: 0.46*

*Shelf life: 12 month if kept dry.*

*Storage: in dry store. Reseal open bags a.s.a.p*

**French Building Federation - Hemp construction rules minimum requirements**

Minimum 28 days requirements	Volumetric mass Kg/m <sup>3</sup>	Compressive Strength MPa	Young Elasticity moduli MPa
S= ground M = wall E = render	S = 500 M = 420 R = 800	S = 0.3 M = 0.2 E = 0.3	S = 15 M = 15 E = 20

**HEMP CONCRETE AND SHUTTERED HEMP WALLS**

**Dosages and performance**

Mortar composition and dosage Batichanvre+Hemp+Water	Volumetric Mass Kg/m <sup>3</sup> 28/60/90 days	Compressive strength MPa 28/60/90 days	Young Elasticity Moduli MPa 28/60/90 days	90 days Thermal Conductivity (λ) W/m.K	Mortar consumption Kg x m <sup>2</sup> x cm of thickness
25kg + 100 litres + 30-35 litres	452 / 430 / 421	0.8 / 0.8 / 0.7	58 / 62.2 / 60.3	0.09	Batichanvre = 2.6kg Hemp = 10.5 litres

**HEMP RENDERS**

Mortar composition and dosage Batichanvre+Hemp+Water	Volumetric Mass Kg/m <sup>3</sup> 28 days	Compressive strength MPa 28/60/90 days	Young Elasticity Moduli MPa 28/60/90 days	90 days Thermal Conductivity (λ) W/m.K	Mortar consumption Kg x m <sup>2</sup> x cm of thickness
50kg + 100 litres + 53 litres	900	0.81 / 2.2 / 2.2	X / 228 / 174	0.14	Batichanvre = 5.6kg Hemp = 11 litres

Hemp renders are applied in coats of 2-3cm. maximum. Wait 30-90 minutes between coats. If no finishing coat with other materials is envisaged, wait 3-4 days before applying the last coat (2cm.). Consider using Ecomortar WP as a finishing coat, it is a very low capillarity natural lime mortar that will impede water ingress in the main hemp render.

Painting with St. Astier lime paints: wait for the work to dry (60-90 days). Use Uniprotect in external paint work.

**MIXING mortars:** loosen hemp if compacted in bundles.

Mixing in paddle mixers	Mixing in drum mixers
Introduce the hemp and the sand. Whilst turning, spray with water mist until the hemp dampens (colour change). Introduce the Batichanvre and continue to spray until an homogeneous mix is obtained. Total mixing time is about 5 - 10 minutes.	Introduce about 30 litres of water and the Batichanvre. Mix for 3-5 minutes to obtain a milky paste with no lumps. Add the loose hemp and mix for about 5 minutes to obtain the required mix adding the rest of the water. The completed mix should be rather dry and lean. Total mixing time is about 8-10 minutes

<b>For further information See:</b>	<a href="#">Hemp Construction</a>	<a href="#">Ecomortar WP</a>	<a href="#">Lime Paints</a>	<a href="#">Uniprotect</a>	<a href="#">Batichanvre Health and Safety</a>
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**The above details are given for general information purposes and do not constitute a specification. For further Guidance, contact your St Astier Distributor.**

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