HEMPBINDER

Product: Lime & Pozzolanic Binder for Hemp Lime Biocomposites

Characteristics

Hemp Core Binding matrix composed of specialized minerals

Primary Uses

HEMPBINDER is used for building biocomposite thermal envelopes comprised of the wooden core of industrial hemp stalks. When mixed with the proper ratio of water, the mixture solidifies into an insulating biocomposite wall material for non-structural, insulating applications

Delivery and Storage

HEMPBINDER is delivered in a palletized format, stretch wrapped with plastic film. Each pallet contains (40) 50lb bags with sewn top enclosures. Pallets must be stored in environments devoid of moisture. Exposure to moisture will reduce shelf life and efficacy of the binder

Performance

- Thermal resistance value (R-value) of 2.2-2.5 per inch (Variable dependent on density)
- Thermal efficiency, air quality and acoustic comfort
- Hygrothermal behavior: a competitive advantage in bio-based materials thanks to its ability to retain and release moisture without loss of efficiency.
- Protects wooden structural members through encapsulation in the mineral composite matrix
- More efficient phase shift regulation: the greater the heat retention of the insulation is, the longer the phase shift time will be, and the longer the room will be kept cool.
- Humidity management; Hemp and Lime have a high resistance and a favorable interaction with humidity
- 100% Fireproof
- Resistant to mold, mildew, and pests when installed properly

Safety

It is recommended that the person doing the installation wear a dust mask, gloves, and eye protection. Lime can cause skin irritation so protective clothing is beneficial. Always follow OSHA guidelines when working with **HEMP**BINDER

Responsibility

The information described in this data sheet is intended to provide general information on the product and its usage. It is the user's responsibility to determine if the product meets their needs, and is subject to local code compliance.

Thermal Resistance

Approx. Wall Thickness	Hempcrete Thickness	Overall R- Value	Notes
9.25"	8"	21	Thickness includes plaster
11.25"	10"	26	Thickness includes plaster
13.25"	12"	30	Thickness includes plaster
16.25"	15"	35	Thickness includes plaster

*R means resistance to heat flow. The higher the R-value, the greater the insulating power

*Static R-Value not adjusted for thermal mass or location

*R-Value may vary based on density of installed material.

Coverage

Hempcrete quantities required are calculated through cubic footage of wall area.

(1) 50lb bag of **HEMP**BINDER + (1) 33lb bag of hemp core = **5.5 Cubic Feet of Hempcrete**

To generate a price quote for hempcrete based on cubic footage quantity, visit www.buy.hempitecture.com

Environmental

- Hempcrete is 100% biobased, comprised of industrial hemp core and a specialized mineral blend
- Low embodied energy due to rapidly renewable plant-based feedstock
- Reduction of greenhouse gases (GHGs), currently being analyzed for an Environmental Product Declaration.
- Calcification of mineral blend actively stores CO2
- VOC and Red-List Chemical Free
- Recoverable, recyclable, compostable biobased material

Installation

The insulation must be installed in accordance with the installation instructions in the manufacturer's "Product Guide: Hempcrete - Cast in Place"

Technical Services

For all technical questions in the United States, please contact our sales department at Sales@Hempitecture.com

421 E 500 S #100
Jerome, ID 83340

sales@hempitecture.com

Fire Performance Data

HEMPBINDER has been tested in accordance with ASTM E84 test methods to evaluate flame spread and smoke development.

HEMPBINDER scored the highest possible marks under ASTM E84. With a Flame Spread Index of 0 and a Smoke Developed Index of 0, this material classifies as **Class A Fire** Rated

ASTM E84 Test Results

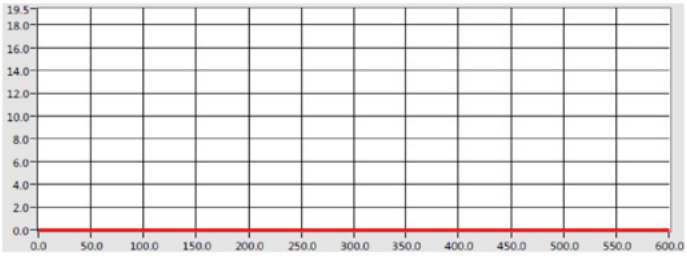
FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
0	0

TEST DATA	
FSI (unrounded)	0.0
SDI (unrounded)	0.98
FS * Time Area (Ft * Min)	0.0
Smoke Area (% * Min)	0.8
Total Fuel Burned (Cubic Ft.)	42.45
Max Flame Front Advance (Ft.)	0.0
Time to Max Flame Front (sec)	0
Max Temp At Exposed T/C (°F)	575
Time To Max Temp (sec)	593

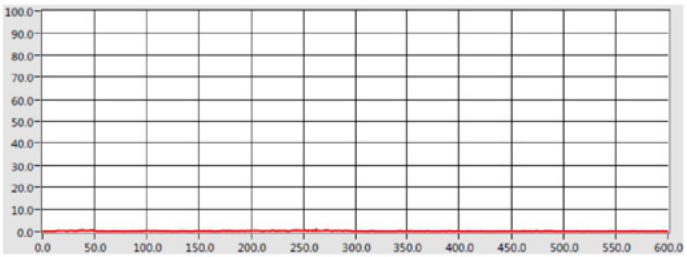
TEST OBSERVATIONS	
Observations After the Test:	
0 – 5 ft.	The specimen was heavily charred.
5 – 8 ft.	The specimen was charred.
8 – 24 ft.	The specimen was discolored.

For INTERTEK B&C:

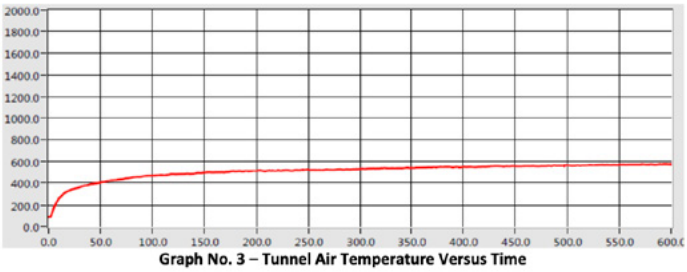
COMPLETED BY:	Joseph Martinez	REVIEWED BY:	Servando Romo
TITLE:	Technician	TITLE:	Project Engineer
SIGNATURE:		SIGNATURE:	



Graph No. 1 - Flame Spread Distance Versus Time



Graph No. 2 – Light Obscuration Versus Time



Graph No. 3 – Tunnel Air Temperature Versus Time