

## TECHNICAL DETAILS - LB 300

**Hemp BLOCK LB 300** is a construction system that consists of hempcrete blocks that are dry-bonded and serve as formwork and filler to a load-bearing system that can be steel-reinforced concrete, steel posts or Fibre Reinforced Polymer (FRP) post and beams.

### COMPOSITION

The hempcrete is composed of industrial **hemp** (stem, wood or shiv) and **prompt natural cement** (fired like lime at low temperature).

#### *Industrial Hemp: 84%*

- Plant with zero waste
- No pest control/roundup needed
- Little irrigation needed
- Promotes biodiversity
- Does not deplete the earth
- Can use fallow or uncultivated land
- Captures CO<sup>2</sup>

#### *Prompt Natural Cement: 16%*

- Cement with a high silica content
- Excellent durability
- Cured by low temperature
- A unique mineralogical composition, compatible with the plant

#### *Hempcrete*

- Not fired like clay blocks, dries naturally
- Hempcrete is 100% renewable
- Light weight
- Carbon sink

### INSTALLATION AND CONSTRUCTION

This system, designed to optimize construction sites, saves considerable installation time:

- Block placing without mortar
- No insulation needed
- Ease of installation
- No installation or design constraints

## PROPERTIES

The **Hemp BLOCK LB 300** construction system offers high performances:

- Thermal resistance
- Hygroscopic regulation
- Acoustic performance
- Sequestering CO<sup>2</sup>
- Termite & Fire resistant
- Load bearing walling system



### KEY CLASSIFICATIONS AND PERFORMANCE DATA

<i>Dimensions</i>	300mm W x 308mm H x 600mm L
<i>Weight</i>	18 Kg
<i>Efficiency</i>	Only 5.4 blocks/m <sup>2</sup>
<i>Wall thickness</i>	300mm + render
<i>Thermal resistance (m<sup>2</sup>K/W λ sec)</i>	4.61 m <sup>2</sup> .K/W (300mm)
<i>Thermal conductivity</i>	0.065 W/(m.k)
<i>Acoustic resistance</i>	Rw (C;Ctr) 43(-1;-2)
<i>Reaction to fire classification</i>	B-s1, d0
<i>Fire Resistance Level (FRL)</i>	FRL : -/60/60, FRL 30/30/30 with inner & outer render
<i>Resistance to impact</i>	Excellent
<i>Dew point</i>	Non
<i>Air Quality</i>	A+
<i>Water buffer value</i>	2.35 g / (m <sup>2</sup> .% RH)
<i>Water vapor permeability</i>	μ < 35
<i>Sequestering CO<sup>2</sup>/m<sup>2</sup></i>	0.889kg/1 m <sup>2</sup> of wall
<i>Life duration of a HempBLOCK wall</i>	min 100 year with 56kg CO <sub>2</sub> stored/1m <sup>2</sup> of wall
<i>Mould and Termite</i>	Resistant
<i>Volatile Organic Compounds (VOC's)</i>	Nil
<i>Equivalent thickness of sd diffusion</i>	0.6m (relative humidity 100%) - 1.2m (relative humidity 0%)
<i>Air tightness</i>	0.30 m <sup>3</sup> /h.m <sup>2</sup>