

HCB are produced using a 'cold' process, significantly reducing the energy consumed.

## Technical data sheet – HCB hempcrete blocks

Non-load bearing blocks with insulation and thermal mass (density 330 kg/m<sup>3</sup>)

### INTRODUCTION

- HCB hempcrete blocks combine insulation with thermal mass. The blocks are formed from hemp 'shiv', the chopped woody stem of the industrial hemp plant, combined with a binder of natural hydraulic lime (LDN Dolomitic Lime Binder).
- With excellent environmental credentials, HCB hempcrete blocks have all the qualities of a sustainable building material: exceptional thermal performance, low embodied energy, and contain a plant aggregate which has sequestered CO<sub>2</sub> from the atmosphere.

CNB - Canabium®

LDN - Dolomitic Lime Binder®



### APPLICATIONS

- Infill masonry construction which is both insulating and breathable
- External insulation of existing buildings
- Interior insulation of existing buildings
- Underfloor insulation
- Soundproofing partitions

### INSTALLATION

- Blocks are laid with a thin layer of lime mortar and hemp shiv mixed to the proportions given in the installation manual.
- Blocks can be cut with hand saw or electric saw.
- Internal and partition walls can be finished with lime or clay plasters or other breathable finishes.
- Floor tiles should be laid on a bed of lime mortar.
- External surfaces should be coated with breathable finishes, such as lime render, timber cladding or masonry cladding using lime mortars.

### FEATURES

- Thermal comfort, acoustic absorption and humidity buffering: HCB hempcrete blocks are permeable to water vapour (breathable).
- Absence of toxic fumes in the event of fire.
- Low energy consumption during manufacture.
- Recyclable at end of life.



Technical data issued in April 2015

<b>Thickness in cm</b>	8	12	15	25	30	36	40
<b>Density in kg/m<sup>3</sup></b>	330	330	330	330	330	330	330
<b>λ Thermal conductivity in W/(mK)</b>	0.07	0.07	0.07	0.07	0.07	0.07	0.07
<b>Thermal transmittance (U-value) in W/(m<sup>2</sup>K)</b>	0.76	0.53	0.43	0.27	0.22	0.19	0.17
<b>Resistance to water vapour diffusion (m)</b>	4.50	4.50	4.50	4.50	4.50	4.50	4.50
<b>Specific heat capacity (J/kgK)</b>	1870	1870	1870	1870	1870	1870	1870
<b>Coefficient of sound absorption</b>	0,8	0,8	0,8	0,8	0,8	0,8	0,8
<b>Sound reduction index, R<sub>w</sub> (dB) with 1.5 cm of plaster per side</b>	24.37	36.55	37.51	40.11	41.17	42.29	42.96
<b>Reaction to fire with plaster</b>	Non-flammable		Non-flammable		Non-flammable		Non-flammable
<b>Phase shift without plaster</b>	3h09'	5h53'	7h58'	14h48'	18h13'	22h19'	25h04'