

# IF ISOHEMP

*brought  
to you by*



## NATURALLY EFFICIENT

The insulating hemp block  
for building & renovation.

## KEY ADVANTAGES

Hemp brings a true sensation of comfort. It makes the atmosphere warm. There's nothing else like it.

Brigitte | owner

## TECHNICAL DATA



### THERMAL RESISTANCE

R = up to 5m<sup>2</sup>K/W



### THERMAL CONDUCTIVITY

λ = 0,071W/mK



### PHASE SHIFT

from 4 to 24h



### ACOUSTICS

sound reduction from 37 to 45dB



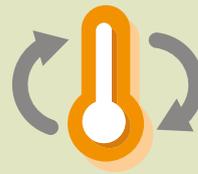
### RESISTANCE TO FIRE

from 60 to 120 minutes



### RESISTANCE TO COMPRESSION

300kPa



thermal regulation



water regulation



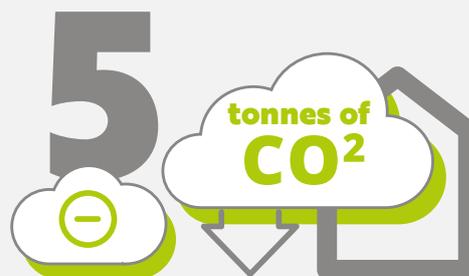
sound proofing



resistance & reaction to fire

I used hemp blocks for the first time following a request from one of my clients who wanted to integrate it into their construction project. I discovered a product with very interesting characteristics that's also easy to implement. It's a very nice, natural alternative to other products available on the market.

David | architect



Constructing 1 single-family house with IsoHemp hemp blocks saves 5 tonnes of CO<sup>2</sup>



# WHY CHOOSE ISOHEMP HEMP BLOCKS?

- They **regulate the temperature** thanks to their ability to diffuse accumulated heat. True thermal buffer; the internal temperature is kept constant and the impact of heat variations between day and night is significantly reduced
- They **regulate humidity** thanks to their high permeability to water vapour. They also act as a water buffer, thus providing a constant and healthy indoor climate for the building occupants.
- They **dampen and absorb noise**. As true sound dampeners, they allow the absorption or abatement of the majority of acoustic waves, thus protecting against noise pollution.
- They **do not catch fire and do not emit toxic fumes**. Thanks to their excellent reaction to fire, they offer up to more than 2 hours of fire resistance depending on the finish and thickness.
- As a **100% natural solution**, they also have a **positive carbon footprint**. A pallet of hemp blocks IsoHemp stores 100kg of CO2.

## APPLICATIONS OF ISOHEMP HEMP BLOCKS

### CONSTRUCTION

Regardless of the construction system you choose, hemp blocks fit perfectly into your project!

- **Hempro System** – For a 100% hemp construction.
- Pole-beam system (wood, steel, concrete) –hemp blocks allow for the creation of insulating and breathable mono-walls that do not require the use of any other insulation materials
- Wood frame – hemp blocks form the envelope of the building and provide the thermal inertia necessary for comfort in summer and winter alike.
- Traditional construction – hemp blocks guarantee stable insulation performance over time

### RENOVATION

When conducting building renovations, particular attention must be given to achieving a good match between the existing walls and the new materials used.

IsoHemp hemp blocks offer you the guarantee of efficient energy renovation both in internal and external insulation.

### INTERIOR WALLS

Create walls or separate rooms with hemp blocks to ensure lightness, simplicity and acoustic comfort.

### FLOORS & ROOFS

Using hemp blocks to insulate your floors and flat roofs makes your life easier both in terms of speed and simplicity of application.



# SUMMARY TABLE

Technical characteristics	Block 6	Block 9	Block 12	Block 15	Block 20	Block 25	Block 30	Block 36	Unit
Thickness	6	9	12	15	20	25	30	36	cm
Modular dimensions	60x30								cm
Number of blocks per m <sup>2</sup>	5,5								blocks/m <sup>2</sup>
Maximum block weight	4,6	7,1	9,2	11,5	15,3	20	23	27,5	kg
Bulk density when dry	340								kg/m <sup>3</sup>
Adhesive consumption	2,4	3,6	4,7	5,8	7,8	9,7	11,6	14	kg/m <sup>2</sup>
Dry thermal resistance	0,90	1,34	1,79	2,24	3	3,73	4,48	5,37	m <sup>2</sup> K/W
Thermal resistance at 50% RH	0,85	1,27	1,69	2,11	2,82	3,52	4,23	5,07	m <sup>2</sup> K/W
Thermal conductivity λ	0,071								W/mK
Phase shift	3,9	5,9	7,9	9,8	13,1	16,4	19,7	23,6	h
Sound reduction index* Rw	37	38	39	40	42	43	44	45	dB
Acoustic absorption coefficient α	0,85								
Equivalent air layer thickness Sd	0,17	0,25	0,34	0,42	0,56	0,70	0,84	1,00	m
Water vapour resistance factor μ	2,8								
Compressive strength	300								kPa

Technical characteristics	O Blocks		U Blocks		Unit
Thickness	30	36	30	36	cm
Modular dimensions	60x30				cm
Maximum block weight	19,7	24,3	15,3	18,3	kg
Diameter of the recess	15	18	15 x 20	18 x 20	cm

## ISOHEMP

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