

Product sheet.Hemp blocks.



The IsoHemp hemp block, manufactured in Belgium from hurds, lime and water, is a self-supporting masonry element intended for new build and renovation projects. Non-load-bearing, it integrates into load-bearing structures providing high performance in thermal insulation, hygrometric regulation, acoustic comfort and durability.

Used for infill walls, insulating envelopes, partition walls and floor insulation, the hemp block can be installed in numerous constructive configurations, notably through the Syst'HEMP solutions developed by IsoHemp for high-performance construction and renovation.

Recognised and certified.



Technical characteristics.

	Block 7	Block 9	Block 12	Block 15	Block 20	Block 25	Block 30	Block 36	Unit
Modular dimensions [L x l]	600 x 300				600 x 200				mm
Thickness	75	90	120	150	200	250	300	360	mm
Number of blocks per m ²	5,5				8,3				blocks/m ²
Bulk density	367*				320*				kg/m ³
Dry thermal resistance	1	1,34	1,79	2,24	3	3,73	4,48	5,37	m ² K/W
Thermal resistance 50% RH	0,94	1,27	1,69	2,11	2,82	3,52	4,23	5,07	m ² K/W
Thermal conductivity λ_{Ui}	0,08				0,071				W/mK
Equivalent air layer thickness S_d	0,21	0,25	0,34	0,42	0,56	0,7	0,84	1	m
Water vapour resistance factor μ	2,8								
Compressive strength	0,2								Mpa
Phase shift (ISO 13786)	4,9	5,9	7,9	9,8	13,1**	16,4**	19,7**	23,6**	h
Sound reduction index***	37	37	38	38	40	41	42	44	dB
	(0;-2)	(-1;-3)	(-1;-3)	(0;-3)	(-1;-5)	(-1;-5)	(-1;-5)	(-1;-6)	
Acoustic absorption coefficient	0,85								
Reaction to fire	B, S1, d0								
Fire resistance ****	45		60		120		240		min

* +/- 10% bulk density at delivery

** Negligible given an attenuation greater than 300

*** Hemp block laid with render on one side - simulated value

**** Hemp block laid with render on the fire side

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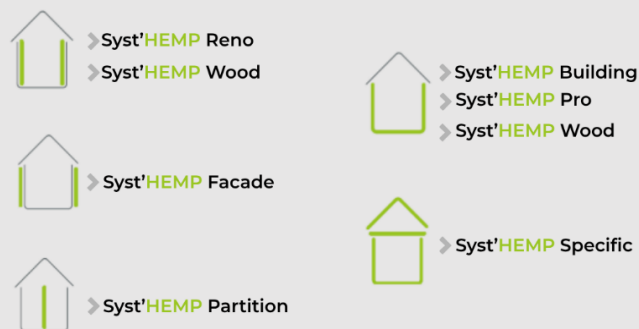
Technical characteristics.

	P Blocks		U Blocks		Unit
Thickness	30	36	30	36	cm
Modular dimensions [L x l]	600 x 200		600 x 300		mm
Maximum block weight	12,3	14,4	13,7	16,5	kg
Recess section	15 x 15	18 x 18	15 x 42	18 x 42	cm
Cross-section of the recess	225	324	630	756	cm ²
Adhesive consumption	5,6	6,8	3,8	6,8	Kg/m ²

Composition.

Plant-based hemp aggregate (hurds, particle size 2–20 mm) and a mineral binder based on aerial and hydraulic lime.

Fields of application.



Packaging.

	Pallet dimensions	Max. pallet weight (kg)	m ² per pallet	Blocks per pallet
Block 7	120 x 100 x 120	495	15,12	84
Block 9	120 x 100 x 122	486	12,96	72
Block 12	120 x 100 x 122	490	9,72	54
Block 15	120 x 100 x 119	474	7,56	42
Block 20	120 x 100 x 114	455	5,4	30
Block 25	120 x 100 x 114	455	4,32	24
Block 30	120 x 100 x 114	455	3,6	30
Block 36	120 x 100 x 114	455	3	25
P-block of 30	120 x 100 x 114	390	3,6	30
P-block of 36	120 x 100 x 114	380	3	25
U-block of 30	120 x 100 x 104	295	3,24	18
U-block of 36	120 x 100 x 114	295	2,7	15

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Installation.

IsoHemp hemp blocks are installed using the thin-joint masonry principle, with the IsoHemp Adhesive Mortar specially developed for this purpose. Their lightness and ease of cutting allow rapid installation and easy adaptation to the specific requirements of the site. To guarantee optimum adhesion of the adhesive mortar, installation must be carried out at a temperature between 5 °C and 30 °C. The completed walls must be protected from rising damp and water infiltration in accordance with best practice. Junctions with other building elements are given specific treatment to ensure continuity of thermal, acoustic and hygrothermal performance. Interior and exterior finishes must be compatible with the hygric regulation properties of the material. Design and installation requirements are detailed in the technical guides and constructive solutions developed by IsoHemp.

Storage.	Storage
Pallets with corrugated sheet covering stored outside	6 months
Open pallet and exterior wall in progress	3 months
Masonry under completed roof	1 year with a maximum of 1 winter

* Storage precautions for IsoHemp hemp block pallets: Pallets must be protected from rain but not wrapped in plastic film or tarpaulin. The blocks must be able to breathe.

This technical data sheet is based on our current state of knowledge and practice.
Our products and processes are evolving, and so is this document: please make sure you have the latest version before use.
You can find our latest documentation at www.iso hemp.com