

IsoHemp Hemp block

DEFINITION

The Belgian-made IsoHemp hemp block is a self-supporting masonry element with no structural role. It is made from hemp shives and a mixture of air and hydraulic lime. The product is moulded, pressed, hardened and air-dried without the need for heat input.

IsoHemp hemp blocks are used for thermal, hydric and acoustic regulation in new construction (with structure), interior and exterior renovation. They can be used as infill masonry, building envelopes, partition walls or floor insulation.

Under no circumstances do they contribute to the load-bearing capacity of a floor or roof.

CHARACTERISTICS AND DIMENSIONS

IsoHemp hemp blocks range in colour from beige to off-white, with a porous surface between the plant strands for easy adhesion of the finishing coat.

The blocks have modular dimensions :

- **Thickness** : 7.5, 9, 12, 15, 20, 25, 30 and 36 cm
- **Length** : 60 cm
- **Height** : 30 cm except for 36 cm thick blocks: 20 cm

PACKAGING

PACKAGING OF PALLET	VALUE	UNIT
Dimensions of a 7,5 cm block pallet	120 x 100 x 120	cm
Dimensions of a 9 and 12 cm block pallet	120 x 100 x 122	cm
Dimensions of a 15 cm block pallet	120 x 100 x 119	cm
Dimensions of 20, 25, 36, 36 cm P and U-block pallet	120 x 100 x 114	cm
Dimensions of 30 and 30 cm P and U-block pallet	120 x 100 x 104	cm
Maximum weight of a 7,5 and 15 cm block pallet	420	kg
Maximum weight of 9 and 12 cm block pallets	461	kg
Maximum weight of 20, 25 and 36 cm block pallets	430	kg
Maximum weight of a 30 cm block pallet	390	kg
Maximum weight of a 36 cm block pallet	430	kg
Maximum weight of a 30 cm P-block pallet	430	kg
Maximum weight of a 36 cm P-block pallet	446	kg
Maximum weight of a 30 cm U-block pallet	304	kg
Maximum weight of a 36cm U-block pallet	315	kg

TECHNICAL CHARACTERISTICS

PRODUCT RANGE	Block 7	Block 9	Block 12	Block 15	Block 20	Block 25	Block 30	Block 36
Modular dimensions [L x l mm]	600X300							600X200
Thickness [mm]	75	90	120	150	200	250	300	360
Number of blocks per m ²	5,55							8,3
Bulk dry density [kg/m ³]	280							
Dry thermal resistance [m ² K/W]	1,12	1,34	1,79	2,24	3	3,73	4,48	5,37
Thermal resistance at 50%HR [m ² K/W]	1,06	1,27	1,69	2,11	2,82	3,52	4,23	5,07
Thermal conductivity λ [W/mK]	0,071							
Equivalent air layer thickness Sd [m]	0,21	0,25	0,34	0,42	0,56	0,7	0,84	1
Water vapour resistance factor μ	2,8							
Compressive strength MPa	0,20							
Compressive strength at ULS fd	0,099							
Phase shift [h] (ISO 13786)	4,9	5,9	7,9	9,8	13,1***	16,4***	19,7***	23,6***
Sound reduction index Rw [dB]*	37 (0 ; -2)	37 (-1 ; -3)	38 (-1 ; -3)	38 (0 ; -3)	40 (-1 ; -5)	41 (-1 ; -5)	42 (-1 ; -5)	44 (-1 ; -6)
Acoustic absorption coefficient α	0,85							
Reaction to fire	B, S1, d0							
Resistance to fire ** [min]	45		60		120		240	

*Coated hemp block 15mm on one side – simulated value

**Hemp block masonry plastered on the fireside

***Insignificant considering a damping of more than à 300

TECHNICAL CHARACTERISTICS OF HEMPRO RANGE (INTERLOCKING BLOCKS)

HEMPRO RANGE	P-blocks		U-blocks		Unit
Thickness	30	36	30	36	cm
Modular dimensions [L x l]	60 x 30	60 x 20	60 x 30		cm
Maximum weight of a block	21,7	16,9	15,5	19,3	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

APPLICATION

IsoHemp hemp blocks are glued together using IsoHemp thin joint of adhesive mortar (3 mm). They must be protected against the risk of rising damp. Outside, the hemp blocks must be laid at least 20 cm from the ground. It is very important that the first row is laid perfectly horizontally, so that the wall can be built easily. During installation, take care to protect the masonry from the elements. For more details, refer to the IsoHemp Installation Guide.

COMPOSITION

Air lime	9 %
Hydraulic lime	11 %
Hempshive (particle size of 2 to 20 mm)	80 %

CONSERVATION

Store on a flat surface, in a dry place and away from moisture. If the pallet with honeycomb is outside, it can be stored for 6 months. If the pallet is open and a wall is being built outside, it will keep for 3 months. 1 year with a maximum of one winter for masonry with a completed roof.

PRECAUTION FOR USE

During application, the temperature must be between 5 and 30°C. Free from rain – Free from frost.

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Find our latest technical sheets on www.iso hemp.com

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