

The technical data of ENVIROCRETE®, specified within this document, refer to test samples of varying amounts. Following are the main data facts.

TECHNICAL data for ENVIROCRETE PANELS	Cement quantity	
	120 Kg/m <sup>3</sup>	150 Kg/m <sup>3</sup>
ENVIROCRETE specific weight	500 Kg/m <sup>3</sup>	550 Kg/m <sup>3</sup>
Max size variation	1 mm/m	1 mm/m
k-value Thermal conductivity	0,09 W/m °K	0,09 W/m °K
Compression strength (breaking)	1,96 N/mm <sup>2</sup>	2,74 N/mm <sup>2</sup>

TESTS OF REACTION AND RESISTANCE TO FIRE	350 kg/m <sup>3</sup> of cement
Fire reaction - (10 cm ENVIROCRETE)	M1
Resistance to fire - (10 cm ENVIROCRETE)	REI 90
Reaction to fire - (1 cm plaster + 10 cm ENVIROCRETE + 1 cm plaster)	M0
Resistance to fire - (1 cm plaster + 10 cm ENVIROCRETE + 1 cm plaster)	REI 180

### ENVIROCRETE SOUND ABSORPTION

The test has been made according to the norm ISO 354 dated 1985 "Acoustics - Measurement of sound absorption in a reverberation room", using the procedure of internal test PP016 "Measurement of the coefficient of sound absorption in rumbling room" revision 0 dated 29/02/1996.

Weighted coefficient of sound absorption " $\alpha_w$ " Value in 500 Hz on the reference curve	0,75
Form indicator* Frequency spacing in which " $\alpha_p$ " curve is of 0,25 higher than the reference curve	H (4000 Hz)
Class of sound absorption **	C

(\*) L = Low M = Medium H = High

(\*\*) A:  $\alpha_w = 0,90$  0,95 1,00

B:  $\alpha_w = 0,80$  0,85

C:  $\alpha_w = 0,60$  0,65 0,70 0,75

D:  $\alpha_w = 0,30$  0,35 0,40 0,45 0,50 0,55

E:  $\alpha_w = 0,15$  0,20 0,25

Non classified:  $\alpha_w = 0,00$  0,05 0,10

### TRANSMITTANCE VALUES OF THE MATERIALS TRADITIONALLY USED IN THE CONSTRUCTION INDUSTRY

The following table compares the transmittance of four traditional partition or load-bearing walls.

The thermal insulation of load-bearing ENVIROCRETE is much higher than other load-bearing materials used for buildings.

Material	cm.	Watt/ (m <sup>2</sup> K)	cal/ hm <sup>2</sup> K	
HOLLOWCORE BLOCKS	30	0,540	0,460	
CELLULAR CONCRETE	30	0,530	0,456	
TRADITIONAL WALL	Hollowcore bricks	12	0,386	0,329
	Traditional insulating material	6		
	Hollowcore bricks	12		
LOAD BEARING ENVIROCRETE BLK	30	0,345	0,294	

All data contained in this document is subject to be revised and updated by:

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TECHNICAL FEATURES OF ENVIROCRETE FOR LOAD BEARING WALLS	Quantity of cement	
	380 kg/m <sup>3</sup>	300 kg/m <sup>3</sup>
Specific weight of pressed green ENVIROCRETE	1.320 Kg/m <sup>3</sup>	1.280 Kg/m <sup>3</sup>
Specific weight of pressed hardened ENVIROCRETE	1.288 Kg/m <sup>3</sup>	1.210 kg/m <sup>3</sup>
ENVIROCRETE bond to reinforcement Ø 16, length 15 cm.	30.250 N	24.750 N
Secant modulus of elasticity	3.006 N/mm <sup>2</sup>	2.727 N/mm <sup>2</sup>
Compression strength (breaking) characteristic value	(*)	3,2 N/mm <sup>2</sup>
Thermal conductivity $\lambda$	0,09 W/mK	(*)
Specific thermal conductance (C <sub>s</sub> )	1,44 W/m <sup>2</sup> K	(*)
Max probable uncertainty	1,80%	(*)
Average value of steam transmission speed "g"	2654 mg/hm <sup>2</sup>	3892 mg/hm <sup>2</sup>
Average value of permeability "W"	2,1mg/m2hPa	3,2 mg/m2hPa
Average value of the resistance factor of diffusion " $\mu$ "	13	7,8
Average value of the equivalent air thickness "Sd"	35 cm	23 cm
Average value of permeability to steam " $\delta$ "	0,057 mg/mhPa	0,09 mg/mhPa
Overall uncertainty to permeability to steam	8,10%	7,80%
Weighted coefficient of sound absorption " $\alpha_w$ "	0.75	(*)
Form indicator	alto	(*)
Class of sound absorption	C	(*)
Footfalls softening	10 db	(*)
Acoustical insulation (2 cm plaster+10 cm ENVIROCRETE +2 cm plaster) "Rw"	38 db	(*)
(*) Not measured values.		