

Technical data sheet of CEMVIN boards R1

CEMVIN boards are manufactured pursuant to standard EN 12467 and within the quality control ISO 9001:2016. The boards are made from a mixture of cement, cellulose, limestone and organic fibre. Thanks to this composition, CEMVIN boards have unique properties and many ways of use.

CEMVIN board properties and advantages

- frost resistance
- water resistance
- reaction to fire A1
- fire resistance
- weather resistance
- hygienically harmless
- resistance to electric arc
- easy to cut
- excellent paint adhesion
- strength
- fast assembly

Possible CEMVIN board applications

- dry construction
- internal and external wall jacketing,
- for industry lost formwork
- fire walls and noise barriers
- components for prefabricated constructions
- dry paving
- cable trays
- insulation and inflammable mats
- switchboard fillings and partitions
- and others

Table of basic physical and mechanical properties of CEMVIN	
Bulk density, dry, average (EN 12467)	1 770 kg/m ³
Bulk density, dry, minimal (EN 12467)	1 700 kg/m ³
Strength characteristics and mechanical properties	
Bending tensile strength along fiber direction – ambient (EN 12467)	25 MPa
Bending tensile strength across fiber direction – ambient (EN 12467)	16 MPa
Bending tensile strength along fiber direction – wet (EN 12467)	21 MPa
Bending tensile strength across fiber direction – wet (EN 12467)	13 MPa
Modulus of elasticity	8 000 MPa
Shear friction coefficient (ČSN 74 4507)	$\mu_s = 0,53$; $\mu_d = 0,59$
Humidity effects and structural physical properties	
Water absorbency of the board in water for 24 hours	max. 15 %
Balanced weight humidity at 20 °C	5–8 %
Linear expansivity when the air humidity changes from 35 % to 85 % (EN 13 009)	0,17 %
Water impermeability after 24 hours (EN 12467)	Impermeable
Weighted sound reduction index – board thickness 12 mm (EN ISO 10140-2)	Rw 30 dB
Water vapour resistance factor (EN ISO 12572)	70–90
Thermal conductivity (EN ISO 10456)	max. 0,35 W/mK

Fire properties		
Reaction to fire (EN 13 501-1)		A1
Flame spread index (ČSN 73 0863)		i = 0 mm/min
Fire resistance (EN 1363-1)	6 min (board 5 mm)	
	15 min (board 8 mm)	
	16 min (board 10 mm)	
Other properties		
Frost resistance (max R _L > 0,75; EN 12467)		100 cycles
Heat resistance		200 °C
Board pH		11
Weight activity Ra 226		21 Bq/kg
Weight activity index		I = 0,37
Resistance to the electric arc effects (ČSN 33 2000-5-52 ed. 2)		resistant without signs of material rupture
Resistance to high voltage arc discharge (EN 61621)		th. 10 mm, min. 142 sec
Release of hazardous VOC substances (ISO 16000-10)		meets the requirements
Dimension tolerances (EN 12467)		
Board thickness	3–6 mm	±0,6 mm
	7–20 mm	±10 %
	21–40 mm	±2,0 mm
Basic format length and width		l. ±4,0 mm; w. ±2,0 mm
Accurate division of length and width		±2,0 mm
Diagonal tolerance		±4,0 mm
Tolerance of edge straightness		2,0 mm/m
Tolerance of rectangularity		3,0 mm/m