

# Technical Data Sheet



## CETRIS® BORDER

CETRIS® BED BORDER is a CETRIS® cement-bonded particleboard with rectangular format, thickness 28 mm, and dimensions 1,250 x 250 mm; it is produced by pressing a mixture of wood chips (19% of weight), Portland cement (69% of weight), water (10% of weight), hydrating additives (2% of weight). The top edge is provided with a double-edge, side edges are milled to allow joining (tongue+groove). The borders may be cut, drilled or milled. Borders may be set in concrete, or directly in a groove to be later filled with soil. The cement-bonded particleboard are used mainly as a structural material in cases where moisture resistance, strength, fire resistance, ecological and hygienic harmless are required at the same time. CETRIS® Boards do not contain either asbestos or formaldehyde; they are resistant to insects and mold exposure. They are fireproof and can provide sound insulation. The boards can be worked with conventional woodworking tools.

### Technical specifications:

Name	Basic dimensions of the CETRIS® HOBBY border			Total weight of border (kg/pc)
	Thickness (mm)	Height (mm)	Length (mm)	
Garden patch border	28	250	1,250	13

Table of basic physical and mechanical properties of CETRIS® cement-bonded particleboards:	Limit values according to standard	Mean values - real
Bulk density acc. to EN 323:	min. 1,000 kg/m <sup>3</sup>	1,350-1,500 kg/m <sup>3</sup>
Bending tensile strength acc. to EN 310	min. 9.0 N/mm <sup>2</sup>	min. 11.5 N/mm <sup>2</sup>
Modulus of elasticity acc. to EN 310	min. 4,500 N/mm <sup>2</sup>	min. 6,800 N/mm <sup>2</sup>
Tensile strength perpendicular to the board plane acc. to EN 319	min. 0.5 N/mm <sup>2</sup>	min. 0.63 N/mm <sup>2</sup>
Internal bond after cycling in a humid environment according to EN 321	min. 0.3 N/mm <sup>2</sup>	min. 0.41 N/mm <sup>2</sup>
Reaction to fire acc. to EN 13 501-1		A2-s1, d0
Index of flame propagation along the surface acc. to the Czech standard ČSN 73 0863		i = 0 mm/min
Thickness swelling when stored in water for 24 hours	max. 1.5 %	max. 0.28 %
Thickness swelling after cycling in a humid environment according to EN 321	max. 1.5 %	max. 0.31 %
Linear expansion with changes in humidity from 35% to 85% at 23 °C according to EN 13 009		max. 0.122 %
Water absorption by the board when stored in water for 24 hours		max. 16 %
Thermal expansion coefficient acc. to EN 13 471		10 × 10 <sup>-6</sup> K <sup>-1</sup>
Coefficient of thermal conductivity acc. EN 12 664; thickness 8 to 40 mm		0.200 - 0.287W/mK
Airborne sound insulation according to Czech standard CSN 73 0513, th.8 to 40mm		30 dB – 35 dB
Diffusion resistance factor according to DIN EN ISO 12572, th.8 to 40		52.8 – 69.2
Resistance to frost at 100 cycles according to EN 1328	R <sub>L</sub> > 0.7	R <sub>L</sub> = 0.97
pH of the board material		12,5
Mass activity Ra 226	150 Bq/kg	22 Bq/kg
Mass activity index	I = 0.5	I = 0.21
Surface resistance to water and chemical de-icing agents acc. to Czech standard CSN 73 1326	Waste after 100 cycles max. 800 g/m <sup>2</sup> (Method A)	Waste after 100 cycles max. 20.4 g/m <sup>2</sup> (Method A)
	Waste after 75 cycles max. 800 g/m <sup>2</sup> (Method C)	Waste after 100 cycles max. 47.8 g/m <sup>2</sup> (Method C)
Resistance to arc discharge of high voltage according to EN 61 621		th. 10mm, min.143 sec
Shearing friction coefficient acc. to the Czech standard ČSN 74 4507		Static μ <sub>s</sub> = 0.73
		dynamic μ <sub>d</sub> = 0.76
Mass balanced humidity at 20° and a relative humidity of 50% according to EN 634-1	9 ± 3 %	9.50%