

CETRIS[®] INCOL

CETRIS[®] INCOL is a cement-bonded particleboard with a smooth surface, tinted with black pigment in the mass. It is produced by pressing a mixture of wood chips (63% by volume), Portland cement (25% vol.), water (10% vol), and hydration additives (2% by volume); it is available in standard thicknesses 12 mm. The basic size of the board is 3,350 x 1,250 mm. We deliver the boards cut to the sizes specified by the customer, with rounded edge or chamfered edge to 45° angle, milled starting with half-groove. The boards may also be delivered with pre-drilled holes. The cement-bonded particleboard are used mainly as a structural material in cases where moisture resistance, strength, fire resistance, ecological and hygienic harmlessness 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:

basic size:	3,350 x 1,250 mm
board thicknesses:	12 mm
Bulk density:	1,150-1,450 kg/m ³
service: to customer's requirements	cutting, drilling holes, shrinkage, edge cutting and milling
Surface:	smooth
surface finish:	tinted with black pigment in the mass

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 ³	1,350 kg/m ³
Bending tensile strength acc. to EN 310	min. 9.0 N/mm ²	min. 11.5 N/mm ²
Modulus of elasticity acc. to EN 310	min. 4,500 N/mm ²	min. 6,800 N/mm ²
Tensile strength perpendicular to the board plane acc. to EN 319	min. 0.5 N/mm ²	min. 0.63 N/mm ²
Internal bond after cycling in a humid environment according to EN 321	min. 0.3 N/mm ²	min. 0.41 N/mm ²
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 ⁻⁶ K ⁻¹

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	$R_L > 0.7$	$R_L = 0.97$
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 ² (Method A)	Waste after 100 cycles max. 20.4 g/m ² (Method A)
	Waste after 75 cycles max. 800 g/m ² (Method C)	Waste after 100 cycles max. 47.8 g/m ² (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 $\mu_s = 0.73$
		dynamic $\mu_d = 0.76$
Mass balanced humidity at 20° and a relative humidity of 50% according to EN 634-1	$9 \pm 3 \%$	9.50%

Dimensional toleran

Feature	Board thickness	Requirement
Thickness of uncut board	12 mm	± 1.0 mm
Length and width of the basic fo		± 5.0 mm
Precision of cutting the length a		± 3.0 mm
Edge straightness tolerance		1.5 mm/m
Rectangularity tolerance		2.0 mm/m

Appearance:

Parameter	I.Quality class	II.Quality class
Deviation from the right angle	max. 2 mm/1 m of length	max. 4 mm/1 m of length
Permitted edge damage	max. to the depth of 3 mm	max. to the depth of 30 mm
Protrusions on the surface	max.1 mm, size 10 mm	max. 1 mm
Depressions	max.1 mm, size 10 mm	max. 2 mm