Technical Data Sheet

CETRIS® PLUS

CETRIS® PLUS is a cement-bonded particleboard with smooth surface treated with primer coat. 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); it is available in standard thicknesses of 8, 10, 12, 14, 16 , 18, 20, 22, 24, 26, 28, 30, and 32 mm. Upon prior agreement it is also possible to deliver the following thicknesses: 34, 36, 38 and 40 mm. Both sides and all edges are treated with white primer. The primer coat improves the bonding power between the board and the surface finish, reduces rate of absorption and consumption of the paint for final coat; it comes as both sided, including the edges. The reverse side has a lower opacity and irregular structure. 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 from the 12-mm thickness with half-groove, starting from the 16-mm thicknes with tongue and 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:	8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 mm
Bulk density:	1,150-1,500 kg/m3
service: to customer's requirements.	cutting, drilling holes, shrinkage, edge cutting and milling
Hue:	colour shade : white
surface finish:	primer coat

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/m3	1,350-1,500 kg/m3
Bending tensile strength acc. to EN 310	min. 9.0 N/mm2	min. 11.5 N/mm2
Modulus of elasticity acc. to EN 310	min. 4,500 N/mm2	min. 6,800 N/mm2
Tensile strength perpendicular to the board plane acc. to EN 319	min. 0.5 N/mm2	min. 0.63 N/mm2
Internal bond after cycling in a humid environment according to EN 321	min. 0.3 N/mm2	min. 0.41 N/mm2
Reaction to fire acc. to EN 13 501-1		B-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/m2 (Method A)	Waste after 100 cycles max. 20.4 g/m2 (Method A)
	Waste after 75 cycles max. 800 g/m2 (Method C)	Waste after 100 cycles max. 47.8 g/m2 (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 μs = 0.73
		dynamic μd = 0.76
Mass balanced humidity at 20° and a relative humidity of 50% according to EN 634-1	9 ± 3 %	9.50%

Dimensional tolerance:

Feature	Board thickness	Requirement
Thickness of uncut board	8 mm	±0.7 mm
	10 mm	±0.7 mm
	12 mm	±1.0 mm
	14 mm	±1.0 mm
	16 mm	±1.2 mm
	18 mm	±1.2 mm
	20-40 mm	±1.5 mm
Length and width of the basic format		±5.0 mm
Precision of cutting the length and width		±3.0 mm
Edge straightness tolerance		1.5 mm/m
Rectangularity tolerance		2.0 mm/m

Appearance:

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