

Technical Data Sheet



CETRIS® AKUSTIC

CETRIS® AKUSTIC is a cement-bonded particleboard with pre-drilled holes and smooth cement surface. The CETRIS® AKUSTIC cement-bonded particleboard is manufactured by pressing a mixture of wood chips (19% of weight), Portland cement (69% of weight), water (10% of weight), hydrating additives (2% of weight), followed by cutting and drilling regular holes. In addition to the existing high mechanical parameters, such treatment improves the noise transmission properties. The solid basic CETRIS® particleboard excels primarily in high airborne sound transmission loss; the drilled board is used as absorbing acoustic walling. Compared to other acoustic walling materials, the use of the CETRIS® AKUSTIC particleboard provides extra high resistance against mechanic perforation (e.g. with a ball) and resistance against moisture; in addition to these properties the particleboard retains a high-class response to fire features (A2 -s1,d0). These parameters predetermine this new type of CETRIS® board to be used primarily in sport facilities, areas with variable temperature and moisture levels and buildings with special requirements. CETRIS® Boards do not contain either asbestos or formaldehyde; they are resistant to insects and mold exposure. The boards can be worked with conventional woodworking tools.

Technical specifications:

basic size:	1,250 × 625 mm
board thicknesses:	8 or 10 mm (thicknesses of 12, 14, and 16 mm available upon request)
Bulk density:	1,150-1,500 kg/m ³
area density:	th. 8 mm – 10 kg/m ² , th. 10 mm – 12.5 kg/m ²
Surface:	smooth
surface finish:	without surface finish
service:	drilled holes – 12 mm diameter, hole spacing: 30–32 mm

Table of basic physical and mechanical properties of CETRIS® AKUSTIC cement-bonded particleboards:	Limit values according to standard	Mean values - real
Bulk density acc. to EN 323:	min. 1,000 kg/m ³	1,350-1,500 kg/m ³
Class of ball impact resistance according to EN 13964 - th. 8 mm		Class 3A (velocity 4m/s)
- th. 10 mm		Class 2A (velocity 8m/s)
The mean absorption coefficient		0.61 – 0.69 (according to composition)
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 %
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
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	8mm	±0.7 mm
	10mm	±0.7 mm
	12mm	±1.0 mm
	14mm	±1.0 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
Tolerance of spacing of holes		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