

Technical Data Sheet

CETRIS® BASIC



CETRIS® BASIC is a cement-bonded particleboard with smooth naturally cement-grey surface. 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 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. 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 thickness 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:

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|--------------------------------------|--|
| basic size: | 3,350 x 1,250 mm |
| board thicknesses: | 8-10-12-14-16-18-20-22-24-26-28-30-32, upon prior agreement 34-36-38-40 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: | without surface finish |

| 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 μ _s = 0.73 |
| | | dynamic μ _d = 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 | 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 |