

# Technical Data Sheet



## CETRIS® PDB

CETRIS® PDB tongue-and-groove cement-bonded particleboard has a smooth surface and is calibrated by grinding; 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), followed by cutting and milling. The adjustment reduces thickness tolerance to +/- 0.3 mm. The boards are manufactured in a standard format 1,250 x 625 mm, thickness 16, 18, 20, 22, 24, 26, 28 mm. Primarily, they are designed for dry floor technology, i.e. for installation on beams or renovating of old floors. They are also ideal as a base under a loosely deposited thin floor covering. 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.

### Technical specifications:

|                                      |                                       |
|--------------------------------------|---------------------------------------|
| basic size:                          | 1,250 x 625 mm (including the tongue) |
| board thicknesses:                   | 16-18-20-22-24-26-28 mm               |
| Bulk density:                        | 1,150-1,500 kg/m <sup>3</sup>         |
| service: to customer's requirements. | milled edges with tongue and groove   |
| thickness tolerance:                 | +/-0.3 mm                             |
| 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 <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 - 0.287 W/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                           |
| 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                              |
| 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:**

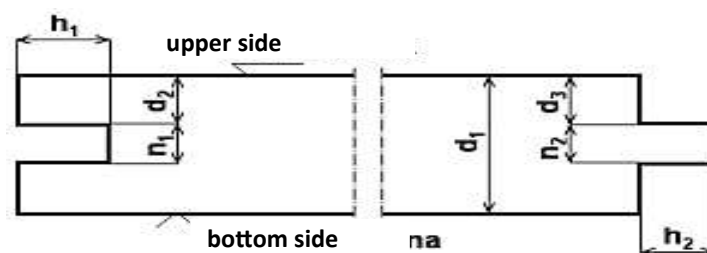
| Feature                                   | Board thickness | Requirement  |
|-------------------------------------------|-----------------|--------------|
| Length and width of the basic format      | 16-28mm         | $\pm 5.0$ mm |
| Precision of cutting the length and width | 16-28mm         | $\pm 3.0$ mm |
| Edge straightness tolerance               | 16-28mm         | 1.5 mm/m     |
| Rectangularity tolerance                  | 16-28mm         | 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      |

**Sizes of tongue and groove (all data in mm)**

|    |      |      |      |      |     |     |      |
|----|------|------|------|------|-----|-----|------|
| d1 | 16   | 18   | 20   | 22   | 24  | 26  | 28   |
| n2 | 5,5  | 5,5  | 5,5  | 5,5  | 7   | 7   | 7    |
| n1 | 6    | 6    | 6    | 6    | 8   | 8   | 8    |
| d2 | 5    | 6    | 7    | 8    | 8   | 9   | 10   |
| d3 | 5,25 | 6,25 | 7,25 | 8,25 | 8,5 | 9,5 | 10,5 |
| h1 | 10   | 10   | 10   | 10   | 10  | 10  | 10   |
| h2 | 8,5  | 8,5  | 8,5  | 8,5  | 8,5 | 8,5 | 8,5  |



| Dimension | Tolerance | Dimension | Tolerance |
|-----------|-----------|-----------|-----------|
| d2        | $\pm 0.5$ | d3        | $\pm 0.5$ |
| n1        | 0 / +0.5  | n2        | - 0.5 / 0 |
| h1        | 0 / +2    | h2        | - 2 / 0   |

**Board size for types PD and PDB. without tonque – 617 x 1**