

# Technical Data Sheet (TDS)

## CETRIS® PROFIL LASUR



CETRIS® PROFIL LASUR is a cement-bonded particleboard with embossed surface imitating the texture of wood or slate and it is treated with pigmented primer paint and a varnish glazing as the colour top coat. 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 10 and 12mm. The glazing top coat provides a solid but non-uniform appearance. 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, milled boards with thickness of 12 mm rebated. The boards may also be delivered with pre-drilled holes. Thanks to its decorative look, the CETRIS® PROFIL LASUR boards are primarily used as facade walling boards in exteriors and interiors. 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. The back side of CETRIS® PROFIL LASUR cement bonded particle boards is treated with primer coat without a regular texture, look and sufficient covering power. The colour shade of the coat is not specific, therefore the requirement for a white or transparent shade needs to be specified in the order in advance.

### Technical specifications:

|                                     |  |
|-------------------------------------|--|
| basic size:                         | 3,350 x 1,250 mm   |
| board thicknesses:                  | 10, 12 mm  |
| Bulk density:                       | 1,150-1,450 kg/m <sup>3</sup>                                  |
| embossing:                          | wood and slate   |
| service: to customer's requirements | cutting, drilling holes, shrinkage, milling                    |
| shades:                             | according to the colour chart* CETRIS ® LASUR (twelve colours) |
| surface finish:                     | pigmented primer, varnish glazing top 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/m <sup>3</sup>       | 1,350 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   |   | $10 \times 10^{-6} \text{ K}^{-1}$               |
| 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 $\mu_s = 0.73$                            |
|   |   | 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 tolerance:

| Feature                                   | Board thickness | Requirement          |
|---|-----------------|----------------------|
| Thickness of uncut board                  | 10 mm           | $\pm 0.7 \text{ mm}$ |
|   | 12 mm           | $\pm 1.0 \text{ mm}$ |
| Length and width of the basic format      |                 | $\pm 5.0 \text{ mm}$ |
| Precision of cutting the length and width |                 | $\pm 3.0 \text{ mm}$ |
| 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      |