

TECATEC PPS CW50 PL V01 natural - Composite Materials

Chemical Designation

PPS (Polyphenylsulfide)

Colour

natural

Density

1.52 g/cm³

Fillers

carbon fibres

Main features

- excellent chemical resistance
- inherent flame resistance
- excellent mechanical properties

Target Industries

- automotive industry
- mechanical engineering
- oil and gas industry
- safety engineering
- sporting goods

The material is in the phase of further development. The characteristic values of this product may change.

| General material information | parameter | value | unit | norm | comment |
|---------------------------------------|-------------------------|--------------|----------------------------------|-------------------|-----------------------|
| Fibre type | | Carbon HT 3k | | - | |
| Fibre architecture | | Twill 2/2 | | - | |
| Fibre areal weight | | 200 | g/m ² | - | |
| Fibre volume content | | 50 | % | - | |
| Resin weight content | | 42.7 | % | - | |
| Areal weight finished product | | 349 | g/m ² | - | |
| Material widths | | 625x525 | mm | others on request | |
| thickness | | 1-95 | mm | - | |
| Fibre orientation | | 0-90° | | others on request | |
| Mechanical properties | parameter | value | unit | norm | comment |
| Tensile strength | | 680 | MPa | ISO 527-4 | |
| Modulus of elasticity (tensile test) | | 55000 | MPa | ISO 527-4 | |
| Flexural strength | | 780 | MPa | ISO 14125 | |
| Modulus of elasticity (flexural test) | | 57000 | MPa | ISO 14125 | |
| Compression strength | | 650 | MPa | ISO 14126 | |
| Compression modulus | | 51000 | MPa | ISO 14126 | |
| Interplanar shear strength | | 131 | MPa | ISO 14129 | |
| Thermal properties | parameter | value | unit | norm | comment |
| Glass transition temperature | | 90 | °C | - | (1) approximate value |
| Melting temperature | | 285 | °C | - | |
| Service temperature | short term | 260 | °C | - | |
| Service temperature | long term | 230 | °C | - | |
| Thermal expansion (CLTE) | in 0° and 90° direction | 5 | 10 ⁻⁶ K ⁻¹ | - | 1) |
| Predrying | parameter | value | unit | norm | comment |
| Drying temperature | | 150 | °C | - | |
| Drying time | | 2-3 | h | - | |

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