

TECATEC PEEK CF50 T200 CP/IP/OS V01 natural - Composite Materials

Chemical Designation

PEEK (Polyetheretherketone)

Colour

natural

Density

1.52 g/cm³

Fillers

carbon fibres

Main features

- excellent chemical resistance
- low coefficient of thermal expansion
- continuous service temperature up to 260 °C
- very high stiffness
- very high strength

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 | | 41.9 | % | - | |
| Areal weight finished product | | 344 | g/m ² | - | |
| Material widths | | 1270 | mm | - | |
| ply thickness (consolidated) | | 0.22 | mm | - | |
| Mechanical properties | parameter | value | unit | norm | comment |
| Tensile strength | | 713 | MPa | ISO 527-4 | 1) (1) measured on pressed plate |
| Modulus of elasticity (tensile test) | | 59000 | MPa | ISO 527-4 | 2) (2) measured on pressed plate 3) (3) measured on pressed plate 4) (4) measured on pressed plate |
| Flexural strength | | 866 | MPa | ISO 14125 | 3) |
| Modulus of elasticity (flexural test) | | 55000 | MPa | ISO 14125 | 4) |
| Thermal properties | parameter | value | unit | norm | comment |
| Glass transition temperature | | 143 | °C | - | (1) approximate value |
| Melting temperature | | 343 | °C | - | |
| Service temperature | short term | 300 | °C | - | |
| Service temperature | long term | 260 | °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 | | 3 | h | - | |

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