

TECAPEEK CMF white - Stock Shapes

Chemical Designation

PEEK (Polyetheretherketone)

Colour

white

Density

1.63 g/cm³

Fillers

ceramic

Main features

- high dimensional stability
- good machinability
- high strength
- high stiffness
- low thermal expansion
- low burring
- good heat deflection temperature
- very good thermal stability

Target Industries

- electrical engineering
- precision engineering
- semiconductor technology
- vacuum technology

| Mechanical properties | condition | value | test method | comment |
|---------------------------------------|-------------------------|------------------------------------|------------------|--|
| Modulus of elasticity (tensile test) | @ 73 °F | 1,227,111 psi | ASTMD 638 | 1) (1) All properties derived from machined plate test specimens |
| Tensile strength at yield | @ 73 °F | 14,122 psi | ASTMD 638 | (2) Data obtained from public source |
| Tensile strength at break | 50 mm/min | 15,200 psi | DIN EN ISO 527-2 | (3) Data obtained from public source |
| Elongation at yield | 50 mm/min | 3 % | DIN EN ISO 527-1 | |
| Elongation at break | @ 73 °F | 4.85 % | ASTMD 638 | |
| Flexural strength | @ 73 °F | 23,642 psi | ASTMD 790 | |
| Modulus of elasticity (flexural test) | @ 73 °F | 783,585 psi | ASTMD 790 | |
| Compression strength | @ 73 °F @ 1% strain | 1,855 psi | ASTMD 695 | |
| Compression strength | @ 73 °F @ 10% strain | 20,712 psi | ASTMD 695 | |
| Compression modulus | @ 73 °F | 335,369 psi | ASTMD 695 | |
| Impact strength (Izod) | @ 73 °F notched | 0.66 ft-lbs/in | ASTMD 256 | |
| Impact strength (Izod) | @ 73 °F unnotched | 15.23 ft-lbs/in | ASTMD 256 | |
| Rockwell hardness | M-Scale | 102 | ASTMD 785 | |
| Thermal properties | condition | value | test method | comment |
| Melting temperature | | 643 °F | - | 1) (1) ASTM D3418 |
| Deflection temperature | @ 264 psi | 572 °F | ASTMD 648 | (2) Data obtained from public source |
| Deflection temperature | @ 66 psi | 551 °F | ASTMD 648 | (3) Data obtained from public source |
| Service temperature | Long Term | 500 °F | - | 3) |
| Service temperature | short term | 500 °F | - | |
| Thermal expansion (CLTE) | | 3.10 *10 ⁻⁵ in/in/°F | ASTME 831 | |
| Thermal conductivity | | 2.60 BTU-in/hr-ft ² -°F | ASTME1530 | |
| Electrical properties | condition | value | test method | comment |
| surface resistivity | | 5.2E+15 | ASTMD 257 | |
| Volume resistivity | | 3.5E+15 Ω/square | ASTMD 257 | |
| Dielectric strength | S/T, in oil | 168 V/mil | ASTMD 149 | |
| Dissipation factor | 1 MHz dry | 0.0032 | ASTMD 150 | |
| Dielectric constant | 1 MHz dry | 4.71 | ASTMD 150 | |
| Other properties | condition | value | test method | comment |
| Moisture absorption | @ 24 hrs | 0.06 % | - | (1) Data obtained from public source |
| Flammability (UL94) | | V0 | - | 1) |

→ TECAPEEK products are based on Victrex® PEEK polymer.

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