

TECAPEEK CM XP109 black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PEEK (Polyetheretherketone)

Colour

black

Density

1.51 g/cm³

Fillers

30% carbon fibres, 15% PTFE

Main features

excellent strength
broad chemical compatibility
good dimensional stability
high stiffness

Target Industries

oil and gas industry
chemical and refinery industry

Mechanical properties

| | <i>parameter</i> | <i>value</i> | <i>unit</i> | <i>norm</i> | <i>comment</i> |
|---------------------------------------|-------------------|--------------|-------------|-------------|----------------|
| Tensile strength | @ 73°F | 11,800 | psi | ASTM D 638 | |
| Modulus of elasticity (tensile test) | @73°F | 1,520,000 | psi | ASTM D 638 | |
| Elongation at yield (tensile test) | @73°F | 1.30 | % | ASTM D 638 | |
| Elongation at break (tensile test) | @ 73°F | 1.8 | % | ASTM D 638 | |
| Flexural strength | @ 73°F | 15,500 | psi | ASTM D 790 | |
| Modulus of elasticity (flexural test) | @ 73°F | 1,500,000 | psi | ASTM D 790 | |
| Compression strength | @73°F; 1% strain | 7,700 | psi | ASTM D 695 | |
| Compression strength | @73°F; 10% strain | 20,500 | psi | ASTM D 695 | |
| Compression modulus | @73°F | 720,000 | psi | ASTM D 695 | |
| Notched impact strength (Izod) | @73°F | 0.68 | ft-lbs/in | ASTM D 256 | |
| Shore hardness | @73°F; D scale | 90 | | ASTM D 2240 | |

Thermal properties

| | <i>parameter</i> | <i>value</i> | <i>unit</i> | <i>norm</i> | <i>comment</i> |
|---------------------|------------------|--------------|-------------|-------------|----------------|
| Melting temperature | | 649 | °F | - | |

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