

TECAPEEK IM GF30 natural - Stock Shapes (rods, plates, tubes)

Chemical Designation

PEEK (Polyetheretherketone)

Colour

natural

Density

1.53

Fillers

30% glass fibres

Main features

- good heat deflection temperature
- very good chemical resistance
- very high creep resistant
- hydrolysis and superheated steam resistant
- inherent flame resistance
- very high stiffness
- high dimensional stability
- resistance against high energy radiation

Target Industries

- aircraft and aerospace technology
- aircraft and aerospace interiors
- food engineering
- food processing
- agricultural machinery
- automotive industry
- electrical engineering
- chemical plant engineering
- mechanical engineering
- conveyor technology

| Mechanical properties | condition | value | unit | test method | comment |
|---------------------------------------|------------------------------|----------------------|-------------------------------|------------------|---------------------------------|
| Modulus of elasticity (tensile test) | @73°F, 1% Sec | 1,406,800 | psi | ASTM D 638 | (1) ASTM D3846 |
| Tensile strength at yield | @73°F | 22,800 | psi | ASTM D 638 | |
| Elongation at break (tensile test) | @73°F | 2.2 | % | ASTM D 638 | |
| Flexural strength | @73°F | 33,800 | psi | ASTM D 790 | |
| Modulus of elasticity (flexural test) | @73°F | 1,495,200 | psi | ASTM D 790 | |
| Compression strength | @73°F | 31,200 | psi | ASTM D 695 | |
| Impact strength (Izod) | @73°F | 1.8 | ft-lbs/in | ASTM D 256 | |
| Rockwell hardness | M scale | 103 | | ASTM D 785 | |
| Coefficient of friction | @ 68°F, 1200 in/min, 155 psi | 0.3 | | - | |
| Shear strength | @73°F | 14,100 | psi | - | 1) |
| Thermal properties | condition | value | unit | test method | comment |
| Melting temperature | | 633 | °F | - | (1) Obtained from public source |
| Deflection temperature | @ 264 PSI, 1/4" | 600 | °F | ASTM D 648 | (2) Obtained from public source |
| Service temperature | Long Term | 500 | °F | - | 1) |
| Thermal expansion (CLTE) | | 1.2*10 ⁻⁵ | in/in/°F | ASTM D 696 | |
| Thermal conductivity | | 3.0 | BTU-in/hr-ft ² -°F | ISO 22007-4:2008 | 2) |
| Other properties | condition | value | unit | test method | comment |
| Moisture absorption | @73°F, 24 hrs | .11 | % | ASTM D 570 | |
| Flammability (UL94) | | V0 | | - | |

→ Resin specification:
ASTM D4000-11 PEEK; MIL-P-46183 Ty. II Cl. 3, excp. Elong.
Shapes specification:
ASTM D6262-12 S-PAEK0121

This information reflects the current state of our knowledge and is intended only to assist and advise. It is given without obligation or liability. It does not assure or guarantee chemical resistance, quality of products or their suitability in any legally binding way. Values are not minimum or maximum values, but guidelines that can be used for comparative purposes in material selection. They are within the normal range of product properties and do not represent guaranteed property values. Testing under individual application circumstances is always recommended. Data is obtained from extruded shapes material unless otherwise noted. References to FDA compliance refer to the resins from which the products were made unless otherwise noted. All trade and patent rights should be observed. All rights reserved. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com.