

## TECAPEEK® GF30 natural - Stock Shapes

### Chemical Designation

PEEK (Polyetheretherketone)

### Colour

natural opaque

### Density

1.53 g/cm<sup>3</sup>

### 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
- automotive industry
- electrical engineering
- chemical plant engineering
- mechanical engineering
- conveyor technology
- textile industry

Mechanical properties	condition	value		test method	comment
Modulus of elasticity (tensile test)	1% Sec, @ 73 °F	1,000,000	psi	ASTMD 638	(1) per ASTM D3846
Shear strength	@ 73 °F	14,100	psi	-	1) (2) Data obtained from public source
Tensile strength at yield	@ 73 °F	14500	psi	ASTMD 638	(3) Data obtained from public source
Tensile strength at break	@ 73 °F	14,500	psi	ASTMD 638	2) (4) @ 1200 in/min; 155 lbs. load Injection molded specimen
Elongation at break	@ 73 °F	2.2	%	ASTMD 638	
Flexural strength	@ 73 °F	14500	psi	ASTMD 790	
Modulus of elasticity (flexural test)	@ 73 °F	1,000,000	psi	ASTMD 790	
Compression strength	@ 10% strain, 73 °F	25,000	psi	ASTMD 695	
Compression modulus	@ 73 °F	696,000	psi	ASTMD 695	3)
Impact strength (Izod)	@ 73 °F	1.8	ft-lbs/in	ASTMD 256	
Rockwell hardness	M Scale	103		ASTMD 785	
Coefficient of friction	@ 68 °F	0.30		ASTMD 3702	4)
Thermal properties	condition	value		test method	comment
Melting temperature		633	°F	-	1) (1) Injection molded specimen
Deflection temperature	@264 psi, 1/4	600	°F	ASTMD 648	2) (2) Injection molded specimen
Service temperature	Long Term	500	°F	-	3) Data obtained from public source
Service temperature	short term	572	°F	-	3) (4) Injection molded specimen
Thermal expansion (CLTE)		1.2*10 <sup>-5</sup>	in/in/°F	ASTMD 696	4) (5) Injection molded specimen
Thermal conductivity		3.0	BTU-in/hr-ft <sup>2</sup> -°F	ASTM C 177	5)
Electrical properties	condition	value		test method	comment
Specific surface resistance		1.0*10 <sup>16</sup>	Ω/square	ASTMD 257	
Volume resistivity	@ 73 °F	1.0*10 <sup>16</sup>	Ω*cm	ASTMD 149	
Dielectric strength		175	V/mil	ASTMD 257	
Other properties	condition	value		test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.02	%	ASTMD 570	(1) Data obtained from public source
Moisture absorption	@ saturation, 73°F	0.03	%	ASTMD 570	1) (2) Injection molded 3mm specimen
Flammability (UL94)		V-0		-	2)

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

→ TECAPEEK products are based on Victrex® PEEK polymer.

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