

## 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 <sup>-5</sup>	in/in/°F	ASTM D 696	
Thermal conductivity		3.0	BTU-in/hr-ft <sup>2</sup> -°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

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