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 (2) Obtained from public source
Deflection temperature	@ 264 PSI, 1/4"	600	°F	ASTM D 648		
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 D4000-23 PEEK; ASTM D8033-22 PEEK012GF30; MIL-P-46183 Ty. II Cl. 3, excp. Elong.
  Shapes specification:
  ASTM D6262-23 S-PAEK0121

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