TECAPEEK IM CF30 black - Stock Shapes (rods, plates, tubes)

Chemical Designation
PEEK (Polyetheretherketone)

Colour
black

Density
1.41 g/cm^3

Fillers
30% carbon fibres

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

Target Industries
- oil and gas industry
- aircraft and aerospace technology
- automotive industry
- conveyor technology
- mechanical engineering
- chemical plant engineering

Mechanical properties	condition	value	unit	test method		comment
Modulus of elasticity (tensile test)	@73°F, 1% Sec	1,885,400	psi	ASTM D 638		(1) ASTM D3846
Tensile strength at yield	@73°F	27,000	psi	ASTM D 638		
Elongation at break (tensile test)	@73°F	1.1	%	ASTM D 638		
Flexural strength	@73°F	46,100	psi	ASTM D 790		
Modulus of elasticity (flexural test)	@73°F	1,850,000	psi	ASTM D 790		
Compression strength	@73°F	34,800	psi	ASTM D 695		
Impact strength (Izod)	@73°F, notched	0.9	ft-lbs/in	ASTM D 256		
Rockwell hardness	M scale	107		ASTM D 785		
Coefficient of friction	@ 68°F	0.22		-		
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)	
Service temperature	Short Term	572	°F	-		
Thermal expansion (CLTE)		$0.80*10^{-5}$	in/in/°F	ASTM D 696		
Thermal conductivity		6.3	BTU-in/hr-ft^2-°F	ASTM C 177	2)	

Other properties	condition	value	unit	test method	comment
Limiting PV	@ 68°F, 1200 in/min	385,000		-	
Flammability (UL94)		V0		-	

- Resin specification:
  ASTM D8033-22 PEEK0120CF30A00000
  Shapes specification:
  ASTM D6262-23 S-PAEK0130

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