TECAPEEK CM XP98 black - Stock Shapes (rods, plates, tubes)

Chemical Designation
PEEK (Polyetheretherketone)

Colour
black

Density
1.43 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
- aircraft and aerospace technology
- automotive industry
- conveyor technology
- oil and gas industry
- mechanical engineering
- chemical plant engineering

Mechanical properties	condition	value	unit	test method		comment
Tensile strength	@73°F	19,000	psi	ASTM D 638		(1) ASTM D732
Modulus of elasticity (tensile test)	@73°F	1,840,000	psi	ASTM D 638		
Elongation at yield (tensile test)	@73°F	2.3	%	ASTM D 638		
Elongation at break (tensile test)	@73°F	2.5	%	ASTM D 638		
Flexural strength	@73°F	32,500	psi	ASTM D 790		
Modulus of elasticity (flexural test)	@73°F	1,600,000	psi	ASTM D 790		
Compression strength	@73°F, 10% strain	32,000	psi	ASTM D 695		
Compression strength	@ 1%	7,700	psi	ASTM D 695		
Compression modulus	@73°F	770,000	psi	ASTM D 695		
Impact strength (Izod)	@73°F, notched	1.00	ft-lbs/in	ASTM D 256		
Shore hardness	D scale	93		ASTM D 2240		
Shear strength	@73°F	13,000	psi	-	1)	

Thermal properties	condition	value	unit	test method		comment
Melting temperature		649	°F	-		(1) Obtained from public source (2) Obtained from public source
Service temperature	Short Term	572	°F	-	1)	
Service temperature	Long Term	500	°F	-	2)	
Thermal expansion (CLTE)		$1.6*10^{-5}$	in/in/°F	-		

Other properties	condition	value	unit	test method	comment
Moisture absorption	@ 24 hrs	0.05	%	ASTM D 570	

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