TECAPEEK CM XP98 black - Stock Shapes

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		test method	comment
Modulus of elasticity (tensile test)	@73°F	1,400,000	psi	ASTM D 638	(1) ASTM D732
Tensile strength	@73°F	18,300	psi	ASTM D 638	
Elongation at break	@73°F	2.2	%	ASTM D 638	
Flexural strength	@73°F	30,500	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@73°F	1,600,000	psi	ASTM D 790	
Compression strength	@73°F, 10% strain	26,000	psi	ASTM D 695	
Compression modulus	@73°F	600,000	psi	ASTM D 695	
Impact strength (Izod)	@73°F, notched	1.03	ft-lbs/in	ASTM D 256	
Rockwell hardness	M scale	102		ASTM D 785	
Shear strength	@73°F	12,100	psi	- 1)	

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

- Resin specification:
  ASTM D4000-11 PEEK0000C30G85300
  Shapes specification:
  ASTM D6262-12 S-PAEK0130

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ate: 2018/08/09 Version: A0