

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

Chemical Designation

PEEK (Polyetheretherketone)

Colour

black

Density

1.41 g/cm³

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
Deflection temperature	@ 264 PSI, 1/4"	600	°F	ASTM D 648	(2) Obtained from public source
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 D4000-11 PEEK0000C30G85300
Shapes specification:
ASTM D6262-12 S-PAEK0130

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