



MANUFACTURING CORPORATION

- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Tecapeek™ CF30 (30% Carbon fiber filled) | Polyetheretherketone

Tecapeek™ is a unique, semi-crystalline, high temperature engineering thermoplastic. It is an excellent material for a wide spectrum of applications where thermal, chemical, and combustion properties are critical to performance. Especially significant in this regard is Tecapeek™'s ability to retain its flexural and tensile properties at very high temperatures in excess of 482°F. This material has been used in applications such as automotive, marine, nuclear, oil well, electronics, medical and aerospace. Tecapeek™ offers exceptional chemical resistance and outstanding wear and abrasion resistance. The addition of glass fiber reinforcements enhances the mechanical and thermal properties of the basic Tecapeek™. The addition of carbon fiber reinforcements enhances the mechanical and thermal properties of the basic Tecapeek™.

Mechanical Properties	ASTM Test Method	Value	Units
Density	D792	0.052	lbs/in ³
Specific Gravity	D792	1.41	g/cc
Water Absorption @ 24 hours, 73°F	D570	0.06	%
@ Saturation, 73°F	D570		%
Tensile Strength, 73°F	D638	27,000	psi
Tensile Modulus	D639	1,885,400	psi
Elongation (at break), 73°F	D638	1.1	%
Flexural Strength, 73°F	D790	46,100	psi
Flexural Modulus, 73°F	D790	1,850,000	psi
Compressive Strength 73°F	D695	34,800	psi
Shear Strength, Ultimate, 73°F	D3846	14,100	psi
Izod Impact Strength, 73°F	D256	1	ft-lb/in of notch
Rockwell Hardness, 73°F	D785	M - 107	M or R Scale
Limiting PV @ 68°F 1200 in/min		385,000	(psi) (ft/min)
Coefficient of Friction, @ 68°F 1200 in/mm, 155 lbs load		0.22	in. ³ -min/ft.lbs.hr
Thermal Properties			
Heat Deflection Temperature @ 264 psi, 1/4"	D648	600	°F
Maximum Continuous Use Temperature		482	°F
Melting Point		633	°F
Coefficient of Linear Thermal Expansion	D696	0.8 X 10 ⁻⁵	in/in./°F
Thermal Conductivity	C177	6.37	
Flammability	UL94	V - 0	(mm)
Electrical Properties			
Volume Resistivity	D149		ohm - cm
Surface Resistivity	D257		ohm/square
Dielectric Strength	D257		Volts/mil

237 Glider Circle, Corona, CA 92880 Phone: (951) 272-9395 Fax: (951) 272-9397

*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufacturers, converters and other published sources. However, they should not be used for specification or design purposes. The above information is provided by Ensinger Hyde.