

DATA SHEET

CARBON FILLED PEEK

Polyetheretherketone with 30% Carbon Fiber Filler

PROPERTY	UNITS	VALUE
MECHANICAL		
Specific Gravity	-	1.42
Tensile Strength	psi	18,000
Tensile Modulus	psi	800,000
Elongation (at break)	%	2.0
Flexural Strength	psi	30,000
Flexural Modulus	psi	1,300,000
Compressive Strength	psi	25,000
Hardness, Rockwell	-	M97
Coefficient of Friction (Dry vs. Steel)	-	.24
Limiting PV (with 4:1 safety factor)	psi x fpm	41,000
THERMAL		
Coefficient of Linear Thermal Expansion	in/in/F	1.70×10^{-5}
Heat Deflection Temperature (264 psi)	F	450
Glass Transition Temperature	F	290
Continuous Service Temperature	F	480
Thermal Conductivity	BTU/in/hr.ft.F	6.37
ELECTRICAL		
Dielectric Strength	volts/mil	--
Volume Resistivity	ohm-cm	$<10^5$
OTHER		
Water Absorption, Immersion, 24 hrs.	% by wt.	.15
Water Absorption, Immersion, Saturation	% by wt.	.50

ENGINEERING NOTES:

- * Excellent bearing performance at high speeds
- * Superior abrasion resistance (SSI - 67)
- * Excellent chemical resistance
- * Extrusion grade has slightly higher strength and toughness