

## PEEK Unfilled Material Specifications

PEEK grades are recognized as having superior balance of chemical and hydrolysis resistance similar to PPS, but can operate at higher temperatures.

Physical Properties	Units	Test	Unfilled
Density	lb/in <sup>3</sup> g/cm <sup>3</sup>	D792	0.047 1.31
Water Absorption, 24 hrs.	%	D570	0.10
Water Absorption, Saturation	%	D570	-

Mechanical Properties	Units	Test	Unfilled
Tensile Strength	psi	D638	16,000
Tensile Modulus	psi	D638	500,000
Tensile Elongation at Break	%	D638	20
Flexural Strength	psi	D790	25,000
Flexural Modulus	psi	D790	600,000
Compressive Strength	psi	D695	20,000
Compressive Modulus	psi	D695	500,000
Hardness Rockwell	-	D785	M100 (R126)
Izod Impact Notched	ft-lb/in	D256	1.0

Thermal Properties	Units	Test	Unfilled
Coefficient of Linear Thermal Expansion	X 10 <sup>-5</sup> in./in./°F	D696	2.6
Heat Deflection Temperature	@264 psi °F/°C	D648	320 / 160
Melting Temperature	°F/°C	D3418	644 / 340
Max. Operating Temperature	°F/°C	-	480 / 249
Thermal Conductivity	BTU- in/ft <sup>2</sup> -hr.-°F x 10 <sup>-4</sup> cal/cm-sec-°C	C177	1.75 6.03
Flammability Rating	-	UL94	V - 0

Electrical Properties	Units	Test	Unfilled
Dielectric Strength	(V/mil) short time, 1/8" thick	D149	480
Dielectric Constant	@1 MHz / @1 KHz	D150	3.30 / -
Dissipation Factor	@1 MHz / @1 KHz	D150	0.003 / -
Volume Resistivity	Ohm-cm @50% RH	-	4.9 X 10 <sup>16</sup>

\*\*The information provided in this table is a compilation of publicly available data. This information is provided for comparison purposes only, and is not intended to be warrantable. Further, *Technical Products, Inc.* disclaims any and all liability from errors, in accuracies, or omissions.