

TECAPEEK SD black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PEEK (Polyetheretherketone)

Colour

black opaque

Density

1.72 g/cm³

Main features

- electrically static dissipative
- excellent chemical resistance

Target Industries

- semiconductor technology

<i>Mechanical properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
Tensile strength	@ 73 °F	18,180	psi	ASTM D 638	(1) Notched
Modulus of elasticity (tensile test)	@ 73 °F	1,200,000	psi	ASTM D 638	
Elongation at break (tensile test)	@ 73 °F	2.3	%	ASTM D 638	
Flexural strength	@ 73 °F	19,900	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	957,200	psi	ASTM D 790	
Compression strength	1% / 10% strain	7,200/24,640	psi	ASTM D 695	
Compression modulus	@ 73 °F	617,000	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	1.08	ft-lbs/in	ASTM D 256	1)
Shore hardness	D scale	94		ASTM D 2240	
Rockwell hardness	M scale	106		ASTM D 785	
<i>Thermal properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
Glass transition temperature		318	°F	-	1)
Melting temperature		638	°F	-	2)
Service temperature	short term	572	°F	-	
Service temperature	long term	500	°F	-	
Thermal expansion (CLTE)	73-140°F, long.	2.78	*10 ⁻⁵ in/in/°F	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	73-212°F, long.	2.78	*10 ⁻⁵ in/in/°F	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	212-302°F, long.	3.89	*10 ⁻⁵ in/in/°F	DIN EN ISO 11359-1;2	
<i>Electrical properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
surface resistivity		10 ⁶ - 10 ⁹	Ω	DIN IEC 60093	
<i>Other properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
Water absorption	24hr	0.02	%	ASTM D 570	