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

Chemical Designation
PEEK (Polyetheretherketone)

Colour
black opaque

Density
1.72 g/cm^3

Main features
- electrically static dissipative
- excellent chemical resistance

Target Industries
- semiconductor technology

Mechanical properties	condition	value	unit	test method		comment
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		

Thermal properties	condition	value	unit	test method		comment
Glass transition temperature		318	°F	-	1)	(1) DSC (2) DSC
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		

Electrical properties	condition	value	unit	test method	comment
surface resistivity		10^6 - 10^9	Ω	DIN IEC 60093	

Other properties	condition	value	unit	test method	comment
Water absorption	24hr	0.02	%	ASTM D 570	

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