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

Chemical Designation
PEEK (Polyetheretherketone)

Colour
black opaque

Density
1.71 g/cm^3

Main features
- electrically static dissipative
- excellent chemical resistance

Target Industries
- semiconductor technology

Mechanical properties	parameter	value	unit	norm		comment
Tensile strength	50mm/min	91	MPa	DIN EN ISO 527-2		(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) For Charpy test: support span 64mm, norm specimen.
Modulus of elasticity (tensile test)	1mm/min	5800	MPa	DIN EN ISO 527-2	1)	
Elongation at break (tensile test)	50mm/min	2	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	148	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	5600	MPa	DIN EN ISO 178		
Compression strength	1% / 2% 5mm/min, 10 N	28 / 53	MPa	EN ISO 604	3)	
Impact strength (Charpy)	max. 7,5J	43	kJ/m^2	DIN EN ISO 179-1eU	4)	
Shore hardness	D	91		DIN EN ISO 868		

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		151	°C	DIN EN ISO 11357	1)	(1) Found in public sources.
Melting temperature		341	°C	DIN EN ISO 11357		
Service temperature	short term	300	°C	DIN 53765		
Service temperature	long term	260	°C	-		
Thermal expansion (CLTE)	23-60°C, long.	5	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	5	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	100-150°C, long.	7	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity		10^6 - 10^9	Ω	DIN EN 61340-2-3		
volume resistivity		10^6 - 10^9	Ω*cm	DIN EN 61340-2-3		

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.02 / 0.03	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm
Flammability (UL94)		V0		-		

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