

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

Chemical Designation

PEEK (Polyetheretherketone)

Colour

black opaque

Density

1.71 g/cm³

Main features

- electrically static dissipative
- excellent chemical resistance

Target Industries

- semiconductor technology

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength	50mm/min	91	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	5800	MPa	DIN EN ISO 527-2	1) (2) For flexural test: support span 64mm, norm specimen.
Elongation at break (tensile test)	50mm/min	2	%	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Flexural strength	2mm/min, 10 N	148	MPa	DIN EN ISO 178	2) (4) For Charpy test: support span 64mm, norm specimen.
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	
<i>Thermal properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
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	DIN 53765	
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	
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
surface resistivity		10 ⁶ - 10 ⁹	Ω	DIN EN 61340-2-3	
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
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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