

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

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
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	(5) Specimen in 4mm thickness
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)
Ball indentation hardness		280	MPa	ISO 2039-1	(5)
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	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	
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 ⁶ - 10 ⁹	Ω	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

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