

TECAPEEK SM PVX black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PEEK (Polyetheretherketone)

Colour

black opaque

Density

1.43 g/cm³

Fillers

carbon fibres, graphite, PTFE

Main features

- very good chemical resistance
- inherent flame retardant
- good heat deflection temperature
- hydrolysis and superheated steam resistant
- good machinability
- good slide and wear properties

Target Industries

- oil and gas industry
- chemical technology
- energy industry
- mechanical engineering

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	62	MPa	DIN EN ISO 527-2	1)
Modulus of elasticity (tensile test)	1mm/min	6000	MPa	DIN EN ISO 527-2	
Elongation at break (tensile test)	50 mm/min	2	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	116	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	6400	MPa	DIN EN ISO 178	
Impact strength (Charpy)		17	kJ/m ²	DIN EN ISO 179-1eA	
Ball indentation hardness		206	MPa	ISO 2039-1	3)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		150	°C	DIN EN ISO 11357	1)
Melting temperature		341	°C	DIN EN ISO 11357	
Service temperature	short term	300	°C	-	2)
Service temperature	long term	260	°C	-	
Thermal expansion (CLTE)	100-150°C, long.	4	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	3	10 ⁻⁵ K ⁻¹	DIN EN ISO 11357	
Thermal expansion (CLTE)	23-60°C, long.	3	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	

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