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

Chemical Designation
PEEK (Polyetheretherketone)

Colour
black opaque

Density
1.43 g/cm^3

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)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen in 4mm thickness
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)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		