

## TECAPEEK PVX - Stock Shapes

### Chemical Designation

PEEK (Polyetheretherketone)

### Colour

black opaque

### Density

1.44 g/cm<sup>3</sup>

### Fillers

carbon fibres, PTFE, graphite

### Main features

- good heat deflection temperature
- high creep resistant
- good slide and wear properties
- hydrolysis and superheated steam resistant
- good wear properties
- inherent flame retardant
- very good chemical resistance
- not electrically insulating

### Target Industries

- mechanical engineering
- chemical technology
- conveyor technology
- automotive industry
- textile industry
- precision engineering
- aircraft and aerospace technology

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1mm/min	5500	MPa	DIN EN ISO 527-2	1)
Tensile strength	50mm/min	84	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50mm/min	84	MPa	DIN EN ISO 527-2	
Elongation at yield	50mm/min	3	%	DIN EN ISO 527-2	
Elongation at break	50mm/min	3	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	142	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	6000	MPa	DIN EN ISO 178	
Compression strength	1% / 2% 5mm/min, 10 N	23 / 44	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	4000	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	28	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	5)
Ball indentation hardness		250	MPa	ISO 2039-1	6)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		146	°C	DIN 53765	1)
Melting temperature		341	°C	DIN 53765	
Service temperature	short term	300	°C		2)
Service temperature	long term	260	°C		
Thermal expansion (CLTE)	23-60°C, long.	3	10 <sup>-5</sup> *K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	3	10 <sup>-5</sup> *K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	100-150°C, long.	4	10 <sup>-5</sup> *K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Specific heat		1.1	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.82	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
Surface resistance		10 <sup>2</sup> - 10 <sup>8</sup>	Ω	DIN IEC 60093	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.02 / 0.03	%	DIN EN ISO 62	1)
Resistance to hot water/ bases		+			
Resistance to weathering		-			
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	2)

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