

## TECAPEEK SM natural - Stock Shapes (rods, plates, tubes)

### Chemical Designation

PEEK (Polyetheretherketone)

### Colour

beige opaque

### Density

1.31 g/cm<sup>3</sup>

### 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

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength	50mm/min	112	MPa	DIN EN ISO 527-2	1) (1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	4300	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
Elongation at break (tensile test)	50 mm/min	14	%	DIN EN ISO 527-2	(3) Specimen in 4mm thickness
Flexural strength	2mm/min, 10 N	159	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	4200	MPa	DIN EN ISO 178	
Notched impact strength (Charpy)		6	kJ/m <sup>2</sup>	DIN EN ISO 179-1eA	
Ball indentation hardness		237	MPa	ISO 2039-1	3)
<i>Thermal properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Glass transition temperature		150	°C	DIN EN ISO 11357	1) (1) Found in public sources.
Melting temperature		341	°C	DIN EN ISO 11357	(2) Found in public sources.
Service temperature	short term	300	°C	-	2) Individual testing regarding application conditions is mandatory.
Service temperature	long term	260	°C	-	
Thermal expansion (CLTE)	23-60°C, long.	5	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	6	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	100-150°C, long.	6	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	

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