

## TECAPEEK SM GF30 natural - Stock Shapes (rods, plates, tubes)

### Chemical Designation

PEEK (Polyetheretherketone)

### Colour

beige opaque

### Density

1.53 g/cm<sup>3</sup>

### Fillers

glass fibres

### Main features

- high dimensional stability
- very good chemical resistance
- inherent flame retardant
- good heat deflection temperature
- hydrolysis and superheated steam resistant
- good machinability
- very high creep resistant

### Target Industries

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

<b>Mechanical properties</b>	<b>parameter</b>	<b>value</b>	<b>unit</b>	<b>norm</b>	<b>comment</b>
Tensile strength	50mm/min	109	MPa	DIN EN ISO 527-2	1)
Modulus of elasticity (tensile test)	1mm/min	8000	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) For Charpy test: support span 64mm, norm specimen. (4) Specimen in 4mm thickness
Elongation at break (tensile test)	50 mm/min	2	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	178	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	7700	MPa	DIN EN ISO 178	
Impact strength (Charpy)		29	MPa	DIN EN ISO 179-1eA	3)
Ball indentation hardness		310	MPa	ISO 2039-1	4)
<b>Thermal properties</b>	<b>parameter</b>	<b>value</b>	<b>unit</b>	<b>norm</b>	<b>comment</b>
Glass transition temperature		150	°C	DIN EN ISO 11357	1)
Melting temperature		341	°C	DIN EN ISO 11357	(1) Found in public sources. (2) Found in public sources.
Service temperature short term	short term	300	°C	-	Individual testing regarding application conditions is mandatory.
Service temperature long term	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	
<b>Electrical properties</b>	<b>parameter</b>	<b>value</b>	<b>unit</b>	<b>norm</b>	<b>comment</b>
surface resistivity		10 <sup>14</sup>	Ω	-	
<b>Other properties</b>	<b>parameter</b>	<b>value</b>	<b>unit</b>	<b>norm</b>	<b>comment</b>
Resistance to hot water/ bases		+	-	1)	(1) + good resistance (2) - poor resistance
Resistance to weathering		-	-	2)	(3) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Flammability (UL94)	corresponding to	V0	-	3)	