

TECAPEEK SM CF30 black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PEEK (Polyetheretherketone)

Colour

black opaque

Density

1.43 g/cm³

Fillers

carbon fibres

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	73	MPa	DIN EN ISO 527-2	1)
Modulus of elasticity (tensile test)	1mm/min	6800	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	138	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	6800	MPa	DIN EN ISO 178	
Impact strength (Charpy)		20	kJ/m ²	DIN EN ISO 179-1eU	
Ball indentation hardness		237	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)	23-60°C, long.	2	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 11359-1;2	
Thermal expansion (CLTE)	100-150°C, long.	3	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	

(1) For tensile test: specimen type 1b
(2) For flexural test: support span 64mm, norm specimen.
(3) Specimen in 4mm thickness

(1) Found in public sources.
(2) Found in public sources.
Individual testing regarding application conditions is mandatory.