



Material data sheet

PEEK CF30 black

Chemical Designation: Polyetheretherketone
DIN-abbreviation: PEEK
Colour / Fillers: black opaque / carbon fibres
Density: 1,38 g/cm³

Main features

- very high creep resistance
- inherent flame retardant
- good chemical resistance
- improved toughness
- very high stiffness
- resistance against high energy radiation
- hydrolysis and superheated steam resistant
- high dimensional stability

Target Industries

- chemical technology
- mechanical engineering
- aircraft and aerospace technology
- automotive industry
- vacuum technology
- oil and gas industry

Characteristics

mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1 mm / min	6000	MPa	DIN EN ISO 527-2 1)	1) For tensile test: specimen type 1b 2) Specimen 10 x 10 x 10 mm 3) For Charpy test: support span 64 mm, norm specimen. 4) Specimen in 4 mm thickness
Tensile strength	50 mm / min	112	MPa	DIN EN ISO 527-2	
Elongation at break	50 mm / min	10	%	DIN EN ISO 527-2	
Compression strength	1% / 2% / 5% 5 mm / min, 10 N	25/47/111	MPa	EN ISO 604 2)	
Impact strength (Charpy)	max. 7,5 J	92	kJ/m ²	DIN EN ISO 179-1eU 3)	
Ball indentation hardness		298	MPa	ISO 2039-1 4)	





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thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		147	°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		
Service temperature	long term	260	°C		
Thermal expansion (CLTE)	23-60 °C, long	4	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100 °C, long	4	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	100-150 °C, long	6	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Specific heat		1.2	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.66	W/(K*m)	ISO 22007-4:2008	

electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 ³ -10 ¹²	Ω	DIN EN 61340-2-3	
volume resistivity		10 ³ -10 ¹²	Ω*cm	DIN EN 61340-2-3	

other properties	parameter	value	unit	norm	comment
Water absorption	24 h / 96 h (23 °C)	0.2 / 0.3	%	DIN EN ISO 62 1)	1) Ø ca. 50 mm, h = 13 mm 2) (+) good resistance 3) – poor resistance 4) 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
Resistance to hot water/bases		(+)		- 2)	
Resistance to weathering		-		- 3)	
Flammability (UL94)	corresponding to	VO		DIN IEC 60695-11-10 4)	

→ PEEK products may be based on Victrex® PEEK or Solvay KetaSpire® polymer

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Wilhelm Herm. Müller GmbH & Co. KG

Heinrich-Nordhoff-Ring 14 · 30826 Garbsen · Postfach 141230 · 30812 Garbsen
Tel. +49 5131 4522-0 · Fax: +49 5131 4522-110 · E-Mail: info@whm.net