

TECAPEEK GF30 natural - Stock Shapes

Chemical Designation

PEEK (Polyetheretherketone)

Colour

beige opaque

Density

1.53 g/cm³

Fillers

glass fibres

Main features

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

Target Industries

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

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1mm/min	6400	MPa	DIN EN ISO 527-2	1)
Tensile strength	50mm/min	105	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50mm/min	105	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	164	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	6600	MPa	DIN EN ISO 178	
Compression strength	1% / 2% 5mm/min, 10 N	29 / 52	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	4800	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	33	kJ/m ²	DIN EN ISO 179-1eU	5)
Ball indentation hardness		316	MPa	ISO 2039-1	6)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		147	°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.	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.	5	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Specific heat		1.0	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.35	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
Specific surface resistance		10 ¹⁴	Ω	DIN IEC 60093	(1) Specimen in 1mm thickness
Specific volume resistance		10 ¹⁴	Ω*cm	DIN IEC 60093	
Dielectric strength	23°C, 50% r.h.	36	kV/mm	ISO 60243-1	1)
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		+	-	-	2)
Resistance to weathering		-	-	-	3)
Flammability (UL94)	corresponding to	V0	-	DIN IEC 60695-11-10;	4)

→ TECAPEEK products are based on Victrex® PEEK polymer.

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