

PEEK DATASHEET

Mechanical properties	parameter	value	unit	norm
Tensile strength	50mm/min	116	MPa	DIN EN ISO 527-2
Modulus of elasticity (tensile test)	1mm/min	4200	MPa	DIN EN ISO 527-2 1)
Tensile strength at yield	50mm/min	116	MPa	DIN EN ISO 527-2
Elongation at yield (tensile test)	50mm/min	5	%	DIN EN ISO 527-2
Elongation at break (tensile test)	50mm/min	15	%	DIN EN ISO 527-2
Flexural strength	2mm/min, 10 N	175	MPa	DIN EN ISO 178 2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	4200	MPa	DIN EN ISO 178
Compression strength	1% / 2% / 5% 5mm/min, 10 N	23/43/102	MPa	EN ISO 604 3)
Compression modulus	5mm/min, 10 N	3400	MPa	EN ISO 604 4)
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU 5)
Notched impact strength (Charpy)	max. 7,5J	4	kJ/m ²	DIN EN ISO 179-1eA
Ball indentation hardness		253	MPa	ISO 2039-1 6)

Thermal properties	parameter	value	unit	norm
Glass transition temperature		150	°C	DIN EN ISO 11357 1)
Melting temperature		341	°C	DIN EN ISO 11357
Heat distortion temperature	HDT, Method A	162	°C	ISO-R 75 Method A
Service temperature	short term	300	°C	2)
Service temperature	long term	260	°C	-
Thermal expansion (CLTE)	23-60°C, long.	5	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2
Thermal expansion (CLTE)	23-100°C, long.	5	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2
Thermal expansion (CLTE)	100-150°C, long.	7	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2
Specific heat		1.1	J/(g*K)	ISO 22007-4:2008
Thermal conductivity		0.27	W/(K*m)	ISO 22007-4:2008

Electrical properties	parameter	value	unit	norm
surface resistivity	Silver electrode, 23°C, 12% r.h.	10 ¹⁵	Ω	DIN IEC 60093 1)
volume resistivity	Silver electrode, 23°C, 12% r.h.	10 ¹⁵	Ω*cm	DIN IEC 60093
Dielectric strength	23°C, 50% r.h.	73	kV/mm	ISO 60243-1 2)
Resistance to tracking (CTI)	Platin electrode, 23°C, 50% r.h., solvent A	125	V	DIN EN 60112

Other properties	parameter	value	unit	norm
Water absorption	24h / 96h (23°C)	0.02 / 0.03	%	DIN EN ISO 62 1)
Resistance to hotwater/ bases		+	-	2)
Resistance to weathering		-	-	3)
Flammability (UL94)	listed (value at 1.5mm)	V0		DIN IEC 60695-11-10;

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