

TKG® PEEK (PEEK)

Density 1,31 g/cm³

Colour Beige

Chemical Designation PEEK (Polyetheretherketone)

PROPERTIES	RESULT	UNIT	PARAMETER	NORM USED
Mechanical properties				
Modulus of elasticity	4100	MPa	1 mm/min	DIN EN ISO 527-2
Tensile strength	115	MPa	50 mm/min	DIN EN ISO 527-2
Tensile strength at yield	115	MPa	50 mm/min	DIN EN ISO 527-2
Elongation at yield	5	%	50 mm/min	DIN EN ISO 527-2
Elongation at break	14	%	50 mm/min	DIN EN ISO 527-2
Flexural strength	175	MPa	2 mm/min , 10 N	DIN EN ISO 178
Modulus of elasticity (flex test)	4100	MPa	2 mm/min , 10 N	DIN EN ISO 178
Compression strength	23 / 42	MPa	1% / 2%. 5 mm/min , 10 N	EN ISO 604
Compression modulus	3400	MPa	5 mm/min , 10 N	EN ISO 604
Impact strength (Charpy)	No break	Kj/m ²	Max. 7,5j	DIN EN ISO 179-1EU
Notched Impact stren. (Charpy)	4	Kj/m ²	Max. 7,5j	DIN EN ISO 179-1EU
Ball indentation hardness	250	MPa		ISO 2039-1
Thermal properties				
Glass transition temperature	150	°C		DIN 53765
Melting temperature	341	°C		DIN 53765
Service temperature	300	°C	Short term	
Service temperature	260	°C	Long term	
Thermal expansion	5	10 ⁻⁵ K ⁻¹	23-60°C long	DIN EN ISO 11359-1;2
Thermal expansion	5	10 ⁻⁵ K ⁻¹	23-100°C long	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				
Surface resistance	10 ¹⁴	Ω		DIN IEC 60093
Miscellaneous properties				
Water absorption	0,02 / 0,03	%	24h / 96h (23°C)	DIN EN ISO 62
Resistance to hot water / bases	(+)			
Resistance to weathering	-			
Flammability (UL94)	V0		According to	DIN IEC 60995-11-10

MAIN CHARACTERISTICS

High creep resistant
 Inherent flame retardant
 Resistant to high energy radiation
 Great heat deflection temperature
 Hydrolysis and superheated steam resistant

INDUSTRY APPLICATIONS

Aircraft and aerospace technology
 Chemical technology
 Textile industry
 Automotive industry
 Mechanical engineering

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