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Technical datasheet

PEEK (Polyetheretherketone)

Example of application
› mechanical engineering (parts with extremely high thermal and mechanical load); gear wheels

Advantages	Disadvantages
› excellent chemical resistance › very high temperature resistance › very good mechanical properties	› expensive

Basic information	Specification
Format	round material: 5 mm up to 200 mm available in 3 m length sheets: 5 mm up to 150 mm available in 3 m x 0.62 m

Physical properties	Standard term/Specification*	Unit	Testing method
Density	1.31	g/cm³	ISO 1183
Moisture ingress	0.2	%	DIN EN ISO 62

Mechanical properties	Standard term/Specification*	Unit	Testing method
Tensile strength	110	MPa	DIN EN ISO 527
Elongation at break	20	%	DIN EN ISO 527
E-Module	4,000	MPa	DIN EN ISO 527
Notch toughness	n.sp.	kJ/m²	ISO 179
Rochwellhardness	230	MPa	DIN EN ISO 2039

Thermal properties	Standard term/Specification*	Unit	Testing method
Thermal conductivity	0.25	W/(m·K)	DIN 52612
Linear thermal expansion coefficient based on a fixed initial length	0.5	$K^{-1} \cdot 10^{-4}$	DIN 53752
	1.0	mm	At initial length of 1.000 mm and a temperature difference of 20 °C.
Max. operating temperature, long-term	250	°C	
Max. operating temperature, short-term	310	°C	
Min. operating temperature, long-term	-60	°C	

Electrical properties	Standard term/Specification*	Unit	Testing method
Resistance	$4{,}9 \cdot 10^{16}$	Ω·cm	DIN IEC 60093
Outer surface coefficient	10^{18}	Ω	DIN IEC 60093
Puncture resistance	20	kV/mm	DIN EN 60243

Legend
n.sp. = not specified

Should you require binding and exact values, please ask for the appropriate factory certificate. This may incur additional costs. Please note that all specifications are standard values only, which are subject to production-related fluctuations.
*Higher specification on request. ** Density based on PEEK MG natural, may deviate with coloured variations.

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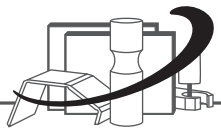

technical plastics

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