PEEK 30% CF

POLYETHER ETHER KETONE WITH CARBON

Material description

PEEK 30% CF is reinforced with 30% carbon fibres. It thus achieves the highest strength values in the PEEK family. Due to the carbon fibre content, the thermal conductivity is increased and the material is no longer electrically insulating.

Conformities

RoHS, REACH

Physical properties	Test method	Value	Unit
Density	DIN EN ISO 1183-1	1.4	g/cm3
Water absorbtion	DIN EN ISO 62	0.14	%
Sliding friction		◕	
Abrasion resistance		◕	

Mechanical properties	Test method	Value	Unit
Yield stress	DIN EN ISO 527	120	MPa
Elongation at break	DIN EN ISO 527	7	%
Tensile modulus of elasticity	DIN EN ISO 527	6500	MPa
Notched impact strength	DIN EN ISO 527	4	kJ/m2
Ball indentation hardness	DIN EN ISO 2039-1	310	MPa

Thermal properties	Test method	Value	Unit
Thermal conductivity	DIN 52612-2	0.92	W/(m*K)
Heat capacity	DIN 52612-1	1.2	kJ/(kg*K)
Coefficient of thermal expansion	DIN 53752	25	10^{-6*K}-1
Operating temperature short term		310	°C
Operating temperature long term		-20 bis 250	°C
Heat deflection temperature	DIN EN ISO 75 / A	315	°C
Flammability	UL 94, 3 mm	V0	

Electrical properties	Test method	Value	Unit
Volume resistivity	IEC 60093	10^4	Ω * cm
Surface resistivity	IEC 60093	10^4	Ω * cm
Dielectric strength	IEC 60243	10	kV/mm

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