PEEK MG

POLYETHER ETHER KETONE MEDICAL GRADE

Material description

PEEK MG (medical grade) is suitable for medical applications thanks to its high purity and comprehensive biocompatibility. PEEK MG is particularly characterised by an extremely long service life, maximum hydrolysis resistance and resistance to high-energy radiation. PEEK MG has been tested for the possible development of allergic reactions, systemic toxicity, local tissue reactions and the influence on cell growth. The test results confirmed its comprehensive biocompatibility.

Conformities

RoHS, REACH, USP Class VI, ISO 10993-5

Physical properties	Test method	Value	Unit
Density	DIN EN ISO 1183-1	1.31	g/cm3
Water absorbtion	DIN EN ISO 62	0.2	%
Sliding friction		◕	
Abrasion resistance		◕	

Mechanical properties	Test method	Value	Unit
Yield stress	DIN EN ISO 527	110	MPa
Elongation at break	DIN EN ISO 527	20	%
Tensile modulus of elasticity	DIN EN ISO 527	4000	MPa
Notched impact strength	DIN EN ISO 179	3.5	kJ/m2
Shore Hardness D	DIN EN ISO 868	88	

Thermal properties	Test method	Value	Unit
Thermal conductivity	DIN 52612-2	0.25	W/(m*K)
Heat capacity	DIN 52612-1	1.34	kJ/(kg*K)
Coefficient of thermal expansion	DIN 53752	50	10^{-6*K}-1
Operating temperature short term		310	°C
Operating temperature long term		-60 bis 250	°C
Heat deflection temperature	DIN EN ISO 75 / A	152	°C
Flammability	UL 94, 3 mm	V0	

Electrical properties	Test method	Value	Unit
Volume resistivity	IEC 60093	4.9 x 10^{16}	Ω * cm
Surface resistivity	IEC 60093	10^{18}	Ω * cm
Dielectric strength	IEC 60243	20	kV/mm
Comparative tracking index (CTI)	IEC 60112	150	CTI

These technical data have been determined as average values by our suppliers from many individual measurements. In all measurements, the test specimens were tested in the dry state. We pass on the data with reservation. The table does not claim to be complete or correct. Material technology is subject to constant further development. No rights or guarantees can be derived from it. Own tests are necessary because the environmental and operating conditions (humidity, temperature, mechanical forces, radiation and chemicals, etc.) set limits in the application.

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