PPSU MG

POLYPHENYLSULFONE MEDICAL GRADE

Material description

PPSU MG (medical grade) is an amorphous thermoplastic and belongs to the group of high-performance plastics. Due to its mechanical properties, combined with good chemical resistance and high hydrolysis resistance, PPSU MG is excellently suited for applications in medical technology. PPSU MG can be used over a wide temperature range and can be steam sterilised repeatedly. The material is available in a wide range of colours.

Conformities

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

Physical properties	Test method	Value	Unit
Density	DIN EN ISO 1183-1	1.29	g/cm3
Water absorbtion	DIN EN ISO 62	0.6	%
Sliding friction			
Abrasion resistance			

Mechanical properties	Test method	Value	Unit
Yield stress	DIN EN ISO 527	77	MPa
Elongation at break	DIN EN ISO 527	30	%
Tensile modulus of elasticity	DIN EN ISO 527	2500	MPa
Notched impact strength	DIN EN ISO 527	10	kJ/m2
Ball indentation hardness	DIN EN ISO 2039-1	145	MPa

Thermal properties	Test method	Value	Unit
Thermal conductivity	DIN 52612-2	0.35	W/(m*K)
Coefficient of thermal expansion	DIN 53752	55	$10^{-6}{}^{*K}$-1
Operating temperature short term		210	°C
Operating temperature long term		-50 bis 180	°C
Heat deflection temperature	DIN EN ISO 75 / A	205	°C
Flammability	UL 94, 3 mm	V0	

Electrical properties	Test method	Value	Unit
Volume resistivity	IEC 60093	10^{15}	Ω * cm
Surface resistivity	IEC 60093	10^{15}	Ω * cm
Dielectric strength	IEC 60243	15	kV/mm
Comparative tracking index (CTI)	IEC 60112	< 100	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.