

PCTFE



POLYCHLOROTRIFLUOROETHYLENE

Material description

PCTFE is a semi-crystalline thermoplastic and belongs to the group of fluoroplastics. PCTFE can be used over a wide temperature range. Its mechanical values, with the exception of impact strength, are higher compared to PTFE. Like all fluoroplastics, PCTFE is extremely resistant to a wide range of chemical substances.

Conformities

RoHS, REACH

Physical properties	Test method	Value	Unit
Density	DIN EN ISO 1183-1	2.13	g/cm ³
Water absorption	DIN EN ISO 62	0.01	%
Sliding friction			
Abrasion resistance			

Mechanical properties	Test method	Value	Unit
Yield stress	DIN EN ISO 527	40	MPa
Elongation at break	DIN EN ISO 527	>50	%
Notched impact strength	DIN EN ISO 527	75	kJ/m ²
Ball indentation hardness	DIN EN ISO 2039-1	60	MPa

Thermal properties	Test method	Value	Unit
Thermal conductivity	DIN 52612-2	0.35	W/(m*K)
Heat capacity	DIN 52612-1	0.9	kJ/(kg*K)
Coefficient of thermal expansion	DIN 53752	40-80	10 ⁻⁶ *K ⁻¹
Operating temperature short term		150	°C
Operating temperature long term		bis 150	°C
Flammability	UL 94, 3 mm	V0	

Electrical properties	Test method	Value	Unit
Volume resistivity	IEC 60093	10 ¹⁸	Ω * cm
Surface resistivity	IEC 60093	10 ¹⁶	Ω * cm
Dielectric strength	IEC 60243	21	kV/mm

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.