PC

POLYCARBONAT

Material description

PC is an amorphous thermoplastic with a number of remarkable properties. Its high rigidity is combined with excellent impact strength down to a temperature range of -80 °C. PC is also self-extinguishing and absorbs very little moisture. On the downside, it is notch-sensitive and susceptible to stress cracking.

Conformities

RoHS, REACH

Physical properties	Test method	Value	Unit
Density	DIN EN ISO 1183-1	1.2	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	65	MPa
Elongation at break	DIN EN ISO 527	80	%
Tensile modulus of elasticity	DIN EN ISO 527	2300	MPa
Notched impact strength	DIN EN ISO 179	20	kJ/m2
Shore Hardness D	DIN EN ISO 868	82	

Thermal properties	Test method	Value	Unit
Thermal conductivity	DIN 52612-2	0.21	W/(m*K)
Heat capacity	DIN 52612-1	1.2	kJ/(kg*K)
Coefficient of thermal expansion	DIN 53752	70	10^{-6*K}-1
Operating temperature short term		140	°C
Operating temperature long term		-40 bis 115	°C
Heat deflection temperature	DIN EN ISO 75 / A	140	°C
Flammability	UL 94, 3 mm	HB	

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	30	kV/mm
Comparative tracking index (CTI)	IEC 60112	275	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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