

PC 20% GF

POLYCARBONAT WITH GLASS FIBRE

Material description

PC GF is reinforced with approximately 20 % short glass fibres. This increases the flexural strength 2 - 3 times compared with unreinforced PC. The glass fibre reinforcement also increases hardness, stiffness, compressive strength, modulus of elasticity and flexural strength. PC GF achieves exceptionally good values for notched impact strength.

Conformities

RoHS, REACH

Physical properties	Test method	Value	Unit
Density	DIN EN ISO 1183-1	1.42	g/cm3
Water absorbtion	DIN EN ISO 62	0.28	%
Sliding friction			
Abrasion resistance			

Mechanical properties	Test method	Value	Unit
Yield stress	DIN EN ISO 527	87	MPa
Elongation at break	DIN EN ISO 527	6	%
Tensile modulus of elasticity	DIN EN ISO 527	4400	MPa
Notched impact strength	DIN EN ISO 527	8	kJ/m2
Shore Hardness D	ISO 868	85	

Thermal properties	Test method	Value	Unit
Thermal conductivity	DIN 52612-2	0.32	W/(m*K)
Heat capacity	DIN 52612-1	1.13	kJ/(kg*K)
Coefficient of thermal expansion	DIN 53752	50	10 ⁻⁶ *K ⁻¹
Operating temperature short term		135	°C
Operating temperature long term		-20 bis 120	°C
Heat deflection temperature	DIN EN ISO 75 / A	142	°C
Flammability	UL 94, 3 mm	HB	

Electrical properties	Test method	Value	Unit
Volume resistivity	IEC 60093	10 ¹⁶	Ω * cm
Surface resistivity	IEC 60093	10 ¹⁴	Ω * cm
Dielectric strength	IEC 60243	35	kV/mm
Comparative tracking index (CTI)	IEC 60112	175	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.