

Technical Data Sheet

EP GC 306

EP GC 306 acc. to EN 60893 – epoxy/glass-fabric laminate with significantly increased tracking resistance (CTI ≥ 600)

Typical Properties

- Very good mechanical and dielectric properties
- Significantly increased tracking resistance (CTI ≥ 600)
- Very good electrical insulation properties
- Low water absorption
- Thermoset laminate (dimensionally stable)

Typical Industries

- Electrical engineering and switchgear construction (elevated tracking-resistance requirement)
- Power electronics and converter engineering
- Transformer and apparatus manufacturing
- Mechanical and plant engineering (highly stressed insulating parts)
- Jig, fixture and tool making

	Test Method	Unit	Value
Mechanical Properties			
Flexural strength	ISO 178	MPa	≥ 340
Flexural modulus of elasticity	ISO 178	MPa	$\geq 22 \cdot 10^3$
Tensile strength	ISO 527-4	MPa	≥ 300
Compressive strength ($\perp$)	ISO 604	MPa	≥ 350
Impact strength (Charpy/Izod)	ISO 179 / ISO 180	kJ / m ²	≥ 50
Shear strength ($\parallel$)	VDE 0318 Part 2	MPa	≥ 30
Electrical Properties			
Electric strength $\perp$ (90 °C, oil bath, 3 mm)	IEC 60243-1	kV / mm	≥ 10.2
Electric strength $\parallel$ (90 °C, oil bath)	IEC 60243-1	kV	≥ 45
Permittivity (50 Hz / 1 MHz)	IEC 60250		≤ 5.3
Dielectric dissipation factor (50 Hz / 1 MHz)	IEC 60250		≤ 0.04
Insulation resistance	IEC 60167	M Ω	$\geq 50,000$
Proof tracking index PTI	IEC 60112	V	≥ 500
Comparative tracking index CTI	IEC 60112	V	≥ 600
Thermal Properties			
Temperature index (thermal endurance)	IEC 60216		≥ 155
General Properties			

	Test Method	Unit	Value
Density	ISO 1183	g / cm ³	1.8-2.0
Water absorption (10 mm thickness)	ISO 62	mg	≤ 34
Colour			manufacturer-dependent (standard colours available)

EP GC 306 is a glass-fabric reinforced epoxy resin laminate to EN 60893 with a tracking resistance of at least CTI 600 (tested acc. to IEC 60112), significantly higher than standard grades (CTI 200-250). A reliable assignment to a DIN 7735 Hgw short designation is not established for this grade and is not claimed here. The values stated are the minimum resp. maximum values required for this material type under EN 60893, depending on the test standard; they are subject to normal production tolerances and serve as an aid to material selection. They are not a legally binding assurance of specific properties. EP GC 306 is not declared for direct food contact.

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