

Technical Data Sheet

EP GC 308

EP GC 308 acc. to EN 60893 – high-temperature special grade of the epoxy/glass-fabric series (180 °C class), glass-fabric reinforced epoxy resin laminate

Typical Properties

- Very high mechanical strength
- High-temperature special grade (temperature index 180)
- Low water absorption
- Very good electrical insulation properties
- Thermoset laminate (dimensionally stable)
- Colour brown

Typical Industries

- Apparatus engineering
- Electrical engineering and switchgear construction (medium voltage)
- Transformer manufacturing
- Mechanical and plant engineering (high-strength insulating parts at elevated temperature)
- Jig, fixture and tool making
- Test and measurement engineering

	Test Method	Unit	Value
Mechanical Properties			
Flexural strength	DIN 53452	MPa	630 (DIN 7735: 350)
Flexural strength at elevated temperature	DIN 53452	MPa	458 (DIN 7735: 175)
Tensile strength	DIN 53455	MPa	370 (DIN 7735: 220)
Compressive strength	DIN 53454	MPa	330 (DIN 7735: 150)
Impact strength	DIN 53453	kJ / m ²	219 (DIN 7735: 100)
Notched impact strength	DIN 53453	kJ / m ²	65 (DIN 7735: 50)
Bond strength (splitting force)	DIN 53463	N	4100 (DIN 7735: 3000)
Modulus of elasticity	DIN 53452	MPa	31 · 10 ³ (DIN 7735: 18 · 10 ³)
Electrical Properties			
Surface resistivity	DIN 53482	Ω	10 ¹² (DIN 7735: 5 · 10 ¹⁰)

	Test Method	Unit	Value
Electric strength $\parallel$ / $\perp$	DIN 53481	kV	90 / 70 (DIN 7735: 40 / 40)
Dielectric dissipation factor (1 MHz)	DIN 53483		0.03 (DIN 7735: 0.05)
Dielectric constant	DIN 53483		4 (DIN 7735: 5)
Comparative tracking index CTI	IEC 60112		250 (DIN 7735: 200)
Electrolytic corrosion (tracking)	DIN 53489		AN 1.2 (DIN 7735: AN 1.4)
Thermal Properties			
Temperature limit / TI	VDE 0304 / IEC 60216	°C	155/180
Thermal conductivity $\parallel$ / $\perp$	DIN 52612	W / (m·K)	0.3 / 0.25
Coefficient of linear expansion $\parallel$ / $\perp$	VDE 0304	10^{-6} / K	10-20 / 15
Thermal class	VDE 0534		F / H
General Properties			
Density	DIN 53479	g / cm ³	1.7-1.9 (typical 1.86)
Water absorption (5 mm thickness)	DIN 53495	mg	14 (DIN 7735: 30)
Glow resistance	DIN 53459		2a
Colour			brown

EP GC 308 is a glass-fabric reinforced epoxy resin high-temperature special grade to EN 60893 for apparatus, electrical and transformer engineering, rated for continuous use up into the 180 °C class (temperature index 180 acc. to IEC 60216-1). A definite assignment to a DIN 7735 Hgw short designation is not reliably established for this grade and is therefore not claimed here. The values stated comprise the minimum requirement to DIN 7735 as well as the typical measured value; 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 308 is not declared for direct food contact.