Technical Data Sheet

Durostone® EPX -M

GFK-EP

Typical characteristics

- High mechanical strength
- High dielectric strength
- Manufactured by filament winding technology and consists of a special (EP) epoxy resin matrix reinforced with e-glass roving

Typical industries

- Generator and Motor
- Healthcare
- Electrical Industry
- Mechanical Engineering Industry
- Oil-filled transformers
- Hydrogen Energy

	Test method	Unit	Guideline value
Mechanical properties			
Density	ISO 1183	g / cm^3	2.1
Flexural strength ⊥	ISO 178	MPa	700
Flexural strength ⊥ +150°C	ISO 178	MPa	350
Modulus of elasticity in flexion ⊥	ISO 178	MPa	35000
Compressive strength (tangential)	ISO 604	MPa	500
Compresive strength (axial)	ISO 604	MPa	110
Compressive strength (radial)	ISO 604	MPa	110
Tensile strength II	ISO 527	MPa	800
Impact strength (radial)	ISO 179	kJ / m^2	250
Thermal properties			
Thermal conductivity ⊥		W / (m * K)	≈ 0.35
Temperature index	IEC 60216	T.I.	180
Insulation class	IEC 60085	/	H
TG-Value	DSC	°C	150
Coefficient of linear expansion (tangential)	TMA	10^{-6} x K^{-1}	5 - 10
coefficient of linear expansion (axial)	TMA	10^{-6} x K^{-1}	20 - 30
coefficient of linear expansion (radial)	TMA	10^{-6} x K^{-1}	25 - 40
Dielectrical properties			
Electric strength 90°C under oil ⊥	IEC 60243	kV / mm	5

	Test method	Unit	Guideline value
Electric strength 90°C under oil II	IEC 60243	kV/25mm	35
Relative permittivity (50 Hz)	IEC 60250	ε_r	≈ 5
Dielectric loss factor (50 Hz)	IEC 60250	tan δ	≈ 0.03
Insulation resistance after 24 h water immersion	IEC 60167	Ω	5×10^9
Comparative tracking index	EN 60112	CTI	400

$^{\perp}$ = perpendicular to the lamination II = parallel to the lamination