

Technical Data Sheet PTFE GF25

PTFE + 25 % glass fibre (GF25)

PTFE + 25 % glass fibre (GF25) – glass-fibre-filled PTFE, higher wear/compressive strength, reduced creep, -200 ... +260 °C

Typische Eigenschaften

- Improved compressive and wear resistance vs. virgin PTFE
- Reduced creep (cold flow) under continuous load
- Very wide temperature range (-200 ... +260 °C)
- Almost universal chemical resistance
- Very low coefficient of friction, self-lubricating
- Non-flammable (UL 94 V-0)
- Good electrical insulator
- Not melt-processable/weldable – machining only

Typische Industrien

- Sealing technology
- Chemical apparatus and plant engineering
- Plain bearings, sliding and guiding elements
- Pump and valve technology
- Piston rings and compressor construction
- Electrical and insulation technology

	Testverfahren	Einheit	Wert
Physical Properties			
Density	ISO 1183	g / cm ³	2.21
Water absorption	ISO 62	%	< 0.05
Colour			white-grey
Mechanical Properties			
Tensile strength	ISO 527	MPa	≥ 17
Elongation at break	ISO 527	%	≥ 180
Hardness	ISO 868	Shore D	58–60
Coefficient of friction (against steel)	DIN 53375		~ 0.17
Thermal Properties			
Service temperature		°C	-200 ... +260
Coefficient of thermal expansion (25–200 °C)	DIN 52612	10 ⁻⁵ / K	≈ 11
Thermal conductivity	DIN 52612	W / (m·K)	≈ 0.38
Electrical Properties			
Dielectric strength	IEC 60243-1	kV / mm	~ 13
Volume resistivity	IEC 60093	Ω·cm	~ 10 ¹³
Surface resistivity	IEC 60093	Ω	~ 10 ¹⁶

	Testverfahren	Einheit	Wert
Fire Behaviour			
Flammability	UL 94		V-0 (non-flammable)
Oxygen index (LOI)	ISO 4589	%	> 95

PTFE + 25 % glass fibre (GF25) is a glass-fibre-filled PTFE compound for tribologically and mechanically more demanding applications. The values stated are typical characteristic values of a PTFE GF25 compound; they serve as an aid to material selection and are not a legally binding warranty of specific properties. The values of filled PTFE grades depend on filler, grain size and processing and may vary between manufacturers. The glass-fibre content improves compressive strength, wear and creep behaviour, but reduces elongation and notched impact strength compared with virgin PTFE and can reduce chemical resistance to hydrofluoric acid and strong alkalis. PTFE must not be overheated (decomposition from approx. 260 °C releasing harmful gases).

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