

Technical Data Sheet

PA66X GF50 black

PA 66X, glass-fibre reinforced 50 %

Typical Properties

- Highest stiffness and strength (50 % glass fibre)
- Very high creep and fatigue resistance
- High dimensional stability, high thermo-mechanical load capacity
- Resistant to oils, greases and fuels

Typical Industries

- Mechanical Engineering
- Automotive Industry
- Electrical Industry

	Test Method	Unit	Value
General Properties			
Density	DIN EN ISO 1183-1	g / cm ³	1.61
Water absorption (24 h)	DIN EN ISO 62	%	0.10
Water absorption (96 h)	DIN EN ISO 62	%	0.20
Flammability	UL 94		HB
Mechanical Properties			
Yield stress	DIN EN ISO 527-2	MPa	115
Yield strain	DIN EN ISO 527-2	%	2
Elongation at break	DIN EN ISO 527-2	%	2
Tensile modulus of elasticity	DIN EN ISO 527-2	MPa	8.700
Flexural strength	DIN EN ISO 178	MPa	200
Flexural modulus	DIN EN ISO 178	MPa	9.000
Compressive modulus	DIN EN ISO 604	MPa	6.200
Compressive strength (2 % strain)	DIN EN ISO 604	MPa	56
Shore hardness	DIN EN ISO 868	scale D	90
Thermal Properties			
Melting temperature	DIN EN ISO 11357	°C	256
Glass transition temperature	DIN EN ISO 11357	°C	78
Coefficient of linear thermal expansion (23–60 °C)	DIN EN ISO 11359	10 ⁻⁶ / K	40

	Test Method	Unit	Value
Coefficient of linear thermal expansion (23–100 °C)	DIN EN ISO 11359	10 ⁻⁶ / K	50
Service temperature, long term	Average	°C	130
Service temperature, short term (max.)	Average	°C	200
Electrical Properties			
Surface resistivity	DIN EN 62631-3-2	Ω	10 ¹⁴
Volume resistivity	DIN EN 62631-3-1	Ω · cm	10 ¹⁴

The specified values are average values obtained from individual measurements and are up to the latest standards. They are intended merely as information about our products and as an aid to the selection of material. We therefore cannot legally bindingly vouch for specific properties or suitability for specific purposes, as properties may also depend, for example, on the dimensions of the semi-finished products. The short-time maximum operating temperature applies only to applications that involve a low mechanical load during a few hours only. The long-term maximum operating temperature is based on the heat-ageing of the plastics through oxidation, which results in a reduction of the mechanical properties. On thick-walled parts only the surface layer - which can be better protected by the addition of antioxidants - is affected by oxidation at high temperatures. The core normally remains unimpaired. The short-term and long-term maximum operating temperatures depend on pressure and media. The minimum operating temperature is mainly determined by possible impact and shock stresses during operation. The specified values apply to low stresses.