

Technical Data Sheet

PA66 CF20 black

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Typical Properties

- Very high stiffness
- Good wear resistance
- High heat deflection temperature
- High dimensional stability
- Good weldability and bondability
- Resistant to many oils, greases and fuels

Typical Industries

- Mechanical and plant engineering
- Automotive industry

	Test Method	Unit	Value
General Properties			
Density	DIN EN ISO 1183-1	g / cm ³	1.23
Water absorption (24 h / 96 h, 23 °C)	DIN EN ISO 62	%	0.1 / 0.3
Flammability	DIN IEC 60695-11-10		HB (UL 94)
Mechanical Properties			
Tensile strength	DIN EN ISO 527-2	MPa	104
Stress at yield	DIN EN ISO 527-2	MPa	104
Strain at yield	DIN EN ISO 527-2	%	12
Elongation at break	DIN EN ISO 527-2	%	13
Tensile modulus	DIN EN ISO 527-2	MPa	5100
Flexural strength	DIN EN ISO 178	MPa	135
Flexural modulus	DIN EN ISO 178	MPa	4300
Compression modulus	EN ISO 604	MPa	3800
Compressive strength (1% / 2% / 5% deformation)	EN ISO 604	MPa	16 / 33 / 89
Impact strength (Charpy, unnotched)	DIN EN ISO 179-1eU	kJ / m ²	116
Shore hardness	DIN EN ISO 868	scale D	83
Thermal Properties			
Glass transition temperature	DIN EN ISO 11357	°C	48
Melting temperature	DIN EN ISO 11357	°C	251

	Test Method	Unit	Value
Service temperature, short term (max.)	Average	°C	170
Service temperature, long term	Average	°C	100
Thermal conductivity	ISO 22007-4:2008	W / (m * K)	0.72
Specific heat capacity	ISO 22007-4:2008	J / (g * K)	1.4
Coefficient of linear thermal expansion (23-60 °C, longitudinal)	DIN EN ISO 11359-1;2	10 ⁻⁵ / K	9
Coefficient of linear thermal expansion (23-100 °C, longitudinal)	DIN EN ISO 11359-1;2	10 ⁻⁵ / K	10

Electrical Properties

Surface resistivity	DIN EN 61340-2-3	Ω	10 ⁴ ... 10 ¹²
Volume resistivity	DIN EN 61340-2-3	Ω * cm	10 ³ ... 10 ¹²

The short-term maximum service temperature applies only to applications with very low mechanical load over a few hours. The long-term maximum service temperature is based on the thermal ageing of the plastic through oxidation, which results in a decrease of the mechanical properties. The stated values are average values, confirmed by continuous statistical testing and in line with the requirements of DIN EN 15860. They serve only as information about our products and as an aid to material selection. We do not thereby provide any legally binding assurance of specific properties or of suitability for particular purposes. Since the properties also depend on the dimensions of the semi-finished product and the manufacturing process, the actual property values of a specific product may deviate somewhat from the stated figures.