

Technical Data Sheet

PA 46 natural

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Typical Properties

- Very high heat deflection temperature
- High rigidity and hardness even at elevated temperatures
- Good wear resistance

Typical Industries

- Electrical Industry
- Vehicle Construction
- Mechanical Engineering

	Test Method	Unit	Value
General Properties			
Density	DIN EN ISO 1183-1	g / cm ³	1.18
Water absorption	DIN EN ISO 62	%	3.70
Flammability (Thickness 3 mm / 6 mm)	UL 94		HB / HB
Mechanical Properties			
Yield stress	DIN EN ISO 527	MPa	95
Elongation at break	DIN EN ISO 527	%	30
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3.100
Notched impact strength	DIN EN ISO 179	kJ / m ²	6.0
Ball indentation hardness	DIN EN ISO 2039-1	MPa	168
Shore hardness	DIN EN ISO 868	scale D	84
Thermal Properties			
Melting temperature	ISO 11357-3	°C	295
Thermal conductivity	DIN 52612-1	W / (m * K)	0.30
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ / K	80
Service temperature, long term	Average	°C	-40 ... 135
Service temperature, short term (max.)	Average	°C	200
Heat deflection temperature	DIN EN ISO 75, Verf. A, HDT	°C	160

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.

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