

## Technical Data Sheet

# PA 6 GF30 black

PA 6, glass-fibre reinforced 30 % (black)

## Typical Properties

- High rigidity and strength through glass-fibre reinforcement
- Good dimensional stability
- Black coloured

## Typical Industries

- Mechanical Engineering

|                                         | Test Method                 | Unit                 | Value       |
|-----------------------------------------|-----------------------------|----------------------|-------------|
| <b>General Properties</b>               |                             |                      |             |
| Density                                 | DIN EN ISO 1183-1           | g / cm <sup>3</sup>  | 1.35        |
| Water absorption                        | DIN EN ISO 62               | %                    | 2.00        |
| Flammability (Thickness 3 mm / 6 mm)    | UL 94                       |                      | HB / HB     |
| <b>Mechanical Properties</b>            |                             |                      |             |
| Yield stress                            | DIN EN ISO 527              | MPa                  | 85          |
| Elongation at break                     | DIN EN ISO 527              | %                    | 5           |
| Tensile modulus of elasticity           | DIN EN ISO 527              | MPa                  | 4.500       |
| Notched impact strength                 | DIN EN ISO 179              | kJ / m <sup>2</sup>  | 4.0         |
| Shore hardness                          | DIN EN ISO 868              | scale D              | 86          |
| <b>Thermal Properties</b>               |                             |                      |             |
| Melting temperature                     | ISO 11357-3                 | °C                   | 220         |
| Thermal conductivity                    | DIN 52612-1                 | W / (m·K)            | 0.28        |
| Thermal capacity                        | DIN 52612                   | kJ / (kg·K)          | 1.50        |
| Coefficient of linear thermal expansion | DIN 53752                   | 10 <sup>-6</sup> / K | 60          |
| Service temperature, long term          | Average                     | °C                   | -30 ... 110 |
| Service temperature, short term (max.)  | Average                     | °C                   | 180         |
| Heat deflection temperature             | DIN EN ISO 75, Verf. A, HDT | °C                   | 140         |

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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