

PA 6 FR

Chem. Designation: Polyamid

DIN-Abbreviation: PA 6 FR

| Properties | | Value | Unit | ISO/IEC |
|--|-----|---------------------------|-------------------|----------|
| Density | | 1,17 / - | | |
| Water absorption, relative 1) | | 3 / - | % | 62 |
| Thermal Properties | | Value | Unit | ISO/IEC |
| Crystalline melting point | | 222 / - | °C | - |
| Coefficient of thermal expansion: - average value between 23 and 60°C | | 90 · 10 ⁻⁶ / - | m/(m·K) | - |
| Temperature of deflection under load - Method a: 1,8 MPa | | 65 / - | °C | 75 |
| Max. service temperature in air: -continuously: for min. 5000/20.000 h | | 85 / - | °C | - |
| Minimum service temperature | | -20 / - | °C | - |
| Flammability acc. to UL standard 94 (thickness 3mm/6mm) | | V0 / V0 | | - |
| Mechanical Properties (at 23°C) | | Value | Unit | ISO/IEC |
| Tensile strength at yield/Tensile strength at break | dry | 82 / - | MPa | 527-1/-2 |
| Elongation at break | dry | 3 / - | % | 527-1/-2 |
| Modulus of elasticity in tension | dry | 3800 / - | MPa | 527-1/-2 |
| Ball indentation hardness H 358 / 30 or H 961 / 30 | dry | 190 / - | N/mm ² | 2039-1 |
| Electrical Properties | | Value | Unit | ISO/IEC |
| Volume resistivity | dry | 10 ¹³ / - | Ohm·cm | 60093 |
| Surface resistivity | dry | 10 ¹⁶ / - | Ohm | 60093 |

dry = values referring to dry materials

moist = values referring to material in equilibrium with
= the standard atmosphere 23°C/50% RH

o.B. = no break

1) after 24/96h immersion in water of 23°C

2) only for short time exposure (a few hours) in applications where no or only a very low load is applied to the material

3) stress to produce 1% strain in 1000 h (s 1/1000)

4) $\rho = 0,05 \text{ N/mm}^2$, $v = 0,6 \text{ m/s}$ surface roughness C35 steel mating surface Ra 0,7 - 0,9

This table is a valuable help in the choice of material. The data listed here fall within the normal range of product properties. However, they are not guaranteed and they should not be used to establish material specification limits nor used alone as the basis of design. It has to be noted that fibre reinforced material shows an anisotropic behaviour (properties differ when measured parallel and perpendicular to be extrusion direction).