

PA 6 GF

Chem. Designation: Polyamid

DIN-Abbreviation: PA 6 GF

Properties	Value	Unit	ISO/IEC
Density	1,36 / -		
Water absorption, relative 1)	0,2 / 0,3	%	62
- at saturation in air of 23°C, 50% RF	2,1 / -	%	
- at saturation in water of 23°C	6,5 / -	%	

Thermal Properties	Value	Unit	ISO/IEC
Crystalline melting point	218 / -	°C	-
Glass transition temperature	49 / -	°C	-
Thermal conductivity (23° C)	0,41 / -	W/(k·m)	-
Coefficient of thermal expansion: - average value between 23 and 60°C	60 · 10 ⁻⁶ / -	m/(m·K)	-
Coefficient of thermal expansion: - average value between 23 and 100°C	60 · 10 ⁻⁶ / -	m/(m·K)	-
Temperature of deflection under load - Method a: 1,8 MPa	210 / -	°C	75
Temperature of deflection under load - Method b: 1,8 N/mm ²	220 / -	°C	75
Max. service temperature in air: -short periods 2	160 / -	°C	-
Max. service temperature in air: -continously: for min. 5000/20.000 h	100 / -	°C	-
Minimum service temperature	-20 / -	°C	-
Flammability acc. to UL standard 94 (thickness 3mm/6mm)	HB / HB		-

Mechanical Properties (at 23°C)	Value	Unit	ISO/IEC
Tensile strength at yield/Tensile strength at break	dry 98 / -	MPa	527-1/-2
Tensile strength	dry 98 / -	MPa	527-1/-2
Elongation at break	dry 5 / -	%	527-1/-2
Modulus of elasticity in tension	dry 5700 / -	MPa	527-1/-2
Compression Test - 1% nominal strain	dry 21 / -	MPa	604
impact-strength - Charpy unnotched	dry 60 / -	kJ/m ²	179/1eU
Ball indentation hardness H 358 / 30 or H 961 / 30	dry 232 / -	N/mm ²	2039-1
Coefficient of Friction 4)	dry 0,46 / 0,52	μ	

Electrical Properties	Value	Unit	ISO/IEC
Surface resistivity	dry 10 ¹² / -	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) p = 0,05 N/mm², v = 0,6 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).