

Nylon 6/PA6 Properties Data Sheet

Technical Data	Method of Verification	Unit	PA6
Physical Properties			
Density	ISO 1183	g/cm ³	1.25
Water absorption	ISO 62	%	3
Mechanical Properties			
Tensile strength at yield	ISO 527-2	MPa	90
Tensile strength at break	ISO 527-2	Mpa	-
Elongation at break	ISO 527-2	%	≥50
Modulus of elasticity after tensile test	ISO 527-2	MPa	3,000
Modulus of elasticity after flexural test	ISO 178	MPa	-
Hardness-Rockwell	ISO 2039-2		-
Hardness - Shore D	DIN 53505		82
Charpy impact strength at 23 °C	ISO 179	kJ/m ²	N. B.
Friction coefficient	DIN 53375		0.38
Thermal Properties			
Heat deflection temperature - HDT/A	ISO 75-2	°C	75
Max. service temperature - Short term		°C	160
Max. service temperature - Long term		°C	100
Thermal conductivity at 23 °C	DIN 11359	W/(K*m)	0.23
Coefficient of linear thermal expansion	ISO 11359	10 ⁻⁴ *K ⁻¹	0.85
Electrical Properties			
Dielectric constant at 1 MHz	IEC 60250	10 ⁶ Hz	3.50
Dielectric loss factor at 1 MHz	IEC 60250	10 ⁶ Hz	0.031
Volume resistively	IEC 60093	Ohm (Ω) * cm	≥10 ¹³
Surface resistively	IEC 60093	Ohm (Ω)	>10 ¹²
Dielectric strength	IEC 60243-1	kV/mm	50
Miscellaneous Data			
Flammability	UL 94	Class	HB
*NOTE: 1 g/cm ³ = 1,000 kg/m ³ , 1 Mpa = 1 N/mm ² , 1kV/mm = 1 MV/m			

Statement:

The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Energetic will not provide any legally binding guarantee of certain properties, or any suitability.