

Nylon 66

Material Information



Nylon 66

Product full identity:

Nylon 66 / Polyamide 66 (PA 66)

Nylon 66 provides higher strength, stiffness, heat, and wear resistance than standard Nylon 6, with improved creep resistance. Ideal for gears, bushes, washers, and other mechanical applications, it delivers reliable performance where durability and precision are key.

Properties

- High strength and stiffness
- High wear and creep resistance
- Wide temperature range (+95 to -30°C)
- Dimension stability and electrical properties
- Food contact approved
- Easily machined

Applications

- Gears
- Bushes
- Washers
- Mechanical
- Applications that require wear resistance

Forms



Solid Rod



Sheet

Nylon 66

Technical Properties

Physical	Unit	Test Method	Result
Specific gravity	g/cm ³	ISO 1183-1	1.14
Water absorption until saturation at 23°C	%	ISO 62	8
Maximum service temp. Upper temp limit – short term	°C	-	-
Maximum service temp. Upper temp limit – long term	°C	-	95
Lower temp limit	°C	-	-30
Mechanical	Unit	Test Method	Result
Tensile strength	MPa	ISO 527-1/-2	90
Elongation at yield	%	ISO 527-1/-2	-
Tensile strength at break	MPa	ISO 527-1/-2	-
Unnotched impact strength	kJ/m ²	ISO 179-1/1eU	No break
Notch impact strength	kJ/m ²	ISO 179-1/1eA	6
Ball indentation / Rockwell hardness	MPa	ISO 2039-2	88
Shore-D		-	80
Flexural modulus of elasticity	MPa	ISO 178	3240
Tensile modulus of elasticity	MPa	ISO 527-1 / -2	3550
Thermal	Unit	Test Method	Result
Vicat-softening point VST/B/50	°C	-	-
Heat deflection temperature HDT/B	°C	ISO 75-1 / -2	85
Coefficient of linear thermal expansion 23 – 100°C	m/(m.K)	-	95
Thermal conductivity at 23°C	W/mK	-	0.28
Electrical	Unit	Test Method	Result
Volume resistivity	Ω x m	IEC 60093	10 ¹⁴
Surface resistivity	Ω	ANSI/ESD STM 11.11	10 ¹³
Insulation resistivity	Ω . cm	-	-
Dielectric constant at 1MHz		IEC 62631-2-1	3.30
Dielectric loss factor at 1MHz		IEC 62631-2-1	0.02
Dielectric strength	kV/mm	IEC 60243-1	27
Comparative tracking index (CTI)		-	-
Additional Data	Unit	Test Method	Result
Bondability		-	-
Food compliance – FDA		FDA	Yes
Food compliance – EU		EU 10/2011	Yes
Antistatic		-	-
Flammability	Unit	Test Method	Result
Fire performance		UL 94	HB
Optical	Unit	Test Method	Result
N/A	N/A	N/A	N/A

All information provided in this Product Datasheet is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.