

Nylon 6 Cast

Material Information



Nylon 6 Cast

Product full identity:

Nylon 6 / Polyamide 6 (PA 6)

Nylon 6 Cast is a stress-relieved material with enhanced strength, stiffness, and hardness. With excellent wear resistance, heat aging performance, and machinability, it's ideal for gears, bushes, washers, and applications requiring superior wear resistance.

Properties

- High strength and stiffness
- High wear and heat resistance
- Good temperature range (+105 to -30°C)
- Good creep resistance
- Easily machined

Applications

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

Forms



Solid Rod



Sheet

Nylon 6 Cast

Technical Properties

Physical	Unit	Test Method	Result
Specific gravity	g/cm ³	ISO 1183-1	1.15
Water absorption until saturation at 23°C	%	ISO 62	6.50
Maximum service temp. Upper temp limit – short term	°C	-	-
Maximum service temp. Upper temp limit – long term	°C	-	90
Lower temp limit	°C	-	-30
Mechanical	Unit	Test Method	Result
Tensile strength	MPa	ISO 527-1/-2	88
Elongation at yield	%	ISO 527-1/-2	5
Tensile strength at break	MPa	ISO 527-1/-2	25
Unnotched impact strength	kJ/m ²	ISO 179-1/1eU	No break
Notch impact strength	kJ/m ²	ISO 179-1/1eA	3
Ball indentation / Rockwell hardness	MPa	ISO 2039-1/2039-2	M88
Shore-D		ISO 868	80
Flexural modulus of elasticity	MPa	ISO 178	3280
Tensile modulus of elasticity	MPa	ISO 527-1/-2	3600
Thermal	Unit	Test Method	Result
Vicat-softening point VST/B/50	°C	ISO 306	-
Heat deflection temperature HDT/B	°C	ISO 75-1/-2	80
Coefficient of linear thermal expansion 23 – 100°C	m/(m.K)	-	90
Thermal conductivity at 23°C	W/mK	-	0.29
Electrical	Unit	Test Method	Result
Volume resistivity	Ω x m	IEC 62631-3-1	10 ¹⁴
Surface resistivity	Ω	ANSI/ESD STM 11.11	10 ¹³
Insulation resistivity	Ω . cm	-	-
Dielectric constant at 1MHz		IEC 62631-2-1	3.20
Dielectric loss factor at 1MHz		IEC 62631-2-1	0.016
Dielectric strength	kV/mm	IEC 60243-1	25
Comparative tracking index (CTI)		-	-
Additional Data	Unit	Test Method	Result
Bondability		-	-
Food compliance – FDA		FDA (Natural & Blue)	Yes
Food compliance – EU		EU 10/2011 (Natural & Blue)	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.