

Nylon 6 GSM

Material Information



Nylon 6 GSM

Product full identity:

Nylon 6 GSM

Nylon 6 GSM contains finely divided particles of molybdenum disulphide (MoS₂) that help enhance its load bearing capabilities while maintaining the impact resistance that is inherent to Nylon. It is the most commonly used grade for applications like gears, sheaves, sprockets and custom parts.

Properties

- Lightweight
- Good sliding properties
- High strength, stiffness and hardness
- Good fatigue
- High tensile strength
- High wear and impact resistance

Applications

- Gears
- Bearings
- Sprockets
- Custom parts

Forms



Solid Rod



Sheet

Nylon 6 GSM

Technical Properties

Physical	Unit	Test Method	Result
Specific gravity	g/cm ³	ISO 1183-1	1.16
Water absorption until saturation at 23°C	%	ISO 62	6.70
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	82
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 2039-2	84
Shore-D		ISO 868	80
Flexural modulus of elasticity	MPa	ISO 178	3150
Tensile modulus of elasticity	MPa	ISO 527-1/-2	3400
Thermal	Unit	Test Method	Result
Vicat-softening point VST/B/50	°C	-	-
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	-	0.30
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	3.2
Dielectric loss factor at 1MHz		IEC 62631-2-1	0.016
Dielectric strength	kV/mm	IEC 60243-1	24
Comparative tracking index (CTI)		-	-
Additional Data	Unit	Test Method	Result
Bondability		-	-
Food compliance – FDA		FDA	No
Food compliance – EU		EU 10/201	No
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.