

Material: **Nylon 6**

Stand 04/2026

Short description of material

Nylon 6 produced in moldson the basis of direct polymerization with a partially crystalline structure. The high crystallite content leadstoexcellent mechanical properties such as very highabrasion & wear resistance, hardness and stiffness.

Application examples

- Rope Sheaves
- Rollers
- Gears
- Sliding Bearing
- Sliding plates / Wear Pads
- Guide rails

Colours

Black, blue, natural

Mechanical values

	ASTM	Dry	
Density	ISO 1183	1,15	g/cm³
Tensile Strength	ASTM D638	13,000	psi
Tensile Elongation at break	ASTM D638	40	%
Tensile Modulus	ASTM D638	515,000	psi
Modulus of elasticity from bending test	ASTM D790	505,000	psi
Flexural Strength	ASTM D790	18,300	psi
Notched-bar Impact Strength	ASTM D256	1.17	Ft.lb./in
Compressive Strenght	ASTM D695	16,400	psi
Compressive modulus	ASTM D695	740,000	psi
Shear Strength	ASTM D732	10,500	psi
Hardness shore D	ISO 868	83	psi
Sliding friction coefficient against steel (dry running) ¹⁾	-	0,36	-
Sliding wearagainststeel (dry running) ¹⁾	-	0,10	µm/km

Thermal values

Melting temperature	ISO 3146	428	°F
Thermal conductivity	DIN EN 12939	0,23	W/(K*m)
Heat Deflection Temperature 264 PSI	ASTM D648	200	°F
Coefficient of linear thermal expansion ²⁾	-	7-8	10 ⁻⁵ *K ⁻¹
Operating temperature range (long-term) ³⁾	-	-40 bis +221	°F
Operating temperature range (short-term) ³⁾	-	+338	°F
Fire behaviour	UL 94, IEC 60695	HB	-

Electrical values

Dielectric constant ⁴⁾	IEC 60250	3.7	-
Dielectric loss factor ⁴⁾	IEC 60250	0,03	-
Specific volume resistance	IEC 62631	10 ¹⁵	Ω *cm
Surface resistance	IEC 62631	10 ¹³	Ω
Dielectric strength	IEC 60243	50	kV/mm
Creep current resistance	IEC 60112	CTI 600	-

Miscellaneous data

Moistureabsorption in normal climate until saturated	DIN EN ISO 62	2.2	%
Water absorption 24 hrs	DIN EN ISO 62	0.3 – 0.5	%
Water absorpton until saturated	DIN EN ISO 62	6.5	%

¹⁾ against steel, hardened and ground
P = 0,05 Mpa; V = 0,6m/s; t = 60 °C near running surface

²⁾ For a temperature range of + 23 °C up to + 60 °C

³⁾ Experience values established with finished parts that are not under any stress in heated air, depending on the type and form of heat exposure, short-term = max. 1h, long-term=months

⁴⁾ at 10⁶ Hz

The content of this datasheet are meant to give an overview of the product's properties. It reflects our current knowledge and may not be complete. The values should be taken as guide values because they are very depend on surrounding conditions and machining methods. The values are in no way a legally binding assurance of the product's properties or its suitability for use in a specific application. All stated values are average values established from many individual tests. They are based on a temperature of 23°C and 50% RH. For specific applications, we recommend determining suitability by means of a trial.

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