PA6G - cast polyamide 6

Other material names PA6G: silon, nylon
Material group: Polyamide



Cast nylon polyamides, commonly called nylon type PA6G, or PA6 C are manufactured in standard stock shapes and cast in the form of sheet, rod and tube. Cast nylon polyamides are highly molecular, highly crystalline polymers. Semi finished nylon type 6 shapes are manufactured using a casting method, whereby the raw material caprolactam polymerises by means of a controlled chemical reaction.

By using additives such as oil, solid lubricants or thermal stabilisers, the typical characteristics of type 6 nylon can be selectively adjusted for certain applications, opening up a custom tailored range of materials to cover a wide application spectrum. Cast Nylon demonstrates even higher crystallinity and better machinability than extruded nylon.

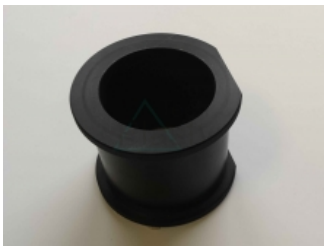
Color of material:

Natur Black

Delivery of this material is also possible in other colors - for example blue, red, green, yellow ... These colors are not in stock and their delivery is possible only after previous demand.

Typical applications:

- Rollers
- Slide bearings
- Slide elements
- Components under varying stress
- Parts subject to high impacts and shocks






The material is used in:

Electrotechnical industry
Automobile industry
Packaging industry
Engineering industry
Steel industry
Construction machines
Production of single-purpose machines

Features:

- Very low levels of internal stress
- High degree of crystallinity
- Toughness at high levels of hardness

- Very good wear resistance
- Good abrasion resistance
- Good damping properties
- Easy processing
- Ability to be manufactured in wide ranging casting weights and dimensions

Material availability: Material is in stock

Material properties table

Specific weight	1.15 g/cm³
Yield strength	85 N/mm²
Allowable mean pressure deformation 1%	26.00 N/mm²
Allowable mean pressure deformation 2%	51.00 N/mm²
Allowable mean pressure deformation 5%	92.00 N/mm²
p.v dry limit	0.13 MPa.m/s
Flexural strength	140 N/mm²
Tensibility	40 %
Flexural modulus	3 200 N/mm²
Tensile modulus	3 500 N/mm²
Impact toughness	bez zlomu
Notched toughness	>4 kJ/m²
Ball hardness	165 N/mm²
Friction coefficient	0.35
Sliding wear	0.10 um/km
Abrasive wear	150
Antistatic material	No
Permittivity	3.60
Electrical strength	25 kV/mm
Specific internal resistance	10^(13) Ω
Specific surface resistance	10^(12) Ω.cm
Melting point	220 °C
Thermal expansion	8 10^(-5)/K
Thermal conductivity	0.29 W/(K.m)
Permanent use temperature	-40 ; 105 °C
Transient temperature of use	-40 ; 170 °C
Absorbability	2.2 %
Water absorption	6.5 %
Resistance - oils	resistant
Acid resistance	conditionally resistant
Durability - alcali	resistant
Food contact	No

Engineering plastics are supplied in the form of bars, plates, strips, tubes and sheets. From the semi-finished products the company TechPlasty has regularly in stock, we also supply blanks.

All standard and special materials are designed to meet your specific requirements. Their mechanical, thermal, and electrical properties and chemical resistance satisfy the most demanding requirements and this allows them to work even in the most difficult conditions. If you need advice when choosing the appropriate material for your application, please contact us. We'll gladly advise you. You can utilize the long-term experience of our technical advisors free-of- charge, who can visit you right in your operation and solve your requirements for engineering plastics directly at the site of their usage.

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