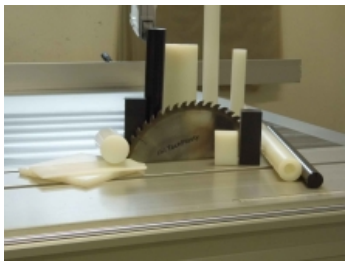
PA6 - extruded polyamide 6

Other material names PA6: silon, nylon
Material group: Polyamide

This material offers an optimal combination of mechanical strength, stiffness, toughness, mechanical damping properties and wear resistance. These properties, together with good electrical insulating properties and a good chemical resistance make PA6 a “general purpose” grade for mechanical construction and maintenance.



Color of material:

Natur Black

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
Production of single-purpose machines

Features:

- High mechanical strength, stiffness, hardness and toughness
- Good fatigue resistance
- High mechanical damping ability
- Good sliding properties
- Excellent wear resistance
- Good electrical insulating properties
- Good resistance to high energy radiation (gamma- and X-rays)
- Good machinability

Material availability: Material is in stock

Material properties table

Specific weight	1.14 g/cm³
Yield strength	76 N/mm²
Allowable mean pressure deformation 1%	24.00 N/mm²
Allowable mean pressure deformation 2%	46.00 N/mm²
Allowable mean pressure deformation 5%	80.00 N/mm²
p.v dry limit	0.11 MPa.m/s
Flexural strength	130 N/mm²
Tensibility	50 %

Flexural modulus	2 500 N/mm²
Tensile modulus	3 200 N/mm²
Impact toughness	bez zlomu
Notched toughness	>5 kJ/m²
Ball hardness	150 N/mm²
Friction coefficient	0.38
Sliding wear	0.23 um/km
Antistatic material	No
Permittivity	3.90
Electrical strength	25 kV/mm
Specific internal resistance	10^(12) Ω
Specific surface resistance	10^(12) Ω.cm
Melting point	220 °C
Thermal expansion	10 10^(-5)/K
Thermal conductivity	0.28 W/(K.m)
Permanent use temperature	-30 ; 95 °C
Transient temperature of use	-40 ; 140 °C
Absorbability	2,6 %
Water absorption	10 %
Resistance - oils	resistant
Acid resistance	conditionally resistant
Durability - alcali	conditionally resistant
Food contact	No
Special features	PA6 can absorb up to 7% (by weight) water under high humidity or submerged in water. This can result in dimensional changes up to 2% and a corresponding reduction of physical properties. Proper design techniques can frequently compensate for this factor.

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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