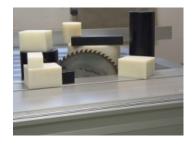
PA6G - cast polyamide 6

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 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 k]/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	Material properties table	
Allowable mean pressure deformation 1% Allowable mean pressure deformation 2% Allowable mean pressure deformation 2% Allowable mean pressure deformation 5% p.v dry limit 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 K/m² Ball hardness 165 N/mm² Friction coefficient 0.35 Sliding wear Abrasive wear Abrasive wear Abrasive wear Abrasive mear Abrasive mear 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 Absorbability 2.2 % Absorbability Resistance Ourability - alcali Purability - alcali	Specific weight	1.15 g/cm ³
Allowable mean pressure deformation 2% Allowable mean pressure deformation 5% p.v dry limit 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 165 N/mm² Friction coefficient 0.35 Sliding wear Abrasive wear Abrasive wear Abrasive mear Antistatic material No Permittivity 3.60 Electrical strength Specific internal 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; 170 °C Absorbability Acid resistance Durability - alcali resistant conditionally resistant p.13 MPa.m/s 92.00 N/mm² 92.00 N/m	Yield strength	85 N/mm ²
Allowable mean pressure deformation 5% p.v dry limit 0.13 MPa.m/s Flexural strength 140 N/mm² 40 % Flexural modulus 3 200 N/mm² Tensibility 40 % Flexural modulus 3 500 N/mm² Tensile modulus 3 500 N/mm² Motched toughness bez zlomu Notched toughness 165 N/mm² Friction coefficient 0.35 Sliding wear 0.10 um/km Abrasive wear 150 Antistatic material No Permittivity 3.60 Flectrical strength Specific internal 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 Absorbability Acid resistance conditionally resistant Acid resistance Curability - alcali	Allowable mean pressure deformation 1%	26.00 N/mm ²
p.v dry limit Flexural strength Tensibility Flexural modulus Flexural modulus Tensile modulus	Allowable mean pressure deformation 2%	51.00 N/mm ²
Flexural strength Tensibility Tensibility Flexural modulus 3 200 N/mm² Tensile modulus 3 500 N/mm² Impact toughness bez zlomu Notched toughness Palk J/m² Ball hardness 165 N/mm² Friction coefficient 0.35 Sliding wear Abrasive wear Abrasive wear Antistatic material No Permittivity 3.60 Electrical strength Specific internal resistance 10^(13) Ω Specific surface resistance Melting point 220 °C Thermal conductivity 0.29 W/(K.m) Permanent use temperature 40; 105 °C Transient temperature of use Absorbability 2.2 % Water absorption Resistance Conditionally resistant Acid resistance Conditionally resistant	Allowable mean pressure deformation 5%	92.00 N/mm ²
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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	Tensibility	40 %
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Sliding wear0.10 um/kmAbrasive wear150Antistatic materialNoPermittivity3.60Electrical strength25 kV/mmSpecific internal resistance10^(13) ΩSpecific surface resistance10^(12) Ω.cmMelting point220 °CThermal expansion8 10^(-5)/KThermal conductivity0.29 W/(K.m)Permanent use temperature-40; 105 °CTransient temperature of use-40; 170 °CAbsorbability2.2 %Water absorption6.5 %Resistance - oilsresistantAcid resistanceconditionally resistantDurability - alcaliresistant	Ball hardness	165 N/mm ²
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$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sliding wear	0.10 um/km
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Electrical strength 25 kV/mm Specific internal resistance $10^{\circ}(13) \Omega$ Specific surface resistance $10^{\circ}(12) \Omega.\text{cm}$ Melting point $220 ^{\circ}\text{C}$ Thermal expansion $8 10^{\circ}(-5)/\text{K}$ Thermal conductivity 0.29W/(K.m) Permanent use temperature $-40 ; 105 ^{\circ}\text{C}$ Transient temperature of use $-40 ; 170 ^{\circ}\text{C}$ Absorbability 2.2% Water absorption 6.5% Resistance - oilsresistantAcid resistanceconditionally resistantDurability - alcaliresistant	Antistatic material	No
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Specific surface resistance10^(12) Ω.cmMelting point220 °CThermal expansion8 10^(-5)/KThermal conductivity0.29 W/(K.m)Permanent use temperature-40; 105 °CTransient temperature of use-40; 170 °CAbsorbability2.2 %Water absorption6.5 %Resistance - oilsresistantAcid resistanceconditionally resistantDurability - alcaliresistant	Electrical strength	25 kV/mm
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Transient temperature of use Absorbability 2.2 % Water absorption Resistance - oils Acid resistance Durability - alcali -40 ; 170 °C 6.5 % resistant conditionally resistant resistant	Thermal conductivity	0.29 W/(K.m)
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Resistance - oils resistant Acid resistance conditionally resistant Durability - alcali resistant	Absorbability	2.2 %
Acid resistance conditionally resistant Durability - alcali resistant	Water absorption	6.5 %
Durability - alcali resistant		
·		conditionally resistant
Food contact No	· ·	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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