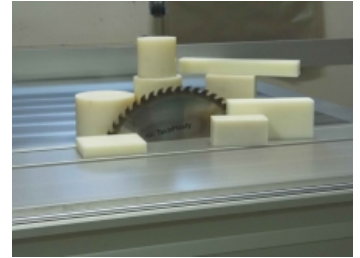


# PA12G - cast polyamide 12

**Other material names PA12G:** Cast Nylon Polyamide 12

**Material group:** Polyamide

PA12G natural is a semi crystalline polyamide 12 with very high toughness and good chemical resistance, with reduced sensitivity to stress cracking. The PA12G properties include the lowest water absorption characteristics of all polyamides, which means any parts made from PA12G should remain stable in humid environments. In addition to this, PA12G also has good impact resistance, good slide friction properties, and good wear resistance. Compared to other polyamides, PA12G has one of the lowest melting points available at 180°C.



## Typical applications:

- aircraft and aerospace technology
- electronics
- food technology
- mechanical engineering
- automotive industry

## Features:

- high toughness
- good wear properties
- resistant to many oils, greases and fuels
- high dimensional stability
- good slide and wear properties
- low density
- low moisture absorption
- good weldable and bondable

**Material availability:** Production only on request

Material properties table

<b>Specific weight</b>	1.03 g/cm <sup>3</sup>
<b>Yield strength</b>	60 N/mm <sup>2</sup>
<b>p.v dry limit</b>	0.10 MPa.m/s
<b>Flexural strength</b>	90 N/mm <sup>2</sup>
<b>Tensibility</b>	55 %
<b>Flexural modulus</b>	1 500 N/mm <sup>2</sup>
<b>Tensile modulus</b>	2 000 N/mm <sup>2</sup>
<b>Impact toughness</b>	bez zlomu
<b>Notched toughness</b>	>15 kJ/m <sup>2</sup>
<b>Ball hardness</b>	100 N/mm <sup>2</sup>
<b>Friction coefficient</b>	0.32
<b>Sliding wear</b>	0.80 um/km
<b>Abrasive wear</b>	260
<b>Antistatic material</b>	No
<b>Permittivity</b>	3.50
<b>Electrical strength</b>	20 kV/mm
<b>Specific internal resistance</b>	10 <sup>^(14)</sup> Ω
<b>Specific surface resistance</b>	10 <sup>^(13)</sup> Ω.cm
<b>Melting point</b>	179 °C
<b>Thermal expansion</b>	10 10 <sup>^(-5)</sup> /K

<b>Thermal conductivity</b>	0.23 W/(K.m)
<b>Permanent use temperature</b>	-60 ; 80 °C
<b>Transient temperature of use</b>	-60 ; 140 °C
<b>Absorbability</b>	0,9 %
<b>Water absorption</b>	1,4 %
<b>Resistance - oils</b>	resistant
<b>Acid resistance</b>	conditionally resistant
<b>Durability - alcali</b>	resistant
<b>Food contact</b>	No

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