

Chemical Designation

PA 6 C (Cast polyamide 6)

Colour

blue opaque

Density

1.15 g/cm³

Data generated directly after machining
(standard climate Germany).

Main features

- good wear properties
- good mechanical properties
- high fatigue strength
- good damping
- high mechanical load capacity
- resistant to many oils, greases and fuels

Target Industries

- construction industry
- gear manufacturing
- oil and gas industry
- conveyor technology
- agricultural machinery
- heavy duty industry
- mining industry

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>	
Tensile strength	50mm/min	89	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b	
Modulus of elasticity (tensile test)	1mm/min	3600	MPa	DIN EN ISO 527-2	1)	
Tensile strength at yield	50mm/min	89	MPa	DIN EN ISO 527-2		
Elongation at yield (tensile test)	50mm/min	18	%	DIN EN ISO 527-2		
Elongation at break (tensile test)	50mm/min	25	%	DIN EN ISO 527-2		
Shore hardness	D	82		DIN EN ISO 868		
<i>Thermal properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>	
Glass transition temperature		49	°C	DIN EN ISO 11357	(1) Found in public sources. Individual testing regarding application conditions is mandatory.	
Melting temperature		217	°C	DIN EN ISO 11357	(2) Found in public sources.	
Service temperature	short term	170	°C	-	1)	
Service temperature	long term	100	°C	-		
Thermal expansion (CLTE)	23-60°C, long.	11	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	2)	
Specific heat		1.6	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.33	W/(K*m)	ISO 22007-4:2008		
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>	
surface resistivity		10 ¹⁴	Ω	DIN IEC 60093		
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>	
Moisture absorption	24h / 96h (23°C)	0.2 / 0.5	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm
Resistance to hot water/ bases		(+)		-	2)	(2) (+) limited resistance
Resistance to weathering		(+)		-		(3) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)	

