

## Chemical Designation

PA 6 C (Cast polyamide 6)

## Colour

yellow opaque

## Density

1.11 g/cm<sup>3</sup>

## Fillers

elastomer

Data generated directly after machining  
(standard climate Germany).

## Main features

- electrically insulating
- resistant to many oils, greases and fuels
- high toughness
- good slide and wear properties
- good wear properties
- good impact strength

## Target Industries

- automotive industry
- mechanical engineering
- heavy duty industry

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	53	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	2200	MPa	DIN EN ISO 527-2	1) (2) For flexural test: support span 64mm, norm specimen.
Tensile strength at yield	50mm/min	53	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Elongation at yield (tensile test)	50mm/min	13	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
Elongation at break (tensile test)	50mm/min	58	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
Flexural strength	2mm/min, 10 N	73	MPa	DIN EN ISO 178	2) n.b. = not broken
Modulus of elasticity (flexural test)	2mm/min, 10 N	2200	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	14/26/53	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	2100	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	5)
Notched impact strength (Charpy)	max. 7,5J	16	kJ/m <sup>2</sup>	DIN EN ISO 179-1eA	
Shore hardness	D	77		DIN EN ISO 868	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		53	°C	DIN EN ISO 11357	1) (1) Found in public sources.
Melting temperature		216	°C	DIN EN ISO 11357	(2) Found in public sources.
Service temperature	short term	160	°C		2) Individual testing regarding application conditions is mandatory.
Service temperature	long term	95	°C		
Thermal expansion (CLTE)	23-60°C, long.	13	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	13	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Specific heat		1.7	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.32	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 <sup>14</sup>	Ω	-	
volume resistivity		10 <sup>14</sup>	Ω*cm	-	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.6 / 1.2	%	DIN EN ISO 62	1) (1) Ø ca. 50mm, h=13mm
Resistance to hot water/ bases		(+)		-	2) (2) (+) limited resistance
Resistance to weathering		-		-	3) (3) - poor resistance
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4) (4) 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.

