

Chemical Designation

PA 6 (Polyamide 6)

Colour

blue

Density

1.27 g/cm³

Fillers

detectable filler

Main features

- detectable via metal detector
- x-ray detectable
- Explanation of food contact according to FDA and EU 10/2011 on request
- high toughness
- resistant to many oils, greases and fuels
- for injection moulding

Target Industries

- food technology

Mechanical properties	parameter	value	unit	norm	comment
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Tensile strength		60	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)		2700	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)		20	%	DIN EN ISO 527-1	
Impact strength (Charpy)		158	kJ/m ²	DIN EN ISO 179-1eU	

Thermal properties	parameter	value	unit	norm	comment
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Glass transition temperature		5 / 60	°C	-	1) (1) moist / dry - literature value
Melting temperature		220	°C	-	2) (2) literature value
Service temperature	short term	150	°C	-	3) (3) literature value
Service temperature	long term	100	°C	-	4) (4) literature value

Electrical properties	parameter	value	unit	norm	comment
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surface resistivity		10 ¹²	Ω	DIN EN 61340-2-3	
volume resistivity		10 ¹²	Ω*cm	DIN EN 61340-2-3	

Other properties	parameter	value	unit	norm	comment
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Molding shrinkage	longitudinal	2,0	%	DIN EN ISO 294-4	1) 23 °C / 50 % relative humidity up to saturation 2) metal detectable 3) x-ray detectable
Molding shrinkage	transverse	2,0	%	DIN EN ISO 294-4	
Water absorption		0,1	%	DIN EN ISO 62	
Detectability	4 x 4 x 4 mm	2,3	mm Al	-	2)
Detectability	4 x 4 x 4 mm	2,4	mm Al	-	3)

Processing parameter	parameter	value	unit	norm	comment
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processing temperatures		260 - 300	°C	-	
Mould temperature		70 - 110	°C	-	

→ This material can be processed as a thermoplastic taking the normal technical provisions into account. The above mentioned information refers exclusively to the injection moulding process.

→ Back pressure and injection rate should be adjusted to the component geometry accordingly. The optimum processing temperature depends upon the respective geometry of the moulded part and can be different from machine to machine.

Predrying	parameter	value	unit	norm	comment
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Permissible residual moisture content		< 0,1	%	-	
Drying temperature		80	°C	-	
Drying time		3 - 6	h	-	

