

Chemical Designation

PA 66 (Polyamide 66)

Colour

black

Density

1.31 g/cm³

Fillers

graphite, carbon fibres, metal sulfide

Main features

- good slide and wear properties
- very high stiffness
- good wear properties
- good heat deflection temperature
- resistant to many oils, greases and fuels
- good weldable and bondable
- low viscosity
- for injection moulding

Target Industries

- automotive industry
- mechanical engineering

Mechanical properties	parameter	value	unit	norm	comment
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Tensile strength		200	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)		18500	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)		2,0	%	DIN EN ISO 527-1	
Impact strength (Charpy)		40	kJ/m ²	DIN EN ISO 179-1eU	

Thermal properties	parameter	value	unit	norm	comment
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Glass transition temperature		5 / 72	°C	-	1) (1) moist/dry - literature value (2) literature value
Melting temperature		260	°C	-	2) (3) literature value (4) literature value
Heat distortion temperature		255	°C	ISO-R 75 Method A	
Service temperature	short term	170	°C	-	3)
Service temperature	long term	110	°C	-	4)

Electrical properties	parameter	value	unit	norm	comment
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volume resistivity		10 ²	Ω*cm	DIN EN ISO 3915	
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Other properties	parameter	value	unit	norm	comment
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Water absorption	23 °C / 50 % relative humidity up to saturation	1,8	%	DIN EN ISO 62	
Molding shrinkage	longitudinal	0,4	%	DIN EN ISO 294-4	
Molding shrinkage	transverse	1,0	%	DIN EN ISO 294-4	

Processing parameter	parameter	value	unit	norm	comment
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processing temperatures		270 - 310	°C	-	
Mould temperature		80 - 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.

→ Processing should be carried out as gently as possible, in order to maintain the maximum fibre length in the component. 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 - 120	°C	-	
Drying time		4 - 8	h	-	

