

Chemical Designation

PA 66 (Polyamide 66)

Colour

black

Density

1.32 g/cm³

Fillers

carbon fibres

Main features

- 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
- electronics

<i>Mechanical properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength			275	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)			26800	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)			1,8	%	DIN EN ISO 527-1	
Impact strength (Charpy)			47	kJ/m ²	DIN EN ISO 179-1eU	
<i>Thermal properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Glass transition temperature			5 / 72	°C	-	1) (1) moist/dry - literature value
Melting temperature			260	°C	-	2) (2) literature value
Heat distortion temperature			259	°C	ISO-R 75 Method A	3) (3) literature value
Service temperature		short term	170	°C	-	4) (4) literature value
Service temperature		long term	110	°C	-	
<i>Electrical properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
volume resistivity			10 ⁻¹	Ω*cm	DIN EN ISO 3915	
<i>Other properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Water absorption			< 0,1	%	DIN EN ISO 62	1) (1) 23 °C / 50 % relative humidity up to saturation
Molding shrinkage		longitudinal	0,4	%	DIN EN ISO 294-4	
Molding shrinkage		transverse	0,8	%	DIN EN ISO 294-4	
<i>Processing parameter</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
processing temperatures			270 - 310	°C	-	
Mould temperature			80 - 110	°C	-	
<p>→ 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.</p> <p>→ 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.</p>						
<i>Predrying</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Permissible residual moisture content			< 0,1	%	-	
Drying temperature			80 - 120	°C	-	
Drying time			4 - 8	h	-	

