

TECACOMP PA46 CF15 TF10 black 1015048 - Compounds

Chemical Designation

PA 46 (Polyamide 46)

Colour

black

Density

1.3 g/cm³

Fillers

carbon fibres, PTFE

Main features

- high stiffness
- good wear properties
- very good heat resistance
- resistant to many oils, greases and fuels
- low viscosity

Target Industries

- automotive industry
- mechanical engineering

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength		202	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)		11600	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)		2,4	%	DIN EN ISO 527-1	
Impact strength (Charpy)		45	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		75	°C	-	1)
Melting temperature		296	°C	-	2)
Heat distortion temperature		286	°C	-	4)
Service temperature	short term	220	°C	-	3)
Service temperature	long term	130	°C	-	4)
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Water absorption	23 °C / 50 % relative Luftfeuchte bis Sättigung	1,6	%	DIN EN ISO 62	
<i>Processing parameter</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
processing temperatures		280 - 320	°C	-	
Mould temperature		80 - 130	°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.

<i>Predrying</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Permissible residual moisture content		< 0,05	%	-	
Drying temperature		80 - 90	°C	-	
Drying time		2 - 8	h	-	

- PA46 acts hygroscopic and can absorb moisture from the ambient atmosphere. On this account, conventional hot air dryers can't fulfil the required moisture level. In the case of PA46 it is recommended to use a dehumidified air dryer (dew point between - 30 and - 40 °C) or a vacuum dryer.
- Information on storage and shelf life: The granules must be stored in dry, normally tempered rooms and in closed containers. For moisture-sensitive materials, the granules must be sealed airtight. Protection against direct sunlight must be guaranteed. The granules are usually subject to the requirements of no shelf life limitation. Shelf Life may be limited by some additives.

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