

TECACOMP PPS TRM XS black 1061043 - Compounds

Chemical Designation

PPS (Polyphenylensulfide)

Colour

black

Density

1.46 g/cm³

Fillers

carbon fibres, graphite

Main features

- very high stiffness
- good slide and wear properties
- very good chemical resistance
- high dimensional stability
- high stiffness
- high creep resistance
- high heat deflection temperature
- inherent flame retardant

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		154	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)		22800	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)		0,8	%	DIN EN ISO 527-1	
Impact strength (Charpy)		22	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		90	°C	-	1)
Melting temperature		280	°C	-	2)
Heat distortion temperature		276	°C	ISO-R 75 Method A	3) literature value 4) literature value
Service temperature	short term	260	°C	-	3)
Service temperature	long term	230	°C	-	4)
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
<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 humidity up to saturation	< 0,1	%	DIN EN ISO 62	
Molding shrinkage	longitudinal	0,2	%	DIN EN ISO 294-4	
Molding shrinkage	transverse	0,7	%	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		300 - 340	°C	-	
Mould temperature		140 - 160	°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>Pre-drying</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Permissible residual moisture content		< 0,05	%	-	
Drying temperature		140 - 150	°C	-	
Drying time		2 - 4	h	-	

→ To achieve optimum mechanical properties, it is recommended to pre-dry the material with the above mentioned parameters.

→ 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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