

# TECACOMP PEEK 450 ELS nano black 1014992 - Compounds

## Chemical Designation

PEEK (Polyetheretherketone)

## Colour

black

## Density

1.33 g/cm<sup>3</sup>

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength		95	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)		4500	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)		3	%	DIN EN ISO 527-1	
Impact strength (Charpy)		80	kJ/m <sup>2</sup>	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		143	°C	DIN 53765	
Melting temperature		343	°C	DIN 53765	
Service temperature	long term	260	°C	-	
Service temperature	short term	300	°C	-	
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
surface resistivity		4,2 x 10 <sup>6</sup>	Ω	DIN EN 61340-2-3	
volume resistivity		4,2 x 10 <sup>6</sup>	Ω*m	DIN EN 61340-2-3	
<i>Processing parameter</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Cylinder/processing temperature		360 - 400	°C	-	
Mould temperature		160 - 210	°C	-	
Material temperature		390 - 400	°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.

<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		140 - 160	°C	-	
Drying time		4 - 6	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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