

TECACOMP PEEK 450 MED black 1015094 - Compounds

Chemical Designation

PEEK (Polyetheretherketone)

Colour

black

Density

1.32 g/cm³

Main features

- hydrolysis and superheated steam resistant
- very good sterilisable
- resistance against high energy radiation
- very good stress cracking resistance
- very good chemical resistance
- high creep resistance

Target Industries

- medical technology
- mechanical engineering
- food technology

<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)		3700	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)		28	%	DIN EN ISO 527-1	
Impact strength (Charpy)		n.B.	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		143	°C	DIN 53765	
Melting temperature		343	°C	DIN 53765	
Service temperature	short term	300	°C	-	
Service temperature	long term	260	°C	-	
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Molding shrinkage	transverse	2,0	%	DIN EN ISO 294-4	
Molding shrinkage	longitudinal	2,0	%	DIN EN ISO 294-4	
Melt flow index (MFI)	380 °C / 5 kg	8,5	g/10 min	DIN EN ISO 1133	
Bulk density		0,69	g/cm ³	EN ISO 60	
<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		180 - 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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