TECACOMP® PEEK TRM PVX black 4007 - Compounds

Chemical Designation
PEEK (Polyetheretherketone)

Colour
black

Density
1.5 g/cm^3

Fillers
carbon fibres, solid lubricant

Main features
- very good bearing and wear properties

Target Industries
- automotive industry
- mechanical engineering

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity	50 mm/min	12500	MPa	DIN EN ISO 527-1	
Tensile strength	50 mm/min	155	MPa	DIN EN ISO 527-1	
Elongation at break	50 mm/min	1,8	%	DIN EN ISO 527-1	
Flexural strength	2 mm/min	198	MPa	DIN EN ISO 178	
Modulus of elasticity (flexural test)	2 mm/min	11200	MPa	DIN EN ISO 178	
Bending strain	2 mm/min	2,0	%	DIN EN ISO 178	
Compression strength	5 mm/min	180	MPa	EN ISO 604	
Compression modulus	1 mm/min	4100	MPa	EN ISO 604	
Impact strength (Charpy)		30	kJ/m^2	DIN EN ISO 179-1eU	

Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		143	°C	DIN 53765	
Melting temperature		343	°C	DIN 53765	
Heat distortion temperature	HDT A	325	°C	ISO-R 75 Method A	
Heat distortion temperature	HDT B	340	°C	ISO-R 75 Method B	
Service temperature	short term	300	°C	-	
Service temperature	long term	260	°C	-	

Other properties	parameter	value	unit	norm	comment
Molding shrinkage	longitudinal	0,27	%	DIN EN ISO 294-4	
Molding shrinkage	transverse	0,85	%	DIN EN ISO 294-4	
Melt flow index (MFI)	380 °C / 5 kg	15	g/10 min	DIN EN ISO 1133	
MVR	380 °C / 5 kg	12	cm³/10 min	DIN EN ISO 1133	
Bulk density		0,63	g/cm^3	EN ISO 60	

Processing parameter	parameter	value	unit	norm	comment
Cylinder/processing temperature		360 - 400	°C	-	
Mould temperature		160 - 200	°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.
- 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.

Predrying	parameter	value	unit	norm	comment
Permissible residual moisture content		< 0,02	%	-	
Drying temperature		140 - 180	°C	-	
Drying time		4 - 6	h	-	

- In order to achieve optimum mechanical properties, pre-drying of the material is recommended w ith the parameters mentioned above.
- Granulate should preferably be stored in dry rooms at normal temperatures and be protected from direct sunlight.

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