TECACOMP PEEK TRM XS black 1046942 - Compounds

Chemical Designation
PEEK (Polyetheretherketone)

Colour
black

Density
1.4 g/cm^3

Fillers
carbon fibres, graphite

Main features
- very good mechanical strength
- very good bearing and wear properties
- high creep resistance
- high heat deflection temperature
- very good chemical resistance
- hydrolysis and superheated steam resistant
- high dimensional stability
- low moisture absorption

Target Industries
- automotive industry
- mechanical engineering

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength		190	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)		18300	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)		2,1	%	DIN EN ISO 527-1	
Impact strength (Charpy)		34	kJ/m^2	DIN EN ISO 179-1eU	

Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		143	°C	- 1)	(1) literature value (2) literature value (3) literature value (4) literature value
Melting temperature		343	°C	- 2)	
Heat distortion temperature		325	°C	ISO-R 75 Method A	
Service temperature	short term	300	°C	- 3)	
Service temperature	long term	260	°C	- 4)	

Electrical properties	parameter	value	unit	norm	comment
volume resistivity		10^1	Ω*m	DIN EN ISO 3915	

Other properties	parameter	value	unit	norm	comment
Water absorption	23 °C / 50 % relative humidity up to saturation	< 0,1	%	DIN EN ISO 62	
Molding shrinkage	longitudinal	0,4	%	DIN EN ISO 294-4	
Molding shrinkage	transverse	0,9	%	DIN EN ISO 294-4	

Processing parameter	parameter	value	unit	norm	comment
processing temperatures		360 - 410	°C	-	
Mould temperature		170 - 210	°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		150 - 160	°C	-	
Drying time		2 - 4	h	-	