

TECACOMP PEEK TRM PVX black 1046944 - Compounds

Chemical Designation

PEEK (Polyetheretherketone)

Colour

black

Density

1.5 g/cm³

Fillers

carbon fibres, graphite, PTFE

Main features

- good slide and wear properties
- good 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			145	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)			11200	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)			2,6	%	DIN EN ISO 527-1	
Impact strength (Charpy)			29	kJ/m ²	DIN EN ISO 179-1eU	
Thermal properties		parameter	value	unit	norm	comment
Glass transition temperature			143	°C	-	1) (1) literature value
Melting temperature			343	°C	-	2) (2) literature value
Heat distortion temperature			325	°C	ISO-R 75 Method A	3) (3) literature value
Service temperature short term			300	°C	-	4) (4) literature value
Service temperature long term			260	°C	-	
Electrical properties		parameter	value	unit	norm	comment
surface resistivity			10 ⁴	Ω	DIN EN 61340-2-3	
volume resistivity			10 ²	Ω*m	DIN EN 61340-2-3	
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			0,3	%	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	-	