

TECACOMP PEEK 450 ID blue 1014884 - Compounds

Chemical Designation

PEEK (Polyetheretherketone)

Colour

blue

Density

1.48 g/cm³

Fillers

detectable filler

Main features

- detectable via metal detector
- x-ray detectable
- Explanation of food contact according to FDA and EU 10/2011 on request
- good chemical resistance
- high creep resistance
- inherent flame retardant
- good heat deflection temperature
- hydrolysis and superheated steam resistant

Target Industries

- food technology

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength		97	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)		4200	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)		18	%	DIN EN ISO 527-1	
Impact strength (Charpy)		n.B.	kJ/m ²	DIN EN ISO 179-1eU	
Notched impact strength (Charpy)		6	kJ/m ²	DIN EN ISO 179-1eA	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		143	°C	-	1)
Melting temperature		343	°C	-	2)
Service temperature	short term	300	°C	-	3)
Service temperature	long term	260	°C	-	4)
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 ¹²	Ω	DIN EN 61340-2-3	
volume resistivity		10 ¹²	Ω*cm	DIN EN 61340-2-3	
Other properties	parameter	value	unit	norm	comment
Detectability	4 x 4 x 4 mm	2,2	mm Al	-	1)
Water absorption		0,03	%	DIN EN ISO 62	2)
Detectability	4 x 4 x 4 mm	2,5	mm Al	-	3)
Molding shrinkage	longitudinal	1,8	%	DIN EN ISO 294-4	
Molding shrinkage	transverse	1,8	%	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.

→ 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	-	

→ 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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