

TECATEC PEEK MT CF50 S280 CP/IP/OS V01 natural - Composite Materials

Chemical Designation

PEEK (Polyetheretherketone)

Colour

natural

Density

1.52 g/cm³

Fillers

carbon fibres

Main features

- very resistant to autoclaving
- biocompatible
- excellent chemical resistance
- compliant with cytotoxicity according to ISO 10993-5
- low coefficient of thermal expansion
- very high stiffness
- very high strength

Target Industries

- medical technology

The material is in the phase of further development. The characteristic values of this product may change.

General material information	parameter	value	unit	norm	comment
Fibre type		carbon HT 3k		-	
Fibre architecture		atlas 5HS		-	
Fibre areal weight		280	g/m ²	-	
Fibre volume content		50	%	-	
Resin weight content		41.9	%	-	
Areal weight finished product		482	g/m ²	-	
Material widths		1000 1270	mm	others on request	
ply thickness (consolidated)		0.31	mm	-	
Mechanical properties	parameter	value	unit	norm	comment
Tensile strength		713	MPa	ISO 527-4	
Modulus of elasticity (tensile test)		59	GPa	ISO 527-4	
Flexural strength		866	MPa	ISO 14125	
Modulus of elasticity (flexural test)		55	GPa	ISO 14125	
Compression strength		645	MPa	ISO 14126	
Impact strength (Charpy)		65.5	kJ/m ²	-	
Interplanar shear strength		137	MPa	ISO 14129	
Interlaminar shear strength		65	MPa	ISO 14130	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		143	°C	-	
Melting temperature		343	°C	-	
Service temperature	short term	300	°C	-	
Service temperature	long term	260	°C	-	
Thermal expansion (CLTE)	in 0° and 90° direction	5	10 ⁻⁶ K ⁻¹	-	
Predrying	parameter	value	unit	norm	comment
Drying temperature		150	°C	-	
Drying time		3	h	-	

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