TECATEC PEEK CF50 T200 CP/IP/OS V01 natural - Composite Materials

Chemical Designation
PEEK (Polyetheretherketone)

Colour
natural

Density
1.52 g/cm^3

Fillers
carbon fibres

Main features
- excellent chemical resistance
- low coefficient of thermal expansion
- continuous service temperature up to 260 °C
- very high stiffness
- very high strength

Target Industries
- automotive industry
- aircraft and aerospace technology
- mechanical engineering
- oil and gas industry
- safety engineering
- sporting goods

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		Twill 2/2		-		
Fibre areal weight		200	g/m²	-		
Fibre volume content		50	%	-		
Resin weight content		41.9	%	-		
Areal weight finished product		344	g/m²	-		
Material widths		1270	mm	-		
ply thickness (consolidated)		0.22	mm	-		

Mechanical properties	parameter	value	unit	norm		comment
Tensile strength		713	MPa	ISO 527-4	1)	(1) measured on pressed plate (2) measured on pressed plate (3) measured on pressed plate (4) measured on pressed plate
Modulus of elasticity (tensile test)		59000	MPa	ISO 527-4	2)	
Flexural strength		866	MPa	ISO 14125	3)	
Modulus of elasticity (flexural test)		55000	MPa	ISO 14125	4)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		143	°C	-		(1) approximate value
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}	-	1)	

Predrying	parameter	value	unit	norm	comment
Drying temperature		150	°C	-	
Drying time		3	h	-	

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Date: 2024/11/21

Version: AE