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	*condition*	*value*	*unit*	*test method*		*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	*condition*	*value*	*unit*	*test method*		*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	*condition*	*value*	*unit*	*test method*		*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	*condition*	*value*	*unit*	*test method*	*comment*
Drying temperature		150	°C	-	
Drying time		3	h	-	

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