

TECATEC PC CW50 PL V01 natural - Composite Materials

Chemical Designation

PC (Polycarbonate)

Colour

natural

Density

1.52 g/cm³

Fillers

carbon fibres

Main features

- high dimensional stability
- good surface appearance
- low coefficient of thermal expansion
- very high stiffness
- very high strength

Target Industries

- automotive industry
- mechanical engineering
- safety engineering
- sporting goods

General material information	condition	value	unit	test method	comment
Fibre type		carbon HT 3k		-	
Fibre architecture		twill 2/2		-	
Fibre areal weight		200	g/m ²	-	
Fibre volume content		50	%	-	
Resin weight content		38.8	%	-	
Areal weight finished product		327	g/m ²	-	
Material widths		625x525	mm	others on request	
thickness		1-95	mm	-	
Fibre orientation		0-90°		others on request	
Mechanical properties	condition	value	unit	test method	comment
Tensile strength		440	MPa	ISO 527-4	
Modulus of elasticity (tensile test)		48000	MPa	ISO 527-4	
Flexural strength		615	MPa	ISO 14125	
Modulus of elasticity (flexural test)		48000	MPa	ISO 14125	
Compression strength		215	MPa	ISO 14126	
Compression modulus		26000	MPa	ISO 14126	
Interlaminar shear strength		44	MPa	ISO 14130	
Thermal properties	condition	value	unit	test method	comment
Glass transition temperature		143	°C	-	(1) approximate value
Service temperature	long term	120	°C	-	
Service temperature	short term	140	°C	-	
Thermal expansion (CLTE)	in 0° and 90° direction	5	10 ⁻⁶ K ⁻¹	-	1)
Predrying	condition	value	unit	test method	comment
Drying temperature		120	°C	-	
Drying time		3	h	-	

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Date: 2022/02/14

Version: AC