

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		parameter	value	unit	norm	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		parameter	value	unit	norm	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		parameter	value	unit	norm	comment
Glass transition temperature			143	°C	-	(1) approximate value
Service temperature	short term		140	°C	-	
Service temperature	long term		120	°C	-	
Thermal expansion (CLTE)	in 0° and 90° direction		5	10 ⁻⁶ K ⁻¹	-	1)
Predrying		parameter	value	unit	norm	comment
Drying temperature			120	°C	-	
Drying time			3	h	-	

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