

## TECATEC PC CW50 PL V01 natural - Composite Materials

### Chemical Designation

PC (Polycarbonate)

### Colour

natural

### Density

1.52 g/cm<sup>3</sup>

### 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

<i>General material information</i>					
	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Fibre type		carbon HT 3k		-	
Fibre architecture		twill 2/2		-	
Fibre areal weight		200	g/m <sup>2</sup>	-	
Fibre volume content		50	%	-	
Resin weight content		38.8	%	-	
Areal weight finished product		327	g/m <sup>2</sup>	-	
Material widths		625x525	mm	others on request	
thickness		1-95	mm	-	
Fibre orientation		0-90°		others on request	
<i>Mechanical properties</i>					
	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
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	
<i>Thermal properties</i>					
	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
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 <sup>-6</sup> K <sup>-1</sup>	-	1)
<i>Predrying</i>					
	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Drying temperature		120	°C	-	
Drying time		3	h	-	

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