

# TECATEC PA12 CF50 T200 CP/IP/OS V01 natural - Composite Materials

## Chemical Designation

PA 12 (Polyamide 12)

## Colour

natural

## Density

1.39 g/cm<sup>3</sup>

## Fillers

carbon fibres

## Main features

- very good abrasion resistance
- very good mechanical strength
- low moisture absorption

## Target Industries

- automotive industry
- 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/m <sup>2</sup>	-	
Fibre volume content		50	%	-	
Resin weight content		36.7	%	-	
Areal weight finished product		316	g/m <sup>2</sup>	-	
Material widths	others on request	1000 1270	mm	-	
ply thickness (consolidated)		0.23	mm	-	
Mechanical properties	parameter	value	unit	norm	comment
Tensile strength		642	MPa	ISO 527-4	1) (1) measured on pressed plate
Modulus of elasticity (tensile test)		53000	MPa	ISO 527-4	2) (2) measured on pressed plate
Flexural strength		660	MPa	ISO 14125	3) (3) measured on pressed plate
Modulus of elasticity (flexural test)		56000	MPa	ISO 14125	4) (4) measured on pressed plate
Interlaminar shear strength		41	MPa	ISO 14130	5) (5) measured on pressed plate
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		37	°C	DIN EN ISO 11357	(1) approximate value
Melting temperature		180	°C	DIN EN ISO 11357	
Service temperature	short term	150	°C	-	
Service temperature	long term	110	°C	-	
Thermal expansion (CLTE)	in 0° and 90° direction	3	10 <sup>-6</sup> K <sup>-1</sup>	-	1)
Predrying	parameter	value	unit	norm	comment
Drying temperature		80	°C	-	
Drying time		6-8	h	-	

Nothing contained in this Technical Datasheet shall be interpreted as any express warranty or guarantee. We are neither liable for any values nor content of this datasheet. This exclusion of liability does not apply to claims for damages based on intent, gross negligence or culpable breach of material contractual obligations (cardinal obligations), nor in the case of injury to life, body or health and in the case of product liability as provided by law. Nothing contained herein shall be construed to indicate the non-existence of any relevant patents or to constitute a permission, encouragement or recommendation to practice any development covered by any patents, without permission of the owner of this patent. Data sheet parameters are subject to regular review, the current versions can be found at [www.ensingerplastics.com](http://www.ensingerplastics.com)