

TECATEC PEI GF50 S296 CP/IP/OS FR V01 black - Composite Materials

Chemical Designation

PEI (Polyetherimide)

Colour

black

Density

1.9 g/cm³

Fillers

glass fibres

Main features

- electrically insulating
- flame retardant as per FAR 25.853
- inherent flame resistance
- very good mechanical strength
- continuous service temperature up to 150 °C

Target Industries

- automotive industry
- aircraft and aerospace interiors
- mechanical engineering
- oil and gas industry
- safety engineering
- sporting goods
- transportation

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			E glass		-	
Fibre architecture			US 7781		-	
Fibre areal weight			296	g/m ²	-	
Fibre volume content			50	%	-	
Resin weight content			33.7	%	-	
Areal weight finished product			446	g/m ²	-	
Material widths	others on request		1000 1270	mm	-	
ply thickness (consolidated)			0.24	mm	-	
Mechanical properties		parameter	value	unit	norm	comment
Tensile strength			450	MPa	ISO 527-4	
Modulus of elasticity (tensile test)			24000	MPa	ISO 527-4	
Flexural strength			570	MPa	ISO 14125	
Modulus of elasticity (flexural test)			26000	MPa	ISO 14125	
Compression strength			670	MPa	ISO 14126	
Compression modulus			27000	MPa	ISO 14126	
Thermal properties		parameter	value	unit	norm	comment
Glass transition temperature			217	°C	-	(1) approximate value
Service temperature	short term		200	°C	-	
Service temperature	long term		180	°C	-	
Thermal expansion (CLTE)	in 0° and 90° direction		10	10 ⁻⁶ K ⁻¹	-	1)
Other properties		parameter	value	unit	norm	comment
Flammability			passed		-	1) (1) compliant with CS25.853 and AITM3.0005 up to at least 0.5 mm thickness
Predrying		parameter	value	unit	norm	comment
Drying temperature			150	°C	-	
Drying time			4-6	h	-	

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