

Tepex® *dynalite* 108-FG290(x)/45%

Filament Glass - TPU Consolidated Composite Laminate

Layup	Test Condition	According to Standard	Unit	Value	
				Longitudinal	Transversal
Fiber	-	-	-	E-Glass Filament	
Weaving style	-	DIN ISO 9354	-	Twill 2/2	
Area weight (dry fabric)	-	DIN EN 12127	g/m ²	290	
Yarn	-	DIN EN 12654-2/3	tex	204	68 x 3
Yarn density	-	DIN EN 1049-2	1/cm	7	7
Weight rate	-	-	%	50	50
Polymer	-	-	-	Thermoplastic Polyurethane (TPU)	
Fiber content (nominal)	-	-	vol.-%	45	
Thickness per layer (nominal)	-	-	mm	0.25	
Laminate density	-	ISO 1183-1	g/cm ³	1.82	

Mechanical properties	Test Condition	According to Standard	Unit	Value	
				Longitudinal	Transversal
Tensile modulus	23 °C, dry	ISO 527-4/5 ¹⁾	GPa	23	
Tensile strength	23 °C, dry	ISO 527-4/5 ¹⁾	MPa	440	
Tensile elongation at break	23 °C, dry	ISO 527-4/5 ¹⁾	%	2.3	
Flexural modulus	23 °C, dry	ISO 14125 ²⁾	GPa	21	
Flexural strength	23 °C, dry	ISO 14125 ²⁾	MPa	650	

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Thermal properties	Test Condition	According to Standard	Unit	Value	
				Longitudinal	Transversal
Glass transition temperature	10 K/min	ISO 11357-2	°C	94	
Heat deflection temperature ³⁾	19 GPa	ISO 75-1/-3	°C	92	
Coefficient of linear thermal expansion	-35 °C to 23 °C, dry	ISO 11359-1/2	E ⁻⁶ /K	12.1	
Coefficient of linear thermal expansion	23 °C to 80 °C, dry	ISO 11359-1/2	E ⁻⁶ /K	13.7	
Flammability Rating	-	UL94	-	HB	

Legend

- : Not relevant
- dry: dry as manufactured
- 1) Test specimen (250 x 25 x 2) mm
- 2) Test specimen (80 x 25 x 2) mm
- 3) Based on ISO 75-1/-3

® Bond-Laminates registered trademark

The values in the datasheet are for this specific composition only, the characteristics of composites depend on the reinforcement level and the fiber orientation. Non-standard thickness may also alter some or all of these properties. The data listed here fall within the normal range of product properties, but they should not be used to establish specification limits nor used alone as basis of design. The underlying tests were conducted at room temperature and with 2 mm specimen thickness.

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Caution: Do not use this product in medical applications involving permanent implantation in human body.