Tepex® *dynalite* 102-RGUD600(x)/47%

Roving Glass - PA6 Consolidated Composite Laminate

Layup	Test Condition	According to Standard	Unit	Value	
				Longitudinal	Transversal
Fiber	-	-	-	E-Glass Roving	
Weaving style	-	DIN ISO 9354	-	Plain	
Area weight (dry fabric)	-	DIN EN 12127	g/m²	600	
Yarn	-	DIN EN 12654-2/3	tex	1200	
Yarn density	-	DIN EN 1049-2	1/cm	4	1
Weight rate	-	-	%	80	20
Polymer	-	-	-	Polyamide 6 (PA6)	
Fiber content (nominal)	-	-	vol.-%	47	
Thickness per layer (nominal)	-	-	mm	0.5	
Laminate density	-	ISO 1183-1	g/cm³	1.80	

Mechanical properties	Test Condition	According to Standard	Unit	Value	
				Longitudinal	Transversal
Tensile modulus	23 °C, ISO 1110	ISO 527-4/5[1)]	GPa	29	10
Tensile strength	23 °C, ISO 1110	ISO 527-4/5[1)]	MPa	480	120
Tensile elongation at break	23 °C, ISO 1110	ISO 527-4/5[1)]	%	1.7	1.7
Tensile modulus	23 °C, dry	ISO 527-4/5[1)]	GPa	32	14
Tensile strength	23 °C, dry	ISO 527-4/5[1)]	MPa	620	110
Tensile elongation at break	23 °C, dry	ISO 527-4/5[1)]	%	2.1	1.3
Flexural modulus	23 °C, ISO 1110	ISO 14125[2)]	GPa	23	9
Flexural strength	23 °C, ISO 1110	ISO 14125[2)]	MPa	520	190
Flexural modulus	23 °C, dry	ISO 14125[2)]	GPa	26	12
Flexural strength	23 °C, dry	ISO 14125[2)]	MPa	800	275

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Thermal properties	Test Condition	According to Standard	Unit	Value	
				Longitudinal	Transversal
Melting temperature	10 K/min	ISO 11357-3	°C	220	
Heat deflection temperature[3)]	26 GPa	ISO 75-1/-3	°C	214	
Coefficient of linear thermal expansion	-35 °C to 23 °C, dry	ISO 11359-1/2	E^{-6}/K	11	22
Coefficient of linear thermal expansion	23 °C to 80 °C, dry	ISO 11359-1/2	E^{-6}/K	11	26

Legend

- :	Not relevant
dry:	dry as manufactured
ISO 1110:	Conditioned acc. to ISO 1110, 70 °C, 62 % RH, equilibrium
1)	Test specimen (250 x 25) mm
2)	Test specimen (80 x 25) 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.

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

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