

Biotex Flax/PLA Technical Information



Composition

Volume Fraction	40%	Standard
	Others	On request

Yarn

Linear Density	250tex	Standard
	125-2000tex	On request

Processing	The commingled yarn can be consolidated by heating to 180-200°C and applying a pressure of at least 1 bar. Typical processes for the yarn include filament winding.	
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Fabric

Weave Style	2x2 twill	Standard
	4x4 hopsack	Standard
	Other styles	On request

Fabric Weight	420-520gsm	Standard (depending on weave style)
	250-800gsm	On request

Fabric Width	1.25m	Standard
	Up to 3m	On request

Processing	The commingled fabric can be consolidated by heating to 180-200°C and applying a pressure of 1-50bar. Typical processes include vacuum consolidation, autoclave and press moulding.	
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Preconsolidated Sheet

Thickness	0.8, 1.2, 1.6, 2.0, 2.4 & 2.8mm	Standard
	Others	On request

Processing	The sheets can be formed to shape by heating to 180-200°C and stamp forming with a matched tool in a press at typical pressures of 10-100bar.	
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Typical Properties

Density	1.33g/cm ³	
Tensile Modulus	13.2GPa	(ISO 527-4)
Tensile Strength	102MPa	(ISO 527-4)
Tensile Elongation	1.6%	(ISO 527-4)
Flexural Modulus	7.8GPa	(ISO 14125)
Flexural Strength	131MPa	(ISO 14125)
Charpy Impact (flat)	32.8kJ/m ²	(ISO 179-1 unnotched, flatwise)
Charpy Impact (edge)	28.4kJ/m ²	(ISO 179-1 unnotched, edgewise)

Data for laminate made from Biotex 40vol% flax-PLA 4x4 hopsack fabric by press moulding and tested at ambient temperature.