BIOFIBIX HYPERMAT 600 – TECHNICAL DATASHEET

BIOFIBIX Hypermat is an isotropic flax reinforcement engineered to meet **cost**, **performance & sustainability** needs of high-volume composite applications.

Key characteristics:

- Isotropic flax reinforcement
- Proprietary treatment technology
- Belgian grown flax fibers
- European Flax Certification
- High specific stiffness & strength
- High vibration and sound damping
- Low resin uptake at full impregnation
- Improved moisture resistance

Description of the fabric

Property	Value	Unit	Standard
Areal weight	574 ± 62	g/m^2	ISO 3801
Moisture content *	6.4 ± 0.2	%	ISO 3344
Width	Standard: 1270 Available: 500 - 2300	mm	ISO 5025
Thickness **	1.9 ± 0.15	mm	ISO 5084

* measured at standard conditions RH 50% - 23 °C

** measured with circular pressure foot having a diameter of 70mm and exerting a pressure of 1 kPa

Mechanical properties of the laminate

Details of laminate 1

Stacking sequence	2 layers oriented in machine direction (MD)	
Production method	Vacuum infusion	
Resin	Sicomin Infugreen 810 with SD4773 hardener	
Fiber mass fraction	39.3 ± 1.0	%
Thickness of consolidated ply*	1.11 ± 0.07	mm

* laminate thickness divided by number of layers

Mechanical properties of laminate 1

Standard	ISO 527			ISO 14125		
Loading mode	Tension			Flexure		
Test direction	MD	CD	45	MD	CD	45
Young's modulus (GPa)	8.0 ± 0.9	9.3 ± 0.5	8.4 ± 0.6	7.4 ± 0.3	8.4 ± 0.5	7.6 ± 0.3
Strength (MPa)	77 ± 4	87 ± 6	81 ±3	106 ± 3	116 ± 9	110 ± 7
Failure strain (%)	1.8 ± 0.1	1.6 ± 0.1	1.6 ± 0.1	3.1 ± 0.2	2.8 ± 0.1	3.0 ± 0.3

MD: Machine Direction , CD: Cross Direction

Details of laminate 2

Stacking sequence	2 layers oriented in machine direction (MD)	
Production method	Vacuum infusion	
Resin	Polynt DISTITRON® 3501 LS1	
Fiber mass fraction	42.2 ± 1.5	%
Thickness of consolidated ply*	1.07 ± 0.07	mm

* laminate thickness divided by number of layers

Mechanical properties of laminate 2

Standard	ISO 527			ISO 14125		
Loading mode	Tension			Flexure		
Test direction	MD	CD	45	MD	CD	45
Young's modulus (GPa)	7.0 ± 0.4	9.9 ± 0.5	8.6 ± 0.5	7.2 ± 0.2	9.3 ± 0.5	8.6 ± 0.6
Strength (MPa)	70 ± 4	88 ± 5	84 ± 3	100 ± 6	114 ± 10	109 ± 5
Failure strain (%)	1.7 ± 0.1	1.5 ± 0.1	1.7 ± 0.1	2.7 ± 0.2	2.8 ± 0.1	2.8 ± 0.2

MD: Machine Direction , CD: Cross Direction