Biotex Flax

Biotex Flax 400g/m² 2x2 Twill

High performance fabric for automotive, sporting goods and decorative applications

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Biotex Flax provides high levels of performance, coupled with the ease of processing normally associated with glass-reinforced materials. The materials use twistless technology to provide a combination of sustainability, performance and processability. Compared to glass fibre composites, Biotex Flax offers reduced weight, improved environmental impact, vibration damping, similar specific stiffness and safer handling.

Biotex Flax is available in a range of yarn weights and fabric constructions. The materials can be processed using standard composites manufacturing techniques and are suitable for semi-structural and decorative applications in a range of sectors, including automotive, sports & leisure, consumer goods and construction.

Biotex Flax 400g/m^2 2x2 Twill fabric is typically used for semi-structural and decorative components in applications such as sporting goods, consumer goods and automotive interiors.

Specifications

Weave Style	2x2 Twill	
Fabric Weight	400 g/m^2	
Width	1250 mm	Others on request
Typical Ply Thickness	0.45-0.8 mm, depending on process	

Processing

Typical processes for Biotex Flax fabrics include vacuum infusion or resin transfer moulding using either standard resins or bio-based resins. The fabrics can also be pre-pregged, and processing is carried out in the same way as glass fibre.

Mechanical Properties

Typical mechanical properties of moulded laminates

	Vacuum infused unsaturated polyester	Press moulded epoxy prepreg	
Fibre Volume Fraction	30%	60%	
Density	1.29 g/cm^3	1.38 g/cm^3	
Tensile Modulus	8.5 GPa	9.3 GPa	ISO 527-4
Tensile Strength	72 MPa	78 MPa	ISO 527-4
Flexural Modulus	7 GPa	7 GPa	ISO 14125
Flexural Strength	115 MPa	195 MPa	ISO 14125

Tested at ambient temperature.

Safety

Biotex Flax reinforcements are based on renewable biomass and have fewer health and safety concerns than many conventional alternative materials. However, typical precautions should be taken when handling the material including using appropriate PPE and adequate ventilation.

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Composites Evolution is a supplier of innovative, sustainable materials to the composites industry. Our products include fibres, resins and intermediates based on natural, bio-derived, recycled and recyclable materials, which enable customers to meet cost, weight and environmental targets.

- **Biotex Jute:** Low cost, lightweight alternative to glass fibre reinforcement
- **Biotex Flax:** High performance, lightweight alternative to glass and carbon fibres
- **Biotex Flax/PP:** Commingled reinforcement for rapid processing and reduced weight
- **Biotex Flax/PLA:** 100% bio-derived commingled reinforcement
- **Ecopreg PFA:** Fire-retardant prepreg with low environmental impact

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