

# Biotex Flax

## Biotex Flax 1000tex Yarn

High performance twistless yarn for semi-structural 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 a unique 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.

This 1000tex yarn is typically used for the direct production of parts using pultrusion or filament winding.



## Specifications

Linear Density	1000tex
Package Type	To customer specifications

## Processing

Typical processes for Biotex Flax yarn include pultrusion and filament winding, or for the production of textile preforms.

## Mechanical Properties

Typical mechanical properties of moulded laminates

Fibre Volume Fraction	60%	
Density	1.32 g/cm <sup>3</sup>	
Tensile Modulus	42 GPa	ISO 527-4
Tensile Strength	385 MPa	ISO 527-4
Elongation	33 GPa	ISO 14125
Flexural Modulus	430 MPa	ISO 14125

Data derived from vacuum infused laminates using Biotex Flax 250tex yarn and unsaturated polyester resin, 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.

**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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