

Biotex Jute Plain Weave 290g/m² Fabric

Technical Data Sheet

December 2013

Introduction

Biotex Jute woven fabrics are reinforcement textiles based on natural jute fibre and designed for fibre-reinforced polymer composite applications. Jute offers the benefits of premium natural fibres such as flax – including a favourable stiffness-to-weight ratio – but at a price that rivals glass fibre. The fabrics can be processed in a similar way to glass or carbon fibre and are suitable for use with a wide variety of resins, including synthetic and bio-based systems. Typical processes include wet lay-up, vacuum infusion, resin transfer moulding (RTM), press moulding, pultrusion, prepregging etc.

Biotex natural reinforcements and intermediates provide the high performance and easy processing normally associated with glass fibre composites but with lower weight and environmental impact. They are suitable for semi-structural and decorative applications in sectors such as automotive, construction, marine, sports and consumer goods.

Specification

Specification for standard fabric (other constructions available on request):

Fabric specifications	
Weave style	Plain weave
Warp yarn	Jute 250tex
Weft yarn	Jute 250tex
Warp count	6 ends/cm
Weft count	6 picks/cm
Weight	290g/m ²
Tolerance on weight	+/-5%
Width	1350mm
Tolerance on width	+/-2%

Fibre Properties

Typical average properties for jute fibres:

Jute fibre properties*	
Density	1.46g/cm ³
Diameter**	20 m
Tensile modulus	40GPa
Tensile strength	400MPa
Strain	1.8%

*jute fibre is a natural product and a certain amount of variation should be expected.

**Jute fibre has a non-circular cross-section.



Composite Properties

Property	Woven jute-polyester vacuum infused laminate* (0 dir)	Woven jute-polyester vacuum infused laminate* (90 dir)	Test Method
Fibre content by vol	33%	33%	
Density	1.28g/cm ³	1.28g/cm ³	
Tensile modulus	7.4GPa	7.8GPa	ISO 527-4
Tensile strength	54.9MPa	60.7MPa	ISO 527-4
Tensile elongation	1.3%	1.3%	ISO 527-4
Flexural modulus	5.1GPa	5.7GPa	ISO 14125
Flexural strength	80.3MPa	90.8MPa	ISO 14125

*Data for laminates made with Biotex Jute plain weave 290gsm fabric

Sizing

Biotex Jute is supplied unsized as standard. Sizings are possible on request.

Packaging

Standard packaging details (other packaging options are possible on request):

Packaging details	
Roll width	1350mm
Roll length	50m
Net weight	19.6kg
Core	Cardboard tube
Wrapping	Polythene film

Orders for multiple rolls are typically packed on a standard wooden pallet and covered with stretch wrap.

Storage

Biotex Jute should be stored in a cool dry place away from direct sunlight. Jute fibre can absorb moisture from the atmosphere so drying may be required before use, especially if exposed to excessive humidity.

Safety

Jute fibre is a naturally occurring, non-hazardous material, but typical precautions should be taken when handling the material including using appropriate PPE and adequate ventilation. See MSDS for details.

Disclaimer

The information provided here is believed to be accurate but should be considered indicative only. It is the responsibility of the customer to check the suitability of the product for their specific application prior to use.

