AmpliTex 5008

AmpliTex flax biaxial fabric 350 gsm

1. Product description

Non-crimp biaxial flax fabric with fibers oriented at +45° and -45°, suitable for manufacturing fiber reinforced composite products with high performance and low environmental impact.

2. Specifications

Fabric construction		**Ply construction**		**Stitching fibre**	
Fibre type:	Flax (EU)	**-45 ply**		Stitching thread:	textured polyester
Construction:	-45/+45°	Fibre type:	Flax	Stitch weight:	6 gsm
Fabric weight :	350 gsm +/- 5%	Fibre tex :	106 TEX		
		Ply weight :	171 gsm		
		+45 ply			
		Fibre type:	Flax		
		Fibre tex :	106 TEX		
		Ply weight :	171 gsm		

Standard width*: **1270 mm**
Standard roll length*: **50 m**

* other width and length on request

3. Mechanical properties

Fiber properties

Properties of fibers used in the fabric are:

Tensile modulus of fibers	58.5	GPa
Tensile strength fibers	700	MPa
Density of fiber	1.35	

Considering that glass fibers have a density of 2.6 and a tensile modulus of 70GPa, the flax ampliTex biax 350 g/m^2 can replace a 560 g/m^2 glass fiber biax fabric to have the same stiffness in tension. In compression, the performance of flax is a bit lower, so that as the biax often work in traction in one direction and compression in the other direction, the flax ampliTex biax 350 g/m^2 can replace a 475 g/m^2 glass fiber biax fabric to have the same stiffness.

4. Processing guidelines

- Good compatibility with epoxy and polyester
- Near-zero CTE, hence good processing compatibility with carbon fibres
- Compatible with infusion-based processes (vacuum infusion, RTM), wet layup, bladder inflation moulding (BIM), compression moulding
- Sensitive to humidity : dry fabric before use
- Fiber weight fraction of 60% can be reached with process pressure >5 bars. However, the fibers absorb a lot of resin when laminating the fabric and it tends to look “dry” (unless too much resin is used) before pressure is applied. We recommend controlling amount of adhesive used for laminating and to impregnate with 50-60% resin in weight. Excess resin comes then out while pressing the fabric.