

**FLAX LINEN DRY FABRIC D-RU 3.5 AMPLITEX 5030 TECHNICAL DATA SHEET**

Non-crimp unidirectional fabric with fibers oriented at 0°, suitable for manufacturing fiber reinforced composite products with high performance and low environment impact.

**Fabric Specification**

Fabric Type	Flax (EU)
Construction	0°
Fiber TEX	200 TEX
Fabric Weight	120 gsm +/- 5%
Standard Width	1150 mm
Standard Roll Length	100 mm <i>*other lengths upon request</i>

**Composite Properties**

Properties measured on samples with 5 layers aligned at 0°, manufactured in a press with 5 bars pressure (52% fiber weight), with Epoxy resin R&G type L, cured at 80°C. Fibers dried 30 minutes at 110°C prior processing.

Tensile Modulus parallel to fibers	36 GPa
Tensile Modulus perpendicular to fibers	
Tensile Strength parallel to fibers	410 MPa
Tensile Strength perpendicular to fibers	
Tensile Strain to failure parallel to fibers	
Tensile Strain to failure perpendicular to fibers	

Flexural Modulus parallel to fibers	
Flexural Modulus perpendicular to fibers	
Flexural Strength parallel to fibers	
Flexural Strength perpendicular to fibers	
Flexural Yield Strength parallel to fibers	

**Fiber Properties**

Considering that glass fibers have a density of 2.6 kg/dm<sup>3</sup> and a tensile modulus of 70GPa, the flax ampliTex UD 100 g/m<sup>2</sup> can replace a 160 g/m<sup>2</sup> glass fiber UD fabric to have the same stiffness in tension.

Tensile Modulus of fibers	58.5 GPa
Tensile Strength of fibers	700 MPa
Density of fibers	1.35 kg/dm <sup>3</sup>

**Processing Guidelines**

- Good compatibility with epoxy and polyester
- Near-zero CTE, hence good processing compatibility with carbon fibers
- Compatible with infusion-based processes (vacuum infusion, RTM), wet layup, bladder inflation molding (BIM), compression molding
- Sensitive to humidity: dry fabric prior impregnating at 110°C for 15 minutes in ventilated oven
- Fiber weight fraction of >50% can be reached with process pressure >5 bar. 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 will be pressed out once pressure is applied.