

FLAX LINEN DRY FABRIC D-SU 8.1 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	954 denier (106 TEX)
Fabric Weight	8.1 oz/yd ² (275 gsm +/- 5%)
Stitching Thread	Textured Polyester, 0.4 per inch (1/cm)
Standard Width	13.78 inch (350 mm)
Standard Roll Length	164 ft (50 m)

Composite Properties

Properties measured on samples with 6 layers aligned at 0°, manufactured in a press with 5 bars pressure (57% fiber weight after process).

Tensile Modulus parallel to fibers	32 Gpa	4.6 Msi
Tensile Modulus perpendicular to fibers	3.2 Gpa	464 Ksi
Tensile Strength parallel to fibers	383 Mpa	55.5 Ksi
Tensile Strength perpendicular to fibers	22 Mpa	3.2 Ksi
Tensile Strain to failure parallel to fibers	1.7%	
Tensile Strain to failure perpendicular to fibers	0.6%	

Flexural Modulus parallel to fibers	26 Gpa	3.77 Msi
Flexural Modulus perpendicular to fibers	3.7 Gpa	536 Ksi
Flexural Strength parallel to fibers	330 Mpa	47.8 Ksi
Flexural Strength perpendicular to fibers	42 Mpa	6.1 Ksi
Flexural Yield Strength parallel to fibers	209 Mpa	30.1 Ksi

Fiber Properties

Considering that glass fibers have a density of 2.6 kg/dm³ and a tensile modulus of 70GPa, the flax ampliTex UD 275 g/m² can replace a 480 g/m² glass fiber UD fabric to have the same stiffness in tension. In compression, the performance of flax is a bit lower, so that the flax ampliTex UD 275 g/m² can replace a 350 g/m² glass fiber UD fabric to have the same stiffness.