

TECHNICAL DATA SHEET - FLAXPREG T-UD

Description:

FLAXPREG T-UD is a range of pre-impregnated materials based on epoxy resin and the 100% unidirectional flax fibres reinforcement developed by EcoTechnilin / Lineo : the FlaxTape™.



FlaxPreg T-UD material

Main markets:

		Advantages
Sport and leisure	Flax is already used to improve the dampening properties of rackets, bicycle frames, skis, boards, ...	Dampening properties
Transportation	Already used in aeronautic, automotive, boat manufacturing, railway.	Weight reduction, Mechanical & Acoustic properties, Close to aramid behaviour, Bio-based material
Wind energy	Development projects	Dampening properties, Weight reduction, Bio-based material

Reference	Flax reinforcement	Epoxy part of the total weight	Width
FLAXPREG T-UD 110	FlaxTape™ – 110gr of flax/m ²	50%	0.4m

Mechanical properties:

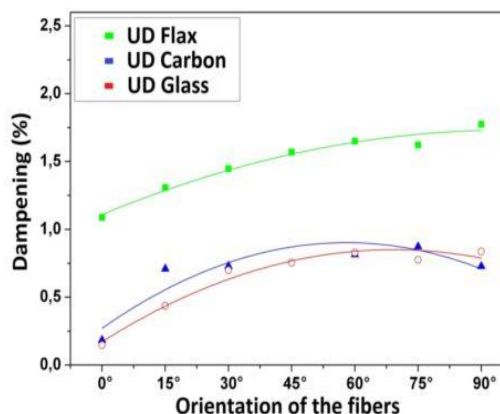
Mechanical results from a composite made with 12 layers of “FlaxPreg T-UD 110”:

RATE OF FIBRES	By weight	51 %
TRACTION (ISO 527)	Tensile strength	365 MPa
	Modulus	35 GPa
	Failure strain	1.35 %
FLEXION (ISO 14 125)	Ultimate stress strength	300 MPa
	Modulus	27.5 GPa
	Elongation	2.6 %
THEORIC DENSITY		1.3 g/cm ³

Dampening properties:

Low frequency dampening (flexion / mode 2):

Product	Dampening ratio
UD Flax	1.47%
UD Carbon	0.18%
UD Glass	0.15%



Available curing cycles:

Curing Time	Curing Temperature	Glass Transition Temperature
2 hours	110°C	113°C to 122°C
1 hour	120°C	125°C to 134°C
30 min	130°C	127°C to 136°C
1 hour		135°C to 145°C
15 min	140°C	134°C to 144°C
30 min		135°C to 145°C
1 hour		135°C to 145°C
15 min	150°C	128°C to 136°C
30 min		136°C to 146°C

Shelf Life:

Storage Temperature	Shelf Life
< 4°C	> 1 year
23°C	6 – 8 weeks
30°C	3 – 4 weeks