

## TECHNICAL DATA SHEET - FLAXPLY

### Description:

FLAXPLY is a range of flax reinforcements “ready to be used” in composite manufacturing for hand lay-up, infusion, RTM...

This range of flax reinforcements has been developed to mainly enhance the vibration absorption qualities, mechanical properties, weight reduction and aesthetic aspect of composite parts. It also allows the development of greener material.



Balanced fabric



Unidirectional (UD) fabric

### Main Advantages

- Easy and ready to use with conventional processes (RTM, infusion, hand lay-up...)
- Good mechanical properties
- Eco-friendly flax reinforcements made with bio-based fibers
- Unique aesthetic aspect
- Vibration absorption
- Electrical Insulation
- CTE near 0
- Low density (1.4) enabling weight reduction
- Easy combination with other kind of fabrics (glass, carbon...)

### Main markets:

<u>Main markets:</u>		<b>Advantages</b>
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
Design	Interior and exterior architectural parts, Objects, ...	Aesthetic aspects, Bio-based material

Reference	Description	Width
<b>FLAXPLY UD 150</b>	Unidirectional fabric - 150gr of flax/m <sup>2</sup>	1m
<b>FLAXPLY UD 180</b>	Unidirectional fabric - 180gr of flax/m <sup>2</sup>	1m
<b>FLAXPLY BL 150</b>	Balanced fabric - 150gr of flax/m <sup>2</sup>	1m
<b>FLAXPLY BL 200</b>	Balanced fabric - 200gr of flax/m <sup>2</sup>	1m
<b>FLAXPLY BL 300</b>	Balanced fabric - 300gr of flax/m <sup>2</sup>	1m
<b>FLAXPLY BL 550</b>	Balanced fabric - 550gr of flax/m <sup>2</sup>	1m

**Mechanical properties:**

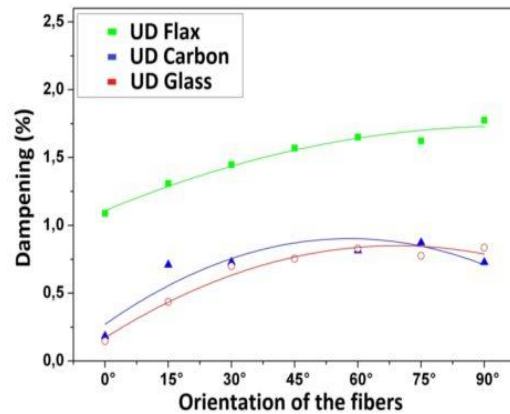
Mechanical results from a composite made with 12 layers of “FlaxPly UD 180 + epoxy resin”:

RATE OF FIBRES	By weight	65 %
	By volume	60 %
TRACTION (ISO 527)	Tensile strength	330 MPa
	Modulus	35 GPa
	Elongation	1.8 %
FLEXION (ISO 14 125)	Ultimate stress strength	300 MPa
	Modulus	22 GPa
	Elongation	2.4 %
THEORIC DENSITY	1.33 gr/cm <sup>3</sup>	

**Dampening properties:**

Low frequency dampening (flexion / mode 2):

Product	Dampening ratio
<b>UD Flax</b>	<b>1.47%</b>
<b>UD Carbon</b>	<b>0.18%</b>
<b>UD Glass</b>	<b>0.15%</b>



FLAXPLY products must be handled with gloves

PLEASE, CONTACT US FOR ANY TECHNICAL SUPPORT OR ASSISTANCE.