



Technical datasheet 2016

FLAXPLY UD180

Technical datasheet for weaves

MECHANICAL PROPERTIES OF WOVEN FABRIC COMPOSITE VF (%)	TENSION	FLEXURAL
	51.1 ± 1.4	51 ± 1.3
Density (g/cm ³)	1.33 ± 0.02	1.31 ± 0.02
Modulus in warp direction (GPa)	E1= 35 ± 0.5 (1) E2= ± (2)	E1= 22 ± (1) E2= ± (2)
Modulus in weft direction (GPa)	E1= 4.7 ± 0.3(1) E2= ± (2)	E1= 300 ± 27 (1) E2= ± (2)
Strength in warp (MPa)	330 ± 38	±
Strength in weft (MPa)	30 ± 0.4	±
Failure strain in warp (%)	0.83 ± 0.05	2.41 ± 0.03
Failure strain in weft (%)	1.80 ± 0.03	±
Standards	ISO 527	SO 14125

(1) Measured between 0 and 0,1% strain

(2) Measured between 0,3 and 0,5 % strain

RECOMENDED STORAGE AND USE CONDITIONS

Keep it in the plastic bag

ADDITIONNAL INFORMATION

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.



Description of the fabric

Property	Unit	Standard	Value
<i>COMPOSITION</i> Reinforcing fiber : Flax ☒ Hemp ☐	VOL %		100 $\pm$
<i>AREAL WEIGHT</i>	g / m ²	ISO 3801	190 $\pm$ 2
<i>AREAL VOLUME</i> *	mm ³ / mm ²	Calculation	0.131 $\pm$ 0.001
<i>THICKNESS</i>	mm	ISO 5084	0.2 $\pm$
<i>WEAVE STYLE</i>			ribs 4/4-ud
<i>YARNS / CM</i>	(warp)	ISO 4602	42.5 $\pm$
<i>PICKS CM</i>	(weft yarns)	ISO 4602	3 $\pm$
<i>WEIGHT DISTRIBUTION</i>	%		weft : 4.5 $\pm$ warp : 95.5 $\pm$
<i>STANDARD WIDTH</i>	cm	ISO 5025	103 $\pm$

$$*AREAL VOLUME = \frac{\text{areal weight}}{\text{density}} \times \frac{1}{1000}$$

A glass fiber weave of 200 g / m² has an areal volume of 0,079 mm³ / mm², while a flax weave of 200 g/m² has an areal volume of 0,138 mm³ / mm²

TREATMENT

No treatment ☐

Compatibilised for use with lineo patented technology to avoid moisture uptake and ensure good processability

Other treatments _____

Purpose of treatment _____

Sizing _____



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Description of the yarns / rovings

	UNIT		WARP	WEFT
TYPE OF YARNS / ROVINGS	wet spin yarns		wet spin yarns	wet spin yarns
COMPOSITION	VOL %		EU ☒ NON-EU ☐	EU ☒ NON-EU ☐
Reinforcing fiber :			100 ±	100 ±
Flax ☐ Hemp ☐	Brand name :		EU ☒ NON-EU ☐	EU ☒ NON-EU ☐
Matrix fiber			±	±
DENSITY	g/cm ³		1.45 ±	1.45 ±
		Standard		
LINEAR DENSITY	Tex (g/km)	ISO 1973	41.7 ± 0.3	27.8 ± 0.1
TORSION	Twists / m	ISO 17202	N/C ±	N/C ±