A COMPLETE RANGE OF BAMBOO BASED PRODUCTS


BOBBINS OF CONTINUOUS RIBBON

- ✓ Width : 2mm to 5mm
- ✓ Thickness : 0,15mm to 0,3mm
- ✓ Linear density : 600tex to 1200tex

2x2 TWILL FABRIC

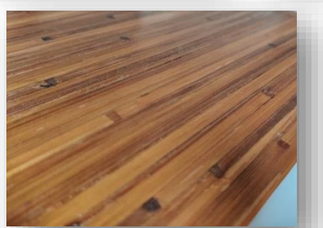
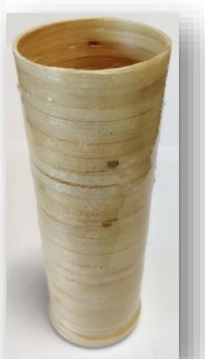
- ✓ Width : 1,2mm to 2,1m
- ✓ Thickness : 0,3mm to 0,8mm
- ✓ Weight : 300g/m² or 610g/m²


UNIDIRECTIONAL FABRICS & MULTIAXIAL FABRICS

- ✓ Width : 300mm to 2,1m
- ✓ Thickness pli: 0,15mm to 0,3mm
- ✓ Weight pli : 150g/m² to 170g/m²


PREPREGS

- ✓ Width : 300mm to 2,1m
- ✓ Unidirectional & twill fabrics
- ✓ Thermoplastic and thermoset


MONOLITHIC & « SANDWICH » COMPOSITES

- ✓ Thermoplastic and thermoset
- ✓ Panels, tubes and complex shapes
- ✓ 100% bamboo or reinforcements' combinations

Cobratex product range
Ref : CTX-0082-RET v3.12

SPECIFICATIONS

COBRATEX
Composite Bamboo Reinforcing Alternatives

TENSILE BAMBOO RIBBON	YOUNG MODULUS (GPa)	ULTIMATE STRENGTH (MPa)	DENSITY (kg/dm³)
81.108.03.03	13	280	**1,35**

Source CIRIMAT

2 TIMES LIGHTER THAN GLASS

COMPOSITE UD / RTM6	REINFORCEMENT RATIO vol.	Q FACTOR	DAMPING Coef.
CARBON HIGH – MODULE	60%	**80**	1,3%
GLASS GRADE – S	60%	**60**	1,7%
BAMBOO 101.100.03.03	**70%**	**26**	3,8%

Source MECANO ID

DAMPING X3 VS CARBON

*Note: **carbon's resonance** frequency = bamboo damping peaks*

SEA WATER	IMMERSION	YOUNG MODULUS	ULTIMATE STRENGTH
FLAX / EPOXY	30 days	-58%	-42%
BAMBOO / EPOXY (open edges)	**100 days**	-21%	-30%

Source IFREMER

LIMITED PROPERTIES' REDUCTION
SIGNIFICANT PROPERTIES' RECOVERY WHEN DRIED

*Note: **No reinforcement swelling** with water absorption*

LIFE CYCLE ASSESSMENT (LCA)

	FLAX	GLASS	BAMBOO
Abiotic resources depletion (kg Sb eq./kg)	1,70E-03	1,90E-02	7,32E-07
Acidification (kg SO2 eq./kg)	2,20E-03	1,60E-02	1,49E-03
Eutrophication Potential (kg PO4—eq./kg)	1,40E-03	1,20E-03	2,05E-04
Global warming potentials (kg CO2 eq./kg)	-1,40E+00	2,65E+00	-2,10E+00
Ozone Depletion Potential (kg CFC-11 eq./kg)	2,40E-08	2,00E-07	3,99E-11
Human Toxicity (kg 1.4-DB eq./kg)	2,15E-01	9,10E+00	6,94E-02
Freshwater **aquatic ecotoxicity** (kg 1.4-DB eq./kg)	5,90E-02	1,70E-01	1,05E-02
Photochemical oxidation (kg C2H4 eq./kg)	7,30E-05	6,00E-04	5,34E-05
Terrestrial ecotoxicity (kg 1.4-DB eq./kg)	8,70E-03	4,20E-02	3,59E-04

Source Expleo

BAMBOO ABSORBE CO2 ≈ GLASS EMISSIONS
X1,5 CO2 ABSORBED BY FLAX

AVERAGE GAIN OTHER POLLUTIONS
X100 VS GLASS
X3,5 VS FLAX

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