

# SUSTAINABLE TECHNOLOGY SOLUTIONS

low twist

## great alignment of the fibres, increasing the strength of the final composite part by 10-20%

## ampliTex<sup>©</sup> light **low twist** FACTS

#### FIBRE PROPERTIES LOW TWIST

- Tensile strength 700 MPa
- Tensile modulus 59 GPa
- Strain to failure 1.8 %
- Density I 350 kg/m<sup>3</sup>
- European Eco Superior
- A local and renewable resource.

#### **FABRIC ARCHITECTURES**

- ampliTex <sup>©</sup> light
  UD flax fabric no 5030
  I15g/m<sup>27,</sup> Width 1150 mm, low twist
- ampliTex <sup>©</sup> light balanced weave 0/90° flax dense no 503 l 200g/m2, width 1150 mm, low twist

#### PROCESSING

- Good compatibility with epoxy and polyester
- Near-zero CTE, hence good processing compatibility with carbon fibres
- Compatible with infusion-based processes (vacuum infusion, RTM), wet layup, bladder inflation molding (BIM), compression molding

### PERFORMING NATURAL FIBRE PRODUCTS

The strong need of the water sport and bike industry inspired us to develop this lightweight range



We control the natural fibre quality, the yarn thickness and the twist for the highly automated production of our light fabrics. The drapability and mechanical performance of our fabrics are optimized for modern composite manufacturing.

Use half the weight of your current glass fibres to reach the same performance in your composite part and increase the damping properties by up to three. The ampliTex<sup>®</sup> light products are made with a new lowtwist yarn for a maximum performance. While regular natural fibre yarns have a high twist, thus a low surface coverage at a given weight, this tape-like flax roving allows the design of fabrics with a very low fabric areal weight. When pressure is applied during processing, the fibres of the rovings are further spread, filling the open space between the rovings of the fabric. In addition, the low twist results in a great alignment of the fibres, increasing the strength of the final composite part by 10-20% vs. a part made from standard flax yarn.

These ampliTex<sup>®</sup> light fabrics are ideal for replacing light glass fibre fabrics traditionally used in surfboard construction, cutting weight of the required reinforcement material by up to 50%. In carbon composite bicycle frames, they offer a unique opportunity to simultaneously increase the strength and the damping properties by replacing some of the carbon fibre layers, thus increasing both the comfort and the safety for the end user.

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## Play naturally smart

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