Vitrulan
Composites

REINFORCEMENTS FOR WIND TURBINE ROTOR BLADES

We have developed and supplied high performance reinforcements to rotor blade manufacturers since the early days of the industry.

Today the ever increasing blade and turbine size drives us to further develop reinforcements to meet industry demands for both onshore and offshore conditions.

OUR WIDE PRODUCT RANGE INCLUDES

- Tailor-made fabrics to customer specific processes and applications:
  - Main Spar
  - Trailing edge
  - Root section
  - Skin and shear webs
  - Blade surface
- AceBlade, next generation unidirectional reinforcement with outstanding mechanical performance and superior fiber alignment.
- Special fabrics ensuring excellent resin flow.

Please see reverse side for more detailed product information.

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Unidirectional reinforcements, spar cap area	Weight g/m²	Description
AceBlade Glass fiber Carbon fiber	600 – 2400 300 – 600	▌Non stitched, powder bound construction ▌Superior fiber alignment delivers outstanding mechanical performance
0/90°, 0/± 45° + optional CSM	600 – 2400	▌Stitched reinforcement with customer optimized flow properties
0°	600 – 2400	▌Stitched UD excluding 90 degree backing yarn to deliver excellent mechanical performance and fiber alignment

Unidirectional reinforcements, trailing edge area	Weight g/m²	Description
0°	600 – 1200	▌Stitched reinforcement, with customized conformability for complicated contours

Multiaxial reinforcements, shell and shear webs	Weight g/m²	Description
± 45°, ± 60°, ± 30°	400 – 1800	▌Standard double diagonal ▌Available angles between 30 – 90 to optimize fiber direction

Multiaxial reinforcements, root area	Weight g/m²	Description
± 45° with 0° or 90°	600 – 1800	▌Triaxial product with tailored flow properties

Special flow aid materials	Weight g/m²	Description
X-Flow ± 45° or ± 60°	600 – 1200	▌Excellent in-plane and through the thickness flow properties without decreasing laminate mechanical performance
Multiflow	300 – 2400	▌Any multiaxial combined with enhancing flow layer improving flow properties of a heavy reinforcement package

Multiaxial reinforcements, root area	Weight g/m²	Description
GFT-57G10	30 – 50	▌Epoxy compatible light weight veil

All the materials can be produced with any glassfiber type available on the market, including High Modulus glass types.

Carbon fiber options also available.