

# WINDSTRAND® 3000 TYPE 30® ROVING LIGHTER BLADES, HIGHER PERFORMANCE

Windstrand® 3000 combines high weaving efficiencies and increased tensile Modulus at 0° for lighter blades and reliable performance. Blades utilizing Windstrand® 3000 are capable of operating in extreme environments due to its optimized design.

- Windstrand® 3000 is compatible with epoxy resin.
- Produced with H-glass, specially designed for applications that require high Modulus and long fatigue life.
- DNV-GL Quality system certified in all manufacturing locations.

# FOR HIGH PERFORMANCE BLADES

# Benefits\*

- 0° fiber Modulus greater than 88 GPa
- · Enhanced 90° properties
- · High weaving efficiency for strong blades
- · Operation at increased Fiber Volume Fraction (FVF) levels
- · Lighter blades: 3-6% blade weight reduction

# **Applications**

Optimized design for wind turbines in all on-shore and off-shore locations.

- Helping with high performance designs of Spar Cap, Shell and Root.
- Production of longer and lighter blades help in especially low wind areas.



# **Technical Characteristics**(Single-End Roving)

PRODUCT OFFERINGS WINDSTRAND® 3000	NOMINAL FILAMENT DIAMETER (µm)	LINEAR DENSITY TEX (G/KM) ISO 1889	SOLIDS (%) ISO 1887
300 Tex	13	300 ± 15	0.65 ± 0.20
600 Tex	17	600 ± 30	0.55 ± 0.12
1200 Tex	17	1200 ± 60	0.55 ± 0.12
2400 Tex	17	2400 ± 120	0.55 ± 0.12

<sup>\*</sup>Owens Corning internal tests; or external tests by designer, depending on application, 2013

### **Product Availability**

(Standard Reference)

Owens Corning® High-Modulus Glass is globally available in WINDSTRAND® single-end roving form factor. Please, contact your Owens Corning representative for information on TEX (yield) ranges and resin systems compatibility in your region.

# **Packaging**

(Standard Reference)

Rovings are available in a single-end internal-pull package. Each pallet weighs approximately 1 ton. Pallets are stretch-wrapped for load stability. All doffs are wrapped with Tack-Pak™ for protection and to aid package run-out and transfer. Full doffs are approximately 19 kg (40 lb.) and they can be packaged in bulk or Creel-Pak® format.

#### Standard Package:

- Cylindrical bobbin without tube, Outside Diameter (OD) ± 270mm, height 260-300mm.
- · Partial bobbins have smaller diameter.
- Max bobbin weight must not exceed 19kg.
- Bobbin covered by a Tack-Pak™ film.

#### Pallet:

- Size: 1150 x 1150mm, 4 ways entry.
- 16 bobbins (ma x OD) per layer. Pallets are 3 or 4 tiers high.
- · Pallet is stretch-wrapped.

#### Identification:

- · Bobbin label (each bobbin)
- · Four pallet labels, one on side of the pallet.



#### Americas

# Owens Corning Composite Materials, LLC

One Owens Corning Parkway Toledo, OH 43659 USA 1-800-GET-PINK®

# Europe

# European Owens Corning Fiberglas Sprl.

166 Chaussée de la Hulpe B-1170 Brussels Belgium +32 3 674 8211

# **Asia Pacific**

# Owens Corning Shanghai Regional Headquarters

40/F, Pudong Kerry Parkside, 115 Fang Dian Road, Pudong, Shanghai, 201204, China +86-21-6101 9666

#### India

# Owens Corning (India) Private Limited

7th Floor, Alpha Building, Hiranandani Gardens Powai, Mumbai- 400076 022 66681700

https://www.owenscorning.com/composites

This information and data contained herein is offered solely as a guide in the selection of product. We believe this information to be reliable, but do not guarantee its applicability to the user's process or assume any responsibility or liability arising out of its use or performance. The user agrees to be responsible for thoroughly testing any application of the product to determine its suitability. Because of numerous factors affecting results, we make no warranty of any kind, express or implied, including those of merchantability and fitness for a particular purpose. Statements in this publication shall not be construed as representations or warranties or as inducements to infringe any patent or violate any law, safety code or insurance regulation. We reserve the right to modify this document without prior notice.