



# ULTRAPAR™ 2

## NEXT-LEVEL SPAR CAPS

Ultraspar™ 2 combines the higher performance of WindStrand® 4000 with the consistency of the pultrusion process, allowing efficient, cost-effective blade design and production. High-performance glass-pultruded profiles enable lighter, longer, stronger blades that reduce the cost of wind energy.

- Produced with H<sup>2</sup> Glass, the second-generation high-modulus glass specifically designed for wind blades by Owens Corning.
- Ultraspar™ 2 is pultruded with epoxy resin and is compatible with infusion in epoxy resin systems. Contact Owens Corning regarding compatibility with other resin systems.

### FOR LONGER BLADES PRODUCED EFFICIENTLY

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#### Product Benefits

##### Proven Performance

- 63 GPa laminate 0° tensile modulus (at 70% FVF — Fiber Volume Fraction) — true performance to enable longer, lighter blades.
- Balances increased FVF to maintain strong fatigue performance.

##### Consistency and Productivity

- Pultrusion delivers consistent glass content for reliable performance and eliminates on-site spar cap infusion for improved productivity.
- Low porosity enables mechanical stability and quality consistency.
- Double-sided PA66 peel ply cover with easy peel-off, enabling an ideal contact surface for excellent bonding properties.

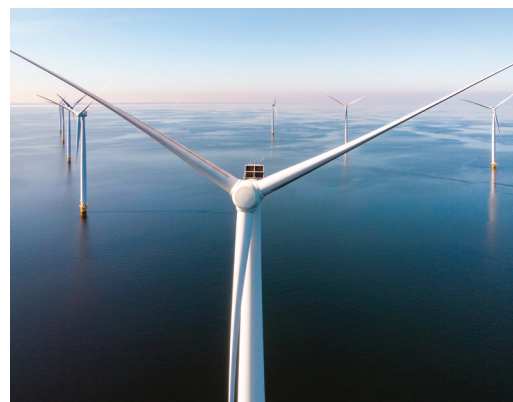
##### Reliable Supply

- Owens Corning® H<sup>2</sup> Glass is continuously produced at scale and increasing capacity, delivering reliable product supply and consistency.

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#### Applications

Ultraspar™ 2 is a high-performance pultruded profile custom-designed for wind blade spar caps. Ultraspar™ 2 enables blade designers to optimize the weight and maximize the length and strength of wind blades.



## Properties

CHARACTERISTIC*	TEST METHOD	STRENGTH MEAN (MPA)	MODULUS MEAN (GPA)
0° Tensile**	ISO 527-5A	1,350	63
0° Compression**	ISO 527-5B	1,250	63
90° Tensile	ISO 527-5	50	14
90° Compression	ISO 14126	140	14
V-Notched Rail Shear	ASTM D7078	55	4
Fatigue (Tension-Tension)	ISO 13003	M value = 8.5	

\* Typical FVF at 70%.

\*\* The sample piece is milled to 2 mm thick rectangle coupon for testing.

DATA SOURCE – Above typical data from third-party lab testing lab.

## Availability and Packaging

This product is currently available in China. Please contact your Owens Corning representative for information in your region.

Ultraspar™ 2 is a custom-designed product requiring the profile dimensions of the specific design for a blade. Adequate time is needed for die preparation to properly produce the product.

Ultraspar™ 2 has coiled inner diameters of at least 1,500 mm and outer diameters up to 2,300 mm.

## Storage

Glass fiber products should be stored in a dry area and remain in their original packaging until use. Products should be protected from the weather and other sources of water.



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POWER NOW**

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