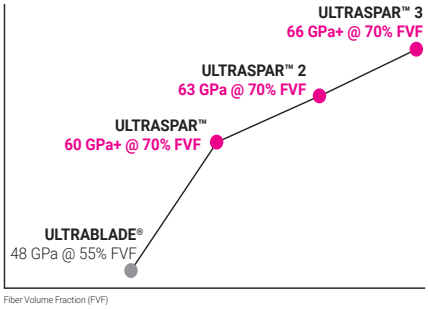
ULTRASPAR™ SMART BLADE PERFORMANCE

The ULTRASPAR™ pultruded planks, Glas-Powered™ by the Owens Corning® high-modulus glass family are designed to deliver more performance, part consistency, and an easier spar cap assembly experience — simply put, they are the most cost-effective solution to build high performance wind blades we ever made.

- Reliable blade design and production made possible by the unique combination of the OC™ High-modulus glasses and the consistency of the pultrusion process
- Performance enabled by a higher fiber volume fraction (FVF) and proven by Owens Corning DNV certified laboratories

Laminate Modulus



Up to 24% lower total costs
Compared to carbon fiber planks[2]

Lower cycle-time
Compared to glass fabric lay-up

Non conductive
Glass fiber is an electrical isolator by design

[1] External blade design studies commissioned by Owens Corning. The study and estimates are based on a 80+m (5MW) blade design while comparing glass fabrics performance with the ULTRASPAR™ pultruded planks. [2]The lower total cost includes BoM (bill of materials) and operational costs (OPEX). Performance and materials cost may vary upon further customer development and requirements, and sourcing.

ULTRASPAR™
Glas-Powered™ by H-glass

Up to
16% LIGHTER BLADES[1]

ULTRASPAR™

ULTRABLADE® fabrics

ULTRASPAR™ 2
Glas-Powered™ by H² glass

Up to
18% LIGHTER BLADES[1]

ULTRASPAR™ 2

ULTRABLADE® fabrics

New
ULTRASPAR™ 3
Glas-Powered™ by H³ glass

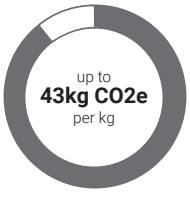
Up to
20% LIGHTER BLADES[1]

ULTRASPAR™ 3

ULTRABLADE® fabrics

Lower Climate Impact

OC Glass fiber production



Carbon fiber production

Learn how we are halving our operations impact at **owenscorning.com/sustainability**

Carbon fiber climate impact estimates dependent on the PAN source and fuel sources of oxidation and carbonization processes.

Your Global Materials Engineering Partner

Owens Corning operates in every major blade making region, with Science & Technology centers in the United States, Europe and China, and a global engineering team ready to **partner with you to design and build better blades.**

- **DNV certified laboratories**
- **Local engineering support**
- **APQP4WIND certified operations**
- **Less transportation, lower footprint**

Properties

				ULTRASPAR™	ULTRASPAR™ 2	ULTRASPAR™ 3
FVF	%	Mean	ISO 1172	70	70	70
0º Tensile Modulus	GPa	Mean	ISO 527-5	60	63	66
0º Compression Modulus	GPa	Mean	ISO 14126	61.5	64	68
0º Tensile Strain to failure	%	Mean	ISO 527-5	2.2	2.2	2.2
90º Tensile Strength	MPa	Mean	ISO 527-5	55	55	55
90º Tensile Modulus	GPa	Mean		16.5	16.5	16.5
90º Compression Strength	MPa	Mean	ISO 14126	155	160	160
90º Compression Modulus	GPa	Mean		19.5	19.5	19.5
Flexural Strength	MPa	Mean	ISO 14125	/	1100	/
Flexural Modulus	GPa	Mean		/	56	/
Interlaminar shear strength	MPa	Mean	ISO 14130	/	65.5	/
Interlaminar shear strength (ILSS-two ply panel + fabrics)	MPa	Mean	ASTM D2344	~60	~55.5	
Tension-Tension Fatigue (m - value)	—		ISO 13003 ASTM D3479	>8	>8	>8

Certifications

Product performance verified by Owens Corning DNV certified laboratories.

Product manufactured under the APQP4Wind protocols.

Owens Corning scored an A for CDP Climate Change in 2021 and is included in the CDP "A List" for Water Security.

Owens Corning was ranked among the top 1% of all companies rated by EcoVadis with a Platinum Certificate.

Availability and Packaging

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

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

ULTRASPAR™ is compatible with epoxy resin systems.

HOW WE POWER NOW™

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

https://www.owenscorning.com/wind | Composites@owenscorning.com

Pub. No. 10025380. Ultraspar_product data sheet. May 2022. English.