



## TECHNICAL DATA SHEET

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### **OLY MESH BS300 SYSTEM**

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**OLY MESH BS300** is a biaxial mesh made of basalt fiber and AISI 304 stainless steel, suitable for structural reinforcement using the FRCM (Fiber Reinforced Cementitious Matrix) technique in combination with an inorganic matrix based on natural hydraulic lime (NHL). It is characterized by excellent mechanical properties, being extremely lightweight and easy to handle.

**OLY WALL STRUKTURAF15** is a low-thickness mortar based on hydraulic binder and pure natural hydraulic lime according to EN 459-1, strength class M15. It is CE marked in accordance with the harmonized standards EN 998-1, EN 988-2, and EN 1504-3. It can be applied manually or by spraying.

The system composed of **OLY MESH BS300** and **OLY WALL STRUKTURAF15** is CE marked on the basis of EAD 340275-00-0104 and has ETA 24/0993.



### Characteristics of the mesh

Property		U.M.	Value	Tolerance	Reference Standard
Fiber type		Basalt and stainless steel			
Mesh weight		g/m <sup>2</sup>	305	± 5%	EN 12127:1997
Weight of the sizing		g/m <sup>2</sup>	65	± 5%	ISO 1887:2014
Equivalent thickness		mm	0,034	± 5%	Internal method
Mesh size		mm	13,6x14,2	± 5%	ETAG 0004 C.3.3
Standard roll dimensions		m	1,60x31,25	± 0,5%	
Number of threads (yarns) per 10 cm	Weft	n°	5	± 0,5%	EN 1049-2:1999
	Warp	n°	5	± 0,5%	
Average tensile strength of mesh		MPa	1.341	± 5%	EAD 340275-00-0104
Characteristic tensile strength of mesh		MPa	1.214	± 5%	
Average ultimate strain of the mesh		%	2,10	± 5%	
Ultimate characteristic strain of mesh		%	1,95	± 5%	
Average elastic modulus of mesh		GPa	63	± 5%	

### Characteristics of the inorganic matrix

Property	U.M.	Value
Commercial name of the matrix		OLY WALL STRUKTURA F15
Product type		Fine mortar based on NHL lime
Strength class		M15
Harmonized reference standards		EN 998-1, EN 998-2, EN 1504-3
Minimum applicable thickness	mm	5
Pot life (+20°C and 50% UR)	min	60
Fresh mortar specific weight	kg/m <sup>3</sup>	≈ 1.500
Compressive strength (28 days)	MPa	≥ 15
Elastic modulus	GPa	≈ 7
Adhesion to support	MPa	≥ 1,3

Note: for further details, refer to the technical data sheet of the mortar

### Characteristics of the FRCM Composite

Property	U.M.	Value	Tolerance	Reference Standard
Tensile strength $\sigma_u$ (Average value)	MPa	1.351	± 5%	EAD 340275-00-0104
Tensile strength $\sigma_u$ (Characteristic value)	MPa	1.065	± 5%	
Elastic modulus phase non-cracked $E_1$ (Average value)	GPa	1.416	± 5%	
Elastic modulus phase cracked $E_3$ (Average value)	GPa	61	± 5%	
Ultimate strain $\epsilon_u$ (Average value)	%	1,98	± 5%	
Ultimate strain $\epsilon_u$ (Characteristic value)	%	1,64	± 5%	

### Storage Conditions

Store in a dry, covered location at temperatures above +5°C. Take appropriate precautions during handling, transport, and storage to avoid damage.

### Packaging

Roll size: 1,60x31,25 m (50 m<sup>2</sup>)  
Pallet: 15 rolls (750 m<sup>2</sup>).

### Application Method

The support must be consistent, clean, stable, and free from any coatings (e.g., biological films, plaster, etc.). Any necessary remediation or repair work on the support should be completed beforehand. The application process involves the following steps:

- Wet the support until it is fully saturated but without excess water on the surface;
- Apply a first layer of OLY WALL STRUKTURA F15 mortar to a thickness of approximately 5 mm;
- While the mortar is still fresh, gently embed the OLY MESH BS300 mesh, which can also be curved with a radius of at least 20 mm;
- Cover the system with a second layer of OLY WALL STRUKTURA F15 mortar until the total reinforcement thickness reaches approximately 10 mm.

For further details, refer to the technical data sheets of the components and installation manuals.

### Precautions for use and safety

For proper installation and use of the system, refer to the preparation and installation manual provided by the manufacturer. During the preparation and installation of reinforcement systems, wear appropriate personal protective equipment (headgear, gloves, safety glasses, and dust masks). The product must be cleaned of dust, oils, fats, etc., before application.

### General Warnings

The information in this technical data sheet corresponds to our current knowledge and experience. The data has been processed with the utmost care, but no guarantee of accuracy or completeness is provided, and no responsibility is assumed for any subsequent user decisions. The data does not impose any legal obligations or secondary commitments of any kind. The data does not exempt the customer from independently verifying the product's suitability for its intended use. Our products undergo continuous quality control on both raw materials and finished products to ensure consistent quality. Our technicians and consultants are available for information, clarification, and queries regarding the use and processing of our products, as well as for site inspections. The most up-to-date technical data sheets are available on the website [www.olympus-italia.com](http://www.olympus-italia.com) or may be requested from our offices. The marking obligations are not related to the intrinsic nature of a given product but to the intended use for which the material is employed: before placing an order, the customer must submit all available documentation to the D.L. to establish the suitability of the materials (in terms of certifications and performance) for their intended use.

For the latest version of this technical data sheet, information, technical assistance, and further structural reinforcement systems, contact the Olympus technical office:

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