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Member of



European Technical Assessment

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General Part

Technical Assessment Body issuing the European Technical Assessment:

Technical and Test Institute for Construction Prague

Trade name of the construction products:	FIBERGLASS MESH EF145 FIBERGLASS MESH EF160 - glass fibre meshes for reinforcement of cementitious or cement based renderings
Product family to which the construction product belongs:	Product area code: 4 Thermal insulation products. Composite insulating kits/systems
Manufacturer:	EURO FISI-D SH.P.K 811092585 Rruga Gjilani Nr.61 Radivojce 61000 Viti Kosovo www.eurofisigroup-ks.com
Manufacturing plant:	EURO FISI-D SH.P.K Rruga Gjilani Nr.61 Radivojce 61000 Viti Kosovo
This European Technical Assessment contains:	8 pages
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:	EAD 040016-01-0404 Glass fibre mesh for reinforcement of cementitious or cement based renderings

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Specific part

1. Technical description of the product

1.1 General

Rectangular glass fibre meshes for reinforcement of cementitious or cement based renderings **FIBERGLASS MESH EF145** and **FIBERGLASS MESH EF160** are **leno woven fabric** made of glass fibre strands. According to the manufacturer technical specification the type of the glass of fibre mesh is **E-glass**. To provide resistance to alkali conditions, they are coated by an organic layer. The distance of strands is at least 3 mm so that the reinforced rendering or mortar sufficiently penetrates the meshes.

Concerning product packaging, transport, storage, maintenance, replacement and repair it is the responsibility of the manufacturer to undertake the appropriate measures and to advise his clients on the transport, storage, maintenance, replacement and repair of the product as he considers necessary.

It is assumed that the product will be installed according to the manufacturer's instructions or (in absence of such instructions) according to the usual practice of the building professionals.

2. Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

The product is used as reinforcement of cementitious base coats (e.g. of ETICS) or cement-based and/or lime-cement-based core part of wall rendering/plastering. Nominal thickness of reinforced layer is usually of 2 mm up to 15 mm. The reinforcement shall be embedded into a fresh mortar and sufficiently covered. The maximum particle size of aggregate used in rendering in relation to the mesh opening has to be taken into account to prevent the damage of the mesh during application and its action as a separation layer in renderings (base coats).

The reinforcement prevents the surface of hardened rendering from cracking, caused by shrinkage.

The assessment methods included or referred to in EAD 040016-01-0404 have been written based on the manufacturer's request to take into account a working life of the glass fibre mesh for reinforcement of cement based renderings for the intended use of 25 years when installed in the works (provided that the glass fibre mesh for reinforcement of cement based renderings is subject to appropriate installation). These provisions are based upon the current state of the art and the available knowledge and experience.

The real working life may be, in normal use conditions, considerably longer without major degradation affecting the basic requirements for works¹.

¹ The real working life of a product incorporated in a specific works depends on the environmental conditions to which that works is subject, as well as on the particular conditions of the design, execution, use and maintenance of that works. Therefore, it cannot be excluded that in certain cases the real working life of the product may also be shorter than the working life referred to above.

The indications given as to the working life of the construction product cannot be interpreted as a guarantee but are regarded only as a means for expressing the expected economically reasonable working life of the product.

3. Performance of the product and references to the methods used for its assessment

The essential characteristics of glass fibre mesh for reinforcement of cement based renderings **FIBERGLASS MESH EF145 and FIBERGLASS MESH EF160** and methods of verification were carried out in compliance with the *EAD 040016-01-0404: Glass fibre meshes for reinforcement of cement-based renderings*. Expression of the product performance is stated in Table No. 1 – No. 2.

Table No. 1: glass fibre mesh **FIBERGLASS MESH EF145**

No.	Essential characteristic and method of verification and assessment	Expression of product performance FIBERGLASS MESH EF145	
Safety in case of fire (BWR 2)			
1	Reaction to fire (EAD 040016-01-0404, Cl. 2.2.1, Commission Delegated Regulation (EU) 2016/364)	No performance assessed	
2	Organic content (EAD 040016-01-0404, Cl. 2.2.2)	Ash content (average value)	Organic content (average value)
		85.7 %	14.3 %
3	Gross heat of combustion (EAD 040016-01-0404, Cl. 2.2.3)	Heat combustion Q_{PCS} [MJ/kg]	
		5.179	
		Heat combustion Q_{PCS} [MJ/m²]	
		0.76	
Hygiene, health and the environment (BWR 3)			
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404, Cl. 2.2.4)	Leachable substances	No performance assessed
		Content of cadmium	
Safety and accessibility in use (BWR 4)			
5	Mesh size (EAD 040016-01-0404, Cl. 2.2.5)	Average mesh size <i>(warp direction x weft direction)</i>	5.0 mm x 5.3 mm
		Average mesh opening <i>(warp direction x weft direction)</i>	4.2 mm x 3.8 mm
6	Weaving accuracy (EAD 040016-01-0404, Cl. 2.2.6)	An untrimmed edge in any length	No singularities or defects
		Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)	
		A gap over treble distance of wefts or warps in any length	
		Weft skewing or weft waving over 4 % of width of the fabric (measured by a rectangular rule)	
		A cracked thread	

No.	Essential characteristic and method of verification and assessment	Expression of product performance FIBERGLASS MESH EF145		
7	Tensile strength and elongation (EAD 040016-01-0404, Cl. 2.2.7)	Number of threads per meter, determined on the principle of EN 13496, Cl. 6.3	warp threads per meter	weft threads per meter
			199.8	188.0
		In the as-delivered state	warp direction	weft direction
		<ul style="list-style-type: none"> - tensile strength $T_{max,m}$ - tensile strength $R_{50,m}$ - elongation ϵ_m 	36.5 kN/m 1826 N/50 mm 3.3 %	54.4 kN/m 2724 N/50 mm 3.0 %
		After alkalis conditioning	warp direction	weft direction
		<ul style="list-style-type: none"> - tensile strength $T_{max,m}$ - tensile strength $R_{50,m}$ - elongation ϵ - residual value of tensile strength $\Delta T_{max,ag}$ 	22.1 kN/m 1108 N/50 mm 1.9 % 60.6 %	41.5 kN/m 2077 N/50 mm 2.1 % 76.2 %
8	Mass per unit area (EAD 040016-01-0404, Cl. 2.2.8)	147 g/m²		
9	Thickness (EAD 040016-01-0404, Cl. 2.2.9)	0.44 mm		

Table No. 2: glass fibre mesh **FIBERGLASS MESH EF160**

No.	Essential characteristic and method of verification and assessment	Expression of product performance FIBERGLASS MESH EF160	
Safety in case of fire (BWR 2)			
1	Reaction to fire (EAD 040016-01-0404, Cl. 2.2.1, Commission Delegated Regulation (EU) 2016/364)	No performance assessed	
2	Organic content (EAD 040016-01-0404, Cl. 2.2.2)	Ash content (average value)	Organic content (average value)
		85.7 %	14.3 %
3	Gross heat of combustion (EAD 040016-01-0404, Cl. 2.2.3)	Heat combustion Q_{PCS} [MJ/kg]	
		3.870	
		Heat combustion Q_{PCS} [MJ/m²]	
		0.681	
Hygiene, health and the environment (BWR 3)			
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404, Cl. 2.2.4)	Leachable substances	No performance assessed
		Content of cadmium	
Safety and accessibility in use (BWR 4)			
5	Mesh size (EAD 040016-01-0404, Cl. 2.2.5)	Average mesh size <i>(warp direction x weft direction)</i>	4.9 mm x 4.3 mm
		Average mesh opening <i>(warp direction x weft direction)</i>	4.2 mm x 2.9 mm
6	Weaving accuracy (EAD 040016-01-0404, Cl. 2.2.6)	An untrimmed edge in any length	No singularities or defects
		Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)	
		A gap over treble distance of wefts or warps in any length	
		Weft skewing or weft waving over 4 % of width of the fabric (measured by a rectangular rule)	
		A cracked thread	

No.	Essential characteristic and method of verification and assessment	Expression of product performance FIBERGLASS MESH EF160		
7	Tensile strength and elongation (EAD 040016-01-0404, Cl. 2.2.7)	Number of threads per meter, determined on the principle of EN 13496, Cl. 6.3	warp threads per meter	weft threads per meter
			201.8	235.3
		In the as-delivered state	warp direction	weft direction
		<ul style="list-style-type: none"> - tensile strength $T_{max,m}$ - tensile strength $R_{50,m}$ - elongation ϵ_m 	36.7 kN/m 1836 N/50 mm 3.7 %	77.9 kN/m 3896 N/50 mm 3.5 %
		After alkalis conditioning	warp direction	weft direction
		<ul style="list-style-type: none"> - tensile strength $T_{max,m}$ - tensile strength $R_{50,m}$ - elongation ϵ - residual value of tensile strength $\Delta T_{max,ag}$ 	20.8 kN/m 1042 N/50 mm 2.3 % 56.7 %	49.1 kN/m 2459 N/50 mm 2.2 % 63.1 %
8	Mass per unit area (EAD 040016-01-0404, Cl. 2.2.8)	176 g/m²		
9	Thickness (EAD 040016-01-0404, Cl. 2.2.9)	0.48 mm		

4. Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

According to the European Commission decision 97/556/EC, the **AVCP system 2+** (further described in Annex V to Regulation (EU) No 305/2011 as amended) applies.

5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

The manufacturer shall perform a permanent internal factory production control based on the control plan. The Control Plan specifies the type, test method, criteria and frequency of tests conducted on the final product.

The control plan for the manufacturer/corner stones (factory production control) is specified in Cl. 3.2 of EAD 040016-01-0404 Glass fibre mesh for reinforcement of cementitious or cement based renderings. Manufacturer and Technical and Test Institute for Construction Prague have agreed a control plan which is deposited with the Technical and Test Institute for Construction Prague in documentation which accompanies the ETA.

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By
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