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European Technical Assessment

ETA 16/0765
of 20/06/2017

I General Part

Technical Assessment Body issuing the ETA:	**Technical and Test Institute for Construction Prague**
Trade name of the construction products:	**EUROWEK STRONG 330,** **EUROWEK PROFESSIONAL SYSTEM,** **EUROWEK LUX,** **EUROWEK STANDARD,** **EUROWEK BASIC** **EUROWEK PREMIUM** **EUROWEK PLUS+** **EUROWEK INTERIOR** - glass fibre meshes for reinforcement of cement based renderings
Product family to which the construction product belongs:	Product area code: 4 Thermal insulation products. Composite insulating kits/systems
Manufacturer:	PROXIM Sp. z o.o. Lucyny Herc 52 20-328 Lublin Poland
Manufacturing plant(s):	PROXIM Sp. z o.o. Nasutów 200B 21-025 Niemce Poland
This European Technical Assessment contains:	16 pages including 1 Annex (variation of the trade names) which form an integral part of this assessment
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of:	European Assessment Document EAD 040016-00-0404 Glass fibre mesh for reinforcement of cement based renderings (February 2016)
This ETA replaces:	ETA 16/0765 issued on 20/10/2016

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

II Specific part

1. Technical description of the product

1.1 General

EUROWEK STRONG 330, EUROWEK PROFESSIONAL SYSTEM, EUROWEK LUX, EUROWEK STANDARD, EUROWEK BASIC, EUROWEK PREMIUM, EUROWEK PLUS+, EUROWEK INTERIOR - glass fibre meshes for reinforcement of cement based renderings are leno woven fabrics made of glass fibre strands. According manufacturer declaration, the type of a glass of glass fibre meshes EUROWEK BASIC, EUROWEK STANDARD and EUROWEK PLUS+ is C-glass, the type of a glass of glass fibre meshes EUROWEK STRONG 330, EUROWEK PROFESSIONAL SYSTEM, EUROWEK LUX, EUROWEK PREMIUM, EUROWEK INTERIOR 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 products are used as reinforcement of cement based renderings (mortars) with the thickness of 2 - 10 mm. The reinforcement shall be embedded in a fresh mortar and sufficiently covered. The reinforcement prevents the hardened mortar from cracking, caused especially by dilatation.

The glass fibre meshes are also used in base coats of external thermal insulation systems with rendering (eg. ETICS).

The assessment methods included or referred to in EAD 040016-00-0404 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 works[1].

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[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

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

Table No.1 – reaction to fire:

Trade name of the mesh	**Reaction to fire class** according to Commission Delegated Regulation (EU) 2016/364
EUROWEK STRONG 330	**No performance assessed**
EUROWEK PROFESSIONAL SYSTEM	
EUROWEK LUX	
EUROWEK STANDARD	
EUROWEK BASIC	
EUROWEK PREMIUM	
EUROWEK PLUS+	
EUROWEK INTERIOR	

3.1.2 Organic content

The determination of the ash content and organic content was based on Cl. 2.2.2 of EAD 040016-00-0404.

The results of the test are stated in Table No. 2 and Table No. 3.

Table No. 2 – ash content:

Trade name of the mesh	Ash content		
EUROWEK STRONG 330	**78,7 %**	**78,8 %**	**78,6 %**
EUROWEK PROFESSIONAL SYSTEM	**84,1 %**	**84,3 %**	**84,4 %**
EUROWEK LUX	**79,7 %**	**79,7 %**	**80,0 %**
EUROWEK STANDARD	**86,5 %**	**86,6 %**	**86,3 %**
EUROWEK BASIC	**88,2 %**	**88,3 %**	**88,0 %**

Trade name of the mesh	Ash content		
EUROWEK PREMIUM	79,6 %	79,7 %	79,7 %
EUROWEK PLUS+	85,8 %	85,3 %	85,3 %
EUROWEK INTERIOR	80,0 %	79,9 %	80,3 %

Table No. 3 – organic content:

Trade name of the mesh	Organic content		
EUROWEK STRONG 330	21,3 %	21,2 %	21,4 %
EUROWEK PROFESSIONAL SYSTEM	15,9 %	15,7 %	15,6 %
EUROWEK LUX	20,3 %	20,3 %	20,0 %
EUROWEK STANDARD	13,5 %	13,4 %	13,7 %
EUROWEK BASIC	11,8 %	11,7 %	12,0 %
EUROWEK PREMIUM	20,4 %	20,3 %	20,3 %
EUROWEK PLUS+	14,2 %	14,7 %	14,7 %
EUROWEK INTERIOR	20,0 %	20,1 %	19,7 %

3.1.3 Heat combustion

The determination of the heat combustion is based on Cl. 2.2.3 of EAD 040016-00-0404.

Table No. 4

Trade name of the mesh	Heat combustion Q_{PCS} [MJ/kg]
EUROWEK STRONG 330	No performance assessed
EUROWEK PROFESSIONAL SYSTEM	
EUROWEK LUX	
EUROWEK STANDARD	
EUROWEK BASIC	
EUROWEK PREMIUM	
EUROWEK PLUS+	
EUROWEK INTERIOR	

3.2 Safety and accessibility in use (BWR 4)

The determination of mesh size, roll width, tensile strength and elongation and mass per unit area was based on Cl. 2.2.4, Cl. 2.2.5, Cl. 2.2.7 and Cl. 2.2.8 of EAD 040016-00-0404.

Weaving accuracy and thickness – no performance assessed

The results of the tests are stated in Table No. 5 - Table No. 12

Table No. 5 – EUROWEK STRONG 330

EUROWEK STRONG 330			
Mesh size*	Average mesh size (warp direction x weft direction)		**8,5 x 15,0 mm**
	Mesh opening (warp direction x weft direction)		**5,9 x 8,3 mm**
Roll width	**1000 mm**		
Weaving accuracy	An untrimmed edge in any length		**No performance assessed**
	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 yarn		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**84 N/mm** **4,3 %**	**97 N/mm** **4,4 %**
	After alkalis conditioning	warp direction	weft direction
	- tensile strength - elongation ε	**44 N/mm** **2,3 %**	**49 N/mm** **2,0 %**
	The average value of the tensile strength after alkalis conditioning shall be at least 20 N/mm and at least 50 % of the strength in the as-delivered state (residual strength): **passed:** ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered		
Mass per unit area	**319 g/m²**		
Thickness	**No performance assessed**		

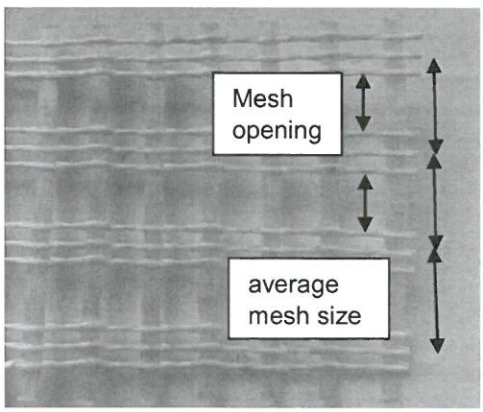

*Fig. No 1: Lenght in the warp direction, width 50 mm - there are 12 warp fibres within the width of 50 mm laid out of as group of 3 fibres

Table No. 6 – EUROWEK PROFESSIONAL SYSTEM

<table>
<tr><th colspan="4">EUROWEK PROFESSIONAL SYSTEM</th></tr>
<tr><td rowspan="2">Mesh size</td><td colspan="2">Average mesh size
(warp direction x weft direction)</td><td>5,2 x 4,1 mm</td></tr>
<tr><td colspan="2">Mesh opening
(warp direction x weft direction)</td><td>4,1 x 3,6 mm</td></tr>
<tr><td>Roll width</td><td colspan="3">1099 mm</td></tr>
<tr><td rowspan="4">Weaving accuracy</td><td colspan="2">An untrimmed edge in any length</td><td rowspan="4">No performance assessed</td></tr>
<tr><td colspan="2">Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)</td></tr>
<tr><td colspan="2">A gap over treble distance of wefts or warps in any length</td></tr>
<tr><td colspan="2">Weft skewing or weft waving over 4 % of width of the fabric (measured by a rectangular rule)
A cracked yarn</td></tr>
<tr><td rowspan="5">Tensile strength and elongation (warp and weft direction)</td><td>In the as-delivered state</td><td>warp direction</td><td>weft direction</td></tr>
<tr><td>- tensile strength
- elongation ε</td><td>46 N/mm
3,6 %</td><td>41 N/mm
3,5 %</td></tr>
<tr><td>After alkalis conditioning</td><td>warp direction</td><td>weft direction</td></tr>
<tr><td>- tensile strength
- elongation ε</td><td>36 N/mm
2,7 %</td><td>41 N/mm
3,4 %</td></tr>
<tr><td colspan="3">The average value of the tensile strength after alkalis conditioning shall be at least 20 N/mm and at least 50 % of the strength in the as-delivered state (residual strength):
passed: ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered</td></tr>
<tr><td>Mass per unit area</td><td colspan="3">158 g/m²</td></tr>
<tr><td>Thickness</td><td colspan="3">No performance assessed</td></tr>
</table>

Table No. 7 – EUROWEK LUX

EUROWEK LUX			
Mesh size	Average mesh size (warp direction x weft direction)		**5,4 x 5,2 mm**
	Mesh opening (warp direction x weft direction)		**4,2 x 4,9 mm**
Roll width	**999 mm**		
Weaving accuracy	An untrimmed edge in any length		**No performance assessed**
	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 yarn		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**39 N/mm** **3,7 %**	**55 N/mm** **3,7 %**
	After alkalis conditioning	warp direction	weft direction
	- tensile strength - elongation ε	**28 N/mm** **2,6 %**	**49 N/mm** **3,4 %**
	The average value of the tensile strength after alkalis conditioning shall be at least 20 N/mm and at least 50 % of the strength in the as-delivered state (residual strength): **passed:** ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered		
Mass per unit area	**163 g/m²**		
Thickness	**No performance assessed**		

Table No. 8 – EUROWEK STANDARD

EUROWEK STANDARD			
Mesh size	Average mesh size (warp direction x weft direction)		**6,0 x 5,1 mm**
	Mesh opening (warp direction x weft direction)		**4,5 x 4,8 mm**
Roll width	**1002 mm**		
Weaving accuracy	An untrimmed edge in any length		**No performance assessed**
	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 yarn		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**37 N/mm** **3,4 %**	**44 N/mm** **3,4%**
	After alkalis conditioning	warp direction	weft direction
	- tensile strength - elongation ε	**25 N/mm** **2,5 %**	**32 N/mm** **2,6 %**
	The average value of the tensile strength after alkalis conditioning shall be at least 20 N/mm and at least 50 % of the strength in the as-delivered state (residual strength): **passed:** ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered		
Mass per unit area	**141 g/m²**		
Thickness	**No performance assessed**		

Table No. 9 – EUROWEK BASIC

EUROWEK BASIC			
Mesh size	Average mesh size (warp direction x weft direction)		**6,1 x 5,1 mm**
	Mesh opening (warp direction x weft direction)		**4,6 x 4,8 mm**
Roll width	**1002 mm**		
Weaving accuracy	An untrimmed edge in any length		**No performance assessed**
	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 yarn		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**39 N/mm** **3,9 %**	**40 N/mm** **3,4 %**
	After alkalis conditioning	warp direction	weft direction
	- tensile strength - elongation ε	**20 N/mm** **1,9 %**	**25 N/mm** **2,0 %**
	The average value of the tensile strength after alkalis conditioning shall be at least 20 N/mm and at least 50 % of the strength in the as-delivered state (residual strength): **passed:** ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered		
Mass per unit area	**134 g/m²**		
Thickness	**No performance assessed**		

Table No. 10 – EUROWEK PREMIUM

<table>
<tr><th colspan="4">EUROWEK PREMIUM</th></tr>
<tr><td rowspan="2">Mesh size</td><td colspan="2">Average mesh size
(warp direction x weft direction)</td><td>5,0 x 5,1 mm</td></tr>
<tr><td colspan="2">Mesh opening
(warp direction x weft direction)</td><td>3,8 x 4,8 mm</td></tr>
<tr><td>Roll width</td><td colspan="3">1001 mm</td></tr>
<tr><td rowspan="5">Weaving accuracy</td><td colspan="2">An untrimmed edge in any length</td><td rowspan="5">No performance assessed</td></tr>
<tr><td colspan="2">Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)</td></tr>
<tr><td colspan="2">A gap over treble distance of wefts or warps in any length</td></tr>
<tr><td colspan="2">Weft skewing or weft waving over 4 % of width of the fabric (measured by a rectangular rule)</td></tr>
<tr><td colspan="2">A cracked yarn</td></tr>
<tr><td rowspan="5">Tensile strength and elongation (warp and weft direction)</td><td>In the as-delivered state</td><td>warp direction</td><td>weft direction</td></tr>
<tr><td>- tensile strength
- elongation ε</td><td>33 N/mm
3,4 %</td><td>48 N/mm
3,9 %</td></tr>
<tr><td>After alkalis conditioning</td><td>warp direction</td><td>weft direction</td></tr>
<tr><td>- tensile strength
- elongation ε</td><td>20 N/mm
2,1 %</td><td>29 N/mm
2,5 %</td></tr>
<tr><td colspan="3">The average value of the tensile strength after alkalis conditioning shall be at least 20 N/mm and at least 50 % of the strength in the as-delivered state (residual strength):
passed: ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered</td></tr>
<tr><td>Mass per unit area</td><td colspan="3">151 g/m²</td></tr>
<tr><td>Thickness</td><td colspan="3">No performance assessed</td></tr>
</table>

Table No. 11 – EUROWEK PLUS+

EUROWEK PLUS+			
Mesh size	Average mesh size (warp direction x weft direction)		**6,3 x 5,2 mm**
	Mesh opening (warp direction x weft direction)		**4,7 x 4,8 mm**
Roll width	**1006 mm**		
Weaving accuracy	An untrimmed edge in any length		**No performance assessed**
	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 yarn		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**38 N/mm** **3,8 %**	**48 N/mm** **3,6 %**
	After alkalis conditioning	warp direction	weft direction
	- tensile strength - elongation ε	**21 N/mm** **2,1 %**	**33 N/mm** **2,5 %**
	The average value of the tensile strength after alkalis conditioning shall be at least 20 N/mm and at least 50 % of the strength in the as-delivered state (residual strength): **passed:** ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered		
Mass per unit area	**148 g/m²**		
Thickness	**No performance assessed**		

Table No. 12 – EUROWEK INTERIOR

EUROWEK INTERIOR			
Mesh size	Average mesh size (warp direction x weft direction)		**9,0 x 10,2 mm**
	Mesh opening (warp direction x weft direction)		**7,1 x 9,4 mm**
Roll width	**1000 mm**		
Weaving accuracy	An untrimmed edge in any length		**No performance assessed**
	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 yarn		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**39 N/mm** **4,1 %**	**62 N/mm** **4,2 %**
	After alkalis conditioning	warp direction	weft direction
	- tensile strength - elongation ε	**25 N/mm** **2,6 %**	**52 N/mm** **3,6 %**
	The average value of the tensile strength after alkalis conditioning shall be at least 20 N/mm and at least 50 % of the strength in the as-delivered state (residual strength): **passed:** ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered		
Mass per unit area	**148 g/m²**		
Thickness	**No performance assessed**		

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 040016-00-0404 *Glass fibre mesh for reinforcement of 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.

Issued in Prague on 20/06/2017

By
Ing. Mária Schaan
Head of the Technical Assessment Body

Annex No. 1

Variations of trade names of glass fibre meshes for reinforcement of cement based renderings:

Trade name in this ETA	Variation of the trade name
EUROWEK STRONG 330	SOLID; ES-330
EUROWEK PROFESSIONAL SYSTEM	ECG165; E4-165
EUROWEK LUX	FGM-165; EG165
EUROWEK STANDARD	FGM-145; STD-145
EUROWEK BASIC	FGM-140
EUROWEK PREMIUM	FGM-150; EG150; EUROWEK PROFESSIONAL
EUROWEK PLUS+	P-150; PLUS+
EUROWEK INTERIOR	INT-145