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European Technical Assessment

ETA 13/0392 of 18/02/2019

General Part

Technical Assessment Body issuing the European Technical Assessment:	**Technical and Test Institute for Construction Prague**
Trade name of the construction product:	**R 116 A101, R 117 A101, R 121 A101, R 122 A101, R 123 A101, R 128 A101, R 131 A101, R 131 A101C+, R 131 A102C+, R 137 A101, R 140 A101N, R 148 A101, R 161 A101, R 162 A101, R 163 A101, R 165 A101, R 170 A101, R 178 A101, R 178 A102C+, R 267 A101, R 275 A101, R 326 A101, R 451 A101, R 585 A101** - glass fibre mesh 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:	SAINT-GOBAIN ADFORS CZ s.r.o. 106 Sokolovská 570 01 Litomyšl Czech Republic
Manufacturing plant(s):	SAINT-GOBAIN ADFORS CZ s.r.o. 106 Sokolovská 570 01 Litomyšl Czech Republic
This European Technical Assessment contains:	22 pages
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:	**EAD 040016-00-0404** Glass fibre mesh for reinforcement of cement based renderings
This version replaces:	ETA 13/0392 issued on 02/07/2018

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Specific part

1. Technical description of the product

1.1 General

Glass fibre meshes for reinforcement of cement based renderings are leno woven fabrics made of glass fibre strands. According 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.

List of the meshes covered by this ETA:

R 116 A101,
R 117 A101,
R 121 A101,
R 122 A101,
R 123 A101,
R 128 A101,
R 131 A101,
R 131 A101C+,
R 131 A102C+,
R 137 A101,
R 140 A101N,
R 148 A101,
R 161 A101,
R 162 A101,
R 163 A101,
R 165 A101,
R 170 A101,
R 178 A101,
R 178 A102C+,
R 267 A101,
R 275 A101,
R 326 A101,
R 451 A101,
R 585 A101

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].

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.

[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.

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
for all meshes covered by this ETA: R 116 A101, R 117 A101, R 121 A101, R 122 A101, R 123 A101, R 128 A101, R 131 A101, R 131 A101C+, R 131 A102C+, R 137 A101, R 140 A101N, R 148 A101, R 161 A101, R 162 A101, R 163 A101, R 165 A101, R 170 A101, R 178 A101, R 178 A102C+, R 267 A101, R 275 A101, R 326 A101, R 451 A101, R 585 A101	**No performance assessed**

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.

Table No. 2 – ash content and organic content:

Trade name of the mesh	Ash content			Organic content		
R 116 A101	**82,7 %**	**81,7 %**	**84,2 %**	**17,3 %**	**18,3 %**	**15,8 %**
R 117 A101	**79,9 %**	**80,7 %**	**80,0 %**	**20,1 %**	**19,3 %**	**20,0 %**
R 121 A101	**79,9 %**	**81,6 %**	**80,7 %**	**20,1 %**	**18,4 %**	**19,3 %**
R 122 A101	**81,5 %**	**81,6 %**	**81,6 %**	**18,5 %**	**18,4 %**	**18,4 %**
R 123 A101	**81,2 %**	**80,7 %**	**79,8 %**	**18,8 %**	**19,3 %**	**20,2 %**
R 128 A101	**82,0 %**	**82,7 %**	**82,5 %**	**18,0 %**	**17,3 %**	**17,5 %**
R 131 A101	**82,8 %**	**82,2 %**	**82,6 %**	**17,2 %**	**17,8 %**	**17,4 %**
R 131 A101C+	**82,8 %**	**82,2 %**	**82,6 %**	**17,2 %**	**17,8 %**	**17,4 %**
R 131 A102C+	**81,7 %**	**82,1 %**	**81,9 %**	**18,3 %**	**17,9 %**	**18,1 %**
R 137 A101	**81,8 %**	**84,8 %**	**77,6 %**	**18,2 %**	**15,2 %**	**22,4 %**
R 140 A101N	**89,3 %**	**88,6 %**	**87,7 %**	**10,7 %**	**11,4 %**	**12,3 %**
R 148 A101	**81,6 %**	**82,1 %**	**81,9 %**	**18,4 %**	**17,9 %**	**18,1 %**
R 161 A101	**81,1 %**	**80,8 %**	**80,3 %**	**18,9 %**	**19,2 %**	**19,7 %**
R 162 A101	**78,2 %**	**77,5 %**	**78,4 %**	**21,8 %**	**22,5**	**21,6**
R 163 A101	**82,8 %**	**83,2 %**	**83,0 %**	**17,2 %**	**16,8 %**	**17,0 %**
R 165 A101	**81,4 %**	**81,3 %**	**81,0 %**	**18,6 %**	**18,7 %**	**19,0 %**
R 170 A101	**82,2 %**	**82,1 %**	**82,5 %**	**17,8 %**	**17,9 %**	**17,5 %**

Trade name of the mesh	Ash content			Organic content		
R 178 A101	**84,5 %**	**84,5 %**	**84,0 %**	**15,5 %**	**15,5 %**	**16,0 %**
R 178 A102C+	**79,5 %**	**81,8 %**	**80,7 %**	**20,5 %**	**18,2 %**	**19,3 %**
R 267 A101	**83,6 %**	**84,2 %**	**83,9 %**	**16,4 %**	**15,8 %**	**16,1 %**
R 275 A101	**83,3 %**	**83,9 %**	**83,0 %**	**16,7 %**	**16,1 %**	**17,0 %**
R 326 A101	**83,4 %**	**83,3 %**	**83,2 %**	**16,6 %**	**16,7 %**	**16,8 %**
R 451 A101	**88,5 %**	**89,7 %**	**87,6 %**	**11,5 %**	**10,3 %**	**12,4 %**
R 585 A101	**82,5 %**	**82,4 %**	**82,6 %**	**17,5 %**	**17,6 %**	**17,4 %**

3.1.3 Heat combustion

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

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

Table No. 3.

Trade name of the mesh	Heat combustion Q_{PCS} [MJ/kg]	Trade name of the mesh	Heat combustion Q_{PCS} [MJ/kg]
R 116 A101	**6,64**	R 161 A101	**5,77**
R 117 A101	**6,64**	R 162 A101	**9,58**
R 121 A101	**5,96**	R 163 A101	**6,22**
R 122 A101	**6,67**	R 165 A101	**6,72**
R 123 A101	**6,62**	R 170 A101	**6,23**
R 128 A101	**6,24**	R 178 A101	**5,71**
R 131 A101	**5,80**	R 178 A102C+	**6,55**
R 131 A101C+	**5,80**	R 267 A101	**6,02**
R 131 A102C+	**5,28**	R 275 A101	**5,66**
R137 A101	**6,93**	R 326 A101	**5,97**
R 140 A101N	**2,05**	R 451 A101	**4,17**
R 148 A101	**6,76**	R 585 A101	**4,88**

3.2 Safety and accessibility in use (BWR 4)

The determination of mesh size, tensile strength and elongation, mass per unit area and thickness was based on Cl. 2.2.4, Cl. 2.2.7, Cl. 2.2.8, Cl. 2.2.9 of EAD 040016-00-0404.

Roll width and weaving accuracy: no performance assessed.

The results of the test are stated in Table No. 4 - Table No. 27.

Table No. 4 – R 116 A101

R 116 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**4,8 x 5,8 mm**
	Mesh opening (warp direction x weft direction)		**3,9 x 4,4 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**46 N/mm** **3,8 %**	**45 N/mm** **4,1 %**
	After alkalis conditioning	warp direction	weft direction
	- tensile strength - elongation ε	**31 N/mm** **2,6 %**	**30 N/mm** **2,7 %**
	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	**147 g/m²**		
Thickness	**0,51 mm**		

Table No. 5 – R 117 A101

R 117 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**4,7 x 5,8 mm**
	Mesh opening (warp direction x weft direction)		**4,0 x 4,5 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**45 N/mm** **3,7 %**	**47 N/mm** **4,2 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		23 N/mm **2,1 %**	**28 N/mm** **2,4 %**
	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	**152 g/m²**		
Thickness	**0,56 mm**		

Table No. 6 – R 121 A101

R 121 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**4,7 x 5,7 mm**
	Mesh opening (warp direction x weft direction)		**4,0 x 4,5 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**48 N/mm** **3,9 %**	**47 N/mm** **4,0 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		31 N/mm **2,7 %**	**29 N/mm** **2,4 %**
	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	**159 g/m²**		
Thickness	**0,56 mm**		

Table No. 7 – R 122 A101

R 122 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**7,1 x 7,1 mm**
	Mesh opening (warp direction x weft direction)		**6,3 x 5,5 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
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 %**	**52 N/mm** **3,8 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		24 N/mm **2,4 %**	**31 N/mm** **2,1 %**
	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	**159 g/m²**		
Thickness	**0,74 mm**		

Table No. 8 – R 123 A101

R 123 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**7,1 x 7,8 mm**
	Mesh opening (warp direction x weft direction)		**6,1 x 5,9 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**43 N/mm** **3,7 %**	**53 N/mm** **3,9 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		29 N/mm **2,6 %**	**36 N/mm** **2,7 %**
	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	**155 g/m²**		
Thickness	**0,66 mm**		

Table No. 9 – R 128 A101

R 128 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**9,1 x 9,1 mm**
	Mesh opening (warp direction x weft direction)		**8,0 x 7,1 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**45 N/mm** **3,8 %**	**62 N/mm** **4,4 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		28 N/mm **2,4 %**	**41 N/mm** **3,0 %**
	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	**158 g/m²**		
Thickness	**0,57 mm**		

Table No. 10 – R 131 A101

R 131 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**4,0 x 4,6 mm**
	Mesh opening (warp direction x weft direction)		**3,3 x 3,7 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**48 N/mm** **3,9 %**	**50 N/mm** **4,0 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		33 N/mm **2,9 %**	**38 N/mm** **3,0 %**
	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	**167 g/m²**		
Thickness	**0,53 mm**		

Table No. 11 – R 131 A101C+

R 131 A101C+			
Mesh size	Average mesh size (warp direction x weft direction)		**4,0 x 5,0 mm**
	Mesh opening (warp direction x weft direction)		**3,2 x 3,6 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**49 N/mm** **3,9 %**	**53 N/mm** **4,2 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		29 N/mm **2,5 %**	**36 N/mm** **2,9 %**
	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	**165 g/m²**		
Thickness	**0,50 mm**		

Table No. 12 – R 131 A102C+

R 131 A102C+			
Mesh size	Average mesh size (warp direction x weft direction)		**4,0 x 4,4 mm**
	Mesh opening (warp direction x weft direction)		**3,2 x 3,5 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**48 N/mm** **3,9 %**	**50 N/mm** **3,9 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		29 N/mm **2,4 %**	**31 N/mm** **2,4 %**
	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	**164 g/m²**		
Thickness	**0,48 mm**		

Table No. 13 – R 137 A101

R 137 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**6,5 x 8,0 mm**
	Mesh opening (warp direction x weft direction)		**5,7 x 6,2 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**44 N/mm** **3,8 %**	**62 N/mm** **4,3 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		30 N/mm **2,5 %**	**42 N/mm** **2,8 %**
	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	**172 g/m²**		
Thickness	**0,67 mm**		

Table No. 14 – R 140 A101N

R 140 A101N			
Mesh size	Average mesh size (warp direction x weft direction)		**4,0 x 4,8 mm**
	Mesh opening (warp direction x weft direction)		**3,2 x 3,5 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**52 N/mm** **4,2 %**	**54 N/mm** **4,1 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		32 N/mm **2,7 %**	**39 N/mm** **2,8 %**
	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	**162 g/m²**		
Thickness	**0,53 mm**		

Table No. 15 – R 148 A101

R 148 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**9,0 x 9,0 mm**
	Mesh opening (warp direction x weft direction)		**8,2 x 7,0 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state - tensile strength - elongation ε	warp direction **42 N/mm** **3,6 %**	weft direction **66 N/mm** **4,0 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction **30 N/mm** **2,6 %**	weft direction **39 N/mm** **2,2 %**
	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	**182 g/m²**		
Thickness	**0,83 mm**		

Table No. 16 – R 161 A101

R 161 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**8,3 x 8,4 mm**
	Mesh opening (warp direction x weft direction)		**7,3 x 6,3 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state - tensile strength - elongation ε	warp direction **44 N/mm** **3,8 %**	weft direction **75 N/mm** **4,0 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction **25 N/mm** **2,1 %**	weft direction **46 N/mm** **2,4 %**
	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	**203 g/m²**		
Thickness	**0,66 mm**		

Table No. 17 – R 162 A101

R 162 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**8,3 x 9,1 mm**
	Mesh opening (warp direction x weft direction)		**7,2 x 7,1 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**52 N/mm** **4,0 %**	**66 N/mm** **3,7 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		37 N/mm **2,9 %**	**46 N/mm** **2,4 %**
	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	**206 g/m²**		
Thickness	**0,79 mm**		

Table No. 18 – R 163 A101

R 163 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**6,2 x 6,4 mm**
	Mesh opening (warp direction x weft direction)		**5,1 x 4,9 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**56 N/mm** **4,2 %**	**64 N/mm** **4,3 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		33 N/mm **2,3 %**	**36 N/mm** **2,4 %**
	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	**202 g/m²**		
Thickness	**0,76 mm**		

Table No. 19 – R 165 A101

R 165 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**5,0 x 5,1 mm**
	Mesh opening (warp direction x weft direction)		**4,7 x 4,2 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**47 N/mm** **4,0 %**	**71 N/mm** **4,2 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		29 N/mm **2,7 %**	**46 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	**206 g/m²**		
Thickness	**0,68 mm**		

Table No. 20 – R 170 A101

R 170 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**5,0 x 5,9 mm**
	Mesh opening (warp direction x weft direction)		**4,3 x 3,9 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**40 N/mm** **3,9 %**	**97 N/mm** **4,5 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		21 N/mm **2,1 %**	**58 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	**217 g/m²**		
Thickness	**0,65 mm**		

Table No. 21 – R 178 A101

R 178 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**8,3 x 10,4 mm**
	Mesh opening (warp direction x weft direction)		**7,1 x 7,8 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**61 N/mm** **4,1 %**	**56 N/mm** **3,8 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		41 N/mm **2,7 %**	**38 N/mm** **2,4 %**
	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	**221 g/m²**		
Thickness	**0,93 mm**		

Table No. 22 – R 178 A102C+

R 178 A102C+			
Mesh size	Average mesh size (warp direction x weft direction)		**8,3 x 10,0 mm**
	Mesh opening (warp direction x weft direction)		**7,0 x 7,7 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**67 N/mm** **4,1 %**	**65 N/mm** **4,2 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		38 N/mm **2,7 %**	**44 N/mm** **3,0 %**
	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	**232 g/m²**		
Thickness	**1,00 mm**		

Table No. 23 – R 267 A101

R 267 A101			
Mesh size*	Average mesh size (warp direction x weft direction)		**13,0 x 10,0 mm**
	Mesh opening (warp direction x weft direction)		**7,5 x 6,5 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**52 N/mm** **3,8 %**	**153 N/mm** **4,5 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		34 N/mm **2,6 %**	**115 N/mm** **3,5 %**
	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	**323 g/m²**		
Thickness	**0,78 mm**		

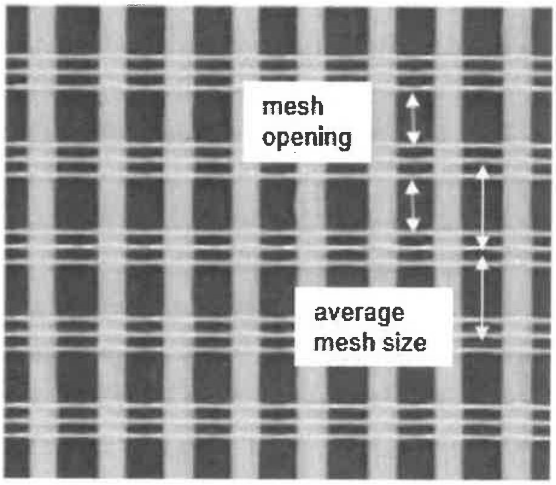

*Fig. No 1: Lenght in the warp direction, width 50 mm - there are 12 warp fibres within the width of 50 mm laid out as group of 3 fibres

Table No. 24 – R 275 A101

R 275 A101			
Mesh size*	Average mesh size (warp direction x weft direction)		**10,0 x 8,0 mm**
	Mesh opening (warp direction x weft direction)		**5,7 x 5,5 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**90 N/mm** **4,5 %**	**105 N/mm** **4,5 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		56 N/mm **2,8 %**	**75 N/mm** **2,9 %**
	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	**336 g/m²**		
Thickness	**0,88 mm**		

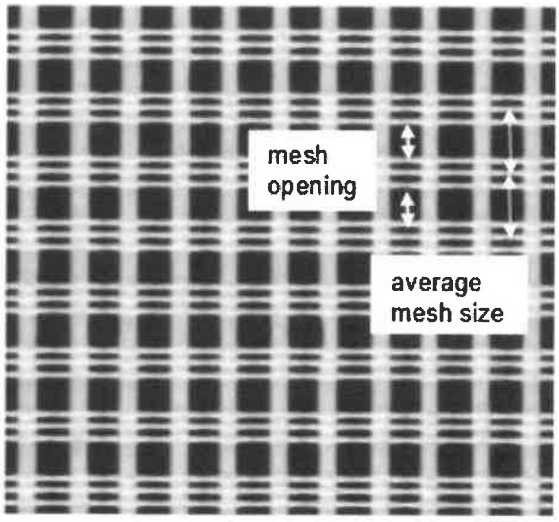

*Fig. No 2: Lenght in the warp direction, width 50 mm - there are 15 warp fibres within the width of 50 mm laid out of as group of 3 fibres

Table No. 25 – R 326 A101

R 326 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**5,0 x 5,9 mm**
	Mesh opening (warp direction x weft direction)		**3,8 x 4,0 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state - tensile strength - elongation ε	warp direction **81 N/mm** **4,7 %**	weft direction **125 N/mm** **4,4 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction **44 N/mm** **3,2 %**	weft direction **80 N/mm** **2,7 %**
	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	**410 g/m²**		
Thickness	**0,96 mm**		

Table No. 26 – R 451 A101

R 451 A101			
Mesh size*	Average mesh size (warp direction x weft direction)		**10,0 x 8,4 mm**
	Mesh opening (warp direction x weft direction)		**5,2 x 4,7 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**111 N/mm** **4,6 %**	**194 N/mm** **4,1 %**
	After alkalis conditioning - tensile strength - elongation ε	warp direction	weft direction
		64 N/mm **2,9 %**	**157 N/mm** **3,5 %**
	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	**533 g/m²**		
Thickness	**1,14 mm**		

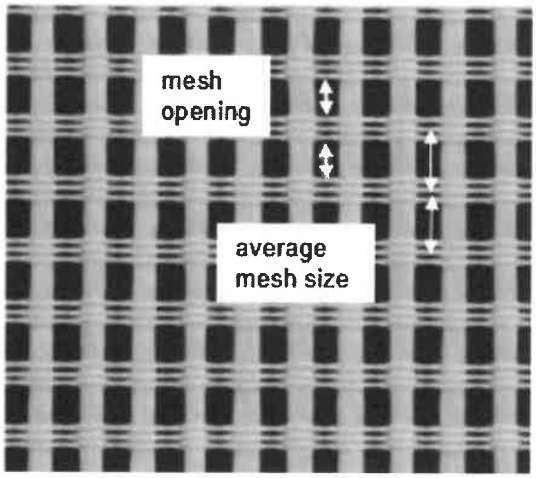

*Fig. No 3: Lenght in the warp direction, width 50 mm - there are 15 warp fibres within the width of 50 mm laid out of as group of 3 fibres

Table No. 27 – R 585 A101

R 585 A101			
Mesh size	Average mesh size (warp direction x weft direction)		**8,3 x 9,2 mm**
	Mesh opening (warp direction x weft direction)		**5,0 x 4,7 mm**
Roll width	**No performance assessed**		
Weaving accuracy	**No performance assessed**		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength - elongation ε	**235 N/mm** **5,0 %**	**195 N/mm** **4,5 %**
	After alkalis conditioning	warp direction	weft direction
	- tensile strength - elongation ε	**145 N/mm** **3,0 %**	**150 N/mm** **3,3 %**
	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		
Mass per unit area	**654 g/m²**		
Thickness	**1,08 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 control plan for the manufacturer (factory production control) is specified in Cl. 3.2 of EAD 040016-00-0404 *Glass fibre mesh for reinforcement of cement based renderings*.

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By
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