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### European Technical Assessment

### ETA 16/0546 of 31/10/2021

#### General Part

#### Technical Assessment Body issuing the European Technical Assessment:

Technical and Test Institute for Construction Prague

<ul> <li>117S (plant Slovakia and Macedonia),</li> <li>117L (plant Slovakia)</li> <li>122L (plant Slovakia and Macedonia),</li> <li>122 (plant Slovakia and Macedonia),</li> <li>123 (plant Slovakia and Macedonia),</li> <li>123/2 (plant Slovakia),</li> <li>125/1 (plant Slovakia),</li> <li>210/2 (plant Slovakia)</li> <li>glass fibre meshes for reinforcement of cementitious or cement based renderings</li> </ul>
Product area code: 4 Thermal insulation products. Composite insulating kits/systems
Technical Textiles – d.o.o.e.l. Techn-Industrial zone 12, MK 2000 SHTIP, North Macedonia
Technical Textiles, s.r.o. Školská 54 922 41 Drahovce, Slovak Republic
Technical Textiles – d.o.o.e.l. Techn-Industrial zone 12, MK 2000 SHTIP, North Macedonia
29 pages
EAD 040016-01-0404 Glass fibre mesh for reinforcement of cementitious or cement based renderings
ETA 16/0546 issued on 22/04/2020

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#### 1. Technical description of the product

#### 1.1 General

**117S, 117L, 122L, 122, 123, 123/2, 125/1, 210/2** - glass fibre meshes (rectangular) for reinforcement of cement based renderings are leno woven fabrics 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.

List of the meshes and manufacturing plants:

Technical Textiles, s.r.o., Školská 54,922 41 Drahovce, Slovak Republic

- 117S,

- 117L,

- 122L,

- 122,

- 123,

- 123/2,

- 125/1,

- 210/2

Technical Textiles – d.o.o.e.l., Techn-Industrial zone 12, MK, 2000 SHTIP, North Macedonia - 117S,

- 122L,

- 122,

- 123

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 cementitious base coats (e.g. of ETICS). 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 works<sup>1</sup>.

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.

<sup>&</sup>lt;sup>1</sup> 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

The essential characteristics of glass fibre meshes for reinforcement of cement based renderings **117S**, **117L**, **122L**, **122**, **123**, **123/2**, **125/1**, **210/2** (plants as specified in Cl. 1.1. of this ETA) and methods of verification were carried out in compliance with the *EAD 040016-01-0404: Glass fibre meshes for reinforcement of cementitious or cement based renderings*. Expression of product performance is stated in Table No. 1 - Table No. 12. Historical data according *EAD 040016-00-0404* were taken into account, see notes in Table No. 1, 3, 4, 5, 6 and 7.

No.	Essential characteristic and method of verification and assessment	Expression of product performance 117S (plant Slovakia)		
		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	<b>Organic content</b> (EAD 040016-01-0404,	Ash content (average value)	Organic content (average value)	
	Cl. 2.2.2)	81.1 %	18.9 %	
	Grass boot of	Heat combustio	on Q <sub>PCS</sub> [MJ/kg]	
	(EAD 040016-01-0404,	7.32 N	/IJ/kg	
3		Heat combustic	on Q <sub>PCS</sub> [MJ/m²]	
	Cl. 2.2.3)	1.08 N	IJ/m²	
	Hygie	ne, health and the environment (BW	/R 3)	
4	Content, emission and/or release of dangerous substances	Leachable substances	No performance assessed	
	(EAD 040016-01-0404, Cl. 2.2.4)	Content of cadmium		
	Sa	afety and accessibility in use (BWR 4	4)	
	Mesh size*	Average mesh size* (warp direction x weft direction)	4.6 x 5.2 mm	
F	(EAD 040016-01-0404, Cl. 2.2.5)	Average mesh opening* (warp direction x weft direction)	3.5 x 4.9 mm	
5	* Historical data according to EAD 040016-00-0404, Cl. 2.2.4	Coverage ratio [%] (calculated from historical data of average mesh opening and average mesh size)	28.3 %	

Table No. 1: glass fibre mesh 117S (plant Slovakia)

No.	Essential characteristic and method of verification and assessment	Expression of product performance 117S (plant Slovakia)				
	Weaving accuracy	An untrimmed edge in a Deflected (uneven) fron	iny length ts of rolls			
		over ± 5 mm (measured edge of the inner tube)	I from the			
6	(EAD 040016-01-0404, Cl. 2.2.6)	A gap over treble distar wefts or warps in any le	ngth	No perfe	ormance assessed	
		Weft skewing or weft wa 4 % of width of the fabri (measured by a rectang	aving over c ular rule)			
		A cracked thread				
		Number of threads within the width of	wa	rp	weft	
	Tensile strength and elongation** (EAD 040016-01-0404, Cl. 2.2.7) ** Historical data according to EAD 040016-00-0404, Cl. 2.2.7	50 mm of the samp used for tensile strength testing	50 mm of the sample used for tensile strength testing	1	0	11
		In the as-delivered state	wa direc	rp tion	weft direction	
		<ul> <li>tensile strength</li> <li>elongation ε</li> </ul>	35 N/ 3.7	/mm %	50 N/mm 4.0 %	
7		After alkalis conditioning	wa direc	rp tion	weft direction	
		- tensile strength	20 N	/mm	29 N/mm	
		<ul> <li>elongation ε</li> </ul>	2.2	%	2.4 %	
		The average value of th shall be at least <b>20 N/m</b> as-delivered state (resid	e tensile sti m and at le ual strength	rength afte east <b>50 %</b> c ):	r alkalis conditioning of the strength in the	
		<b>passed:</b> ≥ 20 N/mm after ≥ 50 % of the strength in	er alkalis co the as-deliv	nditioning a vered.	and residual strength	
		Residual strength of the <b>57.3 %</b> (warp direction) in the as-delivered.	tensile stre and <b>58.0 %</b>	ngth after a (weft dired	alkalis conditioning = ction) of the strength	
	Mass per unit area					
8	(EAD 040016-01-0404, Cl. 2.2.8)		149 g/ı	m²		
0	Thickness		_			
9	(EAD 040016-01-0404, Cl. 2.2.9)		0.51 m	m		

No.	Essential characteristic and method of verification and assessment	Expression of product performance 117L (plant Slovakia)		
		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		
		Ash content	Organic content	
2	Organic content (EAD 040016-01-0404.	(average value)	(average value)	
	Cl. 2.2.2)	79.6 %	20.4 %	
	Cross bast of	Heat combusti	on Q <sub>PCS</sub> [MJ/kg]	
0	combustion	8.28	MJ/kg	
3	(EAD 040016-01-0404,	Heat combusti	on Q <sub>PCS</sub> [MJ/m²]	
	CI. 2.2.3)	1.08	MJ/m <sup>2</sup>	
	Hygie	ene, health and the environment (BV	VR 3)	
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404,	Leachable substances	No performance assessed	
	Cl. 2.2.4)	Content of cadmium		
	Sa	afety and accessibility in use (BWR	4)	
		Average mesh size (warp direction x weft direction)	5.13 x 5.81 mm	
5	Mesh size	Average mesh opening (warp direction x weft direction)	4.65 x 4.60 mm	
5	(EAD 040016-01-0404, Cl. 2.2.5)	<b>Coverage ratio</b> [%] (calculated from historical data of average mesh opening and average mesh size)	28.2 %	
		An untrimmed edge in any length		
	Weaving accuracy	Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)		
6	(EAD 040016-01-0404, CL 2 2 6)	A gap over treble distance of wefts or warps in any length	No performance assessed	
	CI. 2.2.6)	Weft skewing or weft waving over 4 % of width of the fabric (measured by a rectangular rule)		
1		A cracked thread		

No.	Essential characteristic and method of verification and assessment	Expression of product performance 117L (plant Slovakia)		
		Number of threads within the width of	warp direction	weft direction
		used for tensile strength testing	10	9
		In the as-delivered state	warp direction	weft direction
		- tensile strength	40 N/mm	43 N/mm
	Tensile strength and elongation       -       elongation ε         (EAD 040016-01-0404, Cl. 2.2.7)       -       After alkalis conditioning         -       elongation ε       -         The average value of shall be at least 20 N as-delivered state (rest passed: ≥ 20 N/mm at ≥ 50 % of the strength of the strength in the as-delivered.       -	<ul> <li>elongation ε</li> </ul>	3.9 %	3.8 %
		After alkalis conditioning	warp	weft
7			direction	direction
		- tensile strength	22 N/mm	25 N/mm
		- elongation $\varepsilon$	2.2 %	2.1 %
		The average value of th shall be at least <b>20 N/m</b> as-delivered state (resid <b>passed:</b> ≥ 20 N/mm afte ≥ 50 % of the strength in Residual strength of the <b>57.3</b> % (warp direction) in the as-delivered.	te tensile strength afte am and at least <b>50 %</b> of ual strength): er alkalis conditioning a the as-delivered. tensile strength after a and <b>58.0 %</b> (weft direct	r alkalis conditioning of the strength in the and residual strength alkalis conditioning = ction) of the strength
	Mass per unit area			
8	(EAD 040016-01-0404, Cl. 2.2.8)	131 g/m²		
	Thickness			
9	(EAD 040016-01-0404, Cl. 2.2.9)	No p	performance assessed	d

No.	Essential characteristic and method of verification and assessment	Expression of product performance 122L (plant Slovakia)		
		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		
		Ash content	Organic content	
2		(average value)	(average value)	
2	(EAD 040016-01-0404, Cl. 2.2.2)	81.3 %	18.7 %	
		Heat combustic	on Q <sub>PCS</sub> [MJ/kg]	
	combustion	7.62 N	/IJ/kg	
3	(EAD 040016-01-0404,	Heat combustic	on Q <sub>PCS</sub> [MJ/m <sup>2</sup> ]	
	Cl. 2.2.3)	1.12 M	/J/m <sup>2</sup>	
	Hygie	ne, health and the environment (BW	/R 3)	
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404, Cl. 2.2.4)	Leachable substances Content of cadmium	No performance assessed	
	Sá	afety and accessibility in use (BWR 4	4)	
	Mesh size*	Average mesh size*	5.5 x 4.2 mm	
_	(EAD 040016-01-0404, Cl. 2.2.5)	Average mesh opening* (warp direction x weft direction)	4.4 x 3.9 mm	
5	* Historical data according to EAD 040016-00-0404, Cl. 2.2.4	<b>Coverage ratio</b> [%] (calculated from historical data of average mesh opening and average mesh size)	25.7 %	
		An untrimmed edge in any length Deflected (uneven) fronts of rolls over ± 5 mm (measured from the	_	
6	Weaving accuracy (EAD 040016-01-0404, Cl. 2.2.6)	edge of the inner tube) A gap over treble distance of wefts or warps in any length	No performance assessed	
	,	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 122L (plant Slovakia)		
		Number of threads within the width of 50 mm of the sample used for tensile strength testing	warp direction 12	weft direction 9
Tensile strength ar elongation**         (EAD 040016-01-040 Cl. 2.2.7)         7         ** Historical data according to EAD 040016-00-0404, Cl. 2.2.7	Tensile strength and elongation**	In the as-delivered state - tensile strength - elongation ε	warp direction 49 N/mm 3.9 %	weft direction 43 N/mm 3.7 %
	(EAD 040016-01-0404, Cl. 2.2.7) ** Historical data according to EAD 040016-00-0404, Cl. 2.2.7	After alkalis conditioning	warp direction	weft direction
		<ul> <li>tensile strength</li> <li>elongation ε</li> </ul>	27 N/mm 2.2 %	24 N/mm 2.2 %
		The average value of th shall be at least <b>20 N/m</b> as-delivered state (resid <b>passed:</b> ≥ 20 N/mm afte ≥ 50 % of the strength in Residual strength of the <b>57.3 %</b> (warp direction) in the as-delivered.	te tensile strength after m and at least <b>50 %</b> of ual strength): er alkalis conditioning a the as-delivered. tensile strength after a and <b>58.0 %</b> (weft direct	r alkalis conditioning of the strength in the and residual strength alkalis conditioning = ction) of the strength
8	Mass per unit area (EAD 040016-01-0404, Cl. 2.2.8)	148 g/m <sup>2</sup>		
9	<b>Thickness</b> (EAD 040016-01-0404, Cl. 2.2.9)		0.45 mm	

No.	Essential characteristic and method of verification and assessment	Expression of product performance 122 (plant Slovakia)		
		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		
	- · · · ·	Ash content	Organic content	
2	Organic content (EAD 040016-01-0404,	(average value)	(average value)	
	Cl. 2.2.2)	79.1 %	20.9 %	
		Heat combustic	on Q <sub>PCS</sub> [MJ/kg]	
2	combustion	8.19 N	ſJ/kg	
3	(EAD 040016-01-0404,	Heat combustion Q <sub>PCS</sub> [MJ/m <sup>2</sup> ]		
	Cl. 2.2.3)	1.35 N	IJ/m²	
	Hygie	ene, health and the environment (BW	/R 3)	
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404, Cl. 2.2.4)	Leachable substances Content of cadmium	No performance assessed	
	Sa	afety and accessibility in use (BWR 4	4)	
	Mesh size*	Average mesh size*	4.6 x 4.2 mm	
_	(EAD 040016-01-0404, Cl. 2.2.5)	Average mesh opening* (warp direction x weft direction)	3.5 x 3.9 mm	
5	* Historical data according to EAD 040016-00-0404, Cl. 2.2.4	<b>Coverage ratio</b> [%] (calculated from historical data of average mesh opening and average mesh size)	29.3 %	
		An untrimmed edge in any length		
	Weaving accuracy	Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)		
6	(EAD 040016-01-0404, CL 2-2-6)	A gap over treble distance of wefts or warps in any length	No performance assessed	
		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 122 (plant Slovakia)		
		Number of threads within the width of 50 mm of the sample used for tensile strength testing	warp direction 12	weft direction 11
Tensile strength a         elongation**         (EAD 040016-01-04         Cl. 2.2.7)         7         ** Historical data         according to EAL         040016-00-0404         Cl. 2.2.7	Tensile strength and elongation**	In the as-delivered state - tensile strength	warp direction 44 N/mm	weft direction 46 N/mm
	(EAD 040016-01-0404, Cl. 2.2.7) ** Historical data according to EAD 040016-00-0404, Cl. 2.2.7	After alkalis conditioning - tensile strength	3.9 % warp direction 23 N/mm	weft direction 29 N/mm
		<ul> <li>elongation ε</li> <li>The average value of the shall be at least 20 N/m as-delivered state (resident passed: ≥ 20 N/mm after ≥ 50 % of the strength in Residual strength of the 57.3 % (warp direction) in the as-delivered.</li> </ul>	2.1 % the tensile strength after am and at least 50 % of ual strength): the as-delivered. tensile strength after a and 58.0 % (weft direct	2.1 % r alkalis conditioning of the strength in the and residual strength alkalis conditioning = ction) of the strength
8	Mass per unit area (EAD 040016-01-0404, Cl. 2.2.8)	165 g/m²		
9	Thickness (EAD 040016-01-0404, Cl. 2.2.9)		0.47 mm	

Table No. 5: glass fibre mesh	117S, plant North Macedonia
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No.	Essential characteristic and method of verification and assessment	Expression of product performance 117S (plant North Macedonia)		
		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		
	Onnonia contont	Ash content	Organic content	
2		(average value)	(average value)	
2	Cl. 2.2.2)	81.0 %	19.0 %	
	One as head of	Heat combustic	on Q <sub>PCS</sub> [MJ/kg]	
	combustion	7.50 N	/J/kg	
3	(EAD 040016-01-0404,	Heat combustion Q <sub>PCS</sub> [MJ/m <sup>2</sup> ]		
	Cl. 2.2.3)	1.11 N	/J/m²	
	Hygie	ene, health and the environment (BW	/R 3)	
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404,	Leachable substances Content of cadmium	No performance assessed	
	01. 2.2.4)	afety and accessibility in use (BWR /		
		Average mach size*	+)	
		(warp direction x weft direction)	4.6 x 5.1 mm	
Б	(EAD 040018-01-0404, Cl. 2.2.5)	Average mesh opening* (warp direction x weft direction)	3.5 x 4.8 mm	
5	* Historical data according to EAD 040016-00-0404, Cl. 2.2.4	<b>Coverage ratio</b> [%] (calculated from historical data of average mesh opening and average mesh size)	28.4 %	
		An untrimmed edge in any length		
	Weaving accuracy	Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)		
6	(EAD 040016-01-0404, Cl. 2.2.6)	A gap over treble distance of wefts or warps in any length	No performance assessed	
	-,	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 117S (plant North Macedonia)		
		Number of threads within the width of 50 mm of the sample used for tensile	warp direction	weft direction
		strength testing	11	12
		In the as-delivered state	warp direction	weft direction
7	Tensile strength and elongation** (EAD 040016-01-0404, Cl. 2.2.7) ** Historical data according to EAD 040016-00-0404, Cl. 2.2.7	<ul> <li>tensile strength</li> <li>elongation ε</li> </ul>	38 N/mm 3.7 %	48 N/mm 3.6 %
		<ul> <li>(EAD 040016-01-0404, Cl. 2.2.7)</li> <li>** Historical data according to EAD</li> <li>After alkalis conditioning</li> <li>tensile strength</li> <li>elongation ε</li> </ul>	warp direction	weft direction
			22 N/mm 2.1 %	35 N/mm 2.6 %
		The average value of th shall be at least <b>20 N/m</b> as-delivered state (resid	te tensile strength after m and at least <b>50 %</b> of ual strength):	r alkalis conditioning of the strength in the
		$\geq$ 50 % of the strength in	the as-delivered.	
		Residual strength of the tensile strength after alkalis <b>57.3 %</b> (warp direction) and <b>58.0 %</b> (weft direction) in the as-delivered.		alkalis conditioning = ction) of the strength
8	Mass per unit area (EAD 040016-01-0404, Cl. 2.2.8)	149 g/m²		
9	Thickness (EAD 040016-01-0404, Cl. 2.2.9)		0.50 mm	

Table No. 6: glass fibre mesh	122L, plant North Macedo	nia
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No.	Essential characteristic and method of verification and assessment	Expression of product performance 122L (plant North Macedonia)		
		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		
		Ash content	Organic content	
2		(average value)	(average value)	
2	(EAD 040016-01-0404, Cl. 2.2.2)	84.2 %	15.8 %	
	Oreas heat of	Heat combustio	on Q <sub>PCS</sub> [MJ/kg]	
	combustion	6.60 N	IJ/kg	
3	(EAD 040016-01-0404,	Heat combustio	n Q <sub>PCS</sub> [MJ/m²]	
	Cl. 2.2.3)	0.98 MJ/m <sup>2</sup>		
	Hygie	ne, health and the environment (BW	'R 3)	
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404,	Leachable substances Content of cadmium	No performance assessed	
	Si 2.2.4)	afety and accessibility in use (BWR 4	.)	
	Mesh size*	Average mesh size*	53 x 4 2 mm	
5	(EAD 040016-01-0404, Cl. 2.2.5)	(warp direction x weft direction) Average mesh opening* (warp direction x weft direction)	4.1 x 3.8 mm	
0	* Historical data according to EAD 040016-00-0404, Cl. 2.2.4	<b>Coverage ratio</b> [%] (calculated from historical data of average mesh opening and average mesh size)	30.0 %	
		An untrimmed edge in any length		
	Weaving accuracy	Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)		
6	(EAD 040016-01-0404, Cl. 2.2.6)	A gap over treble distance of wefts or warps in any length	No performance assessed	
	,	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 122L (plant North Macedonia)		
		Number of threads within the width of	warp direction	weft direction
		50 mm of the sample used for tensile strength testing	12	10
		In the as-delivered state	warp direction	weft direction
	Tensile strength and	<ul> <li>tensile strength</li> </ul>	50 N/mm	49 N/mm
	elongation** (EAD 040016-01-0404, Cl. 2.2.7) 7 ** Historical data according to EAD	- elongation $\epsilon$	4.2 %	4.2 %
		After alkalis	warp	weft
7 ** 04		conditioning	direction	direction
		<ul> <li>tensile strength</li> </ul>	27 N/mm	31 N/mm
		- elongation $\epsilon$	2.3 %	2.5 %
	CI. 2.2.7	The average value of th shall be at least <b>20 N/m</b> as-delivered state (resid <b>passed:</b> ≥ 20 N/mm afte ≥ 50 % of the strength in Residual strength of the <b>57.3 %</b> (warp direction) in the as-delivered.	te tensile strength after and at least <b>50 %</b> of ual strength): er alkalis conditioning a the as-delivered. tensile strength after a and <b>58.0 %</b> (weft direct	r alkalis conditioning of the strength in the and residual strength alkalis conditioning = ction) of the strength
	Mass per unit area			
8	(EAD 040016-01-0404, Cl. 2.2.8)	149 g/m²		
	Thickness			
9	(EAD 040016-01-0404, Cl. 2.2.9)		0.47 mm	

No.	Essential characteristic and method of verification and assessment	Expression of product performance 122 (plant North Macedonia)		
		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		
	<b>O</b> mme in a sector of	Ash content	Organic content	
2	(EAD 040016-01-0404	(average value)	(average value)	
٢	Cl. 2.2.2)	81.5 %	18.5 %	
	Gross heat of	Heat combustio	n Q <sub>PCS</sub> [MJ/kg]	
2	combustion	7.07 M	J/kg	
3	(EAD 040016-01-0404,	Heat combustion Q <sub>PCS</sub> [MJ/m <sup>2</sup> ]		
	CI. 2.2.3)	1.13 M	J/m²	
	Hygie	ne, health and the environment (BW	R 3)	
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404,	Leachable substances	No performance assessed	
	Cl. 2.2.4)	Content of Cadmidin		
	Sa	afety and accessibility in use (BWR 4	)	
	Mesh size*	Average mesh size* (warp direction x weft direction)	4.6 x 4.2 mm	
F	(EAD 040016-01-0404, Cl. 2.2.5)	Average mesh opening* (warp direction x weft direction)	3.5 x 3.9 mm	
5	* Historical data according to EAD 040016-00-0404, Cl. 2.2.4	<b>Coverage ratio</b> [%] (calculated from historical data of average mesh opening and average mesh size)	29.3 %	
		An untrimmed edge in any length		
	Weaving accuracy	Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)		
6	(EAD 040016-01-0404, CL 2 2 6)	A gap over treble distance of wefts or warps in any length	No performance assessed	
	51. 2.2.0)	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 122 (plant North Macedonia)		
		Number of threads within the width of 50 mm of the sample used for tensile	warp direction	weft direction
		strength testing	13	12
		In the as-delivered state	warp direction	weft direction
	Tensile strength and	- tensile strength	47 N/mm	49 N/mm
		- elongation ε	3.9 %	3.4 %
	(EAD 040018-01-0404, Cl. 2.2.7) 7 ** Historical data according to EAD 040016-00-0404, Cl. 2.2.7	After alkalis	warp	weft
7		conditioning	direction	direction
		- tensile strength	27 N/mm	36 N/mm
			2.3 %	2.5 %
		shall be at least <b>20 N/mm</b> and at least <b>50 %</b> of the strength in the as-delivered state (residual strength):		
		<b>passed:</b> ≥ 20 N/mm after ≥ 50 % of the strength in	er alkalis conditioning a the as-delivered.	and residual strength
		Residual strength of the tensile strength after alkalis conditioning <b>57.3</b> % (warp direction) and <b>58.0</b> % (weft direction) of the strengt in the as-delivered		
	Mass per unit area			
8	(EAD 040016-01-0404, Cl. 2.2.8)	160 g/m²		
	Thickness			
9	(EAD 040016-01-0404, Cl. 2.2.9)	0.45 mm		

No.	Essential characteristic and method of verification and assessment	Expression of product performance 123 (plant Slovakia)		
		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		
		Ash content	Organic content	
2	Organic content (EAD 040016-01-0404.	(average value)	(average value)	
	Cl. 2.2.2)	80.1 %	19.9 %	
	Gross boat of	Heat combusti	on Q <sub>PCS</sub> [MJ/kg]	
2	combustion	6.77	MJ/kg	
3	(EAD 040016-01-0404,	Heat combustion Q <sub>PCS</sub> [MJ/m <sup>2</sup> ]		
	01. 2.2.3)	1.38 MJ/m <sup>2</sup>		
	Hygie	ene, health and the environment (BW	/R 3)	
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404, Cl. 2.2.4)	Leachable substances Content of cadmium	No performance assessed	
	Sa	afety and accessibility in use (BWR	4)	
		Average mesh size* (warp direction x weft direction)	6.8 x 6.7 mm	
Б	Mesh size	Average mesh opening* (warp direction x weft direction)	5.3 x 6.2 mm	
5	5 (EAD 040016-01-0404, Cl. 2.2.5) Coverage ratio [%] (calculated from historical data of average mesh opening and average mesh size)		27.9 %	
		An untrimmed edge in any length	_	
	Weaving accuracy	Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)		
6	(EAD 040016-01-0404, Cl. 2.2.6)	A gap over treble distance of wefts or warps in any length	No performance assessed	
	-,	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 123 (plant Slovakia)		
		Number of threads within the width of	warp direction	weft direction
		50 mm of the sample used for tensile strength testing	8	7
		In the as-delivered state	warp direction	weft direction
		<ul> <li>tensile strength</li> </ul>	50 N/mm	63 N/mm
		- elongation $\epsilon$	4.1 %	3.5 %
	Tensile strength and	After alkalis conditioning	warp	weft
7	elongation (EAD 040016-01-0404, Cl. 2.2.7)		direction	direction
		<ul> <li>tensile strength</li> </ul>	41 N/mm	47 N/mm
		- elongation $\varepsilon$	3.1 %	2.8 %
		The average value of th shall be at least <b>20 N/m</b> as-delivered state (resid <b>passed:</b> ≥ 20 N/mm afte ≥ 50 % of the strength in Residual strength of the <b>57.3 %</b> (warp direction) in the as-delivered.	te tensile strength afte am and at least <b>50 %</b> of ual strength): er alkalis conditioning a the as-delivered. tensile strength after a and <b>58.0 %</b> (weft direct	r alkalis conditioning of the strength in the and residual strength alkalis conditioning = ction) of the strength
	Mass per unit area			
8	(EAD 040016-01-0404, Cl. 2.2.8)	204 g/m²		
	Thickness			
9	(EAD 040016-01-0404, Cl. 2.2.9)	0.74 mm		

Table No. 9: glass fibre mesh	<b>123,</b> plant North Macedonia
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No.	Essential characteristic and method of verification and assessment	Expression of product performance 123 (plant North Macedonia)		
		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	<b>Organic content</b> (EAD 040016-01-0404,	Ash content (average value)	Organic content (average value)	
	Cl. 2.2.2)	81.6 %	18.4 %	
	Gross heat of	Heat combustic	on Q <sub>PCS</sub> [MJ/kg]	
3	combustion	5.92 M	/IJ/kg	
	(EAD 040016-01-0404, Cl. 2.2.3)	Heat combustic	on Q <sub>PCS</sub> [MJ/m <sup>2</sup> ]	
	,	1.22 N	/IJ/m <sup>2</sup>	
	Hygie	ene, health and the environment (BW	/R 3)	
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404, Cl. 2.2.4)	Leachable substances Content of cadmium	No performance assessed	
	Si	afety and accessibility in use (BWR 4	4)	
		Average mesh size	6.7 x 6.7 mm	
	Mesh size	Average mesh opening	5.1 x 6.2 mm	
5	(EAD 040016-01-0404, Cl. 2.2.5)	Coverage ratio [%] (calculated from historical data of average mesh opening and average mesh size)	29.6 %	
		An untrimmed edge in any length		
	Weaving accuracy	Deflected (uneven) fronts of rolls over $\pm$ 5 mm (measured from the edge of the inner tube)		
6	(EAD 040016-01-0404,	A gap over treble distance of wefts or warps in any length	No performance assessed	
	01. 2.2.0)	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 123 (plant North Macedonia)		
		Number of threads within the width of	warp direction	weft direction
		50 mm of the sample used for tensile strength testing	8	7
		In the as-delivered	warp	weft
		Sidle	direction	direction
		- tensile strength	50 N/mm	64 N/mm
		- elongation $\varepsilon$	3.8 %	3.8 %
	Tensile strength and	After alkalis conditioning	warp	weft
7	elongation (EAD 040016-01-0404, Cl. 2.2.7)		direction	direction
		<ul> <li>tensile strength</li> </ul>	35 N/mm	53 N/mm
		- elongation $\epsilon$	2.7 %	3.3 %
		The average value of th shall be at least <b>20 N/m</b> as-delivered state (resid <b>passed:</b> ≥ 20 N/mm afte ≥ 50 % of the strength in Residual strength of the <b>57.3 %</b> (warp direction) in the as-delivered.	te tensile strength afte m and at least <b>50 %</b> of ual strength): er alkalis conditioning a the as-delivered. tensile strength after a and <b>58.0 %</b> (weft direct	r alkalis conditioning of the strength in the and residual strength alkalis conditioning = ction) of the strength
	Mass per unit area			
8	(EAD 040016-01-0404, Cl. 2.2.8)	207 g/m²		
	Thickness			
9	(EAD 040016-01-0404, Cl. 2.2.9)	0.67 mm		

No.	Essential characteristic and method of verification and assessment	Expression of product performance 123/2 (plant Slovakia)		
		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	<b>Organic content</b> (EAD 040016-01-0404,	Ash content (average value)	Organic content (average value)	
	Cl. 2.2.2)	78.6 %	21.4 %	
	Gross heat of	Heat combustio	on Q <sub>PCS</sub> [MJ/kg]	
3	combustion	7.95 N	IJ/kg	
	(EAD 040016-01-0404, Cl. 2.2.3)		n Q <sub>PCS</sub> [MJ/m²]	
		1.34 W		
	Hygie	ene, nealth and the environment (BW	R 3)	
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404, Cl. 2.2.4)	Leachable substances Content of cadmium	No performance assessed	
	Sa	afety and accessibility in use (BWR 4	l)	
	Mesh size	Average mesh size (warp direction x weft direction) Average mesh opening (warp direction x weft direction)	7.9 x 6.7 mm 6.5 x 6.2 mm	
5	(EAD 040016-01-0404, Cl. 2.2.5)	Coverage ratio [%] (calculated from historical data of average mesh opening and average mesh size)	23.9 %	
		An untrimmed edge in any length		
	Weaving accuracy	Deflected (uneven) fronts of rolls over ± 5 mm (measured from the edge of the inner tube)		
6	(EAD 040016-01-0404, Cl. 2.2.6)	A gap over treble distance of wefts or warps in any length	No performance assessed	
		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 123/2 (plant Slovakia)		
		Number of threads within the width of 50 mm of the sample	warp direction	weft direction
		used for tensile strength testing	8	6
		In the as-delivered state	warp direction	weft direction
		<ul> <li>tensile strength</li> </ul>	54 N/mm	45 N/mm
		- elongation $\epsilon$	4.0 %	4.3 %
	Tensile strength and	After alkalis conditioning	warp	weft
7	elongation (EAD 040016-01-0404, Cl. 2.2.7)		direction	direction
		- tensile strength	43 N/mm	31 N/mm
		<ul> <li>elongation ε</li> </ul>	3.1 %	2.8 %
		The average value of the tensile shall be at least <b>20 N/mm</b> and a as-delivered state (residual stren <b>passed:</b> ≥ 20 N/mm after alkalis ≥ 50 % of the strength in the as-o Residual strength of the tensile s <b>57.3 %</b> (warp direction) and <b>58.0</b> in the as-delivered		r alkalis conditioning of the strength in the and residual strength alkalis conditioning = ction) of the strength
	Mass per unit area			
8	(EAD 040016-01-0404, Cl. 2.2.8)	169 g/m²		
	Thickness			
9	(EAD 040016-01-0404, Cl. 2.2.9)	0.64 mm		

	assessment	125/1 (plant Slovakia)				
		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	<b>Organic content</b> (EAD 040016-01-0404, Cl. 2.2.2)	Ash content (average value) 74.0 %	Organic content (average value) 26.0 %			
3	Gross heat of combustion	Heat combustion Q <sub>PCS</sub> [MJ/kg] 9.70 MJ/kg				
	(EAD 040016-01-0404, Cl. 2.2.3)	3.26 MJ/m <sup>2</sup>				
	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 Content of cadmium	No performance assessed			
	Sa	afety and accessibility in use (BWR 4	4)			
	<b>Mesh size</b> (EAD 040016-01-0404, Cl. 2.2.5)	Average mesh size (warp direction x weft direction) Average mesh opening	8.1 x 14.8 mm			
5		(warp direction x weft direction) <b>Coverage ratio</b> [%] (calculated from historical data of average mesh opening and average mesh size)	5.5 x 10.5 mm 51.8 %			
6	<b>Weaving accuracy</b> (EAD 040016-01-0404, Cl. 2.2.6)	An untrimmed edge in any length 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)	No performance assessed			

A cracked thread

Expression of product performance

**Essential characteristic** 

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No.	Essential characteristic and method of verification and assessment	Expression of product performance 125/1 (plant Slovakia)		
	Tensile strength and elongation (EAD 040016-01-0404, Cl. 2.2.7)	Number of threads within the width of 50 mm of the sample used for tensile strength testing	warp direction	weft direction
			<b>2</b> testing of two threads	<b>6</b> width of the sample of 50 mm
		In the as-delivered state	warp direction	weft direction
		<ul> <li>tensile strength</li> <li>elongation ε</li> </ul>	87 N/mm 4.3 %	87 N/mm 4.2 %
7		After alkalis conditioning	warp direction	weft direction
		<ul> <li>tensile strength</li> </ul>	62 N/mm	67 N/mm
		<ul> <li>elongation ε</li> </ul>	3.0 %	2.6 %
		The average value of the tensile strength after alkalis conditioning shall be at least <b>20 N/mm</b> and at least <b>50 %</b> of the strength in the as-delivered state (residual strength): <b>passed:</b> ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered. Residual strength of the tensile strength after alkalis conditioning = <b>57.3 %</b> (warp direction) and <b>58.0 %</b> (weft direction) of the strength		
	Mass par unit area	in the as-delivered.		
8	(EAD 040016-01-0404, Cl. 2.2.8)	336 g/m²		
	Thickness			
9	(EAD 040016-01-0404, Cl. 2.2.9)		1.40 mm	

No.	Essential characteristic and method of verification and assessment	Expression of product performance 210/2 (plant Slovakia)					
	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	<b>Organic content</b> (EAD 040016-01-0404, Cl. 2.2.2)	Ash content (average value)	Organic content (average value)				
		76.0 %	24.0 %				
	Gross heat of	Heat combustion Q <sub>PCS</sub> [MJ/kg]					
3	combustion	10.72 MJ/kg					
	(EAD 040016-01-0404, Cl. 2.2.3)	Heat combustion Q <sub>PCS</sub> [MJ/m <sup>2</sup> ]					
	пуде		K 3)				
4	Content, emission and/or release of dangerous substances (EAD 040016-01-0404, Cl. 2.2.4)	Leachable substances Content of cadmium	No performance assessed				
	Safety and accessibility in use (BWR 4)						
5	<b>Mesh size</b> (EAD 040016-01-0404, Cl. 2.2.5)	Average mesh size (warp direction x weft direction) Average mesh opening (warp direction x woft direction)	8.73 x 8.34 mm 7.61 x 8.00 mm				
		Coverage ratio [%] (calculated from historical data of average mesh opening and average mesh size)	16.4 %				
6	<b>Weaving accuracy</b> (EAD 040016-01-0404, Cl. 2.2.6)	An untrimmed edge in any length 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	No performance assessed				
		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 210/2 (plant Slovakia)		
	Tensile strength and elongation (EAD 040016-01-0404, Cl. 2.2.7)	Number of threads within the width of 50 mm of the sample used for tensile strength testing	warp direction	weft direction
			6	6
		In the as-delivered state	warp direction	weft direction
		<ul> <li>tensile strength</li> <li>elongation ε</li> </ul>	44 N/mm	67 N/mm
			3.8 %	4.2 %
		After alkalis conditioning - tensile strength - elongation ε	warp	weft
7			direction	direction
			23 N/mm	34 N/mm
			1.8 %	1.7 %
		The average value of the tensile strength after alkalis conditioning shall be at least <b>20 N/mm</b> and at least <b>50 %</b> of the strength in the as-delivered state (residual strength): <b>passed:</b> ≥ 20 N/mm after alkalis conditioning and residual strength ≥ 50 % of the strength in the as-delivered. Residual strength of the tensile strength after alkalis conditioning = <b>57.3 %</b> (warp direction) and <b>58.0 %</b> (weft direction) of the strength in the as-delivered.		
8	Mass per unit area (EAD 040016-01-0404, Cl. 2.2.8)	205 g/m²		
	Thickness			
9	(EAD 040016-01-0404, Cl. 2.2.9)	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 CI. 3.2 of EAD 040016-01-0404 *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 31.10.2021

By Ing. Mária Schaan Head of the Technical Assessment Body