



**Technical and Test Institute
for Construction Prague**
Prosecká 811/76a
190 00 Prague
Czech Republic
eota@tzus.cz



Member of



www.eota.eu

European Technical Assessment

**ETA 16/0526
of 04/09/2021**

I General Part

Technical Assessment Body issuing the ETA:

**Technical and Test Institute
for Construction Prague**

Trade name of the construction products:

**GG-145
GG-150
SSA-1363-145
SSA-1363-160
SSA-0606-165
SSA-1111-340-SM
SSA-6810**

- glass fibre meshes for reinforcement
of cementitious or cement based renderings

**Product family to which the construction
product belongs:**

Product area code: 4 Thermal insulation
products. Composite insulating kits/systems

Manufacturer:

JSC "Valmieras stikla šķiedra"
Cempu 13
Valmiera
LV 4201, Latvia

Manufacturing plant(s):

JSC "Valmieras stikla šķiedra"
Cempu 13
Valmiera
LV 4201, Latvia

**This European Technical Assessment
contains:**

13 pages

**This European Technical Assessment is
issued in accordance with regulation (EU)
No 305/2011, on the basis of:**

EAD 040016-01-0404 Glass fibre mesh for
reinforcement of cementitious or cement
based renderings

**This European Technical Assessment
replaces:**

ETA 16/0526 issued on 10/01/2018

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

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (excepted the confidential Annex(es) referred to above). However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body - Technical and Test Institute for Construction Prague. Any partial reproduction has to be identified as such.

II Specific part

1. Technical description of the product

1.1 General

GG-145; GG-150; SSA-1363-145; SSA-1363-160, SSA-0606-165, SSA-1111-340-SM and SSA-6810 - glass fibre meshes for reinforcement of cementitious or 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.

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 or 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 used in base coats of external thermal insulation systems with rendering (eg. ETICS).

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 cementitious or cement based renderings for the intended use of 25 years when installed in the works (provided that the glass fibre mesh for reinforcement of cement based renderings is subject to appropriate installation). These provisions are based upon the current state of the art and the available knowledge and experience.

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

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

The essential characteristics of glass fibre meshes for reinforcement of cementitious or cement based renderings GG-145, GG-150, SSA-1363-145, SSA-1363-160, SSA-0606-165, SSA-1111-340-SM and SSA-6810 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. 11. Historical data according EAD 040016-00-0404 and ETAG 004, Cl. 5.6.7.1 were taken into account, see notes in Table No. 4 - Table No. 11.

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
GG-145	No performance assessed
GG-150	
SSA-1363-145	
SSA-1363-160	
SSA-0606-165	
SSA-1111-340-SM	
SSA-6810	

3.1.2 Organic content and ash content

The determination of the ash content and organic content was based on Cl. 2.2.2 of EAD 040016-01-0404.

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		
GG-145	85,5 %	85,1 %	85,0 %
GG-150	84,6 %	84,5 %	85,0 %
SSA-1363-145	82,4 %	82,3 %	82,2 %
SSA-1363-160	81,2 %	81,3 %	81,3 %

SSA-0606-165	84,0 %	83,9 %	83,9 %
SSA-1111-340-SM	83,5 %	83,3 %	83,6 %
SSA-6810	83,1 %	83,1 %	83,5 %

Table No. 3 – organic content:

Trade name of the mesh	Organic content		
GG-145	14,5 %	14,9 %	15,0 %
GG-150	15,4 %	15,5 %	15,0 %
SSA-1363-145	17,6 %	17,7 %	17,8 %
SSA-1363-160	18,8 %	18,7 %	18,7 %
SSA-0606-165	16,0 %	16,1 %	16,1 %
SSA-1111-340-SM	16,5 %	16,7 %	16,4 %
SSA-6810	16,9 %	16,9 %	16,5 %

3.1.3 Gross heat of combustion

The determination of the gross heat of combustion was based on Cl. 2.2.3 of EAD 040016-01-0404.

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

Table No. 4 – gross heat of combustion:

Trade name of the mesh	Heat combustion Q_{PCS} [MJ/kg]
GG-145	5,23
GG-150	5,45
SSA-1363-145	6,44
SSA-1363-160	6,41
SSA-0606-165	6,31
SSA-1111-340-SM	7,26
SSA-6810	6,90

3.2 Safety and accessibility in use (BWR 4)

The determination of mesh size, weaving accuracy, tensile strength and elongation, mass per unit area and thickness was based on Cl. 2.2.5 - Cl. 2.2.9 of EAD 040016-01-0404.

Weaving accuracy and thickness – no performance assessed

The results of the tests are stated in Table No. 5 - Table No. 11

Table No. 5 – GG-145

GG-145			
Mesh size *	Average mesh size (warp direction x weft direction)		6,2 x 4,4 mm
	Mesh opening (warp direction x weft direction)		5,1 x 4,1 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	41 N/mm	45 N/mm
	- elongation ϵ	3,7 %	3,6 %
	After alkalis conditioning	warp direction	weft direction
- tensile strength	21 N/mm	25 N/mm	
- elongation ϵ	1,8 %	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	145 g/m²		
Thickness	No performance assessed		

Notes:

* Historical data according to EAD 040016-00-0404, Cl. 2.2.4

** Historical data according to ETAG 004, Cl. 5.6.7.1

Table No. 6 – GG-150

GG-150			
Mesh size *	Average mesh size (warp direction x weft direction)		5,7 x 4,2 mm
	Mesh opening (warp direction x weft direction)		4,8 x 3,9 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	46 N/mm	44 N/mm
	- elongation ϵ	3,7 %	3,5 %
	After alkalis conditioning	warp direction	weft direction
	- tensile strength	24 N/mm	24 N/mm
	- elongation ϵ	1,9 %	1,9 %
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	151 g/m²		
Thickness	No performance assessed		

Notes:

* Historical data according to EAD 040016-00-0404, Cl. 2.2.4

** Historical data according to ETAG 004, Cl. 5.6.7.1

Table No. 7 – SSA-1363-145

SSA-1363-145			
Mesh size *	Average mesh size (warp direction x weft direction)		5,7 x 4,2 mm
	Mesh opening (warp direction x weft direction)		4,5 x 3,8 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	49 N/mm	50 N/mm
	- elongation ϵ	3,8 %	3,7 %
	After alkalis conditioning	warp direction	weft direction
	- tensile strength	25 N/mm	29 N/mm
- elongation ϵ	2,1 %	2,3 %	
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	151 g/m²		
Thickness	No performance assessed		

Notes:

* Historical data according to EAD 040016-00-0404, Cl. 2.2.4

** Historical data according to ETAG 004, Cl. 5.6.7.1

Table No. 8 – SSA-1363-160

SSA-1363-160			
Mesh size *	Average mesh size (warp direction x weft direction)		5,1 x 4,2 mm
	Mesh opening (warp direction x weft direction)		4,0 x 3,9 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	43 N/mm	45 N/mm
	- elongation ϵ	3,6 %	3,9 %
	After alkalis conditioning	warp direction	weft direction
	- tensile strength	26 N/mm	29 N/mm
- elongation ϵ	2,3 %	2,3 %	
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	165 g/m²		
Thickness	No performance assessed		

Notes:

* Historical data according to EAD 040016-00-0404, Cl. 2.2.4

** Historical data according to ETAG 004, Cl. 5.6.7.1

Table No. 9 – SSA-0606-165

SSA-0606-165			
Mesh size *	Average mesh size (warp direction x weft direction)		7,8 x 6,2 mm
	Mesh opening (warp direction x weft direction)		6,6 x 6,0 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	40 N/mm	61 N/mm
	- elongation ϵ	3,42 %	3,77 %
	After alkalis conditioning	warp direction	weft direction
	- tensile strength	33 N/mm	52 N/mm
- elongation ϵ	2,76 %	3,21 %	
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	No performance assessed		

Notes:

* Historical data according to EAD 040016-00-0404, Cl. 2.2.4

** Historical data according to ETAG 004, Cl. 5.6.7.1

Table No. 10 – SSA-1111-340-SM

SSA-1111-340-SM			
Mesh size *	Average mesh size (warp direction x weft direction)		11,8 x 13,0 mm
	Mesh opening (warp direction x weft direction)		9,1 x 10,6 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	144 N/mm	100 N/mm
	- elongation ϵ	4,31 %	5,17 %
	After alkalis conditioning	warp direction	weft direction
	- tensile strength	73 N/mm	56 N/mm
- elongation ϵ	2,18 %	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	356 g/m²		
Thickness	No performance assessed		

Notes:

* Historical data according to EAD 040016-00-0404, Cl. 2.2.4

** Historical data according to ETAG 004, Cl. 5.6.7.1

Table No. 11 – SSA-6810

SSA-6810			
Mesh size *	Average mesh size (warp direction x weft direction)		10,1 x 8,5 mm
	Mesh opening (warp direction x weft direction)		8,0 x 7,6 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	63 N/mm	69 N/mm
	- elongation ϵ	4,06 %	4,17 %
	After alkalis conditioning	warp direction	weft direction
	- tensile strength	35 N/mm	46 N/mm
- elongation ϵ	2,28 %	2,73 %	
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	226 g/m²		
Thickness	No performance assessed		

Notes:

* Historical data according to EAD 040016-00-0404, Cl. 2.2.4

** Historical data according to ETAG 004, Cl. 5.6.7.1

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

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

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

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

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

Issued in Prague on 04.09.2021

By
Ing. Mária Schaan
Head of the Technical Assessment Body

