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## European Technical Assessment

**ETA 16/0068  
of 29/02/2016**

### *I General Part*

<b>Technical Assessment Body issuing the ETA:</b>	<b>Technical and Test Institute for Construction Prague</b>
<b>Trade name of the construction product</b>	Glass fibre mesh for reinforcement of cement based renderings: <b>MASTERNET PREMIUM E, MASTERNET PREMIUM 145, MASTERNET SOLID, MASTERNET CLASSIC 145, MASTERNET PRO 165 4x4</b>
<b>Product family to which the construction product belongs</b>	Product are code: 4 Thermal insulation products. Composite insulating kits/systems.
<b>Manufacturer</b>	Masterplast Kft. 8143 Sárszentmihály Árpád u. 1/a Hungary
<b>Manufacturing plant(s)</b>	Plant 1: 3350 Kál, Jászapáti úti ipartelep 1., Hungary  Plant 2: 24000 Subotica, Bodrogyvari Ferenc 172., Serbia
<b>This European Technical Assessment contains</b>	10 pages
<b>This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of</b>	European Assessment Document EAD 040016-00-0404 Glass fibre mesh for reinforcement of cement based renderings (February 2016)

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## *II 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 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 plants:

Plant 1: 3350 Kál, Jászapáti úti ipartelep 1., Hungary  
- MASTERNET PREMIUM E,  
- MASTERNET PREMIUM 145

Plant 2: 24000 Subotica, Bodrogvari Ferenc 172., Serbia  
- MASTERNET SOLID,  
- MASTERNET CLASSIC 145,  
- MASTERNET PRO 165 4x4

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 used in base coats of external thermal insulation systems with rendering (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<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.

### 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 EN 13501-1
MASTERNET PREMIUM E	F – without testing
MASTERNET PREMIUM 145	
MASTERNET SOLID	
MASTERNET CLASSIC 145	
MASTERNET PRO 165 4x4	

##### 3.1.2 Organic content

The determination of the ash 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		
MASTERNET PREMIUM E	77,3 %	77,1 %	77,6 %
MASTERNET PREMIUM 145	78, 8 %	78,7 %	78,7 %
MASTERNET SOLID	83,2 %	83,0 %	83,1 %
MASTERNET CLASSIC 145	82,1 %	82,0 %	82,1 %
MASTERNET PRO 165 4x4	78,1 %	78,5 %	78,3 %

<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.

Table No. 3 – organic content:

Trade name of the mesh	Organic content		
MASTERNET PREMIUM E	22,7 %	22,9 %	22,4 %
MASTERNET PREMIUM 145	21,2 %	21,3 %	21,3 %
MASTERNET SOLID	16,8 %	17,0 %	16,9 %
MASTERNET CLASSIC 145	17,9 %	18,0 %	17,9 %
MASTERNET PRO 165 4x4	21,9 %	21,5 %	21,7 %

### 3.1.3 Heat combustion

No performance assessed

### 3.2 Safety and accessibility in use (BWR 4)

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

The results of the test are stated in Table No. 4 – Table No. 8.

Table No. 4 – MASTERNET PREMIUM E

<b>MASTERNET PREMIUM E</b>			
Mesh size	Average mesh size		<b>5,2 x 5,6 mm</b>
	Mesh opening		<b>3,9 x 5,3 mm</b>
Roll width	<b>996 mm</b>		
Weaving accuracy	An untrimmed edge in any length		<b>No</b>
	Deflected (uneven) fronts of rolls over $\pm 5$ mm (measured from the edge of the inner tube)		<b>No</b>
	A gap over treble distance of wefts or warps in any length		<b>No</b>
	Weft skewing or weft waving over 4 % of width of the fabric (measured by a rectangular rule)		<b>No</b>
	A cracked yarn		<b>No</b>
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
		- tensile strength	<b>41 N/mm</b>
	- elongation $\epsilon$	<b>4,03 %</b>	<b>3,78 %</b>
	After alkalis conditioning	warp direction	weft direction
		- tensile strength	<b>23 N/mm</b>
	- elongation $\epsilon$	<b>2,04 %</b>	<b>2,17 %</b>
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): <b>passed: <math>\geq 20</math> N/mm after alkalis conditioning and <math>\geq 50</math> % residual strength</b>			
Mass per unit area	<b>135 g/m<sup>2</sup></b>		
Thickness	<b>0,54 mm</b>		

Table No. 5 – MASTERNET PREMIUM 145

<b>MASTERNET PREMIUM 145</b>			
Mesh size	Average mesh size		<b>5,3 x 5,6 mm</b>
	Mesh opening		<b>4,1 x 5,2 mm</b>
Roll width	<b>998 mm</b>		
Weaving accuracy	An untrimmed edge in any length		<b>No</b>
	Deflected (uneven) fronts of rolls over $\pm 5$ mm (measured from the edge of the inner tube)		<b>No</b>
	A gap over treble distance of wefts or warps in any length		<b>No</b>
	Weft skewing or weft waving over 4 % of width of the fabric (measured by a rectangular rule)		<b>No</b>
	A cracked yarn		<b>No</b>
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
		- tensile strength	<b>41 N/mm</b>
	- elongation $\epsilon$	<b>3,77 %</b>	<b>3,31 %</b>
	After alkalis conditioning	warp direction	weft direction
		- tensile strength	<b>23 N/mm</b>
- elongation $\epsilon$	<b>2,00 %</b>	<b>1,53 %</b>	
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): <b>passed: <math>\geq 20</math> N/mm after alkalis conditioning and <math>\geq 50</math> % residual strength</b>			
Mass per unit area	<b>139 g/m<sup>2</sup></b>		
Thickness	<b>0,56 mm</b>		

Table No. 6 – MASTERNET SOLID

<b>MASTERNET SOLID</b>			
Mesh size	Average mesh size		<b>4,8 x 5,0 mm</b>
	Mesh opening		<b>3,8 x 4,6 mm</b>
Roll width	<b>1000 mm</b>		
Weaving accuracy	An untrimmed edge in any length		<b>No</b>
	Deflected (uneven) fronts of rolls over $\pm 5$ mm (measured from the edge of the inner tube)		<b>No</b>
	A gap over treble distance of wefts or warps in any length		<b>No</b>
	Weft skewing or weft waving over 4 % of width of the fabric (measured by a rectangular rule)		<b>No</b>
	A cracked yarn		<b>No</b>
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
		- tensile strength	<b>32 N/mm</b>
	- elongation $\epsilon$	<b>3,58 %</b>	<b>3,25 %</b>
	After alkalis conditioning	warp direction	weft direction
		- tensile strength	<b>22 N/mm</b>
	- elongation $\epsilon$	<b>2,64 %</b>	<b>3,34 %</b>
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):			
<b>passed: <math>\geq 20</math> N/mm after alkalis conditioning and <math>\geq 50</math> % residual strength</b>			
Mass per unit area	<b>135 g/m<sup>2</sup></b>		
Thickness	<b>0,46 mm</b>		

Table No. 7 – MASTERNET CLASSIC 145

<b>MASTERNET CLASSIC 145</b>			
Mesh size	Average mesh size		<b>5,9 x 4,4 mm</b>
	Mesh opening		<b>4,7 x 4,0 mm</b>
Roll width	<b>1008 mm</b>		
Weaving accuracy	An untrimmed edge in any length		<b>No</b>
	Deflected (uneven) fronts of rolls over $\pm 5$ mm (measured from the edge of the inner tube)		<b>No</b>
	A gap over treble distance of wefts or warps in any length		<b>No</b>
	Weft skewing or weft waving over 4 % of width of the fabric (measured by a rectangular rule)		<b>No</b>
	A cracked yarn		<b>No</b>
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
		- tensile strength	<b>43 N/mm</b>
	- elongation $\epsilon$	<b>3,34 %</b>	<b>3,34 %</b>
	After alkalis conditioning	warp direction	weft direction
		- tensile strength	<b>23 N/mm</b>
- elongation $\epsilon$	<b>1,87 %</b>	<b>2,36 %</b>	
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): <b>passed: <math>\geq 20</math> N/mm after alkalis conditioning and <math>\geq 50</math> % residual strength</b>			
Mass per unit area	<b>145 g/m<sup>2</sup></b>		
Thickness	<b>0,48 mm</b>		



Table No. 8 – MASTERNET PRO 165 4x4

<b>MASTERNET 165 4x4</b>			
Mesh size	Average mesh size	<b>4,2 x 4,6 mm</b>	
	Mesh opening	<b>3,8 x 3,4 mm</b>	
Roll width	<b>1000 mm</b>		
Weaving accuracy	No performance assessed		
Tensile strength and elongation (warp and weft direction)	In the as-delivered state	warp direction	weft direction
	- tensile strength	<b>33 N/mm</b>	<b>46 N/mm</b>
	- elongation $\epsilon$	<b>3,28 %</b>	<b>3,31 %</b>
	After alkalis conditioning	warp direction	weft direction
- tensile strength	<b>27 N/mm</b>	<b>39 N/mm</b>	
- elongation $\epsilon$	<b>2,71 %</b>	<b>2,89 %</b>	
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): <b>passed:</b> $\geq 20$ N/mm after alkalis conditioning and $\geq 50$ % residual strength			
Mass per unit area	<b>169 g/m<sup>2</sup></b>		
Thickness	<b>0,52 mm</b>		

**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 .

Issued in Prague on 29.02.2016



Head of the Technical Assessment Body

A handwritten signature in blue ink is written below the printed name 'Ing. Mária Schaan'. The signature is stylized and appears to be 'M. Schaan'.