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European Technical Assessment

ETA 22/0092
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General part

Technical Assessment Organism issuing the ETA: ITeC ITeC has been designed in agreement with Article 29 of the Regulation (UE) No 305/2011 and it is a member of EOTA (European Organisation for Technical Assessment).	
Trade name of the construction product	**webertherm etics plus**
Product family to which the construction product belongs	Product Area Code: 04 External Thermal Insulation Composite Systems (ETICS) with rendering on EPS for the use as external insulation of building walls.
Manufacturer	**SAINT-GOBAIN WEBER CEMARKSA SA** Ctra. C-17 km. 2 ES08110 Montcada i Reixac (Barcelona) Spain www.es.weber
Manufacturing plant(s)	According to Annex N kept by ITeC.
This European Technical Assessment contains	19 pages including 3 annexes which form an integral part of this assessment and Annex N, which contains confidential information and is not included in the European Technical Assessment when that assessment is publicly available.
This European Technical Assessment is issued in accordance with Regulation (EU) 305/2011, on the basis of	EAD 040083-00-0404 *External Thermal Insulation Composite Systems (ETICS) with renderings,* edition 2019.

General comments

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

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Specific parts of the European Technical Assessment

1 Technical description of the product

webertherm etics plus is an ETICS (External Thermal Insulation Composite System) with rendering – a kit comprising components which are factory-produced by the manufacturer or component suppliers. The ETICS manufacturer is ultimately responsible for all components of the ETICS specified in this ETA.

The ETICS kit comprises a prefabricated insulation product of expanded polystyrene (EPS) to be bonded onto a wall with supplementary mechanical fixings. The methods of fixing and the relevant components are specified in the table below. The insulation product is faced with a rendering system consisting of several layers (site applied), one of which contains reinforcement. The rendering is applied directly to the insulating panels, without any air gap or disconnecting layer.

The ETICS includes special fittings (e.g. base profiles, corner profiles…) to treat details of ETICS (connections, apertures, corners, parapets, sills…). The assessment and performance of these components are not addressed in this ETA, however the ETICS manufacturer is responsible for adequate compatibility and performance within the ETICS when the components are delivered as a part of the kit.

Composition of the ETICS:

	Components	Coverage (kg/m²)	Thickness (mm)
Bonded ETICS with supplementary mechanical fixings (pursuant to ETA holder's instructions, the minimal bonded surface shall be 40%; National application documents shall be taken into account.)			
Adhesive	**webertherm base plus**: cement base powder requiring addition of 26% – 30 % water, 6,5 l – 7,5 l of water per 25 kg.	1,3 (powder)	6 to 10
Insulation product	**webertherm placa EPS**. Panels of expanded polystyrene (**EPS**). See Annex 1 for product characteristics.	--	40 to 200
Base coat	**webertherm base plus**: cement base powder requiring addition of 26% – 30 % water, 6,5 l – 7,5 l of water per 25 kg.	1,3 (powder)	6 to 8
Glass fibre mesh	**webertherm malla 160**: standard glass fibre mesh. See Annex 2 for product characteristics.	--	--
Key coat	**weberprim silicato**: ready to use water based silicate primer with additives. This product has to be applied before webertene Premium M.	0,20 to 0,25 (prepa-red)	--
Finishing coats	**webertene classic XL**: acrylic binder ready to use paste (particle size max. 2,5 mm). Floated finishing aspect.	3,5	3,0
	webertene classic L: acrylic binder ready to use paste (particle size max. 1,5 mm). Floated finishing aspect.	2,7	1,8

	Components	Coverage (kg/m²)	Thickness (mm)
	webertene advance M: siloxane binder ready to use paste (particle size max. 1,2 mm). Floated finishing aspect.	1,95	1,5
	webertene advance S: siloxane binder ready to use paste (particle size max. 0,8 mm). Floated finishing aspect.	1,75	1,2
	webertene advance XS: siloxane binder ready to use paste (particle size max. 0,5 mm). Floated finishing aspect.	1,50	0,8
	weberplast decor M: acrylic binder ready to use paste (particle size max. 1,5 mm). Floated finishing aspect.	2,0 to 2,5	2,0
	webercal estuco: organic resin powder with lime, pigments and additives. It requires the addition of 48% - 52% water. Particle size max. 0,8 mm. Smooth and floated finishing aspect. This finishing coat is always installed with an embedded glass fibre mesh inside (webertherm malla 65). Mesh size: 1 mm x 1,5 mm. Thickness: 0,18 mm. Weight per unit area: 58 g/m².	1,4 (powder)	2,0 to 4,0
	webertene premium M: silicate binder ready to use paste (particle size max. 1,2 mm). Floated finishing aspect.	2,0	1,5
Ancillary components	Supplementary fixings: - See Annex 3. Other components: - **webertherm perfil arranque**: aluminium profile and its fixing device for its use in the base of the façade. - **webertherm perfil goterón**: PVC profile with an alkali resistant mesh for its use in corner, tops and sills of windows. - **weberflex P100**: polyurethane sealant, type F, class 25 HM (ISO 11600).	Remain under the ETA holder responsibility.	

Table 0: Components of the ETICS **webertherm etics plus**.

2 Specification of the intended use(s) in accordance with the applicable EAD

This ETICS is intended for use as external insulation of buildings' walls. The walls are made of masonry (bricks, blocks, stones …) or concrete (cast on site or as prefabricated panels). The characteristics of the walls shall be verified prior to use of the ETICS, especially regarding conditions for reaction to fire classification and for fixing of the ETICS either by bonding or mechanically. The ETICS is designed to give the wall to which it is applied satisfactory thermal insulation.

The ETICS is made of non load-bearing construction components. It does not contribute directly to the stability of the wall on which it is installed, but it can contribute to its durability by providing enhanced protection from the effect of weathering.

The ETICS can be used on new or existing (retrofit) vertical walls. It can also be used on horizontal or inclined surfaces which are not exposed to precipitation.

The ETICS is not intended to ensure the airtightness of the building structure.

The product will be installed according to the manufacturer's instructions.

The provisions made in this ETA are based on an assumed working life of at least 25 years for **webertherm etics plus** system. These provisions are based upon the current state of the art and the available knowledge and experience.

The indications given on the working life cannot be interpreted as a guarantee given by the producer but are to be regarded only as a mean for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and reference to the methods used for its assessment

Performance of the system **webertherm etics plus** related to the basic requirements for construction works (hereinafter BWR) were determined according to EAD 040083-00-0404 for *External Thermal Insulation Composite Systems (ETICS) with Rendering*. Essential characteristics of **webertherm etics plus** are indicated in the following sections.

Essential characteristic	ETA section	Performance
Basic Works Requirement 2: Safety in case of fire		
Reaction to fire	3.1	Reaction to fire of the ETICS: B-s2,d0 See table 2 for details. Reaction to fire of the insulation material: Class E Reaction to fire of PU foam adhesive: Not relevant.
Façade fire performance	--	Not assessed
Propensity to undergo continuous smouldering of ETICS	--	Not relevant for EPS.
Basic Works Requirement 3: Hygiene, health and the environment		
Content, emission and/or release of dangerous substances – leachable substances	--	Not assessed.

Essential characteristic	ETA section	Performance
Water absorption	3.2.1	Water absorption of the base coat and the rendering system: < 1 kg/m² after 1 hour < 0,5 kg/m² after 24 hours See table 3 for results. Water absorption of the insulation product: According to DoP: WL(T)5 (see table A1.1).
Water tightness of the ETICS: hygrothermal behaviour	--	Test passed (without defects). The ETICS is assessed as resistant to hygrothermal cycles.
Water tightness: freeze-thaw behaviour	--	According to the water absorption test results, all combinations are freeze-thaw resistant.
Impact resistance	3.2.2	See table 4 for results.
Water vapour permeability	3.2.3	Water vapour permeability of the base coat and rendering system: See table 5 for results. Water vapour permeability of the insulation product: According to DoP: MU60 (see table A1.1).
Basic Works Requirement 4: Safety and accessibility in use		
Bond strength between base coat and insulation product	3.3.1	≥ 80 kPa. Cohesive failure in the insulation product. See table 6 for results.
Bond strength between adhesive and substrate	3.3.2	Dry condition: ≥ 250 kPa. Cohesive rupture in the adhesive. 48 h immersion in water + 2 h 23ºC and 50% RH: ≥ 80 kPa. Cohesive rupture in the adhesive. 48 h immersion in water + 7 days 23ºC and 50% RH: ≥ 250 kPa. Cohesive rupture in the adhesive. See table 7 for results.
Bond strength between adhesive and insulation product	3.3.3	Dry condition: ≥ 80 kPa. Cohesive rupture in the insulation product. 48 h immersion in water + 2 h 23ºC and 50% RH: ≥ 30 kPa. Cohesive rupture in the insulation product. 48 h immersion in water + 7 days 23ºC and 50% RH: ≥ 80 kPa. Cohesive rupture in the insulation product. See table 8 for results.
Bond strength of the foam adhesives	--	Not relevant.

Essential characteristic	ETA section	Performance
Fixing strength (transverse displacement)	--	Test not required because the ETICS fulfils the following criteria: E x d < 50.000 N/mm. Note: 'E' is modulus of elasticity of the base coat without mesh and 'd' the mean dry thickness of the base coat.
Wind load resistance	--	Not relevant (bonded ETICS with supplementary mechanical fixings)
Tensile strength perpendicular to the faces of insulation product	--	In dry conditions: According to DoP: TR150 (see table A1.1). Test results: - Minimum value: 172 kPa. - Mean value: 190 kPa. In wet conditions: Not assessed.
Shear strength and shear modulus of elasticity of insulation product	--	Shear strength: - Minimum value: 66 kPa ≥ 20 kPa. - Mean value: 87 kPa. Shear modulus of elasticity: - Minimum value: 1100 kPa ≥ 1000 kPa. - Mean value: 1300 kPa.
Pull-through resistance of fixings from profiles	--	Test not necessary (bonded system with supplementary fixings)
Render strip tensile test	--	Not assessed.
Shear strength and shear modulus of foam adhesives	--	Not relevant.
Post expansion behaviour of foam adhesives	--	Not relevant.
Bond strength after ageing	3.4	≥ 80 kPa. Cohesive rupture in the insulation product. See table 9 for results.
Mechanical and physical characteristics of the mesh	Annex 2	Tensile strength of the glass fibre mesh: See table A2.1 for results. Protection of metal mesh: Not relevant.

Essential characteristic	ETA section	Performance
Basic Works Requirement 5: Protection against noise.		
Airborne sound insulation of ETICS	--	Not assessed.
Dynamic stiffness of the thermal insulation product	--	Not assessed
Air flow resistance of the thermal insulation product	--	Not relevant for EPS.
Basic Works Requirement 6: Energy economy and heat retention.		
Thermal resistance and thermal transmittance of ETICS	3.5	Thermal resistance and thermal transmittance of the ETICS: See section 3.5 and table 10. Thermal resistance of the thermal insulation product: According to the DoP

Table 1: Essential characteristics of the ETICS **webertherm etics plus**

3.1 Safety in case of fire (BWR 2) Reaction to fire of the system

EAD 040083-00-0404, clause 2.2.1.

The reaction to fire of the system **webertherm etics plus** according to EN 13501-1 is defined in table 2. The configuration tested was the worst case with regard to reaction to fire.

Note: A European reference fire scenario has not been laid down for facades. In some Member States, the classification of ETICS according to EN 13501-1 might not be sufficient for the use in facades. An additional assessment of ETICS according to national provisions (e.g. on the basis of a large scale test) might be necessary to comply with Member State regulations, until the existing European classification system has been completed.

ETICS Configuration	Reaction to fire classification acc. to EN 13501-1
Adhesive: webertherm base plus	B-s2,d0
Insulation: : EPS (reaction to fire class declared: E)	
Base coat: webertherm base plus	
Glass fibre mesh: webertherm malla 160	
Key coat (if any) and finishing coat: - webertene classic XL - webertene classic L - webertene advance M - webertene advance S - webertene advance XS - weberplast decor M - webercal estuco (with webertherm malla 65) - weberprim silicato + webertene premium M	

None of the components of the system contains flame retardants.

Table 2: Reaction to fire classification for the different configurations of **webertherm etics plus**.

3.2 Hygiene, health and environment (BWR 3)

3.2.1 Water absorption

EAD 040083-00-0404, clause 2.2.5.1.

	Water absorption (kg/m²)	
	After 1 hour	**After 24 hours**
Base coat onto EPS (with mesh)		
webertherm base plus	< 0,5 (test result: 0,09)	< 0,5 (test result: 0,40)
Rendering system: Base coat (with mesh) + finishing coats, indicated hereafter		
webertherm base plus + webertene classic XL / L	< 0,5 (test result: 0,08)	< 0,5 (test result: 0,27)
webertherm base plus + webertene advance M / S / XS	< 0,5 (test result: 0,03)	< 0,5 (test result: 0,38)
webertherm base plus + weberplast decor M	< 0,5 (test result: 0,06)	< 0,5 (test result: 0,44)
webertherm base plus + webercal estuco	< 0,5 (test result: 0,04)	< 0,5 (test result: 0,23)
webertherm base plus + weberprim silicato + webertene premium M	< 0,5 (test result: 0,22)	< 0,5 (test result: 0,49)

Table 3: Water absorption test results (mean values).

3.2.2 Impact resistance

EAD 040083-00-0404, clause 2.2.8.

Rendering system Base coat + finishing coats, indicated hereafter:	Single mesh		
	Impact Ø mark (mm)		Category
	3 J	10 J	
webertherm base plus + webertene classic XL / webertene classic L**	10 10 11 11 10 (1)	22 20 20 21 22 (1)	I
webertherm base plus + webertene advance M / S / XS*	16 18 18 18 19 (1)	29 27 27 27 27 (1)	I
webertherm base plus + weberplast decor M*	47 24 25 28 31 (2)	58 54 60 67 59 (3)	III
webertherm base plus + webercal estuco**	21 20 21 22 22 (1)	25 25 26 25 26 (2)	II
webertherm base plus + weberprim silicato + webertene premium M*	No marks 21 (1) 20 (1) 20 (1) No marks	58 65 63 52 51 (1)	I

* Finishing coats tested on small samples.

** Finishing coats tested on the wall submitted to hygrothermal cycles.

Description of the observations after the impacts: (1) Superficial impact mark without cracks; (2) Presence of micro-cracks but rendering not penetrated; (3) Circular cracking that does not penetrate as far as the thermal insulation product.

Table 4: Category of use according impact resistance test results.

3.2.3 Water vapour permeability

EAD 040083-00-0404, clause 2.2.9.1.

	Characteristics	Thickness of the rendering system (mm)	Equivalent air thickness S_d (m)
Base coat			
webertherm base plus + webertherm malla 160	Floated finishing aspect.	10	0,17
Rendering system (base coat + finishing coats indicated hereafter)			
webertherm base plus + webertene classic XL / webertene classic L	Floated finishing aspect.	11,0	≤ 2,0 (test result: 0,4)
webertherm base plus + webertene advance M / S / XS	Floated finishing aspect.	9,5	≤ 2,0 (test result: 0,3)
webertherm base plus + weberplast decor M	Floated finishing aspect.	9,8	≤ 2,0 (test result: 0,5)
webertherm base plus + webercal estuco	Floated finishing aspect.	10,0	≤ 2,0 (test result: 0,2)
webertherm base plus + weberprim silicato + webertene premium M	Floated finishing aspect.	9,5	≤ 2,0 (test result: 0,2)

Table 5: Water vapour permeability test results.

3.3 Safety and accessibility in use (BWR 4)

3.3.1 Bond strength between base coat and insulation product

EAD 040083-00-0404, clause 2.2.11.1.

	Bond strength			
	Minimum value (kPa)	Mean value (kPa)	Rupture typology	Required value (kPa)
On samples after 28 days drying under the same conditions of the rig	179	185	C	≥ 80
After hygrothermal cycles on the rig	182	185	C	

C: cohesive rupture in insulation product.

Table 6: Bond strength between base coat and insulation product test results.

3.3.2 Bond strength between the adhesive and the substrate

EAD 040083-00-0404, clause 2.2.11.2.

	Bond strength			
	Minimum value (kPa)	**Mean value (kPa)**	**Rupture typology**	**Required value (kPa)**
No complementary conditioning	700	*795*	B	≥ 250
2 days immersion in water + 2 h drying	307	366	B	≥ 80
2 days immersion in water + 7 days drying	844	932	B	≥ 250

B: cohesive rupture in adhesive.

Table 7: Bond strength between adhesive and substrate (concrete) test results.

3.3.3 Bond strength between adhesive and the insulation product

EAD 040083-00-0404, clause 2.2.11.3.

	Bond strength			
	Minimum value (kPa)	**Mean value (kPa)**	**Rupture typology**	**Required value (kPa)**
No complementary conditioning	167	188	C	≥ 80 (A, B) or ≥ 30 (C)
2 days immersion in water + 2 h drying	142	179	C	≥ 30 (A, B) or no requirement (C)
2 days immersion in water + 7 days drying	156	175	C	≥ 80 (A, B) or no requirement (C)

A: adhesive rupture.

B: cohesive rupture in adhesive.

C: cohesive rupture in insulation product.

Table 8: Bond strength between adhesive and insulation product results.

3.4 Bond strength after ageing

EAD 040083-00-0404, clauses 2.2.20.

System	Bond strength			
	Individual values (kPa)	Mean value (kPa)	Rupture typology	Required value (kPa)
webertene classic XL*	209 202 186 191 214	200	C	≥ 80
webertene classic L**	187 194 183 187 193	189	C	≥ 80
webertene advance M / S / XS*	119 120 86 110 119	111	C	≥ 80
weberplast decor M*	207 187 174 200 197	193	C	≥ 80
webercal estuco**	189 187 186 185 184	186	C	≥ 80
weberprim silicato + webertene premium M*	211 174 198 170 197	190	C	≥ 80

*Finishing coats tested on small samples.

**Finishing coats tested on the wall submitted to hygrothermal cycles.

C: cohesive rupture in insulation product.

Table 9: Bond strength after ageing test results.

3.5 Energy economy and heat retention (BWR 6)

EAD 040083-00-0404, clause 2.2.23.

The thermal resistance of the ETICS is calculated as follows (see table 10).

Insulation product	Thermal conductivity (W/m·K)	Thickness[1] (mm)	Thermal resistance (m²·K/W) (2)		
			$R_{insulation}$	R_{render}	R_{ETICS}
webertherm placa EPS	0,037	40	1,08	0,02	1,10
		200	5,41		5,43

(1) Minimum and maximum thickness considered in the ETA.

(2) $R_{insulation}$: thermal resistance of the insulation panel (in accordance with the Declaration of Performance of the insulation panels).

R_{render}: thermal resistance of the render (base coat + key coat + finishing coat). See section 2.2.23.1 of EAD 040083-00-0404.

R_{ETICS}: thermal resistance of the ETICS ($R_{ETICS} = R_{insulation} + R_{render}$).

Table 10: Thermal resistance of the ETICS.

The thermal transmittance of the substrate wall covered by the ETICS is calculated in accordance with the standard EN ISO 6946:

$U_c = U + \chi_p * n$

Where: $\chi_p * n$: has to be taken into account only if it is greater than 0,04 W/(m²·K).

U_c: global (corrected) thermal transmittance of the covered wall W/(m²·K).

n: number of anchors (through insulation product) per m².

χ_p: local influence of thermal bridge caused by anchor. The values listed below can be taken into account if not specified in the anchor's ETA:

= 0,002 W/K for anchors with a stainless steel screw covered by plastic material and for anchors with an air gap at the head of the screw ($\chi_p * n$ negligible for n<20).

= 0,004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material ($\chi_p * n$ negligible for n<10).

= 0,008 W/K for all other anchors (worst case).

The influence of thermal bridges can also be calculated as described in EN ISO 10211.

U: thermal transmittance of the normal part of the covered wall (excluding thermal bridges) (W/(m²·K)) determined as follows:

$$U = \frac{1}{R_i + R_{render} + R_{substrate} + R_{se} + R_{si}}$$

Where:

R_i: thermal resistance of the insulation product (according to declaration of performance) in (m²·K)/W.

R_{render}: thermal resistance of the render (about 0,02 (m²·K)/W).

$R_{substrate}$: thermal resistance of the substrate of the building (concrete, brick…) in (m²·K)/W.

R_{se} external surface thermal resistance in (m²·K)/W.

R_{si} internal surface thermal resistance in (m²·K)/W.

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

According to the decision 97/556/EC amended by Decision 2001/596/EC, as amended of the European Commission[1], the systems of AVCP (see EC delegated regulation (EU) No 568/2014 amending Annex V to Regulation (EU) 305/2011) given in the table 11 applies.

Trade name of the system	Intended use(s)	Level(s) or class(es) (Reaction to fire)	AVCP system
webertherm etics plus	External thermal insulation composite system/kits (ETICS) with rendering in external walls subject to fire regulations.	A1(2), A2(2), B(2), C(2), D, E, F or A1(3) to E(3)	2+
	External thermal insulation composite system/kits (ETICS) with rendering in external walls not subject to fire regulations.	Any	2+

(1) Products/material for which as clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material).
(2) Products/materials not covered by footnote 1.
(3) Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of classes A1 according to Commission Decision 96/603/EC).

Table 11: Applicable AVPC system.

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

All the necessary technical details for the implementation of the AVCP system are laid down in the *Control Plan* deposited with the ITeC[2], with which the factory production control shall be in accordance.

Products not manufactured by the kit manufacturer shall also be controlled according to the Control Plan.

Where materials/components are not manufactured and tested by the supplier in accordance with agreed methods, then they shall be subject to suitable checks/tests by the kit manufacturer before acceptance.

Any change in the manufacturing procedure which may affect the properties of the product shall be notified and the necessary type-testing revised according to the *Control Plan*.

[1] Official Journal of the European Union (OJEU) L229/15 of 20/08/1997.
Official Journal of the European Union (OJEU) L209/33 of 02/08/2011.

[2] The *Control Plan* is a confidential part of the ETA and is only handed over to the notified certification body involved in the assessment and verification of constancy of performance.

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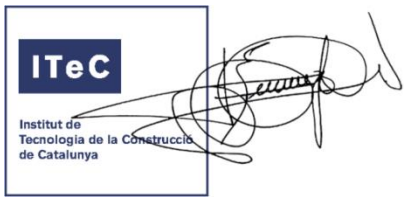

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ANNEX 1: Insulation product characteristics

Description and characteristics		EPS panels
Trade name		**webertherm placa EPS**
Description		Factory-prefabricated uncoated boards for bonded ETICS, made of expanded polystyrene (EPS) according to EN 13163
Reaction to fire EN 13501-1		E [density: 15-20 kg/m³]
Thermal resistance ((m²·K)/W)		acc. to the Declaration of Performance
Thermal conductivity (W/(m·K))		0,037
Thickness EN 823		T2
Length EN 822		L2
Width EN 822		W2
Squareness EN 824		S2
Flatness EN 825		P5
Dimensional stability under:	specified temperature and humidity EN 1604	DS(70,-)1, DS(70,90)1
	laboratory conditions EN 1603	DS(N)2
Tensile strength (kPa) EN 1607		≥ 150 (TR150)
Compression strength (kPa) EN 826		≥ 60 CS(10)60
Water absorption (total immersion) EN 12087		WL(T)5
Water vapour diffusion resistance factor (μ) EN 12086		MU60
Shear strength (N/mm²) EN 12090		≥ 0,02
Shear modulus (N/mm²) EN 12090		≥ 1,0

Table A1.1: Characteristics of insulation product (EPS panels).

ANNEX 2: Glass fibre mesh characteristics

Trade name: webertherm malla 160.

Mesh size: 3,5 mm x 3,8 mm.

Weight per unit area ≥ 160 g/m².

ETA reference: ETA 13/0392.

	webertherm malla 160		Required value
	Warp	**Weft**	
Tensile strength in the as-delivered state (mean value)	38,5 N/mm	56,5 N/mm	--
Tensile strength after artificial ageing (mean value)	25,0 N/mm	37,4 N/mm	> 20 N/mm
Residual strength after artificial ageing	65 %	66 %	> 50%
Elongation in as-delivered state (mean value)	2,57 %	3,34 %	--
Elongation after artificial ageing (mean value)	1,64 %	2,10 %	--

Table A2.1: Test results and requirements of the glass fibre mesh **webertherm malla 160**.

ANNEX 3: Anchors characteristics

Anchors with an ETA according to EAD 330196-01-0604 (or according to ETAG 014 used as EAD).

The anchors are composed of a plastic expansion sleeve with a plate with a diameter of 60 mm, and a plastic or metallic nail or screw.

Use categories and characteristic resistances in the substrate are given in each anchor's ETA.

Trade name	ETA reference	Mounting	Plate stiffness (kN/mm)
webertherm espiga H3	ETA 14/0130	Surface assembly	≥ 0,6
webertherm espiga SLD 5	ETA 17/0077	Surface assembly	≥ 0,6
webertherm espiga SRD 5	ETA 17/0077	Surface assembly	≥ 0,6
webertherm espiga STR U 2G	ETA 04/0023	Surface assembly	≥ 0,6

Table A3.1: Characteristics of anchors for insulation products.