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European Technical Assessment

ETA-24/0982-version 1 of 19/03/2025

GENERAL PART

Technical Assessment Body issuing the European Technical Assessment:	Centre Scientifique et Technique du Bâtiment (CSTB)
Trade name of the construction product:	**FASSATHERM WF ECO-LIGHT 950**
Product family to which the construction product belongs:	Product Area Code: 04 External Thermal Insulation Composite System with rendering (ETICS)
Manufacturer:	**FASSA S.R.L** Via LAZZARIS,3 31027 SPRESIANO (TV) ITALY
Manufacturing plant(s):	**FASSA S.R.L** Via LAZZARIS,3 31027 SPRESIANO (TV) ITALY
This European Technical Assessment contains:	30 pages including 4 Annexes which form an integral part of this assessment Annex 5 contain confidential information and is/are not included in the European Technical Assessment when that assessment is publicly available
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of:	European Assessment Document (EAD) 040083-00-0404 External Thermal Insulation Composite Systems (ETICS) with renderings

SPECIFIC PART

1. Technical description of the product

The External Thermal Insulation Composite System “FASSATHERM WF ECO-LIGHT 950”, subject to this European Technical Assessment (hereinafter ETA) and called ETICS in the following text, is a kit designed and installed in accordance with the Manufacturer’s instructions, deposited with the CSTB. The ETICS comprises the components listed in the following table, which are factory-produced by the Manufacturer or a supplier. The ETICS is made up on site from these components.

The ETICS also includes ancillary materials which are defined in clause 1.3.13 of the EAD[1]. They shall be used in accordance with the Manufacturer’s instructions.

The ETICS is described according to its method of fixing, as defined in clause 1.1 of the EAD.

Method of fixing	Component	Coverage (kg/m²)	Thickness (mm)
Mechanically fixed ETICS with anchors and supplementary adhesive	**Insulation product**		
	Wood Fibre (WF) boards, see Annex 1		
	MULTISOL 140, by Isonat, see Annex 1 (1/5)	—	60 to 240
	MULTISOL 110, by Isonat, see Annex 1 (2/5)	—	60 to 240
	STEICOprotect L Dry, by Steico see Annex 1 (3/5)	—	60 to 240
	PAVAWALL SMART, by Pavatex, see Annex 1 (4/5)	—	60 to 240
	GUTEX THERMOWALL L, by Gutex, see Annex 1 (5/5)	—	120 to 200
	Supplementary adhesives		
	ECO-LIGHT 950: powder requiring addition of about 32% of water, consisting of cement and natural hydraulic lime NHL 3.5	About 2.7 [powder]	—
	A96: white or grey cement based powder requiring addition of 26% in weight water.	About 3.5 [powder]	—
	Anchors for insulation product		
	Plastic anchors, see Annex 2	—	—

[1] EAD 040083-00-0404 is available on the EOTA website: www.eota.eu.

Method of fixing	Component	Coverage (kg/m²)	Thickness (mm)
Mechanically fixed ETICS with anchors and supplementary adhesive	**Base coat**		
	ECO-LIGHT 950: powder requiring addition of about 32% of water, consisting of cement and natural hydraulic lime NHL 3.5	About 4.5 [powder]	Mean: 4.7 [dry] Minimal: 4.5 [dry]
	Meshes		
	Glass fibre meshes (standard and reinforced), see Annex 3		
	Key coat		
	FX 526: ready-to-use pigmented liquid formulated with an acrylic copolymer in aqueous dispersion, to be mandatory applied before the finishing coats.	0.2 to 0.25	—
	Finishing coats		
	RX 561: ready-to-use pastes – acryl-siloxane binder - Particles size: 1.0 mm - Particles size: 1.5 mm - Particles size: 2.0 mm - Particles size: 3.0 mm	 2.0 to 2.3 2.3 to 2.5 2.6 to 2.9 4.0 to 4.2	Regulated by particle size
	RSR 421: ready-to-use pastes - acrylic binder with siloxane additives - Particles size: 1.0 mm - Particles size: 1.5 mm - Particles size: 2.0 mm	 2.0 to 2.3 2.3 to 2.5 2.6 to 2.9	
	FASSIL R 336: ready-to-use pastes – silicate binder - Particles size: 1.0 mm - Particles size: 1.5 mm	 2.0 to 2.3 2.3 to 2.5	
Ancillary materials	Descriptions in accordance with § 1.3.13 of the EAD Remain under the ETA-Manufacturer responsibilities		

The ETICS is designed to give the walls to which it is applied satisfactory thermal insulation. The minimum thermal resistance of the ETICS shall be higher than 1.0 m^2.K/W.

The components are protected from moisture during transport and storage by means of appropriate packaging, unless other measures are foreseen by the Manufacturer for this purpose.

2. Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

This ETICS is intended to be used as thermal insulation of buildings' external walls made of masonry (bricks, blocks, stones, *etc.*) or concrete (cast on site or as prefabricated panels).

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

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

The ETICS is not intended to ensure the airtightness of the walls.

The provisions made in this ETA are based on an assumed working life of at least 25 years, provided that the construction works are subject to appropriate design, execution, maintenance and repair. The indications given as to the working life cannot be interpreted as a guarantee given by the Manufacturer or the Technical Assessment Body, but should only be regarded as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

The ETICS is installed in accordance with Manufacturer´s installation instructions.

Design, execution, maintenance and repair of the construction works shall be done in accordance with national instructions.

3. Performances of the product and references to the methods used for their assessment

Performances of the ETICS, related to the basic requirements for construction works (hereinafter BWR), were determined according to chapters 2 of the EAD.

These performances, given in the following paragraphs, are valid as long as the components are the ones described in § 1 and Annexes 1 to 4 of this ETA.

3.1 Safety in case of fire (BWR 2)

No	Essential characteristic	Assessment method (EAD clause)	Performance
1	Reaction to fire	2.2.1.	-
	- Reaction to fire of ETICS	2.2.1.1	Euroclass B-s1, d0 See cl. 3.1.1 for the details
	- Reaction to fire of thermal insulation material	2.2.1.2	Euroclass E
	- Reaction to fire of PU foam adhesive	2.2.1.3	Not applicable
2	Façade fire performance	2.2.2	No performance assessed
3	Propensity to undergo continuous smouldering of ETICS	2.2.3	No performance assessed

Reaction to fire:

Configuration	Declared organic content (1)	Declared flame retardant content (1)	Class according to EN 13501-1
• Adhesives / supplementary adhesives: - ECO-LIGHT 950 - A96 • Insulation product: Wood fiber panels, reaction to fire Class E, thickness ≥ 60 mm, density from 115 to 140 kg/m^3 • Base coat: ECO-LIGHT 950 • Key coat: FX 526 • Meshes: - R 131 A 101 C+ - 0161-CA (FASSANET 160) - SSA-1363 F+ • Finishing coats: - RX 561 - RSR 421 - FASSIL R 336	Base coat: 3.0% Key coat: 12.0% Finishing coats: 8.60 to 10.30%	Base coat: 0.0% Key coat: 0.0% Finishing coats: 0.0%	B – s1, d0
Other configurations	—	—	NPD(2)

(1) Percentage declared by the Manufacturer, relative to the dried weight of the component as delivered.

(2) No performance determined.

3.2 Hygiene, health and the environment (BWR 3)

#	Essential characteristic	Assessment method (EAD clause)	Performance
4	Content, emission and/or release of dangerous substances – leachable substances	2.2.4	No performance assessed
5	Water absorption	2.2.5	-
	- of the base coat and the rendering system	2.2.5.1	See cl. 3.2.1
	- of the thermal insulation product	2.2.5.2	≤ 1 kg/m^3 (EN 1609- Method A))
6	Water-tightness of the ETICS: Hygrothermal behaviour	2.2.6	Hygrothermal cycles have been performed on a rig. The ETICS is assessed resistant to hygrothermal cycles, it means system “FASSATHERM WF ECO-LIGHT 950” passed the test without defects.
7	Water-tightness: Freeze thaw performance	2.2.7	See cl.3.2.2: The water absorption of the base coat as well as the rendering systems is less than 0.5 kg/m² for all configurations of the ETICS. The ETICS is so assessed as free/thaw resistant.
8	Impact resistance	2.2.8	See cl. 3.2.3
9	Water vapour permeability	2.2.9	-
	- of the rendering system (equivalent air thickness s_d)	2.2.9.1	See cl. 3.2.4
	- of thermal insulation product (water-vapour resistance factor)	2.2.9.2	μ = 3

3.2.1 Water absorption – capillarity test

3.2.1.1 Water absorption of the base coat

- After 1 hour: mean value of the water absorption: 0.04 kg/m^2
- After 24 hours: mean value of the water absorption: 0.34 kg/m^2

3.2.1.2 Water absorption of the rendering system

Rendering system: Base coat + finishing coat indicated below	Mean value of the water absorption (kg/m²) after	
	1 hour	24 hours
With FX 526 RX 561	0.03	0.23
	Test result obtained with particle size of 3 mm	
With FX 526 RSR 421	0.03	0.22
	Test result obtained with particle size of 2 mm	
With FX 526 FASSIL R 336	0.03	0.30
	Test result obtained with particle size of 1.5 mm	

3.2.2 Freeze-thaw behaviour

The water absorption of the base coat as well as the rendering systems is less than 0.5 kg/m² for all configurations of the ETICS.

3.2.3 Impact resistance

Rendering system: Base coat + finishing coat indicated below		Presence of cracks	Maximum impact diameter (mm)	Use category
With FX 526 RX 561	**single standard mesh**	Yes - 3J Yes -10J	20 – 3J 50 – 10J	Category III
	double standard mesh	Yes - 3J Yes -10J	15 – 3J 40 – 10J	Category III
With FX 526 RSR 421	**single standard mesh**	Yes – 3J Yes – 10J	20 – 3J 48 – 10J	Category III
	double standard mesh	Yes - 3J Yes -10J	16 – 3J 35 – 10J	Category III
With FX 526 FASSIL R 336	**single standard mesh**	Yes - 3J Yes -10J	23 – 3J 49 – 10J	Category III
	double standard mesh	Yes - 3J Yes -10J	15 – 3J 32 – 10J	Category III

3.2.4 Water vapour permeability – resistance to water vapour diffusion

Rendering system: Base coat + finishing coat indicated below	Thickness of rendering system (mm)	Equivalent air thickness s_d (m)
With FX 526 RX 561	7.7	≤ 1.0 (Test result obtained with particle size 3 mm: 0.6)
With FX 526 RSR 421	7.3	≤ 1.0 (Test result obtained with particle size 2 mm: 0.4)
With FX 526 FASSIL R 336	6.5	≤ 1.0 (Test result obtained with particle size 1.5 mm: 0.4)

3.3 Safety and accessibility in use (BWR 4)

#	Essential characteristic	Assessment method (EAD clause)	Performance
10	Bond strength	2.2.11	-
	- bond strength between the base coat and the thermal insulation product (mortar or paste)	2.2.11.1	See cl. 3.3.1.1
	- bond strength between the adhesive and the substrate	2.2.11.2	Not applicable
	- bond strength between the adhesive and the thermal insulation product	2.2.11.3	Not applicable
	- bond strength of foam adhesives	2.2.11.4	Not applicable
11	Fixing strength	2.2.12	Test not required because the ETICS fulfils the following criteria: E.d < 50.000 N/mm
12	Wind load resistance of ETICS	2.2.13	-
	- pull-through tests of fixing	2.2.13.1	See cl. 3.3.2.1
	- static foam block test	2.2.13.2	Not applicable
	- dynamic wind uplift test	2.2.13.3	See cl 3.3.2.2
13	Tensile test perpendicular to the faces of the thermal insulation product	2.2.14	-
	- in dry conditions	2.2.14.1	See cl 3.3.3.1
	- in wet conditions	2.2.14.2	See cl 3.3.3.2

14	Shear strength and shear modulus of elasticity test of ETICS	2.2.15	Not relevant because the system is mechanically fixed with anchors
15	Pull-through resistance of fixing from profiles	2.2.16	Not relevant because the system is mechanically fixed with anchors
16	Render strip tensile test	2.2.17	No performance assessed
17	Shear strength and shear modulus of foam adhesive	2.2.18	Not relevant
18	Post expansion behaviour of foam adhesives	2.2.19	Not relevant
19	Bond strength after ageing	2.2.20	-
	- bond strength after ageing of finishing coat tested on the rig	2.2.20.1	See cl. 3.3.4
	- bond strength after ageing of finishing coat not tested on the rig	2.2.20.2	See cl. 3.3.4
20	Mechanical and physical characteristics of the mesh	2.2.21	-
	Tensile strength of the glass fibre mesh	2.2.21.1 2.2.21.2	See cl 3.3.5
	Protection of metal mesh	2.2.21.3	Not relevant

3.3.1 Bond strength: Bond strength between the base coat and the thermal insulation product

Base coat and thermal insulation product indicated below:	Failure resistance (kPa)		
	Initial state	After conditionning	Type of failure
MULTISOL 110	Minimal: 6	Minimal: 7	Cohesive in the insulation product
	Average: 8	Average: 9	
MULTISOL 140	Minimal: 16	Minimal: 15	Cohesive in the insulation product
	Average: 17	Average: 16	
STEICOprotect L dry	Minimal: 16	Minimal: 8	Cohesive in the insulation product
	Average: 17	Average: 13	
PAVAWALL SMART	Minimal: 13	Minimal: 14	Cohesive in the insulation product
	Average: 14	Average: 16	
GUTEX THERMOWALL-L	Minimal: 12	Minimal: 19	Cohesive in the insulation product
	Average: 13	Average: 20	

3.3.2 Wind load resistance of the ETICS

3.3.2.1 Pull-through tests of fixings

Anchors	**Plate diameter (mm)**	≥ 60		
	Plate stiffness (kN/mm)	≥ 0.6		
	Load resistance (kN)	≥ 2.04		
Insulation product	**Type**	**PAVAWALL-SMART**		
	Tensile strength perpendicular to the face (kPa)	See cl 3.3.3		
		Mono-density product		
	Thickness (mm)	≥ 120	≥ 160	≥ 200
Maximum load ***(Pull-through test)***	**Anchors not placed at the panel joints (dry conditions):** R_{panel} **(kN/fixing)**	Minimal: 1.141	Minimal: 1.453	Minimal: 2.260
		Average: 1.248	Average: 1.662	Average: 2.393
	Anchors not placed at the panel joints (wet conditions*): R_{panel} **(kN/fixing)**	Minimal: 0.984	-	-
		Average: 1.041	-	-

* 28 days at (70 ± 2)°C / (95 ± 5)% RH + drying period at (23 ± 2)°C / (50 ± 5)% HR until constant weight.

Anchors	**Plate diameter (mm)**	≥ 60	
	Plate stiffness (kN/mm)	≥ 3.3	
	Load resistance (kN)	≥ 3.3	
Insulation product	**Type**	**MULTISOL 110**	
	Tensile strength perpendicular to the face (kPa)	See cl 3.3.3	
		Mono-density product	
	Thickness (mm)	≥ 60	≥ 100
Maximum load ***(Pull-through test)***	**Anchors not placed at the panel joints (dry conditions):** R_{panel} **(kN/fixing)**	Minimal: 0.420	Minimal: 0.872
		Average: 0.640	Average: 0.903
	Anchors not placed at the panel joints (wet conditions*): R_{panel} **(kN/fixing)**	Minimal: 0.597	-
		Average: 0.665	-

* 28 days at (70 ± 2)°C / (95 ± 5)% RH + drying period at (23 ± 2)°C / (50 ± 5)% HR until constant weight.

Anchors	**Plate diameter (mm)**	≥ 60	
	Plate stiffness (kN/mm)	≥ 3.3	
	Load resistance (kN)	≥ 3.3	
Insulation product	**Type**	**MULTISOL 140**	
	Tensile strength perpendicular to the face (kPa)	See cl 3.3.3	
		Mono-density product	
	Thickness (mm)	≥ 60	≥ 100
Maximum load ***(Pull-through test)***	**Anchors not placed at the panel joints (dry conditions):** R_{panel} **(kN/fixing)**	Minimal: 0.760	Minimal: 1.590
		Average: 0.778	Average: 1.717
	Anchors not placed at the panel joints (wet conditions*): R_{panel} **(kN/fixing)**	Minimal: 0.548	-
		Average: 0.581	-

* 28 days at (70 ± 2)°C / (95 ± 5)% RH + drying period at (23 ± 2)°C / (50 ± 5)% HR until constant weight.

Anchors	**Plate diameter (mm)**	≥ 60
	Plate stiffness (kN/mm)	≥ 0.6
	Load resistance (kN)	≥ 2.08
Insulation product	**Type**	**STEICOprotect L dry**
	Tensile strength perpendicular to the face (kPa)	See cl 3.3.3
		Mono-density product
	Thickness (mm)	≥ 60
Maximum load ***(Pull-through test)***	**Anchors not placed at the panel joints (dry conditions):** R_{panel} **(kN/fixing)**	Minimal: 0.900
		Average: 1.110
	Anchors placed at the panel joints (dry conditions): R_{panel} **(kN/fixing)**	Minimal: 0.740
		Average: 0.760
	Anchors not placed at the panel joints (wet conditions*): R_{panel} **(kN/fixing)**	Minimal: 0.730
		Average: 0.760

* 28 days at (70 ± 2)°C / (95 ± 5)% RH + drying period at (23 ± 2)°C / (50 ± 5)% HR until constant weight.

Anchors	**Plate diameter (mm)**	≥ 60
	Plate stiffness (kN/mm)	≥ 0.6
	Load resistance (kN)	≥ 2.08
Insulation product	**Type**	**GUTEX THERMOWALL L**
	Tensile strength perpendicular to the face (kPa)	See cl 3.3.3
		Mono-density product
	Thickness (mm)	≥ 120
Maximum load ***(Pull-through test)***	**Anchors not placed at the panel joints (dry conditions):** R_{panel} **(kN/fixing)**	Minimal: 1.370
		Average: 1.480
	Anchors not placed at the panel joints (wet conditions*): R_{panel} **(kN/fixing)**	Minimal: 1.050
		Average: 1.180

* 28 days at (70 ± 2)°C / (95 ± 5)% RH + drying period at (23 ± 2)°C / (50 ± 5)% HR until constant weight.

The results of pull-through tests are valid for anchors:

- with same or larger plate diameter than that tested, and/or
- the same or higher plate stiffness/load resistance than that tested.

See list of fixings in Annex 2.

The design wind load resistance of the ETICS fixed with anchors is determined as follows:

$$R_{\mathrm{d}} = \frac{R_{\mathrm{panel}} \cdot n_{\mathrm{panel}} + R_{\mathrm{joint}} \cdot n_{\mathrm{joint}}}{\gamma}$$

n_{panel} number of anchors not placed at the panel joints, per m²

n_{joint} number of anchors placed at the panel joints, per m²

γ national safety factor

3.3.2.2 Dynamic Wind Uplift Test

Insulation product	**Type**		**MULTISOL 110** (See Annex 2)
	Thickness (mm)		60
Anchors	**Characteristics**		See Annex 2
	Plate diameter (mm)		60
	Plate stiffness (kN/mm)		0.6
	Load at plate rupture (kN)		4.3
	Number of anchors per m^2 (pcs/m^2)		5.3
	Assembly of anchors		surface
Maximum load $R_k = Q_1 \times C_s \times C_a$	**Maximum resisted load Q_1 (kPa)**	2.5	Characteristic design resistance: R_k = 2.5 kPa
	Statistical correction factor C_s	0.99	
	Geometric factor C_a	1	

Insulation product	**Type**		**MULTISOL 110** (See Annex 2)
	Thickness (mm)		240
Anchors	**Characteristics**		See Annex 2
	Plate diameter (mm)		60
	Plate stiffness (kN/mm)		0.6
	Load at plate rupture (kN)		2.08
	Number of anchors per m^2 (pcs/m^2)		16
	Assembly of anchors		surface
Maximum load $R_k = Q_1 \times C_s \times C_a$	**Maximum resisted load Q_1 (kPa)**	3.0	Characteristic design resistance: R_k = 3.0 kPa
	Statistical correction factor C_s	0.99	
	Geometric factor C_a	1	

3.3.3 Tensile test perpendicular to the faces of the thermal insulation product

3.3.3.1 Tensile strength perpendicular to the faces in dry conditions

- Insulation product: MULTISOL 140

Thickness (mm)	Minimum (kPa)	Mean (kPa)
60	8.1	10.4
100	12.1	13.6

- Insulation product: MULTISOL 110

Thickness (mm)	Minimum (kPa)	Mean (kPa)
60	12.6	16.4
100	10.6	12.0

- Insulation product: STEICOprotect Ldry

Thickness (mm)	Minimum (kPa)	Mean (kPa)
60	21.8	23.7

- Insulation product: PAVAWALL SMART

Thickness (mm)	Minimum (kPa)	Mean (kPa)
120	6.2	7.3
160	3.6	5.1
200	6.0	7.6

- Insulation product: GUTEX THERMOWALL L

Thickness (mm)	Minimum (kPa)	Mean (kPa)
120	12.0	14.0

3.3.3.2 Tensile strength perpendicular to the faces in wet conditions

- Insulation product: MULTISOL 140

Conditioning	Thickness (mm)	Minimum (kPa)	Mean (kPa)
7 days at (23±2)°C / (50±5)%RH until constant weight	60	9.2	11.8
28 days at (23±2)°C / (50±5)%RH until constant weight		5.9	9.1

- Insulation product: MULTISOL 110

Conditioning	Thickness (mm)	Minimum (kPa)	Mean (kPa)
7 days at (23±2)°C / (50±5)%RH until constant weight	60	11.1	14.8
28 days at (23±2)°C / (50±5)%RH until constant weight		12.7	15.6

- Insulation product: STEICOprotect Ldry

Conditioning	Thickness (mm)	Minimum (kPa)	Mean (kPa)
7 days at (23±2)°C / (50±5)%RH until constant weight	60	16.4	17.4
28 days at (23±2)°C / (50±5)%RH until constant weight		11.3	14.0

- Insulation product: PAVAWALL SMART

Conditioning	Thickness (mm)	Minimum (kPa)	Mean (kPa)
7 days at (23±2)°C / (50±5)%RH until constant weight	120	3.5	5.3
28 days at (23±2)°C / (50±5)%RH until constant weight		4.0	4.6

- Insulation product: GUTEX THERMOWALL L

Conditioning	Thickness (mm)	Minimum (kPa)	Mean (kPa)
7 days at (23±2)°C / (50±5)%RH until constant weight	120	9.7	11.4
28 days at (23±2)°C / (50±5)%RH until constant weight		2.6	9.4

3.3.4 Bond strength after ageing

Tests were carried out onto MULTISOL 110

Rendering system: Base coat + finishing coat indicated below	Bond strength (kPa)		Type of failure
	Minimal	Average	
With FX 526 + RX 561	8	10	Cohesive in the insulation product
	Test result obtained with particle size 3.0mm		
With FX 526 + RSR 421	7	9	Cohesive in the insulation product
	Test result obtained with particle size 2.0mm		
With FX 526 + FASSIL R 336	7	9	Cohesive in the insulation product
	Test result obtained with particle size 1.5mm		

3.3.5 Mechanical and physical characteristics of the mesh: Tensile strength of the glass fibre mesh

Producer's trade name			R 131 A 101 C+	SSA-1363 F+	0161-CA (FASSANET 160)
Tensile strength in the as-delivred state (N/mm)		Wrap	40.3	42.3	46.0
		Weft	48.3	47.6	39.3
Elongation at break in the as-delivred state (%)		Wrap	4.0	4.0	4.0
		Weft	4.6	4.0	3.0
Resistance after ageing	Residual resistance (N/mm)	Wrap	31.0	44.0	23.0
		Weft	25.9	45.9	22.8
	Relative residual resistance (%)	Wrap	76.9	100.0	50.0
		Weft	53.6	96.5	58.1

3.4 Protection against noise (BWR 5)

No	Essential characteristic	Assessment method (EAD clause)	Performance
21	Airborne sound insulation of ETICS	2.2.22.1	No performance assessed
	Dynamic stiffness of the thermal insulation product	2.2.22.2	No performance assessed
	Air flow resistance of the thermal insulation product	2.2.22.3	No performance assessed

3.5 Energy economy and heat retention (BWR 6)

No	Essential characteristic	Assessment method (EAD clause)	Performance
22	Thermal resistance and thermal transmittance of ETICS	2.2.23	Defined in clause 2.2.23 of EAD See cl.3.5.1
	Thermal resistance and thermal transmittance of the thermal insulation product	2.2.23.1	See cl. 3.5.2

3.5.1 Thermal resistance and thermal transmittance of ETICS

The calculated value of thermal resistance of ETICS with minimal thickness and highest value of thermal conductivity of the insulation material is:

$R_{ETICS} = R_{insulation} + R_{render}$ [(m².K)/W	1.42

3.5.2 Thermal resistance and thermal transmittance of the thermal insulation product

See Declaration of performances of the insulation product.

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

According to Decision 97/556/EC (Decision of the Commission of 14 July 1997, L 229 of 20.8.1997, p. 15), as amended by Decision 2001/596/EC (Decision of the Commission of 8 January 2001, L 209 of 2.8.2001, p. 33)[3], the systems of AVCP given in the following table apply:

Product	Intended use	Levels or classes (Reaction to fire)	System
External Thermal Insulation Composite Systems with rendering	in external walls subject to fire regulation	A1(1), A2(1), B(1) or C(1)	1
		- A1(2), A2(2), B(2), C(2) - D, E, F - (A1 to E)(3)	2+
	in external walls not subject to fire regulation	any	2+

(1) Products/materials 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).

[3] Decisions are published in the *Official Journal of the European Union (OJEU)*, see www.new.eur-lex.europa.eu/oj/direct-access.html.

The systems of AVCP are described in Annex V of Regulation (EU) No 305/2011, as amended by Delegated Regulation (EU) No 568/2014.

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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at the CSTB.

The control plan is given in Annex 5. As the control plan contains confidential information, Annex 5 is not included in the published parts of this ETA.

Issued in Marne-la-Vallée on 19/03/2025 by

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Factory-prefabricated, uncoated boards made of wood fibre **MULTISOL 140** (WF) according to EN 13171 and having characteristics described in the following table. The surface of the boards is homogeneous and without “skin”. Coverage (kg/m^2) depends on both thickness of the board and density of wood fibre.

Reaction to fire / EN 13501-1		Class E
Thermal resistance / EN 13171+A1		See Declaration of Performances
Dimensional tolerances	**Thickness / EN 823**	T5 [-1 mm / +3 mm]
	Length / EN 822	± 2 %
	Width / EN 822	± 1.5 %
	Squareness / EN 824	≤ 3 mm/m
	Flatness / EN 825	≤ 2 mm
Dimensional stability under specified temperature and humidity / EN 1604: 48 h at 70°C and 90% RH		DS(70,90)3 [≤ 3 %]
Compressive strength / EN 826		CS(10/Y)70 [≥ 70 kPa]
Tensile strength perpendicular to the faces in dry conditions / EN 1607		TR10 [≥ 10 kPa]
Water absorption (partial immersion) / EN 1609		WS1.0 [≤ 1.0 kg/m^2]
Water vapour diffusion resistance factor (μ) / EN 12086		MU3

ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 1 (1/5)**
Insulation product for mechanically-fixed ETICS with anchors	of ETA-24/0982-version 1

Factory-prefabricated, uncoated boards made of wood fibre **MULTISOL 110** (WF) according to EN 13171 and having characteristics described in the following table. The surface of the boards is homogeneous and without “skin”. Coverage (kg/m^2) depends on both thickness of the board and density of wood fibre.

Reaction to fire / EN 13501-1		Class E
Thermal resistance / EN 13171+A1		See Declaration of Performances
Dimensional tolerances	**Thickness / EN 823**	T4 [-3 mm / +5 mm]
	Length / EN 822	± 2 %
	Width / EN 822	± 1.5 %
	Squareness / EN 824	≤ 3 mm/m
	Flatness / EN 825	≤ 2 mm
Dimensional stability under specified temperature and humidity / EN 1604: 48 h at 70°C and 90% RH		DS(70,90)3 [≤ 3 %]
Compressive strength / EN 826		CS(10/Y)50 [≥ 50 kPa]
Tensile strength perpendicular to the faces in dry conditions / EN 1607		TR7.5 [≥ 7.5 kPa]
Water absorption (partial immersion) / EN 1609		WS1.0 [≤ 1.0 kg/m^2]
Water vapour diffusion resistance factor (μ) / EN 12086		MU3

ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 1 (2/5)** of ETA-24/0982-version 1
Insulation product for mechanically-fixed ETICS with anchors	

Factory-prefabricated, uncoated boards made of wood fibre **STEICOprotect L Dry** (WF) according to EN 13171 and having characteristics described in the following table. The surface of the boards is homogeneous and without “skin”. Coverage (kg/m^2) depends on both thickness of the board and density of wood fibre.

Reaction to fire / EN 13501-1		Class E
Thermal resistance / EN 13171+A1		See Declaration of Performances
Dimensional tolerances	**Thickness / EN 823**	T5 [-1 mm / +3 mm]
	Length / EN 822	± 2 %
	Width / EN 822	± 1.5 %
	Squareness / EN 824	≤ 5 mm/m
	Flatness / EN 825	≤ 6 mm
Dimensional stability under specified temperature and humidity / EN 1604: 48 h at 70°C and 90% RH		DS(70,90)3 [≤ 3 %]
Compressive strength / EN 826		CS(10/Y)50 [≥ 50 kPa]
Tensile strength perpendicular to the faces in dry conditions / EN 1607		TR10 [≥ 10 kPa]
Water absorption (partial immersion) / EN 1609		WS1.0 [≤ 1.0 kg/m^2]
Water vapour diffusion resistance factor (μ) / EN 12086		MU3

ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 1 (3/5)** of ETA-24/0982-version 1
Insulation product for mechanically-fixed ETICS with anchors	

Factory-prefabricated, uncoated boards made of wood fibre **PAVAWALL-SMART** (WF) according to EN 13171 and having characteristics described in the following table. The surface of the boards is homogeneous and without “skin”. Coverage (kg/m^2) depends on both thickness of the board and density of wood fibre.

Reaction to fire / EN 13501-1		Class E
Thermal resistance / EN 13171+A1		See Declaration of Performances
Dimensional tolerances	**Thickness / EN 823**	T5 [-1 mm / +3 mm]
	Length / EN 822	± 2 %
	Width / EN 822	± 1.5 %
	Squareness / EN 824	≤ 5 mm/m
	Flatness / EN 825	≤ 6 mm
Dimensional stability under specified temperature and humidity / EN 1604: 48 h at 70°C and 90% RH		DS(70,90)2 [≤ 2 %]
Compressive strength / EN 826		CS(10/Y)50 [≥ 50 kPa]
Tensile strength perpendicular to the faces in dry conditions / EN 1607		TR7.5 [≥ 7.5 kPa]
Water absorption (partial immersion) / EN 1609		WS1.0 [≤ 1.0 kg/m^2]
Water vapour diffusion resistance factor (μ) / EN 12086		MU3

ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 1 (4/5)** of ETA-24/0982-version 1
Insulation product for mechanically-fixed ETICS with anchors	

Factory-prefabricated, uncoated boards made of wood fibre **GUTEX THERMOWALL L** (WF) according to EN 13171 and having characteristics described in the following table. The surface of the boards is homogeneous and without “skin”. Coverage (kg/m^2) depends on both thickness of the board and density of wood fibre.

Reaction to fire / EN 13501-1		Class E
Thermal resistance / EN 13171+A1		See Declaration of Performances
Dimensional tolerances	**Thickness / EN 823**	T5 [-1 mm / +3 mm]
	Length / EN 822	± 1 %
	Width / EN 822	± 1 %
	Squareness / EN 824	≤ 3 mm/m
	Flatness / EN 825	≤ 3 mm
Dimensional stability under specified temperature and humidity / EN 1604: 48 h at 70°C and 90% RH		DS(70,-)3 [≤ 3 %]
Compressive strength / EN 826		CS(10/Y)50 [≥ 50 kPa]
Tensile strength perpendicular to the faces in dry conditions / EN 1607		TR7.5 [≥ 7.5 kPa]
Water absorption (partial immersion) / EN 1609		WS1.0 [≤ 1.0 kg/m^2]
Water vapour diffusion resistance factor (μ) / EN 12086		MU3

ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 1 (5/5)** of ETA-24/0982-version 1
Insulation product for mechanically-fixed ETICS with anchors	

Anchors with ETA according to European Technical Approval Guideline No 014 (hereinafter ETAG 014) or to European Assessment Document (EAD) 330196-ED-0604 (hereinafter EAD "anchors"). The anchors are composed of a plastic expansion sleeve with a plate having 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. Validity of the anchor's ETA shall be checked before using the anchor.

Trade name	ETA reference	Mounting(1)	Plate stiffness (kN/mm)	Load resistance (kN)
Ejotherm STR U, STR U 2G	ETA-04/0023	a	0.6	2.08
Ejotherm H1	ETA-11/0192	a	0.6	1.40
Ejotherm H2 eco	ETA-15/0740	a	0.97	1.25
Ejot H3	ETA-14/0130	a	0.6	1.25
Fassa Combifix plus (Ejotherm H2 eco)	ETA-15/0740	a	0.97	1.25
Fassa Top Fix 2G (Ejotherm STR U 2G)	ETA-04/0023	a	0.6	2.08
Klimas WKTHERM 8-S	ETA-13/0724	a, b	0.6	4.30
THERMO DRIVE V2	ETA-22/0611	a, b	1.0	2.6
(1) a: surface mounting; b: countersunk mounting.				

These characteristics, the use categories and the characteristic resistances in the substrate shall be taken from the corresponding anchor's ETA.

Additionally, every non-helical anchor with an ETA according to ETAG 014 and EAD 330196-ED-0604 and having the following characteristics can be used:

- plate diameter ≥ 60 mm;
- plate stiffness ≥ 0.6 kN/mm according to EOTA Technical Report No 026;
- load resistance of the plate ≥ 1.25 kN according to EOTA Technical Report No 026.

ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 2** of ETA-24/0982-version 1
Anchors for insulation product	

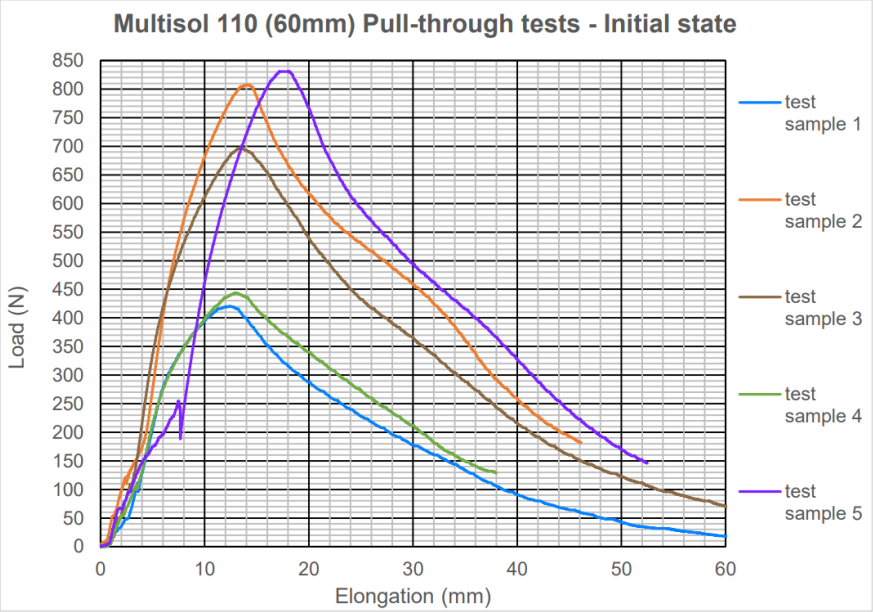
Glass fibre meshes:

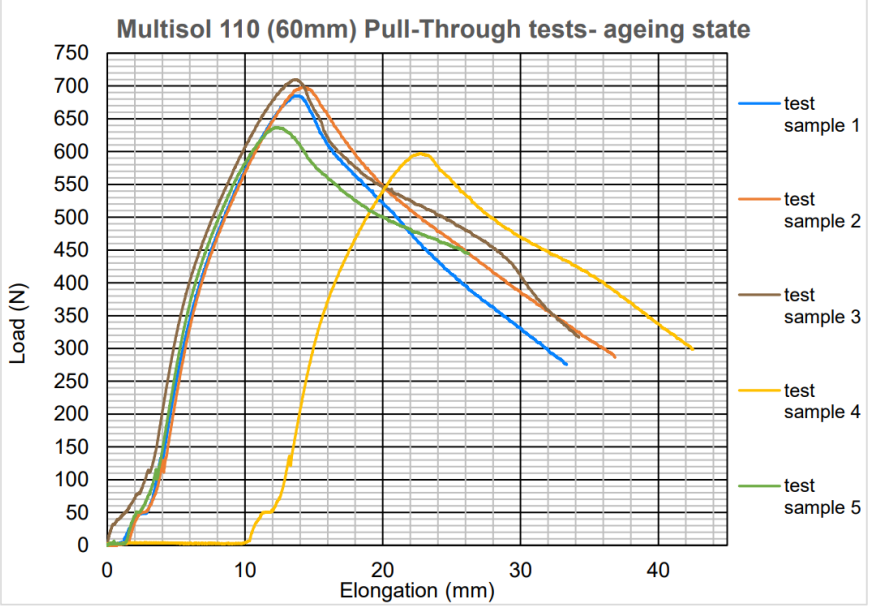
- standard mesh: with mesh size between 3 and 6 mm;

Trade name	Mass per unit area (g/m^2)	Residual strength after ageing (N/mm)		Relative residual strength after ageing (%)(1)	
		Warp	Weft	Warp	Weft
Standard meshes					
SSA-1363 F+	167	≥ 20	≥ 20	≥ 50	≥ 50
R 131 A 101 C+	167	≥ 20	≥ 20	≥ 50	≥ 50
0161-CA (FASSANET 160)	156	≥ 20	≥ 20	≥ 50	≥ 50

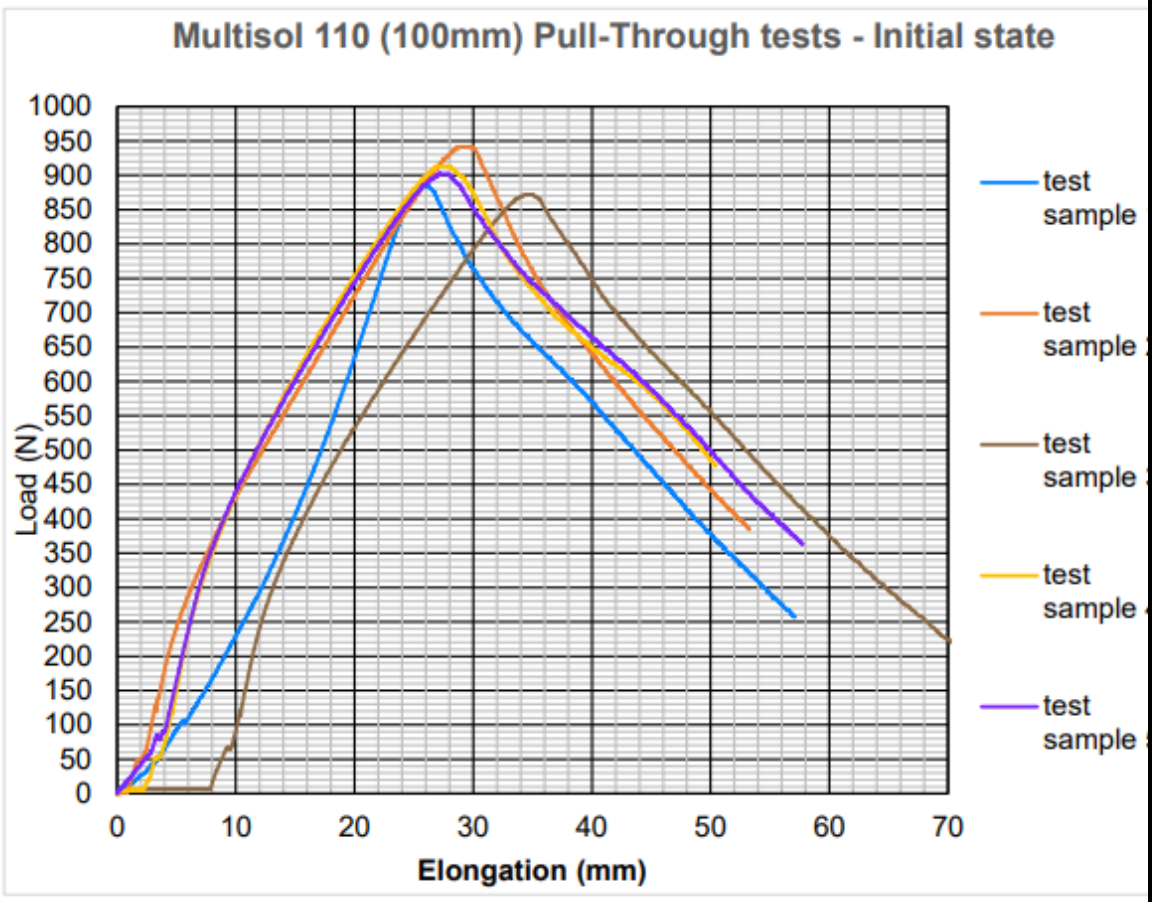
(1) Percentage of the strength in the as-delivered state.

ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 3** of ETA-24/0982-version 1
Glass fibre meshes	



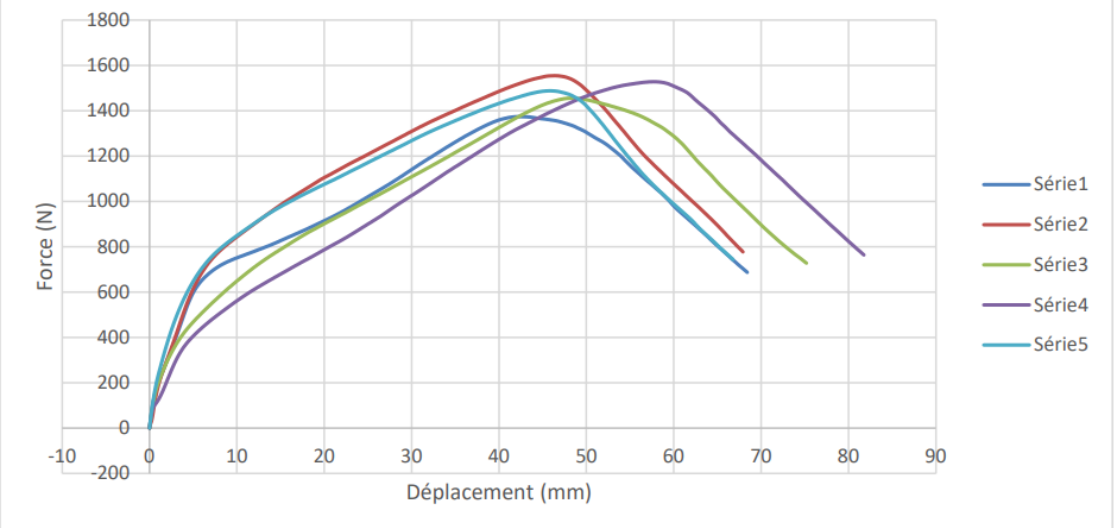


ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 4** of ETA-24/0982-version 1
Pull-through tests – load/displacement graphs	

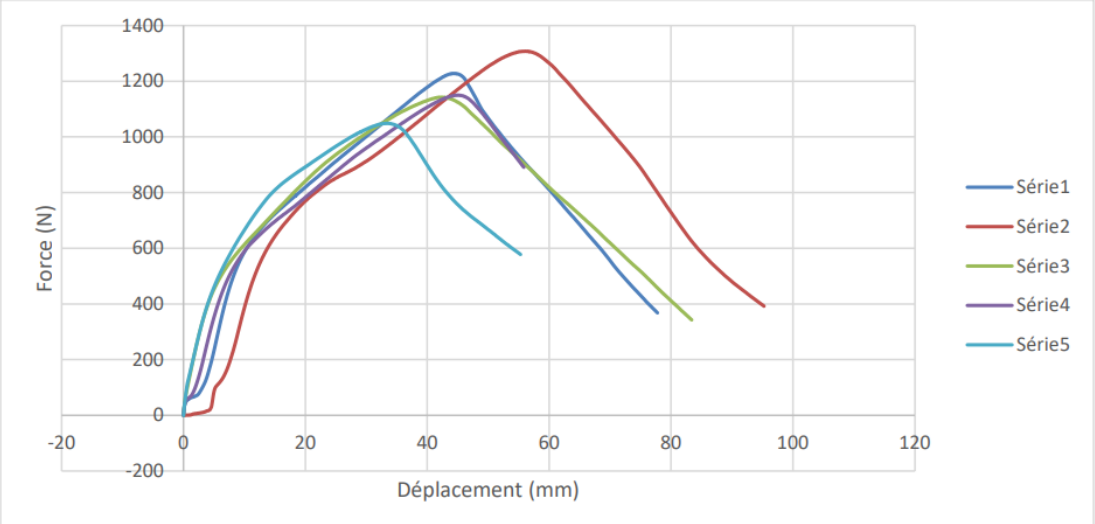


ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 4** of ETA-24/0982-version 1
Pull-through tests – load/displacement graphs	

Thermowall-L (120 mm) – Pull-through tests – initial state



Thermowall- L (120 mm) – Pull-through tests – ageing state



ETICS FASSATHERM WF ECO-LIGHT 950	**ANNEX 4** of ETA-24/0982- version 1
Pull-through tests – load/displacement graphs	