

European Technical Assessment

ETA 26/0287
of 2026/08/12



General Part

Technical Assessment Body issuing the European Technical Assessment:

Itecons - Instituto de Investigação e Desenvolvimento Tecnológico para a Construção, Energia, Ambiente e Sustentabilidade

Trade name of the construction product

FASSATHERM CLASSIC A 50 100

Product family to which the construction product belongs

External thermal insulation composite systems with rendering system

Product family code: 4

Manufacturer

Fassa S.r.l.
Via Lazzaris, 3
31027 Spresiano (TV)
Italia

Manufacturing plant(s)

See Annex B

This European Technical Assessment contains

18 pages including 2 Annexes which form an integral part of this assessment

This European Technical Assessment is issued in accordance with Article 95(4) of Regulation (EU) 2024/3110, on the basis of

EAD 040083-01-0404
External thermal insulation composite systems with rendering system

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. However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body. Any partial reproduction must be identified as such.

Specific parts

1. Technical description of the product

The product FASSATHERM CLASSIC A 50 100 is an External Thermal Insulation Composite System with rendering system (hereinafter referred to as ETICS).

The ETICS is a system of adjacent layers that is fixed to the substrate using adhesive and supplementary mechanical fixing. The continuous thermal insulation layer is faced with a rendering system consisting of two or more layers, one of which contains a reinforcement. The rendering system is applied directly to the thermal insulation boards, without any airgap or discontinuous layer. Ancillary components can be used as optional components.

The assessed ETICS kit comprises a prefabricated insulation product of expanded polystyrene (EPS) to be bonded with supplementary mechanical fixings onto a wall. The fixings are installed while the adhesive is drying and are used to provide stability and flatness of the outer face of the thermal insulation product until the adhesive has dried and has reached its final mechanical strength. The fixings act as a temporary connection to avoid the risk of detachment.

The components of the assessed ETICS are specified in Table 1 and the relevant component characteristics are listed in Annex A.

The ETICS kit may include ancillary components, as defined in the Manufacturer's Product Installation Instructions. Ancillary components are used to treat specific building details such as connections, transitions, endings, etc., e. g., to form joints (i.e, mastics, corner strips, etc.); to give specific protection (i.e., mastic, joint-covers) or to connect them to adjacent building structures (i.e., apertures, corners, parapets, corner profiles, base profiles, etc). These ancillary components are not part of the kit covered by this ETA.

Table 1: Components of the FASSATHERM CLASSIC A 50 100 system

Component	Description	Coverage (kg/m ²)	Thickness (mm)
Insulation product	EPS (standard, with graphite or bicolor) Expanded polystyrene insulation (EPS), in accordance with EN 13163 (see Table A.1.1, Table A.1.2, Table A.1.3 and Table A.1.4).	---	30 to 300
Adhesive	A 50 Premixed adhesive made from Portland cement, selected sands and specific additives (see Table A.2.1).	3.2 to 6.0	5.0 to 10.0
	A 96 Premixed adhesive made from Portland cement, synthetic fibres, selected limestone sands and specific additives (see Table A.2.1).	4.5 to 6.0	5.0 to 10.0
Base Coat	A 50 Premixed adhesive made from Portland cement, selected sands and specific additives (see Table A.3.1).	4.4 to 7.0	3.0 to 5.0
Key coat	FX 526 Pigmented undercoat made from special copolymers in aqueous emulsion, graded aggregate, titanium dioxide, pigments and specific additives (see Table A.4.1).	0.20 to 0.25	0.10 to 0.12
Finishing coat	RSR 421 Finishing coat paste for exteriors made from special water-based siloxane binders and organic binders in aqueous emulsion (see Table A.5.1).	1.6 to 2.9	1.0; 1.5

Component	Description	Coverage (kg/m ²)	Thickness (mm)
	RTA 549 Paste top coat made from special acrylic copolymers in aqueous emulsion, graded limestone aggregate, microfibres, pigments and specific additives (see Table A.5.1).	1.6 to 2.9	1.0; 1.5
	RX 561 Finishing coat putty made from acrylic copolymers, special polysiloxanes in aqueous emulsion, graded aggregate, titanium dioxide, microfibres and specific additives (see Table A.5.1).	1.7 to 2.9	1.0; 1.5
	FASSIL R 336 Finishing coat paste for exteriors made from stabilized potassium silicate and special water-based organic binders, graded aggregate, titanium dioxide and specific additives (see Table A.5.1).	1.8 to 2.9	1.0; 1.5
Decorative coat	SKIN 432 Water-based paint made from organic copolymers and special siloxane resins in aqueous emulsion, graded aggregates, titanium dioxide, pigments and specific additives (see Table A.6.1).	0.35	0.11
	RX 561 0,6 mm Water-based coating made from acrylic copolymers, special polysiloxanes in aqueous emulsion, graded aggregate, titanium dioxide, microfibres and specific additives (see Table A.6.1).	3.2 (2 layers)	1.2 (2 layers)
	FASSADVANCE PROTECTION Paint made from special acrylic self-crosslinking polymers and polysiloxanes in aqueous emulsion, graded inert fillers, titanium dioxide, pigments and specific additives (see Table A.6.1).	0.4	0.14
	DESIDERI VELO Decorative product made from acrylic-siloxane polymers in aqueous emulsion, light-resistant pigments and specific additives (see Table A.6.1).	0.03	0.03
	DESIDERI VELLUTO Product in paste form made from graded aggregates, special polymers and polysiloxanes in aqueous emulsion, with specific additives (see Table A.6.1).	2.5	0.9
Standard glass fibre mesh / Reinforced glass fibre mesh	FASSANET 160 Alkali-resistant fibreglass reinforcing mesh, 160 g/m ² (see Table A.7.1).	---	---
	FASSANET 370 Alkali-resistant fibreglass reinforcing mesh, 368 g/m ² (see Table A.7.2).	---	---
Anchors (supplementary mechanical fixings)	FASSA COMBI FIX PLUS Universal percussion anchor with steel expansion element for fixing insulation panels in ETICS systems in accordance with ETA 18/0006 (see Table A.8.1).	---	---
	FASSA TOP FIX 2G Screw anchor for fixing insulation panels in ETICS systems in accordance with ETA 04/0023 (see Table A.8.1).	---	---
	FASSA H3 BASIC FIX Nailed-in anchor for fixing insulation panels in ETICS systems in accordance with ETA 14/0130 (see Table A.8.1).	---	---
Ancillary components	Remain under the ETA holder responsibility		

Table 2 lists the different possible combinations of the rendering system of FASSATHERM CLASSIC A 50 100.

Table 2: Possible combinations of the FASSATHERM CLASSIC A 50 100 rendering system

Rendering system	Base coat	Key coat	Finishing coat	Decorative coat
1	A 50	FX 526	RSR 421	---
3	A 50	FX 526	RSR 421	RX 561 (0,6mm)
2	A 50	FX 526	RSR 421	SKIN 432
4	A 50	FX 526	RSR 421	FASSADVANCE PROTECTION
5	A 50	FX 526	RSR 421	DESIDERI VELLUTO
6	A 50	FX 526	RSR 421	DESIDERI VELO
7	A 50	FX 526	RTA 549	---
8	A 50	FX 526	RTA 549	RX 561 (0,6mm)
9	A 50	FX 526	RTA 549	SKIN 432
10	A 50	FX 526	RTA 549	FASSADVANCE PROTECTION
11	A 50	FX 526	RTA 549	DESIDERI VELLUTO
12	A 50	FX 526	RTA 549	DESIDERI VELO
13	A 50	FX 526	RX 561	---
14	A 50	FX 526	RX 561	RX 561 (0,6mm)
15	A 50	FX 526	RX 561	SKIN 432
16	A 50	FX 526	RX 561	FASSADVANCE PROTECTION
17	A 50	FX 526	RX 561	DESIDERI VELLUTO
18	A 50	FX 526	RX 561	DESIDERI VELO
19	A 50	FX 526	R 336	---
20	A 50	FX 526	R 336	RX 561 (0,6mm)
21	A 50	FX 526	R 336	SKIN 432
22	A 50	FX 526	R 336	FASSADVANCE PROTECTION
23	A 50	FX 526	R 336	DESIDERI VELLUTO
24	A 50	FX 526	R 336	DESIDERI VELO

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

This ETICS is intended for use on new or existing (retrofit) vertical building external walls ($\pm 5^\circ$ with respect to the vertical plane).

The walls are made of masonry (bricks, blocks or stones) or concrete (cast in situ or as prefabricated panels) with or without rendering systems.

The ETICS is designed to give the building wall to which it is applied, additional thermal insulation and protection from effects of weathering.

The characteristics of the building 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 shall be designed and installed in accordance with ETA holder's installation instructions and this ETA. The kit consists of components defined by the ETA holder and manufactured either by the ETA holder or his suppliers.

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

The provisions made in this European Technical Assessment (ETA) are based on an assumed intended working life of 50 years when installed in the works, provided that the ETICS is subject to appropriate installation.

The indications given as to the working life of the ETICS cannot be interpreted as a guarantee neither given by the product manufacturer or his representative nor by EOTA or Itecons but are regarded only as a means for expressing the expected economically reasonable working life of the kit.

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

The performance of FASSATHERM CLASSIC A 50 100 ETICS was assessed based on the worst-case configuration. The assessed performance applies to all different possible configurations of the system, with the kit components listed in Table 1 and the rendering system configurations listed in Table 2.

Table 3: Performance of FASSATHERM CLASSIC A 50 100

BWR	Essential characteristic	EAD clause	ETA clause	Performance	Notes
2 Safety in case of fire	Reaction to fire of ETICS	2.2.1.1	3.1.1	B - s1, d0	---
	Reaction to fire of the thermal insulation product	2.2.1.2	A.1	E (see Table A.1.1.; Table A.1.2.; Table A.1.3)	---
	Reaction to fire of PU-foam adhesives	2.2.1.3	---	---	Not applicable
	Façade fire performance	2.2.2	---	No performance assessed	---
	Propensity to undergo continuous smouldering	2.2.3	---	No performance assessed	---
3 Hygiene, health and the environment	Content, emission and/or release of dangerous substances. Leachable substances	2.2.4	---	No performance assessed	---
	Water absorption of the base coat and the rendering system	2.2.5.1	3.2.1	$W_{p,1h} < 1.0 \text{ kg/m}^2$ $W_{p,24h} < 0.5 \text{ kg/m}^2$	after 1 hour and after 24 hours
	Water absorption of thermal insulation product	2.2.5.2	A.1	$W_{pi,24h} < 1.0 \text{ kg/m}^2$ (see Table A.1.1.; Table A.1.2.;)	after 24 hours
	Watertightness. Hygrothermal behaviour	2.2.6	---	ETICS is hygrothermal cycles (HWC) resistant	cycles performed on a rig
	Watertightness. Freeze-thaw resistance	2.2.7	---	ETICS is freeze-thaw resistant	---
	Impact resistance	2.2.8	3.3	see Table 5	---
	Water vapour permeability of the rendering system	2.2.9.1	3.4.1	see Table 6	---
	Water vapour permeability of the thermal insulation product	2.2.9.2	---	No performance assessed	---
4 Safety and	Bond strength between the base coat and the thermal insulation product	2.2.10.1	3.5.1	see Table 7	---
	Bond strength between the adhesive and the substrate	2.2.10.2	3.5.2	see Table 8	---

BWR	Essential characteristic	EAD clause	ETA clause	Performance	Notes
	Bond strength between the adhesive and the thermal insulation product	2.2.10.3	3.5.3	see Table 9	---
	Bond strength of PU-foam adhesives	2.2.10.4	---	---	Not applicable
	Fixing strength transverse displacement test with tension load	2.2.11.1	---	---	Not applicable
	Fixing strength transverse displacement test without tension load	2.2.11.2	---	---	Not applicable
	Wind load resistance. Pull-through resistance	2.2.12.1	---	---	Not applicable
	Wind load resistance. Static foam block resistance	2.2.12.2	---	---	Not applicable
	Wind load resistance. Dynamic wind uplift resistance	2.2.12.3	---	---	Not applicable
	Tensile strength perpendicular to the faces of the thermal insulation product in dry conditions	2.2.13.1	A.1	≥ 100 kPa (see Table A.1.1, Table A.1.2 and Table A.1.3)	---
	Tensile strength perpendicular to the faces of the thermal insulation product in wet conditions	2.2.13.2	---	---	Not applicable
	Shear strength and shear modulus of elasticity of the thermal insulation product	2.2.14	A.1	see Table A.1.4	---
	Pull-through resistance of mechanical fixing devices from profiles	2.2.15	---	---	Not applicable
	Render strip tensile strength	2.2.16	---	---	Not applicable
	Shear strength and shear modulus of the PU-foam adhesives	2.2.17	---	---	Not applicable
	Post expansion behaviour of the PU-foam adhesives	2.2.18	---	---	Not applicable
5 Protection against noise	Airborne sound insulation	2.2.19	---	No performance assessed	---
	Dynamic stiffness of the thermal insulation product	2.2.19.1	---	No performance assessed	---
	Air flow resistance of the thermal insulation product	2.2.19.2	---	No performance assessed	---
6 Energy economy and heat retention	Thermal resistance of ETICS without the influence of mechanical fixing devices	2.2.20.1	3.6.1	See Table 10	---
	Thermal conductivity and thermal resistance of the thermal insulation product	2.2.20.2	A.1	see Table A.1.1, Table A.1.2 and Table A.1.3	---
	Thermal transmittance of fixing devices	2.2.20.3	A.8	See Table A.8.1	---
Aspects of durability	Bond strength after ageing of finishing layers tested on the rig	2.2.21.1	3.7.1	See Table 11	---
	Bond strength after ageing of finishing layers not tested on the rig	2.2.21.2	---	---	Not applicable
	Tensile strength and elongation of the glass fibre mesh at initial state and after ageing in alkali conditions	2.2.21	A.7	See Table A.7.1, Table A.7.2	---

3.1. Reaction to fire

3.1.1. Reaction to fire of ETICS

The reaction to fire of FASSATHERM CLASSIC A 50 100 was tested in accordance with ISO 11925-2 and EN 13823 and classified in accordance with EN 13501-1.

The FASSATHERM CLASSIC A 50 100 meets the requirements of class B-s1, d0.

Note: A European reference fire scenario has not been laid down for facades. In some Member States, the classification of ETICS according to EN 13501-1:2018 might not be sufficient for the use in facades. An additional assessment of ETICS according to national provisions (e.g. on the basis of large-scale tests) might be necessary to comply with Member State regulations, until the existing European classification system has been completed.

3.2. Water absorption

3.2.1. Water absorption of the base coat and the rendering system

Table 4: Water absorption of the base coat and the rendering system

Systems assessed	Water absorption after 1 h, $W_{p,1h}$ (mean value) [kg/m ²]	Water absorption after 24 h, $W_{p,24h}$ (mean value) [kg/m ²]
EPS + A 50 + standard mesh	0.0	0.2
EPS + A 50 + standard mesh + RSR 421	0.0	0.2
EPS + A 50 + standard mesh + RTA 549	0.1	0.4
EPS + A 50 + standard mesh + RX 561	0.0	0.2
EPS + A 50 + standard mesh + FASSIL R 336	0.0	0.1

According to the extended application rules foreseen in the reference EAD, test results obtained without a key coat and/or decorative coat apply to the use of any key coat and/or decorative coat (see Table 1 for the kit components and Table 2 for the possible rendering system combinations).

3.3. Impact resistance

The resistance to hard body impact tests, with impact energies of 3 and 10 Joules, were carried out on the hygrothermal cycles rig and on small samples.

Table 5: Impact resistance to hard body impacts

Assessed configurations	Levels of damage	
	3 J	10 J
EPS + A 50 + FASSANET 160 + RSR 421	B _{3,HWC}	D _{10,HWC}
EPS + A 50 + FASSANET 370 + RSR 421	A _{3,w}	A _{10,w}
EPS + A 50 + FASSANET 160 + FASSANET 370 + RSR 421	A _{3,HWC}	A _{10,HWC}
EPS + A 50 + FASSANET 160 + RTA 549	B _{3,HWC}	D _{10,HWC}
EPS + A 50 + FASSANET 370 + RTA 549	A _{3,w}	A _{10,w}
EPS + A 50 + FASSANET 160 + FASSANET 370 + RTA 549	A _{3,HWC}	A _{10,HWC}
EPS + A 50 + FASSANET 160 + RX 561	A _{3,HWC}	D _{10,HWC}
EPS + A 50 + FASSANET 370 + RX 561	A _{3,w}	B _{10,w}

Assessed configurations	Levels of damage	
	3 J	10 J
EPS + A 50 + FASSANET 160 + FASSANET 370 + RX 561	A _{3,HWC}	B _{10,HWC}
EPS + A 50 + FASSANET 160 + FASSIL R 336	B _{3,HWC}	C _{10,HWC}
EPS + A 50 + FASSANET 370 + FASSIL R 336	A _{3,w}	A _{10,w}
EPS + A 50 + FASSANET 160 + FASSANET 370 + FASSIL R 336	A _{3,HWC}	A _{10,HWC}

Notes for interpretation of results:

Level A: no cracks (not even hairline cracks) and no defects observed on the test surface for all five impact points.

Level B: no cracks wider than 0.1 mm and no defects observed on the test surface for five impact out of five impact points.

Level C: no cracks wider than 0.2 mm and no defects observed on the test surface for five impact out of five impact points.

Level D: cracks wider than 0.2 mm.

HWC: tests performed on the hygrothermal cycles rig.

w: tests performed on small samples.

According to the extended application rules foreseen in the reference EAD, test results obtained without a key coat and/or decorative coat apply to the use of any key coat and/or decorative coat (see Table 1 for the kit components and Table 2 for the possible rendering system combinations).

3.4. Water vapour permeability

3.4.1. Water vapour permeability of rendering system

The water vapour permeability, based on the equivalent air thickness of the rendering system, was assessed in accordance with EN ISO 7783:2018, method A.

Table 6: Resistance to water vapour diffusion (S_d)

Systems assessed	Measured rendering system thickness [mm]	Equivalent air thickness, S_d [m] (mean value)
A 50 + standard mesh + FX 526 + RSR 421	7.8	0.5
A 50 + standard mesh + FX 526 + RSR 421 + RX 561 (0.6 mm)	8.3	1.1
A 50 + standard mesh + FX 526 + RSR 421 + SKIN 432	7.6	0.7
A 50 + standard mesh + FX 526 + RSR 421 + FASSADVANCE PROTECTION	8.4	1.3
A 50 + standard mesh + FX 526 + RSR 421 + DESIDERI VELLUTO	8.8	1.2
A 50 + standard mesh + FX 526 + RSR 421 + DESIDERI VELO	8.2	0.9
A 50 + standard mesh + FX 526 + RTA 549	8.2	0.6
A 50 + standard mesh + FX 526 + RTA 549 + RX 561 (0.6 mm)	8.6	0.9
A 50 + standard mesh + FX 526 + RTA 549 + SKIN 432	8.1	0.7
A 50 + standard mesh + FX 526 + RTA 549 + FASSADVANCE PROTECTION	8.1	0.8
A 50 + standard mesh + FX 526 + RTA 549 + DESIDERI VELLUTO	8.1	0.8
A 50 + standard mesh + FX 526 + RTA 549 + DESIDERI VELO	7.6	0.6
A 50 + standard mesh + FX 526 + RX 561	7.8	0.6
A 50 + standard mesh + FX 526 + RX 561 + RX 561 (0.6 mm)	8.5	0.7
A 50 + standard mesh + FX 526 + RX 561 + SKIN 432	8.1	0.8
A 50 + standard mesh + FX 526 + RX 561 + FASSADVANCE PROTECTION	8.5	1.0
A 50 + standard mesh + FX 526 + RX 561 + DESIDERI VELLUTO	8.7	1.1
A 50 + standard mesh + FX 526 + RX 561 + DESIDERI VELO	8.4	0.7

Systems assessed	Measured rendering system thickness [mm]	Equivalent air thickness, S_d [m] (mean value)
A 50 + standard mesh + FX 526 + FASSIL R 336	7.1	0.4
A 50 + standard mesh + FX 526 + FASSIL R 336 + RX 561 (0.6 mm)	8.6	0.8
A 50 + standard mesh + FX 526 + FASSIL R 336 + SKIN 432	8.0	0.9
A 50 + standard mesh + FX 526 + FASSIL R 336 + FASSADVANCE PROTECTION	8.0	0.7
A 50 + standard mesh + FX 526 + FASSIL R 336 + DESIDERI VELLUTO	8.4	0.8
A 50 + standard mesh + FX 526 + FASSIL R 336 + DESIDERI VELO	8.0	0.7

3.5. Bond strength

3.5.1. Bond strength between the base coat and the thermal insulation products

Table 7: Bond strength between base coat and insulation product at initial state and after hygrothermal cycles (HWC)

Systems assessed	Bond strength [kPa]		Mode of failure
EPS + A 50 + standard mesh	$F_{B-I,min,dry}$	64	cohesive failure - 100% rupture in the insulation product
	$F_{B-I,mean,dry}$	70	
	$F_{B-I,min,HWC}$	100	cohesive failure - 100% rupture in the insulation product
	$F_{B-I,mean,HWC}$	100	

3.5.2. Bond strength between the adhesive and the substrate

Table 8: Bond strength between adhesive and substrate

Adhesive	Adhesive thickness [mm]	Bond strength [kPa]		Mode of failure
A 50	4.8	$F_{A-S,min,dry}$	1876	cohesive failure - 100% rupture within the adhesive
		$F_{A-S,mean,dry}$	1888	
	5.2	$F_{A-S,min,2d,2h}$	857	cohesive failure - 100% rupture within the adhesive
		$F_{A-S,mean,2d,2h}$	944	
	5.5	$F_{A-S,min,2d,7d}$	2267	cohesive failure - 100% rupture within the adhesive
		$F_{A-S,mean,2d,7d}$	2357	
A 96	5.2	$F_{A-S,min,dry}$	933	cohesive failure - 100% rupture within the adhesive
		$F_{A-S,mean,dry}$	1024	
	4.9	$F_{A-S,min,2d,2h}$	666	cohesive failure - 100% rupture within the adhesive
		$F_{A-S,mean,2d,2h}$	712	
	4.9	$F_{A-S,min,2d,7d}$	1473	cohesive failure - 100% rupture within the adhesive
		$F_{A-S,mean,2d,7d}$	1600	

3.5.3. Bond strength between the adhesive and the thermal insulation product

Table 9: Bond strength between adhesive and insulation product

Systems assessed	Adhesive thickness [mm]	Bond strength [kPa]		Mode of failure
A 50 + EPS	6.2	$F_{A-I,min,dry}$	100	cohesive failure - 100% rupture in the insulation product
		$F_{A-I,mean,dry}$	100	
	6.3	$F_{A-I,min,2d,2h}$	50	cohesive failure - 100% rupture in the insulation product
		$F_{A-I,mean,2d,2h}$	88	
	5.6	$F_{A-I,min,2d,7d}$	100	cohesive failure - 100% rupture in the insulation product
		$F_{A-I,mean,2d,7d}$	100	
A 96 + EPS	6.6	$F_{A-I,min,dry}$	100	cohesive failure - 100% rupture in the insulation product
		$F_{A-I,mean,dry}$	100	
	6.2	$F_{A-I,min,2d,2h}$	28	adhesive failure - 78% rupture between adhesive and insulation product
		$F_{A-I,mean,2d,2h}$	41	
	6.2	$F_{A-I,min,2d,7d}$	100	cohesive failure - 100% rupture in the insulation product
		$F_{A-I,mean,2d,7d}$	100	

The minimum bonded area, Bs, in accordance with EAD 040083-01-0404, Annex I.4, is 40 %.

3.6. Thermal resistance

3.6.1. Thermal resistance of ETICS without the influence of mechanical fixing devices

Table 10: R_{ETICS} per EPS and thickness

EPS thickness [mm]	R_{ETICS} [(m ² .)/(W)]		
	EPS standard	EPS with graphite	EPS bicolor
30	0,85	0,99	0,90
35	0,99	1,15	1,05
40	1,13	1,31	1,20
45	1,27	1,47	1,34
50	1,41	1,63	1,49
60	1,69	1,96	1,78
70	1,96	2,28	2,08
80	2,24	2,60	2,37
90	2,52	2,92	2,67
100	2,80	3,25	2,96
110	3,08	3,57	3,26
120	3,35	3,89	3,55
130	3,63	4,21	3,84
140	3,91	4,54	4,14
150	4,19	4,86	4,43
160	4,46	5,18	4,73

EPS thickness [mm]	R _{ETICS} [(m ² .) / W]		
	EPS standard	EPS with graphite	EPS bicolor
170	4,74	5,50	5,02
180	5,02	5,83	5,31
190	5,30	6,15	5,61
200	5,58	6,47	5,90
210	5,85	6,79	6,20
220	6,13	7,12	6,49
230	6,41	7,44	6,78
240	6,69	7,76	7,08
250	6,96	8,08	7,37
260	7,24	8,41	7,67
270	7,52	8,73	7,96
280	7,80	9,05	8,26
290	8,08	9,37	8,55
300	8,35	9,70	8,84

3.7. Aspects of durability

3.7.1. Bond strength after ageing of finishing layer tested on the rig

Table 11: Bond strength after ageing of finishing layer tested on the rig

Systems assessed	Bond strength [kPa]		Failure pattern
EPS + A 50 + standard mesh	F _{min,HWC}	100	cohesive failure - 100% rupture in the insulation product
	F _{mean,HWC}	100	
EPS + A 50 + standard mesh + RSR 421	F _{min,HWC}	100	cohesive failure - 100% rupture in the insulation product
	F _{mean,HWC}	100	
EPS + A 50 + standard mesh + RTA 549	F _{min,HWC}	100	cohesive failure - 100% rupture in the insulation product
	F _{mean,HWC}	100	
EPS + A 50 + standard mesh + RX 561	F _{min,HWC}	100	cohesive failure - 100% rupture in the insulation product
	F _{mean,HWC}	100	
EPS + A 50 + standard mesh + FASSIL R 336	F _{min,HWC}	100	cohesive failure - 100% rupture in the insulation product
	F _{mean,HWC}	100	

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 of European Commission as amended by the European Commission Decision 2001/596/EC, the applicable AVCP system is 2+ for any use except for uses subject to regulations on reaction to fire.

For uses subject to regulations on reaction to fire, including propensity to undergo continuous smouldering where relevant, the applicable AVCP systema regarding reaction to fire are 1 or 2+ depending on the conditions defined in the said Decision.

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

The ETA is issued on the basis of agreed data/information, deposited at Itecons, which identifies the system that has been assessed and judged. It is the manufacturer's responsibility to make sure that all those who use the kit are appropriately informed of specific conditions laid down in this ETA.

Changes to the ETICS, their components or their production process, should be notified to the Itecons before the changes are introduced. Itecons will decide whether or not such changes affect the ETA and if so whether further assessment or alterations to the ETA shall be necessary.

Issued in Coimbra on 12.08.2026

By

Technical Assessment Unit of

Itecons – Instituto de Investigação e Desenvolvimento Tecnológico para a Construção, Energia,
Ambiente e Sustentabilidade


Andreia Gil
Senior Official

(Technical Assessment Unit Coordinator)


Validated document

(Administration)

Annex A | Components characteristics

A.1 Insulation product

Factory-prefabricated unfaced panels made of expanded polystyrene (EPS) cut from big blocks, in accordance with EN 13163.

Table A.1.1: EPS standard characteristics

Thermal insulation type	Reference	Nominal thickness range [mm]	Characteristic Assessment method	Performance / Declared values
EPS	EPS standard	30 - 300	Compressive strength EN 826	≥ 70 kPa
			Reaction to fire EN 13501-1	Class E
			Density	≤ 20 kg/m ³
			Shear strength (kPa) / EN 12090	≥ 47 kPa
			Shear modulus (kPa) / EN 12090	≥ 1877 kPa
			Tensile strength perpendicular to faces (dry conditions) EN 1607	$\geq$ TR 100
			Thermal conductivity EN 12667	≤ 0.038 W/(m.K)
			Water absorption ISO 29767 (method A)	≤ 0.10 kg/m ²
			Water vapour diffusion resistance factor, μ (-) EN 13163	30 to 70
		30	Thermal resistance, $R_{\text{Insulation(min. thickness)}}$ EN ISO 6946	0.79 (m ² .K)/W

Table A.1.2: EPS with graphite characteristics

Thermal insulation type	Reference	Nominal thickness range [mm]	Characteristic Assessment method	Performance / Declared values
EPS	EPS with graphite	30 - 300	Compressive strength EN 826	≥ 70 kPa
			Reaction to fire EN 13501-1	Class E
			Density	≤ 20 kg/m ³
			Shear strength (kPa) / EN 12090	≥ 70 kPa
			Shear modulus (kPa) / EN 12090	≥ 1833 kPa
			Tensile strength perpendicular to faces (dry conditions) EN 1607	$\geq$ TR 100
			Thermal conductivity EN 12667	≤ 0.032 W/(m.K)
			Water absorption ISO 29767 (method A)	≤ 0.10 kg/m ²
			Water vapour diffusion resistance factor, μ (-) EN 13163	30 to 70
		30	Thermal resistance, $R_{\text{Insulation(min. thickness)}}$ EN ISO 6946	0.94 (m ² .K)/W

Table A.1.3: EPS bicolor characteristics

Thermal insulation type	Reference	Nominal thickness range [mm]	Characteristic Assessment method	Performance / Declared values
EPS	EPS bicolor	30 - 300	Compressive strength EN 826	≥ 70 kPa
			Reaction to fire EN 13501-1	Class E
			Density	≤ 18 kg/m ³
			Shear strength (kPa) / EN 12090	≥ 89 kPa
			Shear modulus (kPa) / EN 12090	≥ 1800 kPa
			Tensile strength perpendicular to faces (dry conditions) EN 1607	≥ TR 100
			Thermal conductivity EN 12667	≤ 0.034 W/(m.K)
			Water absorption ISO 29767 (method A)	≤ 0.1 kg/m ²
			Water vapour diffusion resistance factor, μ (-) EN 13163	30 to 70
		30	Thermal resistance, R _{insulation(min. thickness)} EN ISO 6946	0.88 (m ² .K)/W

Table A.1.4: Shear strength and shear modulus of elasticity of the EPS

EPS	Thickness [mm]	Shear strength [kPa]		Shear modulus of elasticity, G [kPa]	
		τ _{min}	τ _{mean}	G _{min}	G _{mean}
EPS standard	50	47	59	1877	2300
	300	No performance assessed			
EPS with graphite	50	70	74	1833	2000
	300	No performance assessed			
EPS bicolor	50	89	90	1800	2000
	300	No performance assessed			

A.2 Adhesive

Table A.2.1: Adhesives characteristics

Characteristics	A 50	A 96
Chemical nature	cement based	cement based
Maximum grain size [mm]	0.6	1.4
Weight per square meter [kg/m ²]	3.2 – 6.0	4.5 – 6.0
Density (wet) [kg/m ³]	1720 - 1800	1720 - 1850
Organic content [%]	< 6	< 5
Ash content at 450 °C [%]	93.8 – 95.8	96.7 – 97.9
Heat of combustion [MJ/kg]	≤ 1.1	≤ 0.6

A.3 Base coat

Table A.3.1: Base coat characteristics

Characteristics	A 50
Chemical nature	cement based
Maximum grain size [mm]	0.6
Density (wet) [kg/m ³]	1720 - 1800
Organic content [%]	< 6
Ash content at 450 °C [%]	93.8 – 95.8
Heat of combustion [MJ/kg]	≤ 1.1

A.4 Key coat

Table A.4.1: Key coat characteristics

Characteristics	FX 526
Type of material	polymeric
Density (wet) [kg/m ³]	1560 - 1660
Organic content [%]	< 15
Ash content at 450 °C [%]	~ 85.9

A.5 Finishing coat

Table A.5.1: Finishing coat characteristics

Characteristics	RSR 421	RTA 549	RX 561	FASSIL R 336
Chemical nature	polymeric	acrylic	acrylic	silicate
Maximum grain size [mm]	1.5	1.5	1.5	1.5
Density (wet) [kg/m ³]	1700 - 1900	1700 - 1900	1700 - 1900	1700 - 1900
Organic content [%]	< 8.3	< 8.3	< 8.3	< 8.3
Ash content at 450 °C [%]	~ 90.5	~ 91.8	~ 91.6	~ 92.8
Heat of combustion [MJ/kg]	~ 2.4	~ 3.0	~ 2.9	~ 1.8

A.6 Decorative coat

Table A.6.1: Decorative coat characteristics

Characteristics	SKIN 432	RX 561 0,6 mm	FASSADVANCE PROTECTION	DESIDERI VELO	DESIDERI VELLUTO
Type of material	ready to use paste	ready to use paste	ready to use paste	ready to use paste	ready to use paste
Density (wet) [kg/m ³]	1520 - 1560	1700 - 1900	1320 - 1350	1000	1650
Ash content at 450 °C [%]	52 ± 7	75 ± 5	37 ± 7	9 ± 5	66 ± 5
Heat of combustion [MJ/m ²]	≤ 0.95	≤ 5.70	≤ 2.16	≤ 0.66	≤ 4.41

A.7 Glass fibre meshes

Glass fibre meshes FASSANET 160 and FASSANET 370 can be used both as standard mesh or reinforced mesh: FASSANET 160 (standard) + FASSANET 370 (reinforced) or FASSANET 370 (standard) + FASSANET 160 (reinforced).

Table A.7.1: Glass fibre mesh FASSANET 160 characteristics

Component	Trade Name	Characteristics	Results	
Standard mesh / Reinforced mesh	FASSANET 160	Mass per unit area (g/m ²)	160 (± 5%)	
		Mesh size (mm)	(5.1 X 4.1) ± 0.5	
		Mesh opening (mm)	(3.8 x 3.6) ± 0.5	
		Coverage ratio (%)	≥ 27	
		Organic content (%)	17 ± 3	
		Ash content (%)	83 ± 3	
		Heat of combustion [MJ/kg]	≤ 7.3	
		Tensile strength and elongation	Warp direction	Weft direction
		In the as-delivered state	Tensile strength (N/mm)	≥ 40
			Elongation ε (%)	≥ 4.5
		After alkalis conditioning	Tensile strength (N/mm)	≥ 20
			Elongation ε (%)	≤ 3.0
			Residual tensile strength [%]	≥ 50

Table A.7.2: Glass fibre mesh FASSANET 370 characteristics

Component	Trade Name	Characteristics	Results
Standard mesh / Reinforced mesh	FASSANET 370	Mass per unit area (g/m ²)	368 ± 5%
		Mesh size (mm)	(5.9 X 5.0) ± 5%
		Mesh opening (mm)	(3.8 x 4.1) ± 5%
		Coverage ratio (%)	46 ± 5
		Organic content (%)	12.7 ± 3
		Ash content (%)	87.2 ± 3

Component	Trade Name	Characteristics		Results	
		Heat of combustion [MJ/kg]		≤ 5.18	
		Tensile strength and elongation		Warp direction	Weft direction
		In the as-delivered state	Tensile strength (N/mm)	70	79
			Elongation ε (%)	5.0 ± 1	
		After alkalis conditioning	Tensile strength (N/mm)	≥ 20	
			Elongation ε (%)	3.1	3.3
			Residual tensile strength [%]	≥ 50	

A.8 Anchors

Anchors are used in FASSATHERM CLASSIC A 50 100 system as a supplementary fixing.

Table A.8.1: Anchors description of individual product characteristics

Characteristics		FASSA COMBI FIX PLUS	FASSA TOP FIX 2G	FASSA H3 BASIC FIX
Material(s)		virgin polyethylene plate and sleeve and galvanised steel nail	virgin polyethylene plate and sleeve and galvanised or stainless steel nail	Virgin polyethylene plate and virgin polyamide nail reinforced with glass fibres.
Shape		See ETA 18/0006	See ETA 04/0023	See ETA 14/0130
Dimensions [mm]	φ anchor plate	60	60	60
	Other	See ETA 18/0006	See ETA 04/0023	See ETA 14/0130
Plate stiffness [kN/mm]		0.7	0.6	0.6
Load resistance of the anchor plate [kN]		1.5	2.08	1.25
Type of installation method		According to the manufacturer’s product installation instructions		
Setting position				
Thermal transmittance of fixing devices, χ-value [W/K]		0.001	0.002	0.000
ETA issued in accordance with EAD 330196-01-0604		ETA 18/0006	ETA 04/0023 (ejotherm STR U 2G)	ETA 14/0130

Note: Other fixings can be used provided that they comply with the the characteristics specified above, as stated in the relevant ETA.

Annex B | Manufacturing Plant

1. Via Fornaci, 8
31027 Spresiano (TV)
Italia
2. Zona Industrial São Mamede, Lote 1 e 2
2495-036 São Mamede (Batalha)
Portugal