tecnalia
MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

Área Anardi 5,
E-20730 Azpeitia
Gipuzkoa-Spain
Tel: +34 946 430 850
Lab_services@tecnalia.com
www.tecnalia.com

Designated according to Article 29 of Regulation (EU) No 305/2011

Member of EOTA
www.eota.eu

European Technical Assessment ETA 25/0292 of 25/04/2025

General Part

Technical Assessment Body issuing the ETA:	**TECNALIA RESEARCH & INNOVATION**
Trade name of the construction product	**ThermoCaf ETICS System**
Product family to which the construction product belongs	External Thermal Insulation Composite System with rendering for use as external thermal insulation to the wall of buildings.
Manufacturer	Nuova CAF S.r.l. Via Luigi Einaudi, 7 61032 Fano (PU) Italy www.nuovacaf.it
Manufacturing plants	Nuova CAF S.r.l. Via Luigi Einaudi, 7 61032 Fano (PU) Italy
This European Technical Assessment contains	19 pages including 1 Annex which form an integral part of this assessment.
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	EAD 040083-00-0404 External Thermal Insulation Composite Systems (ETICS) with Rendering

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 – Tecnalia Research & Innovation. Any partial reproduction has to be identified as such.

Table of contents

Specific parts

1. Technical description of the product

This product 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 (European Technical Assessment).

The ETICS kit comprises a prefabricated insulation product of expanded polystyrene (EPS) to be bonded and mechanically fixed onto the wall. The methods of fixing and the relevant components are specified in Table 1. The insulation product is faced with a rendering system consisting of one or more 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 may include special fittings (e.g., base profiles, corner profiles) to treat details such as connections, apertures, corners, parapets, sills, etc. Assessment and performance of these components is not addressed on 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.

The components of the kit are:

	Components	Coverage (kg/m^2)	Thickness (mm)
	ETICS bonded with supplementary mechanical fixing. According to ETA holder's prescriptions the minimal bonded surface shall be at least 40%. National application documents shall be taken into account.		
Insulation material with associated method of fixing	Insulation product:		
	Factory prefabricated expanded polystyrene (EPS) board with or without graphite according to EN 13163 (see further description at Annex 1).	--	40-300
	Adhesive:		
	Adetherm Extra 35 G8 grey: Grey powder consisting of grey cement, sand, synthetic resins, polypropylene fibres and additives. The product requires the addition of 21%-24% water, 5.25 l - 6 l of water per 25 kg. According to EN 998-1.		5-8 (dry)
	• Bead and spot gluing: depending on the thickness of the curb, the number of stitches, the weight and dimensions of the slabs.	min. 5	
	• Full bed bonding: for application with notched trowels.	3.5 – 5.0	
	Mechanical fixings:		
	Nailed-in plastic anchor with a specific nail of virgin polyamide **"LTX-10 (D-PLUS)".**	ETA 16/0509	
	Nailed-in plastic anchor with a specific nail of steel with zinc coating **"LMX-10 (D-H)".**	ETA 16/0509	
Base coat	**Adetherm Extra 35 G8 grey:** Grey powder consisting of grey cement, sand, synthetic resins, polypropylene fibres and additives. The product requires the addition of 21%-	4.5	4-5 (dry)

	24% water, 5.25 l - 6 l of water per 25 kg. according to EN 998-1.		
Glass fibre mesh	**NET-1H:** Alkali and slide resistant glass fibre mesh with mass per unit area 160 g/m^2 and mesh size 4.5 x 4.0 mm.	ETA 18/0989	
Key coat	**Hydrocril Pigmentato:** Pigmented universal water- based anchor primer. Ready-to-use water-based micronized acrylic resin dispersion. This product can be applied before acrylic or acryl-siloxane top coats. Used with Capri K90 finishing coat.	0.2-0.25	0.03
	Microfin Quarz Super: Acrylic resins quartz water paint. The product requires the addition of about 20% of water. This product can be applied before acrylic finish coats. Used with Cervinia K90 finishing coat.	0.12-0.15	0.08-0.09
	EuroSil Pittura: Acrylic-siloxane resins water paint. The product requires the addition of about 20% of water. This product can be applied before acrylic-siloxane finish coats. Used with EuroSil Capri K90 finishing coat.	0.12-0.13	0.08-0.09
	GoldenSil Pittura: Siloxane resins water paint. The product requires the addition of about 20%-25% of water. This product can be applied before siloxane finish coats. Used with GoldenSil Capri K90 finishing coat.	0.12-0.13	0.08-0.09
Finishing coat	**Capri K90:** Ready-to-use acrylic binder paste, rustic finishing aspect, with anti-algae additives. Particle size: 1.2mm. According to EN 15824	2	1.75
	Cervinia K90: Ready-to-use acrylic binder paste, rustic finishing aspect, with anti-algae additives. Particle size: 1.2mm. According to EN 15824	2	1.75
	EuroSil Capri K90: Ready-to-use acryl-siloxane binder paste, rustic finishing aspect, with anti-algae additives. Particle size: 1.2mm. According to EN 15824	2	1.75
	GoldenSil Capri K90: Ready-to-use siloxane binder paste, rustic finishing aspect, with anti-algae additives. Particle size: 1.2mm. According to EN 15824	2	1.75
Ancillary materials	Supplementary profiles: Polyvinyl chloride (PVC) or aluminium profiles for corners, expansion joints, junctions with doors and windows, balconies, etc.	Remain under the ETA holder responsibility	

Table 1: Components ThermoCaf ETICS System.

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

2.1. Intended use

This ETICS is intended for use as external insulation of building walls. The walls are made of masonry (bricks, block, 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 elements. 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 choice of the method of fixing depends on the characteristics of the substrate, which could need preparation and shall be done in accordance with the national instructions.

The provisions made in this ETA are based on an assumed working life of 25 years as minimum, provided that the conditions laid down in the sections below (manufacturing, transport, installation, use, maintenance, etc) are met. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, 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.

2.2. Manufacturing

The ETA is issued for the ETICS, on the basis of agreed data/information, deposited at Tecnalia Research & Innovation, which identifies the ETICS that has been assessed and judged. Changes to the ETICS or the components or their production process, which could result in this deposited data/information being incorrect, shall be notified to Tecnalia Research & Innovation before the changes are introduced. Tecnalia Research & Innovation will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and, if so, whether further assessment or alterations to the ETA shall be necessary.

2.3. Design and installation

The ETICS is installed on site. The installation instructions, including special installation techniques and provisions for the qualification of the personnel, are given in the manufacturer´s technical documentation. It is responsibility of the manufacturer to guarantee

that the information about design and installation are easily accessible to the concerned people.

2.4. Packaging, transport and storage

The information on packaging, transport and storage is given in the manufacturer's technical documentation. It is responsibility of the manufacturer to ensure that this information is easily accessible for the concerned people.

2.5. Use, maintenance and repair

The finishing coat shall normally be maintained in order to fully preserve the ETICS's performance.

Maintenance includes at least:

- Visual inspections of the ETICS.
- The repairing of localised damaged areas due to accidents.
- The application of various products or paints, possibly after washing or ad hoc preparation.

Necessary repairs should be performed as soon as the need has been identified.

It is important to be able to carry out maintenance as far as possible using readily available products and equipment, without spoiling appearance. Only products which are compatible with the ETICS shall be used.

The information on use, maintenance and repair is given in the manufacturer's technical documentation. It is the responsibility of the manufacturer to ensure that this information is made know to the concerned people.

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

The identification tests and the assessment for the intended use of this ETICS according to the Basic Work Requirements, were carried out in compliance with the EAD 040083-00-0404 External Thermal Insulation Composite Systems (ETICS) with Rendering (hereinafter referred as “EAD”).

Safety in case of fire (BWR 2)

3.1 Reaction to fire (EAD 040083-00-0404, Clause 2.2.1)

3.1.1 Reaction to fire of ETICS (EAD 040083-00-0404, Clause 2.2.1.1)

Components	Max. organic content (%)/Max. heat of combustion (MJ/kg)	Flame retardant content
Adhesive Adetherm Extra 35 G8 grey	≤ 1.4% / --	No flame-retardant
Insulation EPS	--	
Base coat Adetherm Extra 35 G8 grey	≤ 1.4% / --	
Glass fibre mesh NET-1H	≤ 27% / --	
Key coat Hydrocril Pigmentato	≤ 8% / --	
Key coat Microfin Quarz Super	≤ 8.5% / --	
Key coat EuroSil Pittura	≤ 9.5% / --	
Key coat GoldenSil Pittura	≤ 10.5% / --	
Finishing coat Capri K90	≤ 6% / --	
Finishing coat Cervinia K90	≤ 6% / --	
Finishing coat EuroSil Capri K90	≤ 6.4% / --	
Finishing coat GoldenSil Capri K90	≤ 7% / --	

Table 2: Organic content, heat of combustion and flame-retardant content of ThermoCaf ETICS System.

The reaction to fire according to EN 13501-1 and Commission Delegated Regulation (EU) No 2016/364 of ETICS ThermoCaf ETICS System is 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 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.

3.1.2 Reaction to fire of thermal insulation material (EAD 040083-00-0404, Clause 2.2.1.2)

No performance assessed. See Annex 1 for thermal insulation product characteristics.

3.1.3 Reaction to fire of PU foam adhesive (EAD 040083-00-0404, Clause 2.2.1.3)

Not relevant.

3.2 Façade fire performance (EAD 040083-00-0404, Clause 2.2.2)

No performance assessed.

3.3 Propensity to undergo continuous smouldering (EAD 040083-00-0404, Clause 2.2.3)

Not relevant.

Hygiene, health and environment (BWR 3)

3.4 Content, emission and/or release of dangerous substances (EAD 040083-00-0404, Clause 2.2.4)

No performance assessed.

3.5 Water absorption (EAD 040083-00-0404, Clause 2.2.5)

3.5.1 Water absorption of the base coat and the rendering system

Base Coat	Rendering	Water absorption (kg/m²)	
		After 1 hour	After 24 hours
Adetherm Extra 35 G8 grey	Without rendering	0.04	0.34
	With Hydrocril Pigmentato + Capri K90	0.04	0.15
	With Microfin Quarz Super + Cervinia K90	0.04	0.13
	With EuroSil Pittura + EuroSil Capri K90	0.03	0.15
	With GoldenSil Pittura + GoldenSil Capri K90	0.04	0.14

Table 3: Water absorption (capillarity test).

3.5.2 Water absorption of the thermal insulation product.

No performance assessed. See Annex 1 for thermal insulation product characteristics.

3.6 Hygrothermal behaviour (EAD 040083-00-0404, Clause 2.2.6)

The hygrothermal performance of the ETICS was tested on the rig. None of the following defects occurred on the assessed external renderings or the base coat during and after the hygrothermal cycles:

- Blistering or peeling of any finishing coat.
- Failure or cracking associated with joints between insulation product boards or profiles fitted with ETICS.
- Detachment of the render coat.
- Cracking allowing water penetration to the insulating layer (normally ≤ 0.2 mm).

Therefore, the ETICS is considered resistant to hygrothermal cycles.

3.7 Freeze-thaw behaviour (EAD 040083-00-0404, Clause 2.2.7)

Water absorption of the base coat and all the finishing coats is lower than 0.5 kg/m^2 after 1 hour and 24 hours. Based on these test results, the system can be considered freeze-thaw resistant and there is no need for further testing.

3.8 Impact resistance (EAD 040083-00-0404, Clause 2.2.8)

Impact resistance of the finishing coat tested on the rig.

Rendering system	Maximum Impact diameter (mm)/damage		Category of use
	3 J	10 J	
Base coat Adetherm Extra 35 G8 grey + glass fibre mesh NET-1H + key coat Hydrocril Pigmentato + finishing coat Capri K90.	20/ no deterioration	35/ rendering no penetrated	II
Base coat Adetherm Extra 35 G8 grey + glass fibre mesh NET-1H + key coat Microfin Quarz Super + finishing coat Cervinia K90.	21/ no deterioration	36/ rendering no penetrated	II
Base coat Adetherm Extra 35 G8 grey + glass fibre mesh NET-1H + key coat EuroSil Pittura + finishing coat EuroSil Capri K90.	21/ no deterioration	35/ rendering no penetrated	II
Base coat Adetherm Extra 35 G8 grey + glass fibre mesh NET-1H + key coat GoldenSil Pittura + finishing coat GoldenSil Capri K90.	21/ no deterioration	34/ rendering no penetrated	II

Table 4: Impact resistance. Finishing coats tested on the rig.

3.9 Water vapour permeability (resistance to water vapour diffusion) (EAD 040083-00-0404, Clause 2.2.9)

3.9.1 Water vapour permeability of the rendering system

Composition of the system		Thickness (m)	Equivalent air thickness S_d (m)
Reinforced base coat Adetherm Extra 35 G8 grey +	Hydrocril Pigmentato + Capri K90	0.0068	0.39
	Microfin Quarz Super + Cervinia K90	0.0071	0.62
	EuroSil Pittura + EuroSil Capri K90	0.007	0.4
	GoldenSil Pittura + GoldenSil Capri K90	0.0069	0.44

Table 5: Water vapour permeability of the rendering system.

3.9.2 Water vapour permeability of thermal insulation product

No performance assessed. See Annex 1 for thermal insulation product characteristics.

Safety and accessibility in use (BWR 4)

3.10 Bond strength

3.10.1 Bond strength between base coat and thermal insulation product (EAD 040083-00-0404, Clause 2.2.11.1)

Composition	Initial State		After hygrothermal cycles		After freeze/thaw cycles	
	Minimum value	Mean value	Minimum value	Mean value	Minimum value	Mean value
EPS panel + base coat Adetherm Extra 35 G8 grey	204 kPa	217 kPa	135 kPa	137 kPa	Test not performed (system is considered freeze thaw resistant)	

Table 6: bond strength between base coat and insulation product.

Rupture type: cohesive break in the insulation material.

3.10.2 Bond Strength between adhesive and substrate (EAD 040083-00-0404, Clause 2.2.11.2)

Composition	Initial State		Immersion in water for 2 days and 2h drying		Immersion in water for 2 days and 7 days drying	
	Minimum value	Mean value	Minimum value	Mean value	Minimum value	Mean value
Concrete slab + adhesive Adetherm Extra 35 G8 grey (4 mm thickness)	1343 kPa	1415 kPa	249 kPa	262 kPa	1396 kPa	1464 kPa

Table 7: Bond strength between adhesive and substrate.

Rupture type: cohesive break in the adhesive.

3.10.3 Bond Strength between adhesive and insulation product (EAD 040083-00-0404, Clause 2.2.11.3)

Composition	Initial State		Immersion in water for 2 days and 2h drying		Immersion in water for 2 days and 7 days drying	
	Minimum value	Mean value	Minimum value	Mean value	Minimum value	Mean value
Adhesive Adetherm Extra 35 G8 grey (4 mm thickness)	206 kPa	220 kPa	83 kPa	87 kPa	198 kPa	214 KPa

Table 8: bond strength between adhesive and insulation product.

Rupture type:

- Initial state: cohesive rupture in the insulation material
- Immersion in water for 2 days and 2h drying: Adhesive rupture
- Immersion in water for 2 days and 7 days drying: cohesive rupture in the insulation material

The minimal bonded surface S is calculated as follows:

$$S\ (\%) = [0.03 \times 100] / B$$

Where:

B= minimum mean failure resistance of the adhesive to the insulation product in dry conditions (MPa)

0.03 MPa correspond to the minimum requirements.

3.11 Fixing strength (transverse displacement strength) (EAD 040083-00-0404, Clause 2.2.12)

Not relevant.

3.12 Wind load resistance of ETICS (EAD 040083-00-0404, Clause 2.2.13)

3.12.1 Pull-through test (EAD 040083-00-0404, Clause 2.2.13.1)

Not relevant.

3.12.2 Static foam block test (EAD 040083-00-0404, Clause 2.2.13.2)

Not relevant.

3.12.3 Dynamic wind uplift EAD 040083-00-0404, Clause 2.2.13.3)

Not relevant.

3.13 Tensile test perpendicular to the faces of thermal insulation product (EAD 040083-00-0404, Clause 2.2.14)

No performance assessed. Tensile strength of thermal insulation product in dry conditions is ≥TR100 (100 kPa). See Annex 1 for declared values.

Tensile strength of thermal insulation product in wet conditions is not applicable.

3.14 Shear strength and shear modulus of elasticity test of ETICS (EAD 040083-00-0404, Clause 2.2.15)

Shear strength of insulation material is ≥ 20 kPa and shear modulus is ≥ 1000 kPa. See Annex 1 for declared values.

3.15 Pull-through resistance of fixing from profiles (EAD 040083-00-0404, Clause 2.2.16)

Not relevant.

3.16 Render strip tensile test (EAD 040083-00-0404, Clause 2.2.17)

No performance assessed.

3.17 Shear strength and shear modulus of foam adhesive (EAD 040083-00-0404, Clause 2.2.18)

Not relevant.

3.18 Post expansion behaviour of foam adhesives (EAD 040083-00-0404, Clause 2.2.19)

Not relevant.

3.19 Bond strength after ageing (EAD 040083-00-0404, Clause 2.2.20)

Bond strength after ageing of finishing coats tested on the rig

Rendering system	After hygrothermal cycles		After freeze/thaw cycles	
	Individual value/type of failure (1)	Mean value	Minimum value	Mean value
Base coat Adetherm Extra 35 G8 grey + glass fibre mesh NET-1H + key coat Hydrocril Pigmentato + finishing coat Capri K90.	142 kN/m²/ CS	142 kN/m²	Test not performed (system is considered freeze thaw resistant)	
	144 kN/m²/ CS			
	140 kN/m²/ CS			
	136 kN/m²/ CS			
	145 kN/m²/ CS			
Base coat Adetherm Extra 35 G8 grey + glass fibre mesh NET-1H + key coat Microfin Quarz Super + finishing coat Cervinia K90.	140 kN/m²/ CS	140 kN/m²	Test not performed (system is considered freeze thaw resistant)	
	140 kN/m²/ CS			
	147 kN/m²/ CS			
	138 kN/m²/ CS			
	137 kN/m²/ CS			
Base coat Adetherm Extra 35 G8 grey + glass fibre mesh NET-1H + key coat EuroSil Pittura + finishing coat EuroSil Capri K90.	139 kN/m²/ CS	141 kN/m²	Test not performed (system is considered freeze thaw resistant)	
	147 kN/m²/ CS			
	138 kN/m²/ CS			
	136 kN/m²/ CS			
	143 kN/m²/ CS			
Base coat Adetherm Extra 35 G8 grey + glass fibre mesh NET-1H + key coat GoldenSil Pittura + finishing coat GoldenSil Capri K90.	144 kN/m²/ CS	142 kN/m²	Test not performed (system is considered freeze thaw resistant)	
	139 kN/m²/ CS			
	146 kN/m²/ CS			
	142 kN/m²/ CS			
	139 kN/m²/ CS			

Table9: Bond strength after ageing of finishing coats tested on the rig.

(1) CS: cohesive failure in insulation material.

3.20 Mechanical and physical characteristics of the mesh (EAD 040083-00-0404, Clause 2.2.21)

		Tensile strength in as delivered state (N/mm)	Residual tensile strength after ageing (N/mm)	Relative residual strength after ageing, of the strength in the as delivered state (%)	Elongation in as-delivered state (%)	Elongation after ageing (%)
NET-1H	Warp	50	31	62	4.09	3.11
	Weft	52	30	57.69	4.1	1.88

Table 10: Mechanical and physical characteristics of the mesh

Protection against noise (BWR 5)

3.21 Airborne sound insulation of ETICS (EAD 040083-00-0404, Clause 2.2.22)

No performance assessed.

Energy economy and heat retention (BWR 6)

3.22 Thermal resistance and thermal transmittance of ETICS (EAD 040083-00-0404, Clause 2.2.23)

The additional thermal resistance provided by the ETICS (R_{etics}) to the substrate wall is calculated from the thermal resistance of the insulation product ($R_{insulation}$), determined as described in the appropriate harmonized standard (EN 13163 for EPS insulation), and the tabulated R_{render} value of the render system (R_{render} is about 0.02 m^2K/W).

$$R_{etics} = R_{insulation} + R_{render} \ [(m^2K)/W]$$

The thermal bridges caused by mechanical fixing devices influence the thermal transmittance of the entire wall and shall be taken into account using the following calculation:

$$U_c = U + \Delta U \ [W/(m^2K)]$$

With:

U_c = corrected thermal transmittance of the entire wall, including thermal bridges.

U = thermal transmittance of the entire wall, including ETICS, without thermal bridges.

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

R_{etics} = thermal resistance of the ETICS [$(m^2K)/W$]

$R_{substrate}$= thermal resistance of the substrate wall [$(m^2K)/W$]

R_{se} = external surface thermal resistance [$(m^2K)/W$]

R_{si} = internal surface thermal resistance [$(m^2K)/W$]

ΔU = correction term of the thermal transmittance for mechanical fixing devices.

$$\Delta U = X_p * n \text{ (for anchors)} + \mathbf{\Sigma}\psi i * \ell i \text{ (for profiles)}$$

X_p = point thermal transmittance value of the anchor [W/K]. See Technical Report no 25. If not specified in the anchors ETA, the following values apply:

= 0.002 W/K for anchors with a plastic screw/nail, stainless steel screw/nail with the head covered by plastic material, and for anchors with an air gap at the head of the screw/nail.

= 0.004 W/K for anchors with a galvanized steel screw/nail with the head covered by a plastic material.

= 0.008 W/K for all other anchors (worst case).

n = number of anchors per m^2

ψi = linear thermal transmittance value of the profile [W/(mK)]

ℓi = length of the profile per m^2

Thermal resistance of ETICS is ≥ 1.0 (m^2.K)/W.

The value of thermal resistance of each insulation product shall be given in the manufacturer´s documentation along with the possible range of thicknesses. In addition, the point thermal conductivity of anchors shall be given when anchors are used in the ETICS.

No performance assessed.

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

According to the European Commission Decision 1997/556/EC, amended by the European Commission Decision 2001/596/EC, system AVCP 2+ applies.

In addition, for uses subject to regulations on reaction to fire and according to the European Commission Decision 1997/556/EC, amended by the European Commission Decision 2001/596/EC, system AVCP 2+ applies.

The AVCP systems 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 Assessment and Verification of Constancy of Performance (AVCP) system are laid down in the control plan deposited at Tecnalia Research & Innovation.

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

Issued in Azpeitia, on 25/04/2025

TECNALIA LAB_SERVICES

Firmado digitalmente por: MIGUEL MATEOS VIZUETE - 72574278D
Fecha y hora: 25.04.2025 08:30:27

Miguel Mateos

Innovation and Conformity Assessment Point

Tecnalia Research & Innovation

ANNEX 1 CHARACTERISTICS OF THE COMPONENTS

Detailed information on the chemical composition and other identifying characteristics of the components has been deposited at Tecnalia Research & Innovation. Further information can be observed from the product data sheets, which are part of the Technical Documentation for this ETA.

Insulation product

EPS PANEL – Standard panel without graphite. Factory made uncoated panels made of expanded polystyrene according to EN 13163 "Thermal insulation products for buildings. Factory made products of expanded polystyrene (EPS)"

Description and characteristics	Standard	Value	
Density (kg/m^3)		17 ± 2	
Thickness (mm)		40-300	
Reaction to fire	EN 13501-1	Euroclass E	
Thickness (mm)	EN 823	T1	±1
Water absorption (partial immersion)	EN 12087	WL(P)0.1	
Water absorption (total immersion)	EN 12087	WL(T)3	
Water absorption (short term by partial immersion)	EN 1609	<1 kg/m^2	
Water vapour permeability – diffusion factor	EN 12086	30 - 70	
Tensile strength perpendicular to the faces in dry conditions (kPa)	EN 1607	≥ 100	
Shear Strength (kPa)	EN 12090	≥ 90	
Shear Modulus of elasticity (kPa)	EN 12090	≥ 1100	
Thermal conductivity (W/mK)	EN 12667	≤ 0.036	
Thermal resistance (m²K/W)		Defined in the declaration according to EN 13163	

EPS PANEL – With graphite. Factory made uncoated panels made of expanded polystyrene with graphite according to EN 13163 "Thermal insulation products for buildings. Factory made products of expanded polystyrene (EPS)"

Description and characteristics	Standard	Value	
Density (kg/m^3)		17 ± 2	
Thickness (mm)		40-300	
Reaction to fire	EN 13501-1	Euroclass E	
Thickness (mm)	EN 823	T1	±1
Water absorption (partial immersion)	EN 12087	WL(P)0.1	
Water absorption (total immersion)	EN 12087	WL(T)3	
Water absorption (short term by partial immersion)	EN 1609	<1 kg/m^2	
Water vapour permeability – diffusion factor	EN 12086	30 - 70	
Tensile strength perpendicular to the faces in dry conditions (kPa)	EN 1607	≥ 100	
Shear Strength (kPa)	EN 12090	≥ 90	
Shear Modulus of elasticity (kPa)	EN 12090	≥ 1100	
Thermal conductivity (W/mK)	EN 12667	≤ 0.031	
Thermal resistance (m²K/W)		Defined in the declaration according to EN 13163	

Mesh

NET-1H Alkali resistant glass fibre mesh with mass per unit area of about 160 g/m^2 and mesh size of about 4.5 x 4.0 mm.

Characteristics	Reference	Value
Mass per unit area (g/m^2)	EAD 040016-00-0404	160 (±8)
Mesh size (mm)		4.5 x 4.0 (± 1)
Thickness (mm)		-
Organic content (%)		27 (± 4)
Heat of combustion (PCS-value) (MJ/kg)		12

Plastic fixings

LTX-10 (D-PLUS) Nailed-in plastic anchor with a specific nail of virgin polyamide, for fixing of external thermal insulation composite systems with rendering in concrete and masonry. ETA 16/0509

GENERAL CHARACTERISTICS	
Plate diameter (mm)	60
Load resistance of the anchor plate (kN)	1.02
Plate stiffness (kN/mm)	0.5

LMX-10 (D-H) Nailed-in plastic anchor with a specific nail of steel with zinc coating, for fixing of external thermal insulation composite systems with rendering in concrete and masonry. ETA 16/0509

GENERAL CHARACTERISTICS	
Plate diameter (mm)	60
Load resistance of the anchor plate (kN)	1.02
Plate stiffness (kN/mm)	0.5