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European Organisation for  
Technical Assessment  
Organisation Européenne  
pour l'évaluation technique

## European Technical Assessment **ETA 20/0261 of 01/07/2021**

### GENERAL PART

Trade name of the construction product

Product family to which the construction product belongs

Manufacturer

Manufacturing plant

This European Technical Assessment contains:

This European Technical Assessment is issued in accordance with Regulation (EU) n° 305/2011, on the basis of

This version replaces:

### **ISOLAREFLEX**

**PAC 09: CURTAIN WALLING/ CLADDING/  
STRUCTURAL SEALANT GLAZING.  
Kits for external wall cladding of mineral  
boards with renderings applied in situ**

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**13 pages, including 7 annexes which form an  
integral part of this assessment**

**EAD 090119-00-0404 ed. July 2018 –  
KITS FOR EXTERNAL WALL CLADDING OF  
MINERAL BOARDS WITH RENDERINGS  
APPLIED IN SITU**

**ETA 20/0261 (v02) of 17/07/2020**

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## SPECIFIC PARTS

### 1. TECHNICAL DESCRIPTION OF THE PRODUCT

The product **ISOLAREFLEX** is a kit for external wall cladding system in which the cladding element is made of mineral boards with a rendering applied in-situ. It consists of the following components: cladding elements, board-fixings, subframe components and thermal insulation product. The product description, with reference to its components, is given in Annexes A1-A7.

Assembled system layers			Annexes
Cladding elements	Rendering systems applied in-situ	Finishing coat + primer (kits no. 0-1-2-3-4-5)	see Annexes A1 and A2
		Reinforcement mesh	see Annex A2
		Adhesive	see Annex A3
	Base-coat		
	Mineral boards: Fiber cement panels		see Annex A4
Board-fixings			
Subframe: steel profiles			
Thermal insulation			see Annex A5
Fixings between the subframe and the substrate			
Ancillary component: wooden spacer			

### 2. SPECIFICATION OF THE INTENDED USE IN ACCORDANCE WITH EUROPEAN ASSESSMENT DOCUMENT N° 090119-00-0404 (hereinafter EAD)

The product **ISOLAREFLEX** is intended to be used in:

- Use 2, non-ventilated cladding systems for external walls.

This ETA covers the kits for Family 2, according to Table 1.1 of EAD 090119-00-0404 as shown in Annexes A6-A7 (construction details).

Concerning product packaging, transport and storage it is the responsibility of the manufacturer to undertake the appropriate measures and to advise his clients on the transport and storage, as he considers necessary in order to reach the declared performances.

The information about installation is provided with the technical documentation from the Manufacturer and it is assumed that the product will be installed according to it or (in absence of such instructions) according to the usual practice of the building professionals.

The performances assessed in this European Technical Assessment, according to the applicable EAD, are based on an assumed intended working life of at least **25** years, provided that the conditions for the installation, packaging, transport, storage, installation as well as appropriate use, maintenance and repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### 3. PERFORMANCE OF THE PRODUCT AND REFERENCES TO THE METHODS USED FOR ITS ASSESSMENT

The tests for performance assessment of **ISOLAREFLEX** were carried out in compliance with EAD 090119-00-0404 according to the test methods reported herein, as well for what concerns sampling, conditioning and testing provisions.

The numbering (#) in the following tables corresponds to the numbering of Table 2.1 of EAD 090119-00-0404.

#### 3.1 SAFETY IN CASE OF FIRE (BWR 2)

#	Essential characteristic	Performance
1	Reaction to fire	Kits 0-1: Class B-s1, d0. Kits 2-3-4-5: No performance assessed.
2	Façade fire performance	No performance assessed.
3	Propensity to undergo continuous smouldering	No performance assessed.

#### 3.2 HYGIENE, HEALTH AND THE ENVIRONMENT (BWR 3)

#	Essential characteristic	Performance
4	Watertightness (protection against driving rain)	The protection against driving rain has been positively carried out considering kit water absorption tests and design details (see Annexes A6 and A7).
5	Water absorption	Water absorption by capillarity
		Water permeability (water column)
	Water absorption of the board	Water absorption of the board
		Water vapour permeability
6	Water vapour permeability	No performance assessed.
7	Drainability	No water accumulation or moisture damage or leakage. See Annexes A6 and A7 (design details).
8	Content, emission and/or release of dangerous substances	No performance assessed.

### 3.3 SAFETY AND ACCESSIBILITY IN USE (BWR4)

#	Essential characteristic	Performance								
9	Wind load resistance	Kits 0-1-2-3-4-5: $Q_{\text{ suction}} = -16.85 \text{ KPa}$								
10	Impact resistance	No performance assessed.								
11	Resistance to horizontal point loads	No performance assessed.								
12	Mechanical resistance	Bond strength (adhesion between the rendering system and the board)	Without ageing	<p><u>With finishing coat:</u> Kits 0-1-2-3-4:</p> <table border="1"> <tr> <td>Dry conditions: <math>F_{\text{load}} = 0.554 \text{ kN}</math>; <math>R_{\text{mean}} = 0.28 \text{ MPa}</math>; <math>R_{\text{min}} = 0.27 \text{ MPa}</math>; 100% adhesive rupture</td> </tr> <tr> <td>2d H<sub>2</sub>O and 2h drying (23°C-50% R.H.): <math>F_{\text{load}} = 0.347 \text{ kN}</math>; <math>R_{\text{mean}} = 0.18 \text{ MPa}</math>; <math>R_{\text{min}} = 0.16 \text{ MPa}</math>; 100% adhesive rupture</td> </tr> <tr> <td>2d H<sub>2</sub>O and 7d drying (23°C-50% R.H.): <math>F_{\text{load}} = 0.594 \text{ kN}</math>; <math>R_{\text{mean}} = 0.30 \text{ MPa}</math>; <math>R_{\text{min}} = 0.29 \text{ MPa}</math>; 100% cohesive rupture</td> </tr> </table> <p>Kit 5: No performance assessed.</p> <p><u>Without finishing coat:</u> Kits 0-1-2-3-4-5:</p> <table border="1"> <tr> <td>Dry conditions: <math>F_{\text{load}} = 0.617 \text{ kN}</math>; <math>R_{\text{mean}} = 0.31 \text{ MPa}</math>; <math>R_{\text{min}} = 0.29 \text{ MPa}</math>; 100% adhesive rupture</td> </tr> <tr> <td>2d H<sub>2</sub>O and 2h drying (23°C-50% R.H.): <math>F_{\text{load}} = 0.329 \text{ kN}</math>; <math>R_{\text{mean}} = 0.17 \text{ MPa}</math>; <math>R_{\text{min}} = 0.13 \text{ MPa}</math>; 100% adhesive rupture</td> </tr> <tr> <td>2d H<sub>2</sub>O and 7d drying (23°C-50% R.H.): <math>F_{\text{load}} = 0.687 \text{ kN}</math>; <math>R_{\text{mean}} = 0.35 \text{ MPa}</math>; <math>R_{\text{min}} = 0.34 \text{ MPa}</math>; 100% cohesive rupture</td> </tr> </table>	Dry conditions: $F_{\text{load}} = 0.554 \text{ kN}$ ; $R_{\text{mean}} = 0.28 \text{ MPa}$ ; $R_{\text{min}} = 0.27 \text{ MPa}$ ; 100% adhesive rupture	2d H <sub>2</sub> O and 2h drying (23°C-50% R.H.): $F_{\text{load}} = 0.347 \text{ kN}$ ; $R_{\text{mean}} = 0.18 \text{ MPa}$ ; $R_{\text{min}} = 0.16 \text{ MPa}$ ; 100% adhesive rupture	2d H <sub>2</sub> O and 7d drying (23°C-50% R.H.): $F_{\text{load}} = 0.594 \text{ kN}$ ; $R_{\text{mean}} = 0.30 \text{ MPa}$ ; $R_{\text{min}} = 0.29 \text{ MPa}$ ; 100% cohesive rupture	Dry conditions: $F_{\text{load}} = 0.617 \text{ kN}$ ; $R_{\text{mean}} = 0.31 \text{ MPa}$ ; $R_{\text{min}} = 0.29 \text{ MPa}$ ; 100% adhesive rupture	2d H <sub>2</sub> O and 2h drying (23°C-50% R.H.): $F_{\text{load}} = 0.329 \text{ kN}$ ; $R_{\text{mean}} = 0.17 \text{ MPa}$ ; $R_{\text{min}} = 0.13 \text{ MPa}$ ; 100% adhesive rupture	2d H <sub>2</sub> O and 7d drying (23°C-50% R.H.): $F_{\text{load}} = 0.687 \text{ kN}$ ; $R_{\text{mean}} = 0.35 \text{ MPa}$ ; $R_{\text{min}} = 0.34 \text{ MPa}$ ; 100% cohesive rupture
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After hygrothermal cycles	<p><u>With finishing coat:</u> Kits 0-1-2-3-4:</p> <table border="1"> <tr> <td><math>F_{\text{load}} = 0.433 \text{ kN}</math>; <math>R_{\text{mean}} = 0.22 \text{ MPa}</math>; <math>R_{\text{min}} = 0.20 \text{ MPa}</math>; 100% adhesive rupture Ratio = <math>R_{\text{mean after}} / R_{\text{mean without ageing}} = 79\%</math></td> </tr> </table> <p>Kit 5: No performance assessed.</p> <p><u>Without finishing coat:</u> Kits 0-1-2-3-4-5:</p> <table border="1"> <tr> <td><math>F_{\text{load}} = 0.558 \text{ kN}</math>; <math>R_{\text{mean}} = 0.28 \text{ MPa}</math>; <math>R_{\text{min}} = 0.26 \text{ MPa}</math>; 100% adhesive rupture Ratio = <math>R_{\text{mean after}} / R_{\text{mean without ageing}} = 90\%</math></td> </tr> </table>	$F_{\text{load}} = 0.433 \text{ kN}$ ; $R_{\text{mean}} = 0.22 \text{ MPa}$ ; $R_{\text{min}} = 0.20 \text{ MPa}$ ; 100% adhesive rupture Ratio = $R_{\text{mean after}} / R_{\text{mean without ageing}} = 79\%$	$F_{\text{load}} = 0.558 \text{ kN}$ ; $R_{\text{mean}} = 0.28 \text{ MPa}$ ; $R_{\text{min}} = 0.26 \text{ MPa}$ ; 100% adhesive rupture Ratio = $R_{\text{mean after}} / R_{\text{mean without ageing}} = 90\%$							
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After freeze-thaw cycles	No performance assessed.									
13	Bending strength of the board	No performance assessed.								
14	Connection (board-fixing-subframe)	Embedding/Shear strength	<p>Corner: Kits 0-1-2-3-4-5: <math>F_{\text{mean}} = 221.8 \text{ N}</math>; <math>F_{\text{c}} = 181.7 \text{ N}</math></p> <p>Border: Kits 0-1-2-3-4-5: <math>F_{\text{mean}} = 281.6 \text{ N}</math>; <math>F_{\text{c}} = 169.0 \text{ N}</math></p>							
15		Pull-through/Pull-out resistance	<p>Corner: Kits 0-1-2-3-4-5: <math>F_{\text{mean}} = 457.5 \text{ N}</math>; <math>F_{\text{c}} = 419.6 \text{ N}</math></p> <p>Border: Kits 0-1-2-3-4-5: <math>F_{\text{mean}} = 422.0 \text{ N}</math>; <math>F_{\text{c}} = 375.0 \text{ N}</math></p> <p>Centre: Kits 0-1-2-3-4-5: <math>F_{\text{mean}} = 496.8 \text{ N}</math>; <math>F_{\text{c}} = 435.2 \text{ N}</math></p>							
16	Resistance of profiles	No performance assessed.								
17	Subframe-fixings	Pull-out resistance	Kits 0-1-2-3-4-5: $F_{\text{mean}} = 2037 \text{ N}$ ; $F_{\text{c}} = 1906 \text{ N}$							
18		Shear load resistance	Kits 0-1-2-3-4-5: $F_{\text{mean}} = 1790 \text{ N}$ ; $F_{\text{c}} = 1431 \text{ N}$							
19	Bracket resistance (horizontal and vertical load)	No performance assessed.								

### 3.4 S PROTECTION AGAINST NOISE (BWR5)

#	Essential characteristic	Performance
20	Airborne sound insulation	No performance assessed.

### 3.5 ENERGY ECONOMY AND HEAT RETENTION (BWR6)

#	Essential characteristic	Performance
21	Thermal resistance	No performance assessed.

### 3.6 DURABILITY

#	Essential characteristic	Performance
22	Accelerated ageing behaviour	Hygrothermal cycles Kits 0-1: No cracks or visible alterations. Kit 2-3-4-5: No performance assessed.
		Freeze-thaw cycles No performance assessed.
23	Cracking strength due to board deformation: water absorption by capillarity after movement cycles	<u>With finishing coat:</u> Kits 0-1: after 3 minutes: 0.018 kg/m <sup>2</sup> after 1 hour: 0.040 kg/m <sup>2</sup> after 24 hours: 0.245 kg/m <sup>2</sup>
		Ratio = $W_{Abs_{mean\ after}} / W_{Abs_{mean\ without\ ageing}}$ - after 3 minutes: 95% - after 1 hour: 83% - after 24 hours: 107%
24	Dimensional stability	by relative humidity Fiber cement panels: $L_m = 0\%$ (T1, T2, L1, L2)
		by temperature
25	Moisture content	No performance assessed.
26	Corrosion	No performance assessed.
27	UV radiation resistance	No performance assessed.

**4. ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE**

In accordance with the European Assessment Document EAD No. 090119-00-0404 the applicable European legal act is: **Decision 2003/640/EC**.

The AVCP systems to be applied are:

- **2+** for uses not subject to regulations on reaction to fire,
- **3** for uses subject to regulations on reaction to fire.

**5. TECHNICAL DETAILS NECESSARY FOR THE IMPLEMENTATION OF THE AVCP SYSTEM, AS PROVIDED FOR IN EAD 090119-00-0404**

Technical details necessary for the implementation of the AVCP system are laid down in the Control Plan deposited at ITC-CNR.

**Issued in San Giuliano Milanese, Italy on 01/07/2021  
by ITC – CNR**

**Professor Antonio Occhiuzzi  
Director of ITC-CNR**

Table A1: Definition of the kit components										
Cladding elements	Rendering systems applied in-situ	id.	<b>Kit 0</b>	<b>Kit 1</b>	<b>Kit 2</b>	<b>Kit 3</b>	<b>Kit 4</b>	<b>Kit 5</b>		
		Finishing coat (FC) (see Table A2)	FC-0	FC-1	FC-2	FC-3	FC-4	FC-5		
		Primer (P) (see Table A3)	P-0	P-1	P-2	P-3	P-4	P-5		
		Reinforcement mesh (see Table A4)								
		Levelling mortar: mineral-based adhesive and skim coat (see Table A5)								
		Dripping and angular profile (see Table A6)								
		Base-coat (see Table A7)								
Board-fixings	Mineral boards: fiber cement panels (see Table A8)									
Board-fixings	Self-drilling metal screws (see Table A9)									
Subframe components	Vertical and horizontal profiles (see Table A10)					Vertical profiles: U-shape profiles				
						Horizontal profiles: C-shape profiles				
	Metal anchor subframe / substrate (see Table A11)					Corner profiles: L-shape profiles				
Insulation product	Anchor dowels and components									
Insulation product	19-layers heat reflective thermal insulation product, single or double (see Table A12)									
Ancillary components	Wooden wool spacer (see Table A13)									

Table A2: Finishing coat								
id.			FC-0	FC-1	FC-2	FC-3	FC-4	FC-5
Trade name and composition			*0)	*1)	*2)	*3)	*4)	*5)
Designation	EN 15824	-	Water-dilutable external renders					
Range of application thickness		[mm]	1	1	1	1	1	1
Coverage		[kg/m <sup>2</sup> ]	2.5	2.5	2.3	2.5	2.5	1.8
Water vapour permeability	EN ISO 7783	[category]	V2	V2	V1	V2	V2	V1
Water absorption	EN 1062-3	[category]	W3	W3	W3	W3	W3	W3
Bond strength	EN 1542	[MPa]	-	-	2.63	≥ 0.3	-	≥ 0.3
Thermal conductivity	EN 1745	[λ]	-	-	0.89	0.74	-	-
Reaction to fire	EN 13501-1	[euroclass]	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	-	A2-s1, d0
Specific weight	EN ISO 2811	[g/cm <sup>3</sup> ]	1.73 ± 0.05	1.73 ± 0.05	1.70 ± 0.05	1.85	1.74 ± 0.05	1.3
Particle size	EN 1062-1	[mm]	< 1.5	< 1.5	1.2	< 1.5	< 1.5	> 1.5
Dry solids content		[%]	85 ± 2	85 ± 2	80	-	-	-
Resistance to passage of vapour (S <sub>d</sub> )	EN 7783-2; EN 1062-1	[m]	0.22	0.22	0.11	0.14	0.42	< 0.07
Water absorption by capillarity (W <sub>24</sub> )	EN 1062-3	[kg/(m <sup>2</sup> h <sup>0.5</sup> )]	0.06	0.06	0.05	0.08	0.07	< 0.1
Drying time (dust free)		[h]	6-8	6-8	12-24	6-8	6-8	6-8
<b>ID – Trade name - Composition</b>								
*0) FC-0 “Rivestimento Acrisilossanico 1.0-1.5 Isolareflex” - Water-dilutable external render based on acryl-siloxane resins								
*1) FC-1 “Biquarz Acrisilossanico 1.0-1.5” - Water-dilutable external render based on acryl-siloxane resins								
*2) FC-2 “Silancolor AC Tonachino” - Water-dilutable external render based on acryl-siloxane resins								
*3) FC-3 “RX 561” - Water-dilutable external render based on acryl-siloxane resins								
*4) FC-4 “Renovatherm Putz” - Water-dilutable external render based on acryl-siloxane								
*5) FC-5 “Capatect Thermosan Fassadenputz NQT” - Water-dilutable external render based on methyl-silicone resins and nanoquartz particles								

<b>ISOLAREFLEX</b>	<b>Annex A1 of ETA N° 20/0261</b>
Product Description	

Table A3: Primer

Id.		P-0	P-1	P-2	P-3	P-4	P-5
Trade name and composition		*0)	*1)	*2)	*3)	*4)	*5)
Designation	EN 1062-1	Water-dilutable primers					
Specific weight (20°C)	EN ISO 2811-1 [g/cm <sup>3</sup> ]	1.35 ± 0.05	1.35 ± 0.05	1.68 ± 0.02	1.61 ± 0.02	1.55 ± 0.05	1.60 ± 0.05
Brookfield viscosity	[cP]	5000 ± 1000	5000 ± 1000	17000 ± 1000	-	15000-20000	-
Dry solids content	EN ISO 3251 [%]	55 ± 2	55 ± 2	65 ± 2	60 ± 2	66.5 ± 2	60 ± 2
Drying time (for re-coating)	[h]	24	24	12-24	6	6	12

**ID – Trade name - Composition**  
 \*0) P-0 “Fondo pigmentato Isolareflex” - Water-dilutable binder based on acrylic resins  
 \*1) P-1 “Fondo P378” - Water-dilutable binder based on acrylic resins  
 \*2) P-2 “Silancolor Base Coat” - Water-dilutable binder based on silicone resins  
 \*3) P-3 “FX 526” - Water-dilutable binder based on acryl-siloxane resins  
 \*4) P-4 “Renovatherm Primer Extra” - Water-dilutable binder based on acryl-siloxane resins  
 \*5) P-5 “Putzgrund” - Water-dilutable binder based on acrylic, silicate and siloxane resins

Table A4: Reinforcement mesh

Composition	Reinforcement mesh in alkali resistant glass fiber	
Designation	EN 13496	Glass fiber reinforcing mesh
Linear density (warp)	[g/m <sup>2</sup> ]	272
Linear density (weft)	[g/m <sup>2</sup> ]	136
Elongation (warp)	[%]	5
Raw mesh weight	[g/m <sup>2</sup> ]	117
Treated mesh weight (total)	[g/m <sup>2</sup> ]	155
Mesh size	[mm]	4 x 4
Percentage of alkali treatment	[%]	18

ISOLAREFLEX

Product Description

Annex A2  
of ETA N° 20/0261



**Table A5: Adhesive: levelling mortar**

<b>Trade name and composition</b>	Mineral-based adhesive and skim coat, consisting of aerial lime, cement and fine calcareous sand		
<b>Designation</b>	EN 998-1	Rendering/plastering mortar for external and internal use, based on inorganic binders	
<b>Specific weight</b>		[kg/m <sup>3</sup> ]	≥ 1000
<b>Particle size</b>		[mm]	< 1.2
<b>Range of application thickness</b>		[mm]	3-5
<b>Permeability to water vapour</b>	EN 1015-19	[μ]	15 (S <sub>d</sub> 0.08)
<b>Water absorption (24 h)</b>	EN 1015-18	[kg/m <sup>2</sup> ]	max 0.5
<b>Thermal conductivity (lambda)</b>		[W/m <sup>2</sup> K]	0.93
<b>Compressive strength (28 gg)</b>	EN 1015-11	[N/mm <sup>2</sup> ]	4
<b>Flexural strength (28 gg)</b>		[N/mm <sup>2</sup> ]	2
<b>Elastic modulus</b>		[N/mm <sup>2</sup> ]	4000
<b>Fire resistance</b>	EN 13501-1	[class]	A1
<b>Workability time (20°C and 65 R.H.)</b>		[h]	1
<b>Re-coating time (same product)</b>		[h]	24
<b>Re-coating time (high build finish)</b>		[gg]	15

**Table A6: Dripping and angular profile**

<b>Type</b>	Dripping and angular profile	
<b>Materials</b>	PVC profile with fiberglass mesh	
<b>Specific weight (PVC profile)</b>	[g/cm <sup>3</sup> ]	1.4
<b>Raw weight (net)</b>	[g/m <sup>2</sup> ]	131
<b>Total weight (net)</b>	[g/m <sup>2</sup> ]	160
<b>Net dimensions</b>	[mm]	3.5 x 3.8

**Table A7: Substrate-solidifying base-coat**

<b>Trade name and composition</b>	"Fissativo acrilossilossanico Isolareflex" - Substrate-solidifying base-coat based on acrylic micro- polymers in a water dispersion	
<b>Generic type</b>	EN 15824	Water-dilutable base-coat, based on organic binders
<b>Specific weight (20°C)</b>	[g/cm <sup>3</sup> ]	1.01
<b>Viscosity</b>	[s]	13 ± 2
<b>Dry solids content</b>	[%]	11 ± 0.5
<b>Drying time (dust free)</b>	[h]	1-2
<b>Drying time (for re-coating)</b>	[h]	12-24
<b>Amount of use each application</b>	[kg/m <sup>2</sup> ]	11

**ISOLAREFLEX**

Product Description

**Annex A3  
of ETA N° 20/0261**

Table A8: Fiber cement panels


<b>Trade name and type</b>	 "Isolareflex" - Fiber cement panels: lightened cement with polystyrene bead filters, glass fiber reinforcement mesh and polymer coating on both sides		
<b>Dimensions</b>	EN 12467	[mm]	1200 (±5) x 2000 (±3.6)
<b>Thickness</b>	EN 12467	[mm]	12.5 ± 1.2
<b>Weight</b>	EN 12467	[kg/m <sup>2</sup> ]	12
<b>Compressive strength</b>	EN 12467	[MPa]	> 6.7
<b>Flexural strength</b>	EN 12467	[MPa]	5.8
<b>Tensile strength</b>	EN 319 EN 789	[MPa]	perpendicular 0.99 parallel 1.427
<b>Vapour permeability</b>	EN 12572	[μ]	31
<b>Reaction to fire</b>	EN 13501-1	[class]	A1
<b>Thermal conductivity (10° and 20°C)</b>	EN 12667	[W/mK]	0.20
<b>Resistance to soak/dry</b>	EN 12467	[category]	A
<b>Resistance to heat/rain</b>	EN 12467	[category]	A
<b>Resistance to freeze/thaw</b>	EN 12467	[category]	A
<b>Immersion in hot water</b>	EN 12467	[cycles]	50

Table A9: Board-fixings


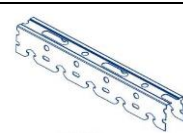



<b>Type</b>	 Phosphated self-perforating metal screws for fixing boards to the subframe profiles		
<b>Material</b>	steel		
<b>Dimensions</b>	[mm]	4 x 41	
<b>Distance between screws</b>	[mm]	200	

Table A10: Subframe components: vertical, horizontal and angular profiles

		Vertical profiles	Horizontal profiles	Angular profiles	
<b>Profiles</b>					
<b>Type/shape</b>		U-shape profiles	C-shape profiles	L-shape profiles	
<b>Dimensions</b>	EN 10143	[mm]	28x40	15x48 or 27x48	30x30
<b>Thickness</b>	EN 10346	[mm]	0.8 mm	0.6	0.6
<b>Span</b>		[mm]	700	400	-
<b>Material</b>	Steel with-zinc / zinc-magnesium / aluminium-zinc-silicon coating				
<b>Connections between C and L profiles</b>		Self-drilling 4.2 x 13 mm steel screw			

**ISOLAREFLEX**

Product Description

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Table A11: Metal anchor between subframe and substrate: components





<b>Anchor dowels</b>		High resistance polyamide dowels M8, 12 x 66 or 12 x 71 mm (standard plaster thickness)
<b>Double thread screws, simple type or with monoblock connection</b>		Galvanized steel double thread screws M8 x 120/150 mm, simple type or with ISO 12392 electrolytic galvanized DD11 EN 10111 steel monoblock connections, M8 x 13/24 mm
<b>Hexagon nuts and flanged hexagon nuts</b>		Hexagon and flexagon hexagon galvanized steel nuts, C18 class, M8 x 8 mm
<b>Washers</b>		Galvanized stainless steel M8 x 24 mm washers

Table A12: Thermal insulation product

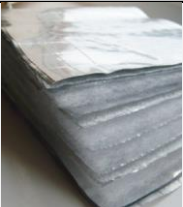

	<b>Type</b>	19-layers heat reflective insulation in aluminium, aluminium film, wadding and PE foam sheets, with aluminium connection tape		
<b>Thickness</b>		-	[mm]	40
<b>Width</b>		-	[cm]	150
<b>Length</b>		-	[cm]	1000
<b>Weight</b>		-	[g/m <sup>2</sup> ]	800
<b>Resistance to nail tearing (nail shank) - initial</b>		EN 12310-1	[N]	longitudinal: 315 transverse: 390
<b>Resistance to nail tearing (nail shank) - after thermal ageing</b>		EN 12310-1	[N]	longitudinal: 315 transverse: 310
<b>Tensile strength parallel to faces</b>		EN 1608	[kPa]	247
<b>Water vapour diffusion resistance (factor <math>\mu</math>)</b>		EN 1931	-	291 x 10 <sup>5</sup>
<b>Reaction to fire</b>		EN 13501-1	[class]	E
<b>Thermal resistance (core)</b>		EN 12667 - EN 16012	[m <sup>2</sup> K/W]	1.5
<b>Emissivity (<math>\epsilon_{90/90}</math>)</b>		EN 16012	-	0.05

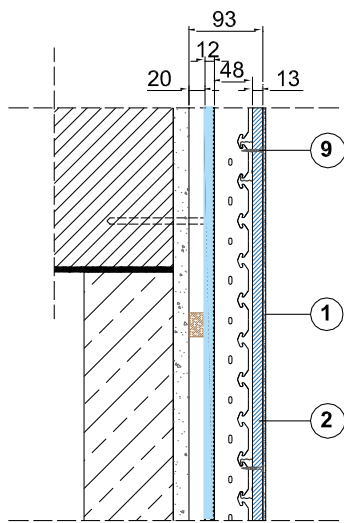
Table A13: Ancillary component: wooden spacer in mineralized spruce wood and bound with Portland cement

	<b>Type and material</b>	Mineralized spruce wooden wool spacer bound with Portland cement - EN 13168
	<b>Dimensions</b>	30 x 20 mm
	<b>Reaction to fire</b>	Euroclass: B-s1, d0

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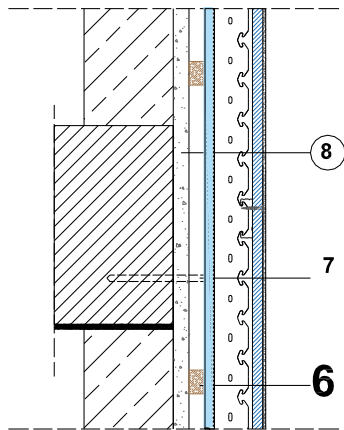
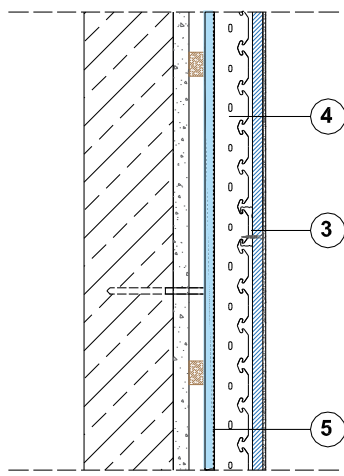
Product Description

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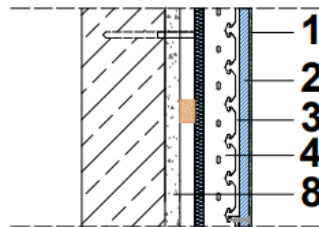


**Legend**

1. Finishing coat and primer
2. Fiber-reinforced panel
3. 6/10 ZM C-shape horizontal profile
4. 8/10 ZM U-shape vertical profile
5. Multilayer heat reflective insulation 19
6. Spacer in mineralized wood
7. Double threaded dowel
8. Existing masonry
9. Drill bit screws
10. L-shape 6/10 ZM profile
11. Drip

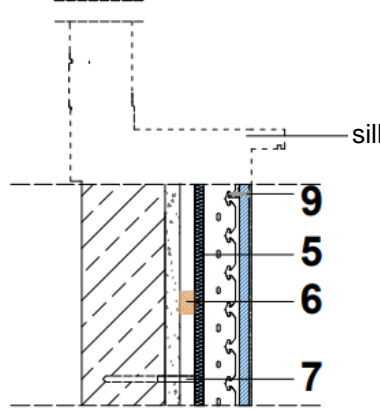


Vertical section



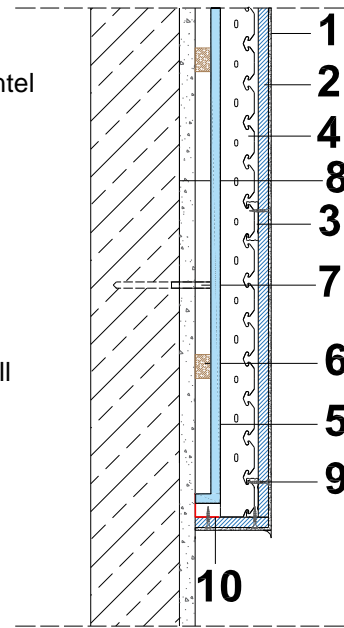
- 1
- 2
- 3
- 4
- 8

lintel



- 9
- 5
- 6
- 7

sill



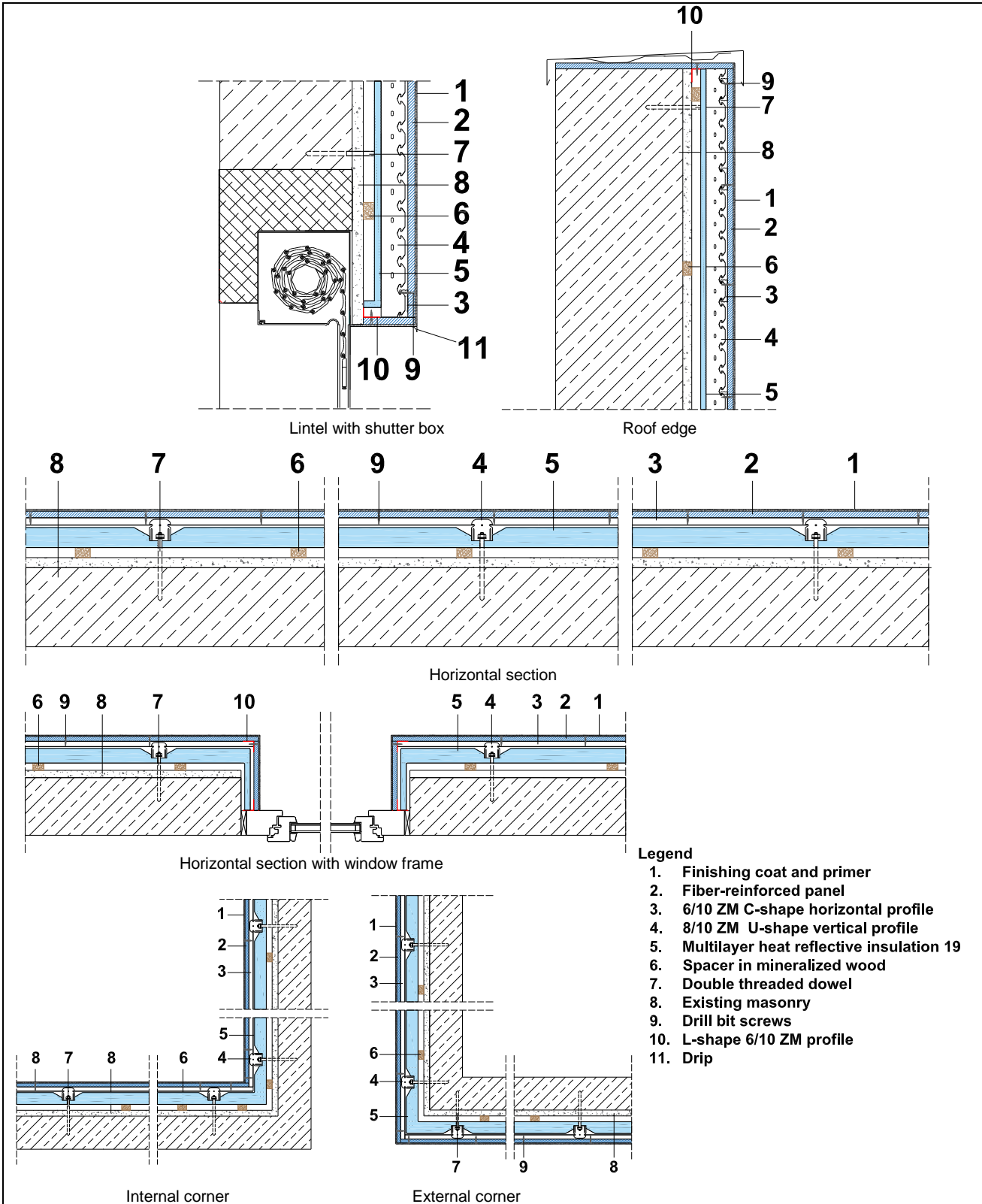
- 1
- 2
- 4
- 8
- 3
- 7
- 6
- 5
- 9
- 10

Base edge

**ISOLAREFLEX**

Construction details

**Annex A6**  
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**ISOLAREFLEX**

Construction details

**Annex A7**  
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