



European Technical Assessment

ETA 25/0634 of 06/08/2025

General Part

Technical Assessment Body issuing the ETA

TECNALIA RESEARCH & INNOVATION

Trade name of the construction product

Aludecor Firewall A2 and Aludecor Firewall B

Product family to which the construction product belongs

Thin Metal Composite Sheet

Manufacturer

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This European Technical Assessment contains

14 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 210046-00-1201 Thin Metal Composite Sheet



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Specific parts

1 Technical description of the product

Aludecor Firewall A2 and Aludecor Firewall B panels are thin metal composite sheets (TMCS) consisting of two thin layers of a metallic skin, which are sandwiching a core in a continuous co-extrusion process.

The external face of metallic skin is pre-coated, and the bonding of both external and internal metallic skins with the core is achieved by adding an adhesive film under controlled temperature and pressure conditions.

Aludecor Firewall A2 and Aludecor Firewall B panels are composed by the following components:

- Faced metallic skins made of aluminium alloy sheets according to EN 485-2 or EN 485-4. The external skin is coated front-side with a two- or a three-coat system, i.e. a primer and an exterior paint, and then a protective coat only for the three-coat system. The rear side aluminium skin is coated with a service coat.
- Core:
 - o Aludecor Firewall A2: Polymeric core with mineral fillers, made of more than 90% inorganic content and remaining organic content.
 - o Aludecor Firewall B: Polymeric core with mineral fillers, made of more than 72% inorganic content and remaining organic content.
- Adhesive layer for bonding faced skins and core through a continuous industrial process.

Aludecor Firewall A2 panels are available on the following dimensions:

- Length: up to 5.000 mm
- Width: 1.000 to 1.550 mm
- Thickness: 3 or 4 mm

Aludecor Firewall B panels are available on the following dimensions:

- Length: up to 5.000 mm
- Width: 1.000 to 1.550 mm
- Thickness: 3, 4 or 6 mm

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

2.1 Intended use

The product (TMCS) is intended to be used for manufacturing of:

- Cladding elements (cassettes/coffering, panels) in external and internal wall cladding kits
- Parts (filling elements) of partition kits
- Filling elements in external or internal supported ceilings
- Rail filling
- Substrate boards for information and orientation systems

The provisions made in this European Technical Assessment are based on an assumed working life of 25 years as minimum according to EAD, provided that the TMCSs are subject to appropriate use and maintenance.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or the Assessment Body, but are to be regarded only as a means for choosing the right product in relation to the expected economically reasonable working life of the works.

2.2 Manufacturing

The European Technical Assessment is issued for the TMCS panels on the basis of agreed data/information, deposited at Tecnalía Research & Innovation, which identifies the product that has been assessed and judged.

Changes to the product or production process, which could result in this deposited data/information being incorrect, shall be notified to Tecnalía Research & Innovation before the changes are introduced. Tecnalía 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 product will be installed according to the manufacturer's instructions or (in absence of such instructions) according to the good practice of the building professionals.

2.4 Packaging, transport and storage

The information on packaging, transport and storage is given in the manufacturer's technical documentation. It is the responsibility of the manufacturer(s) to ensure that this information is effectively communicated to the concerned people.



2.5 Use, maintenance and repair

The maintenance of the constructions where Aludecor Firewall A2 and Aludecor Firewall B panels have been installed includes inspections on site, taking into account the following aspects:

- Regarding panels: Appearance of any damage such as cracking or detachment due to permanent and irreversible deformation.
- Regarding metallic components: Presence of corrosion or water accumulation.
- Necessary repairs should be done rapidly, using the same kit components, and following the repair instructions given by ETA holder.

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





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

The assessment for the intended use of Aludecor Firewall A2 and Aludecor Firewall B panels according to the Basic Works Requirements (BWR) were carried out according to EAD 210046-00-1201 “*Thin metal composite sheet*”.

The characteristics of the components shall correspond to the respective values laid down in the technical documentation of this ETA, checked by Tecnalia Research & Innovation.

Basic requirement for construction works	Essential characteristics	Performance
BWR 2 Safety in case of fire	Reaction to fire	Clause 3.1.
BWR 4 Safety and accessibility in use	Tensile performance	
	<ul style="list-style-type: none"> Core included: Tensile strength Yield strength Elongation Tensile modulus of elasticity 	Not performance assessed
	<ul style="list-style-type: none"> Without core: Tensile strength Yield strength Elongation 	Not performance assessed
	Tensile strength perpendicular to the face	Clause 3.2.
	Flexural performance	
	<ul style="list-style-type: none"> Bending strength in four-point test arrangement Bending modulus of elasticity in four-point test arrangement Flexural strength in three-point test arrangement 	Clause 3.3.
	Shear performance	
	<ul style="list-style-type: none"> Shear strength Shear modulus of elasticity 	Not performance assessed
	Thickness	
	<ul style="list-style-type: none"> Total thickness of sheet Thickness of skin 	Not performance assessed
	Apparent area density	Not performance assessed



	Torque peel strength	Clause 3.4.
	Hard body impact resistance	Not performance assessed
BWR 5 Protection against noise	Dynamic stiffness	Not performance assessed
BWR 6 Energy economy and heat retention	Coefficient of thermal conductivity	Not performance assessed
BWR 7 Sustainable use of natural resources	Durability	
	• Hygrothermal behaviour	Not performance assessed
	• Effect of immersion for 6 h. in boiling water at 90 °C	Not performance assessed
	• Effect of immersion for 500 h. in water at 20 °C	Not performance assessed
	• Effect of freeze-thaw cycles	Not performance assessed
	• Effect of long term exposure to heat (2500 hours at hot dry air 80 °C)	Not performance assessed
	• Creep test	Not performance assessed

Table 1. Aludecor Firewall A2 and Aludecor Firewall B panels performance summary (see also the performance details in the relevant sections of the ETA).



3.1 Reaction to fire

Reaction to fire of Aludecor Firewall A2 and Aludecor Firewall B panels have been tested according to the test methods referred to in EN 13501-1 and relevant for the corresponding reaction to fire class.

The products were tested according to the provisions stated in Annex E of EAD 210046-00-1201: free standing at a distance of 80 mm from the backing board, mechanically fixed directly to the substrate and with a ventilated cavity of 40 mm wide. The specimens mounted with a ventilated cavity include a gap of 10 mm between U-profile of the test device and the bottom of the panel, as well as open horizontal and vertical joints of 10 mm width between panels; these panels are mechanically fixed to an aluminium substructure made up of T- and L-section studs and brackets, with no insulation layer.

Aludecor Firewall A2 panel is Class A2-s1,d0 according to Commission Delegated Regulation (EU) 2016/364 and EN 13501-1.

Aludecor Firewall B panel is Class B-s1,d0 according to Commission Delegated Regulation (EU) 2016/364 and EN 13501-1.

These classifications are valid for an end use application with an air gap or a ventilated cavity behind, free standing and directly fixed to substrate, as long as the following conditions are met:

- with a thickness range between the highest and lowest thickness tested;
- with a joint opening width equal to or smaller than those used for the test;
- fixed with all other types of mechanical devices such as metal nails or rivets;
- each tested adhesive with equal or lower coverages than tested;
- products tested on metallic frames can only be used on metallic profiles;
- fixed at different (wider or closer) horizontal or vertical fixing centres;
- without thermal insulation in the cavity or with class A2-s1,d0 according to EN 13501-1 insulation materials, as long as a ventilated air gap of at least (40 ± 1) mm directly behind the sheets is present.
- without finishes or with different finishes or coatings (e.g. different colours) as long as the test was performed considering the worst case as explained in E.1.3. of the EAD 210046-00-1201.

3.2 Tensile strength perpendicular to the face

The tensile strength perpendicular to the face of Aludecor Firewall A2 and Aludecor Firewall B panels has been assessed according to EAD 210046-00-1201, clause 2.2.3.

Panel	Average value $\sigma_{mt,av}$ [MPa]	Standard deviation σ_n [MPa]	Characteristic value $\sigma_{mt,k}$ [MPa]
Aludecor Firewall A2 3 mm, 0,3 mm skins	7,73	1,81	3,79
Aludecor Firewall A2 4 mm, 0,5 mm skins	6,55	1,26	3,61



Aludecor Firewall B 3 mm, 0,25 mm skins	6,17	2,25	0,93
Aludecor Firewall B 6 mm, 0,5 mm skins	5,98	1,62	2,21

Table 2. Tensile strength perpendicular to the face of Aludecor Firewall A2 and Aludecor Firewall B panels.

3.3 Flexural performance

3.3.1 Bending performance in four-point test arrangement

Bending strength and bending modulus of elasticity in four-point arrangement have been determined according to EAD 210046-00-1201, clause 2.2.4.1.

Panel	Average value $R_{bend,INI,av}$ [MPa]	Standard deviation σ_n [MPa]	Characteristic value $R_{bend,INI,k}$ [MPa]
Aludecor Firewall A2 3 mm, 0,3 mm skins	79,2	14,0	48,6
Aludecor Firewall A2 4 mm, 0,5 mm skins	88,3	2,8	81,9
Aludecor Firewall B 3 mm, 0,25 mm skins	68,1	4,1	59,0
Aludecor Firewall B 6 mm, 0,5 mm skins	32,2	1,6	28,8

Table 3. Bending strength in four-point arrangement of Aludecor Firewall A2 and Aludecor Firewall B panels.

Panel	Average value $E_{bend,av}$ [GPa]	Standard deviation σ_n [GPa]	One-sided bottom confidence level $E_{bend,0,95}$ [GPa]
Aludecor Firewall A2 3 mm, 0,3 mm skins	54,5	5,9	49,6
Aludecor Firewall A2 4 mm, 0,5 mm skins	53,8	1,7	52,2
Aludecor Firewall B 3 mm, 0,25 mm skins	41,8	3,5	38,9
Aludecor Firewall B 6 mm, 0,5 mm skins	24,1	1,1	23,2

Table 4. Bending modulus of elasticity in four-point arrangement of Aludecor Firewall A2 and Aludecor Firewall B panels.

3.3.2 Flexural strength in three-point test arrangement

Flexural strength in three-point arrangement has been assessed according to EAD 210046-00-1201, clause 2.2.4.2.

Panel	Average value $R_{flex,INI,av}$ [MPa]	Standard deviation σ_n [MPa]	Characteristic value $R_{flex,k}$ [MPa]
Aludecor Firewall A2 3 mm, 0,3 mm skins	100,0	6,5	85,8
Aludecor Firewall A2 4 mm, 0,5 mm skins	83,9	3,3	76,7
Aludecor Firewall B 3 mm, 0,25 mm skins	74,2	18,9	33,0
Aludecor Firewall B 6 mm, 0,5 mm skins	52,2	1,8	48,4

Table 5. Flexural strength in three-point arrangement of Aludecor Firewall A2 and Aludecor Firewall B panels.

3.4 Torque peel strength

Torque peel strength has been determined according to EAD 210046-00-1201, clause 2.2.8.

Panel	Average value $T_{INI,av}$ [N.m/m]	Standard deviation σ_n [N.m/m]	Two-sided confidence interval of torque peel strength in initial state $T_{INI,0.975}$ [N.m/m]
Aludecor Firewall A2 3 mm, 0,3 mm skins	74	11	60
Aludecor Firewall A2 4 mm, 0,5 mm skins	129	11	102
Aludecor Firewall B 3 mm, 0,25 mm skins	170	8	162
Aludecor Firewall B 6 mm, 0,5 mm skins	104	17	83

Table 6. Torque peel strength of Aludecor Firewall A2 and Aludecor Firewall B panels.

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

The AVCP System given in the following table applies:

Product	Intended use	Decision	System
TMCS panels	Internal and external wall and ceiling finishes	1998/437/EC	1
	Manufacturing of elements for kits for exterior wall claddings	2003/640/EC	1

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 Tecnia 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 06/08/2025



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ANNEX A: Panels characteristics

A.1 Aludecor Firewall A2 panels

Layer	Components	Material	Characteristics	Value
External finish	Protective coat (only for three-coat system)	PVDF	Thickness [μm]	4 - 7
	Exterior paint	Polyvinylidene fluoride (PVDF)	Thickness [μm]	18 - 20
		Fluoropolymer (FEVE resin)	Thickness [μm]	18 - 20
	Primer	PVDF	Thickness [μm]	4 - 7
External aluminium skin	Mill finish aluminium coil	EN AW 3105 or EN AW 5005 aluminium alloy	Thickness [mm]	0,3 – 0,5
			Density [kg/m ³]	2.700
Adhesive film	Polyethylene based adhesive	Low density polyethylene (LDPE) and ethylene acrylate polymer mix	Thickness [μm]	50
Core	Polymeric core with mineral fillers	> 90% inorganic content and remaining organic content	Thickness [mm]	2 – 3,4
			Density [kg/m ³]	1.800 – 2.100
Adhesive film	Polyethylene based adhesive	Low density polyethylene (LDPE) and ethylene acrylate polymer mix	Thickness [μm]	50
Internal aluminium skin	Mill finish aluminium coil	EN AW 3105 or EN AW 5005 aluminium alloy	Thickness [mm]	0,3 – 0,5
			Density [kg/m ³]	2.700
Internal finish	Service coat	Polyester	Thickness [μm]	4-7

Table A.1. Aludecor Firewall A2 panel components characteristics.

A.2 Aludecor Firewall B panels

Layer	Components	Material	Characteristics	Value
External finish	Protective coat (only for three-coat system)	PVDF	Thickness [μm]	4 - 7
	Exterior paint	Polyvinylidene fluoride (PVDF)	Thickness [μm]	18 - 20
		Fluoropolymer (FEVE resin)	Thickness [μm]	18 - 20
		SDP	Thickness [μm]	18 - 20
Primer	PVDF	Thickness [μm]	4 - 7	
External aluminium skin	Mill finish aluminium coil	EN AW 3105 or EN AW 5005 aluminium alloy	Thickness [mm]	0,25 – 0,5
			Density [kg/m^3]	2.700
Adhesive film	Polyethylene based adhesive	Low density polyethylene (LDPE) and ethylene acrylate polymer mix	Thickness [μm]	50
Core	Polymeric core with mineral fillers	> 72% inorganic content and remaining organic content	Thickness [mm]	2 – 5,5
			Density [kg/m^3]	1.600 – 1.800
Adhesive film	Polyethylene based adhesive	Low density polyethylene (LDPE) and ethylene acrylate polymer mix	Thickness [μm]	50
Internal aluminium skin	Mill finish aluminium coil	EN AW 3105 or EN AW 5005 aluminium alloy	Thickness [mm]	0,25 – 0,5
			Density [kg/m^3]	2.700
Internal finish	Service coat	Polyester	Thickness [μm]	4-7

Table A.2. Aludecor Firewall B panel components characteristics.