

In accordance with IAS accreditation to ISO/IEC 17065
Certification is Hereby Granted

to

Albond Alüminyum Sanayi ve Ticaret A.Ş.

Ayazağa Mah. Mimar Sinan Sk. Seba Center İş Merkezi No: 21 D,
Blk Kat:2 Kapı No: 15 Sarıyer, İstanbul, Turkey

for

“ALBOND FR”

**4 mm thick Aluminium Composite Panel
Exterior Cladding System**

**Test Method: NFPA 285 – 2019 Edition
(System Designation: A211B81-4)**

which, subject to limitations described on the following pages and continued
listing on www.tbwcert.com, complies with Product Certification Scheme
*SD03 Exterior Wall Assemblies, Curtain Walls, Building
Materials, Products & Assemblies*

In witness whereof, this Certificate is issued this 11th day of December 2025



Sandy Dweik

Sandy Dweik
Chief Executive Officer

Nicholas Purcell

Nicholas Purcell
Director of Certification

Certificate Number: TBW0301183

Initial registration: December 11, 2025 Issued: December 11, 2025 Expiration: December 10, 2028
File Name: ZE143_CRT_SD03FP_FR_Issue1_1183_(f) Issue 1

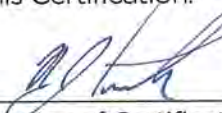
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F 19 Scheme Certificate Issue 8 Issued Mar 2024

“ALBOND FR”
4 mm thick Aluminium Composite Panel
Exterior Cladding System
(System Designation: A211B81-4)

- A. Certification is given for “ALBOND FR” 4 mm thick Aluminium Composite Panel Exterior Cladding System, which has successfully met the requirements for fire propagation characteristics when evaluated against NFPA 285 – 2019 Edition, “Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components”, subject to the limitations stated herein.
- B. Readers of this document should be familiar with the fire test standard and the requirements of ISO/IEC 17065:2012. The Certification will be listed on www.tbwcert.com while it remains current. This Certification is not valid if it is not so listed.
- C. The product is approved based on TBWIC Product Certification Scheme SD03 Exterior Wall Assemblies, Curtain Walls, Building Materials, Products & Assemblies (Issue 12), which includes pre-test sampling, evidence of performance (under report reference SF110 Rev.0, Technical Verification and Proof of Performance, compliance to Factory Production Control requirements, surveillance & Re-certification Inspection/Audits.
- D. Limitations
- D.1. This Certification covers the fire performance characteristics of exterior wall cladding system when evaluated against the requirements of NFPA 285 – 2019 Edition. The exterior wall assembly has been evaluated for fire propagation characteristics as specified in the following*:
- a. The ability of the wall assembly to resist flame propagation over the exterior face of the wall assembly*;
 - b. The ability of the wall assembly to resist vertical flame propagation within the combustible components from one story to the next*;
 - c. The ability of the wall assembly to resist vertical flame propagation over the interior surface of the wall assembly from one story to the next*;
 - d. The ability of the wall assembly to resist lateral flame propagation from the compartment of fire origin to adjacent compartments or spaces*.
- D.2. This Certification covers the performance of the exterior wall assembly when exposed to fire from an interior room that reaches flashover, break exterior windows and exposes the building façade. It is not intended to address the effect of exterior radiation from nearby fires but is relevant to fires that start at the exterior wall assembly*.
- D.3. This Certification covers the exterior wall assembly in its entirety. It does not extend to individual components that comprise the exterior wall assembly (on their own).
- D.4. The actual field installations of the exterior wall cladding system covered under this certification shall not limit the use of the methods and materials employed to seal the gap between the edge of the floor slab and the interior surface of the test specimen during the test, provided approved sealing methods and materials are used in the field*.
- D.5. The design of the exterior wall assembly covered under this certification, including the exact specification of the components, method of fixing, and condition of such components which were subjected to the fire test, shall be duplicated when installed on the site. The design and components of the non-loadbearing exterior wall cladding assembly are not permitted to be substituted, eliminated, or interchanged unless recognised and approved by this Certification.

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- D.6. The components used were evaluated and certified as part of the exterior wall cladding for fire propagation characteristics only. Physical performance, such as (but not limited to) resistance to weathering, resistance to impact/movement, adhesion, mechanical resistance and stability, or thermal properties, are not considered.
- D.7. Window flashing details shall be as tested. No variations allowed.
- D.8. This Certification does not address the following:
- Air and Water Permeability
 - Measurement of heat transmission
 - Classification or definition of material as non-combustible
 - Any Resistance to Fire rating
 - The toxicity level of smoke developed during combustion
 - Effect of aggravated flame spread behaviour of an assembly resulting from the proximity of combustible materials
 - Effects of combustible accessories installed or fixed on the surface of exterior cladding material such as laminates, banners, signage, and alike
 - Effects of radiation from nearby fires
 - Other characteristics such as durability, weather-resistance, water absorption, physical and mechanical properties etc.

E. System Configuration

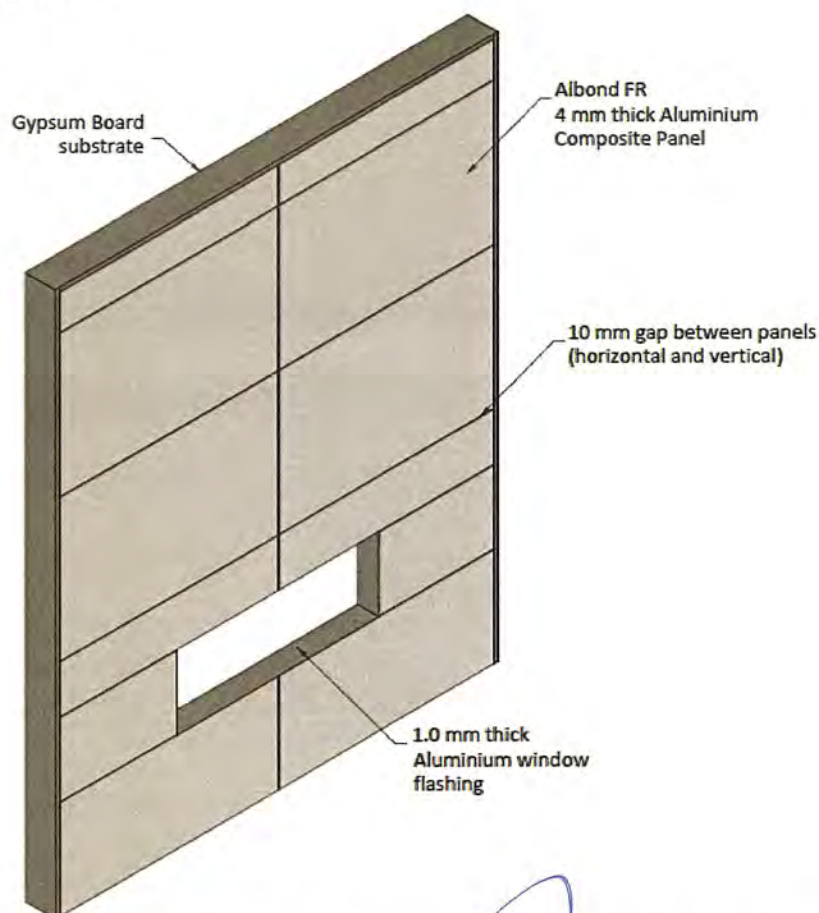
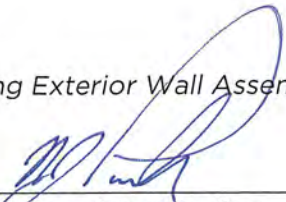


Figure 1. Non-Loadbearing Exterior Wall Assembly - Typical Details

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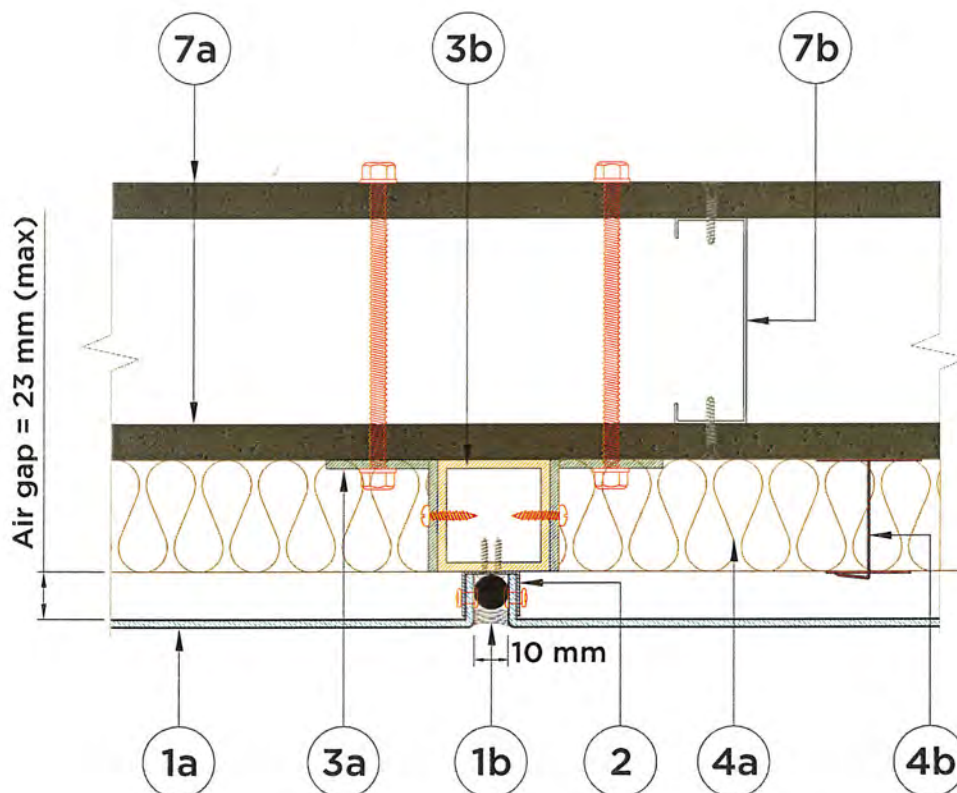


Figure 2. Joint section details - horizontal

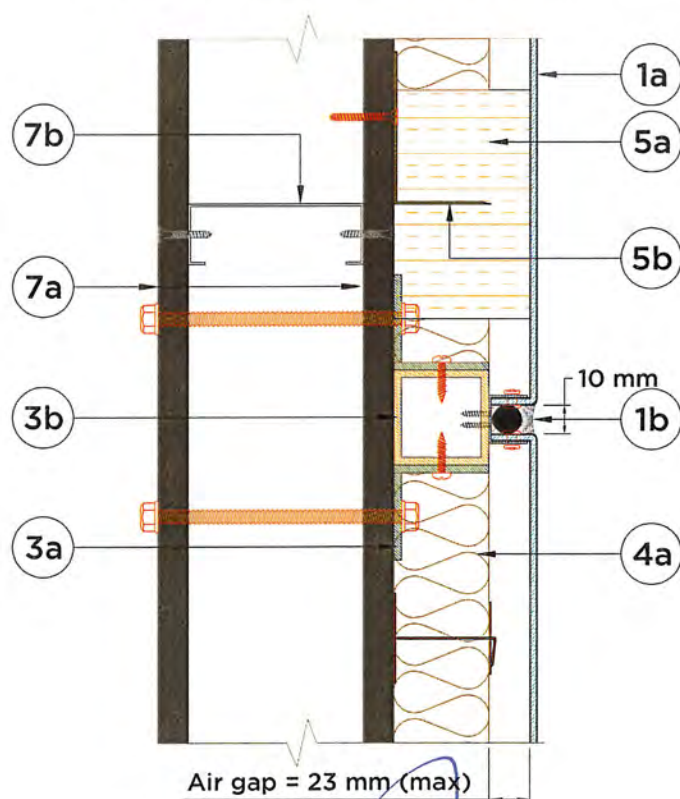


Figure 3. Joint section details- vertical

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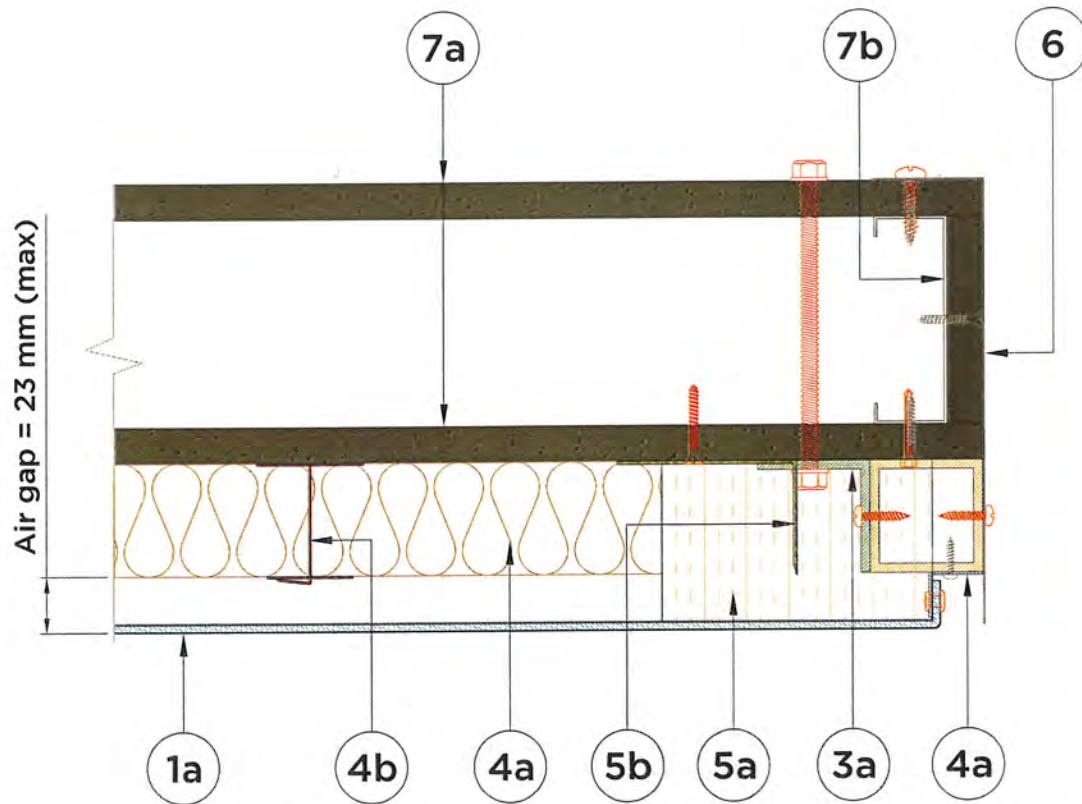


Figure 4. Aperture horizontal section details

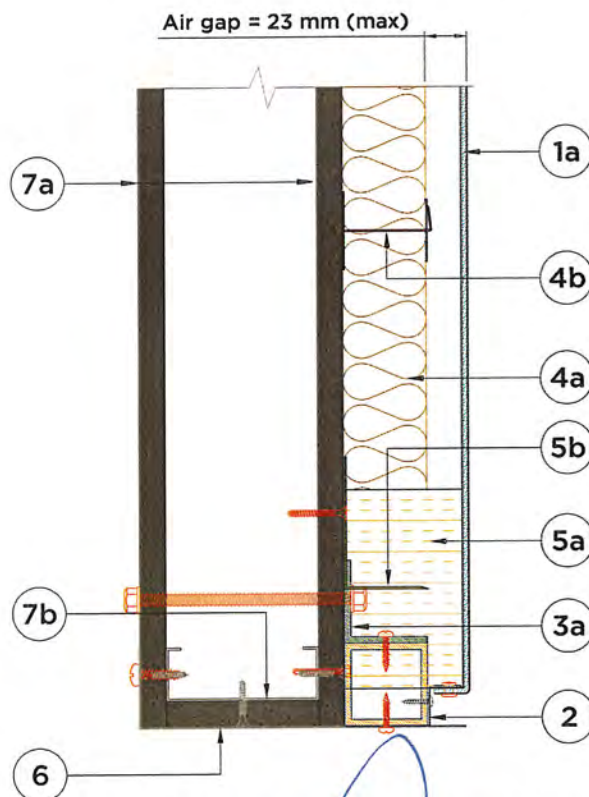


Figure 5. Aperture vertical section details

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1. Cladding element

1a. Aluminium Composite Panel

"Tray profile" Aluminium Composite Panels (ACP) with 25mm deep flanges. The corners of the tray shall be further reinforced with 20 x 20 x 20 x 2 mm (leg x leg x length x thickness) aluminium (Alloy 6063) brackets using Ø5 x 12 mm aluminium blind rivets. The details of the ACP are as follows.

Table 1. Panel Details

Weight	7.4 kg/m ² ± 10%
Top Skin (exterior skin)	0.5 ± 0.02 mm thick, Aluminium Alloy 3105-H44, Polyvinylidene Fluoride (PVDF) finish, 25 ± 4 microns coating thickness
Bottom Skin (interior skin)	0.5 ± 0.02 mm thick, Aluminium Alloy 3105-H44, Polyester (PE) finish, 5 microns maximum coating thickness
Adhesive	"Modified ethylene vinyl acetate (EVA)" Nominal density: 930 kg/m ³ Nominal Thickness: 120 microns
Core	3.0 ± 0.2 mm thick, mineral-filled polymer based core Density 1550 ± 100 kg/m ³
Panel Thickness	4 ± 0.2 mm
Maximum Panel Width	2256 mm
Maximum Panel Height	1450 mm
Minimum Panel Width	1252 mm
Minimum Panel Height	487 mm

1b. Joint seal

A maximum gap of 10 mm shall be maintained at the vertical and horizontal joints between adjacent panels. The gap shall be fitted with a Ø10 mm "VEDAFEU C" firestop rope backing rod, and capped with "Dow Corning Firestop 700" Silicone sealant, extruded smoothly at a nominal depth of 10 mm and flush with the exterior surface of the ACP cladding.

2. Cladding Fixing

Aluminium angles (Alloy 6063), 20 x 20 x 30 x 2 mm (leg x leg x width x thickness) shall be fixed on the flanges of the tray using Ø5 x 12 mm aluminium blind rivets 30-75 mm from corners and 300 mm centres. The aluminium angles shall be fixed to the runners using Ø3.9 x 22 mm pan-head self-tapping stainless steel screw.

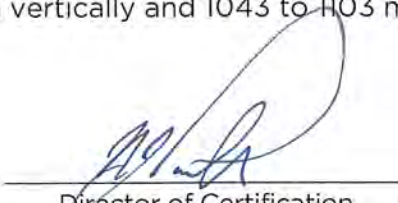
3. Sub-Frame

3a. Wall Brackets

Aluminium brackets (Aluminium Alloy 6063-T5), 50 x 50 x 40 x 4 mm (leg x leg x length x thickness), shall be fixed to the substrate using two nos. Ø10 x 180 mm threaded rod with nut and washer. The wall brackets shall be fixed at a nominal spacing 304 to 1300 mm vertically and 1043 to 1103 mm horizontally.

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3b. Runners

Description: Square Hollow Section (SHS)

Material: Aluminium (Alloy 6060-T5)

Dimension: 50 x 4 mm (side x thickness)

Fixing: fixed vertically and horizontally against the wall brackets using Ø3.9 x 32 mm self-drilling metal steel screws.

4. Exterior Insulation

4a. Mineral Wool

A single layer of 50 mm thick mineral wool, with an aluminium foil facing on one side, shall be fixed against the substrate base wall using galvanised steel insulation fasteners. A maximum air gap of 23 mm shall be maintained between the exterior face of the insulation and the rear of the ACP panel. The joints between the adjacent slabs shall be sealed using 120 mm wide acrylic adhesive-based polypropylene tape (Tikitape AS155).

Manufacturer: Fujairah Rockwool Factory

Reference: "SXXX"

Nominal Density: 150 kg/m³

Slab Dimension: 1200 x 600 mm (length x width)

4b. Insulation Fastener

Description: Galvanized steel with steel washer (self-adhesive type)

Manufacturer: Hira Industries

Reference: "Aeroduct Insulation Fasteners"

Dimension: 50 x 50 mm (base), 60 mm long (mandrel)

Application: Minimum 5 nos. per slab

5. Cavity Fire Barrier

5a. Cavity Barrier

Material: Pre-compressed stonewool lamella with integral foil facing

Reference: Lamatherm CW-FS120

Dimension: 85 x 120 mm (depth x thickness)

Nominal Density: 80 kg/m³

Manufacturer: Siderise Insulation Ltd., UK

Application: A full-seal cavity barrier shall be mechanically secured to the base wall using fixing brackets. The cavity fire barrier shall be installed vertically along the vertical edges of the window opening and extend to the full height of the wall assembly, and horizontally at every floor slab termination and the header of the window opening.

5b. Cavity Barrier Bracket

The brackets shall be bent into an "L" shape with the short leg fixed to the base wall using Ø4 x 55 mm steel screws and the long leg impaling the cavity barrier. The fixings shall be located at a nominal spacing of 250 mm centres.

Material: Galvanised Steel

Reference: "B65/110"

Dimension: 120 x 70 x 1 mm (total length x width x thickness)

Manufacturer: Siderise Insulation Ltd., UK

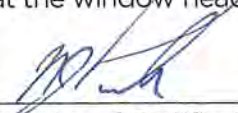
6. Aperture Flashing

1 mm thick aluminium sheet shall be fixed to the basewall using Ø3.9 x 32 mm stainless steel sheet metal screws at a nominal spacing of 150 mm around the window opening perimeter. The flashing shall overlap the interior of the basewall by 50 mm. The aluminium flashing shall be applied over the cavity fire barrier at the window header.

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7. Base Wall

7a. Gypsum Board

1220 × 2400 × 15.9 mm (width × height × thickness) "Type X" gypsum board fixed onto 1.2 mm thick galvanised steel studs and tracks. The boards are fixed to the studs and tracks using Ø3.5 mm × 35 mm zinc-coated drywall screws at a nominal spacing of 300 mm centres. The board joints were covered with gypsum board jointing tape and jointing compound. Screw heads were covered with a jointing compound.

7b. Steel Studs and Tracks

Galvanised steel (ASTM A653M, CS Type B) studs (92 × 32 × 32 × 9 × 1.2 mm, web × flange × flange × lip × thickness) and tracks (95 × 25 × 25 × 1.2 mm, web × flange × flange × thickness) welded directly to the base frame according to the gypsum board dimensions.

F. Approved Manufacturing Location

Hatip Mah. Ali Osman Celebi Bulvari No. 140,
59860 – Corlu, Tekirdag, Turkey

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