THOMAS BELL-WRIGHT
A PHENNA GROUP COMPANY

IAS ACCREDITED Product Certification Agency

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, Türkiye

for

"ALBOND A2"
4 mm thick Aluminium Composite Panel Exterior Wall Cladding System
Test Method: NFPA 285
(System Designation: A113061-4)

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 17th day of February 2025

THOMAS BELL-WRIGHT INTERNATIONAL CONSULTANTS 103143 CERTIFIED

Sandy Dweik
Chief Executive Officer

Nicholas Purcell
Director of Certification

Certificate Number: TBW0301109

Initial registration: February 17, 2025 Issued: February 17, 2025 Expiration: February 16, 2028
File Name: YI088_CRT_SD03FP_A2_Issue1_1109_(f) Issue 1

"ALBOND A2"
4 mm thick Aluminium Composite Panel Exterior Wall Cladding System
(System Designation: A113061-4)

A. Certification is given for "ALBOND A2" 4 mm thick Aluminium Composite Panel Exterior Wall Cladding System, which has **successfully met** the requirements for fire propagation characteristics when evaluated against NFPA 285 - "Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components", subject to the limitations stated herein.

Note: The achieved fire performance on tests conducted to NFPA 285-2012 Edition has been assessed to the latest edition of the standard, NFPA 285-2023 Edition, and found to comply since the extent of revisions of the standard does not impact the existing test evidence as documented in report YI158-4/16/01/25/01.

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 references RD104-1 Rev.0), Technical Verification and Proof of Performance, compliance to Factory Production Control requirements and surveillance & Re-certification Inspection/Audits.

D. Limitations

D.1. This Certification covers the fire propagation characteristics of exterior wall assembly when evaluated against the NFPA 285 fire test method. 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*; and,

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, breaks 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*.

** NFPA 285*

Certificate No.: TBW0301109

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Nicholas Purcell

Seal No.: 103143

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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 non-loadbearing exterior wall 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. Horizontal joints above window/aperture openings shall be located not less than 2000 mm above the header. The design and components of the exterior wall cladding assembly are not permitted to be substituted, eliminated, or interchanged unless recognised and approved by this Certification.

D.6. The method used to seal the gap in the joints between the panels and the components used was 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. This Certification does not address the following:

a. Air and Water Permeability
b. Measurement of heat transmission
c. Classification or definition of material as non-combustible
d. Any Resistance to Fire rating
e. The toxicity level of smoke developed during combustion
f. Effect of aggravated flame spread behaviour of an assembly resulting from the proximity of combustible materials
g. Effects of combustible accessories installed or fixed on the surface of exterior cladding material such as laminates, banners, signage, and alike
h. Effects of radiation from nearby fires

E. System Configuration

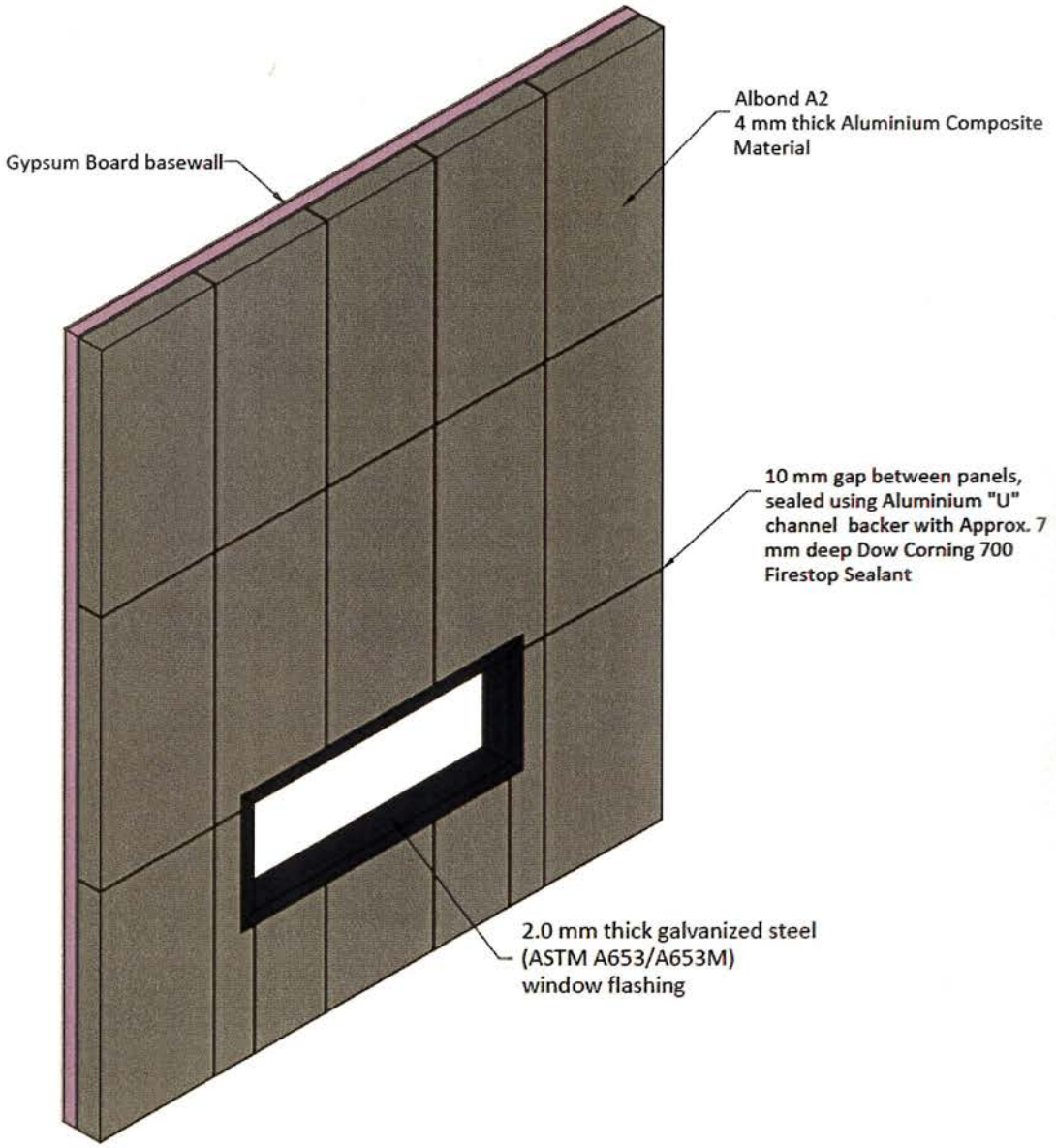

Figure 1. *Aluminium Composite Panel Exterior Wall Cladding System – Typical Details*

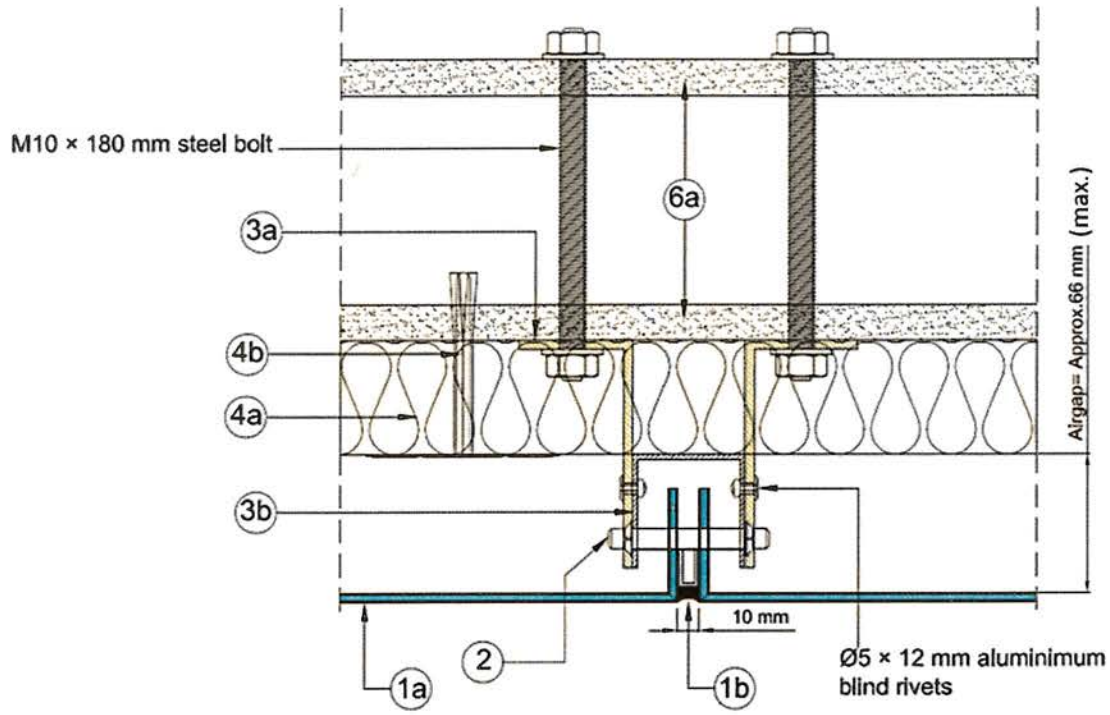

Figure 2. *Horizontal section – joint detail*

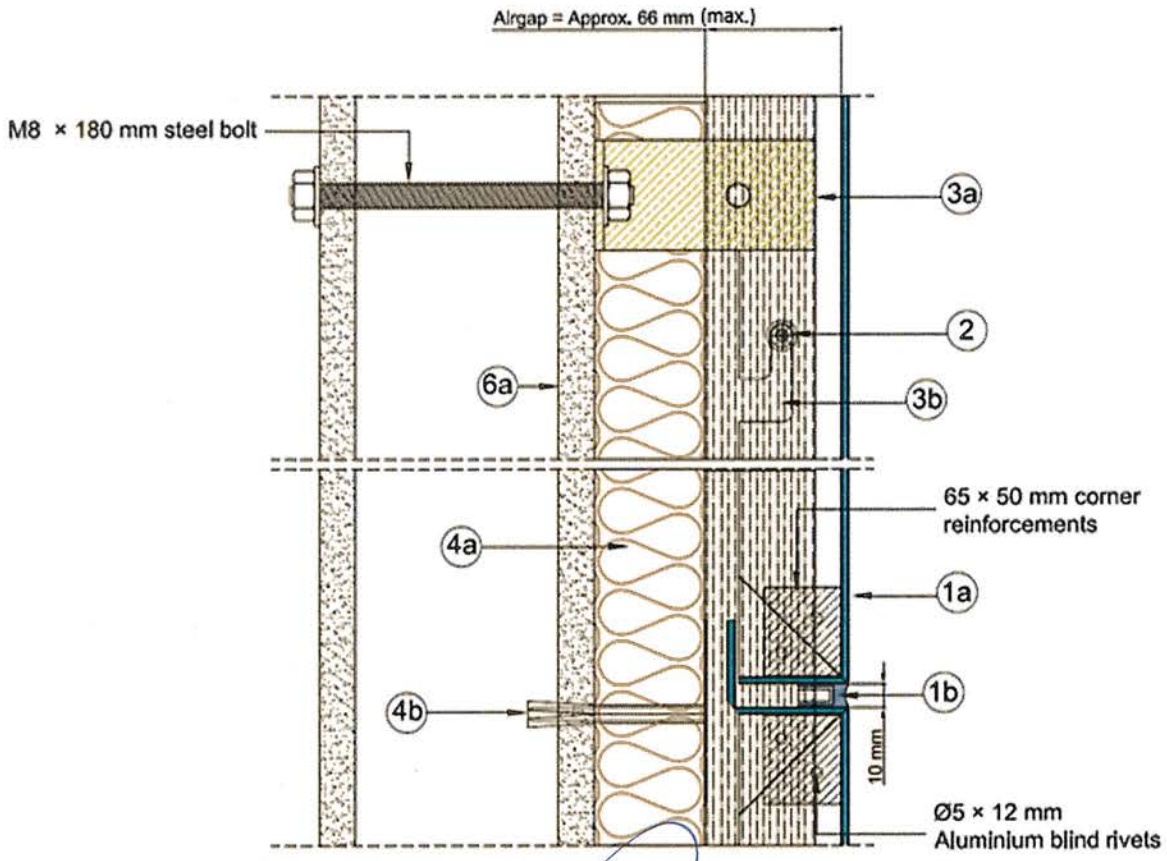

Figure 3. *Vertical section – joint detail*

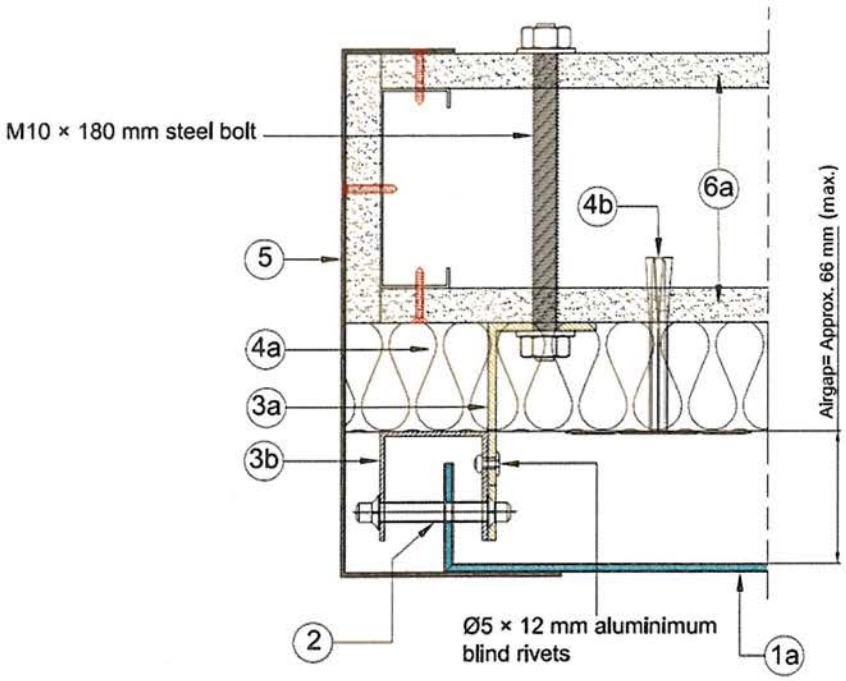

Figure 4. *Horizontal section – window detail*

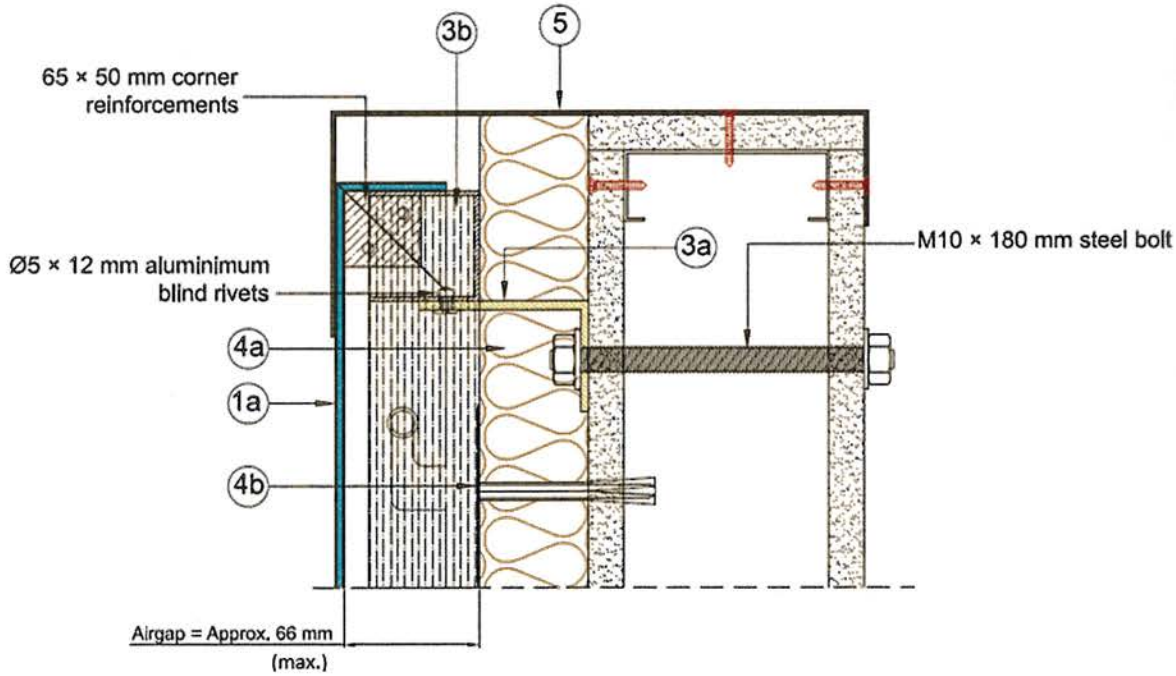

Figure 5. *Vertical section – window detail*

1. Cladding Element

1a. Aluminium Composite Panel

"Tray Profile" Aluminium Composite Panels with 50 mm flange and 40 mm leg bend on the top edge. The corners shall be reinforced with 65 × 50 × 4 mm (length × width × thickness) ACP trimmings fixed using Ø5 × 12 mm aluminium blind rivets. The details of the ACP are stated in Table 1 below

Table 1. *Aluminium Composite Panel Details*

Reference	"ALBOND A2"
Weight Per Unit Area	8.0 ± 0.5 kg/m²
Panel Thickness	4 ± 0.2 mm
Exterior Facing (Top Skin)	0.5 ± 0.02 mm thick, Aluminium Alloy EN-AW 3105-H44, Polyvinylidene Fluoride (PVDF) coating 25 ± 4 microns – "Anthracite Gray" colour
Interior Facing (Bottom Skin)	0.5 ± 0.02 mm thick, Aluminium Alloy EN-AW 3105-H44, Polyester (PE) coating 5 ± 2 microns
Adhesive	Material: Modified ethylene vinyl acetate (EVA) resin Nominal Thickness: 80 microns Nominal Density: 930 kg/m³
Core	"Fire retardant mineral core", Colour: Grey, Thickness: 3 ± 0.2 mm, Minimum Density: 1750 kg/m³
Maximum Panel Width	909 mm
Minimum Panel Width	296 mm
Maximum Panel Height	1940 mm
Minimum Panel Height	830 mm

1b. Panel Joint Seal

A maximum gap of 10 mm shall be maintained between the panel joints. Aluminium "U" channel (Aluminium Alloy 6063-T6) 8.5 × 16 × 1.5 mm (width × height × thickness) shall be recessed into the panel gap and capped off with "Dow Corning 700 Firestop" Sealant applied at a depth of 7 mm flush with the exterior face of the ACP cladding.

2. Cladding Fixing

The panels shall be hung to the stainless-steel shaft through the Ø10 mm notches cut on the vertical flanges of the panel at 102 mm from the panel corner to the notch centres and spaced 434 mm centres. The panels shall be overlapped by the succeeding panel on the top edge by 28 mm. The shaft shall be inserted into the holes across the vertical runners and held in place using retaining rings fixed on both ends.

3. Sub-Frame

3a. Wall Brackets

Aluminium "L" profile bracket, 50 × 50 × 100 × 4 mm (leg 1 x leg 2 × height × thickness) Aluminium Alloy 6063-T5. The brackets shall be fixed to the basewall in pairs, with the long legs adjacent to each other to accommodate the width of the vertical runner, using M10 × 180 mm steel bolts with nut and washer. The brackets shall be fixed at a vertical spacing of 706 to 1092 mm and horizontal spacing of 789 to 793 mm.

3b. Vertical Runners
Aluminium "U" channel, 48 × 50 × 48 × 3 mm (leg × web × leg × thickness) Aluminium Alloy 6060-T5. The aluminium "U" channel shall be fixed to the wall brackets using Ø5 × 12 mm aluminium blind rivets.

4. Exterior Insulation

4a. Insulation Material
A single-layer of 50 mm thick un-faced mineral wool slabs shall be fixed to the substrate using metal insulation stainless steel insulation anchors. A maximum airgap of 66 mm shall be maintained between the exterior face of the insulation and the rear face of the ACP panel.

Reference: "Bonus Premium R CS 50"
Manufacturer: Eryap Grup
Nominal Density: 150 kg/m³
Nominal Thickness: 50 mm
Dimension: 600 × 1200 mm (width × length)

4b. Insulation Fastener
Material: Stainless steel
Reference: "Forfiks"
Manufacturer: Alfor Plastik
Dimensions: Ø9 × 110 mm
Fixing Details: Five (5) nos. of insulation fasteners shall be used per slab.

5. Window Flashing
2 mm thick galvanised steel sheet (ASTM A653, CS Type B) shall be fixed around the window aperture using stainless-steel self-tapping screws Ø4 × 12 mm spaced at 300 mm centres. The flashing shall overlap the ACP by 102 mm. The flashing shall be fixed against the exterior face of the ACP using Ø5 × 12 mm rivets.

6. Base Wall

6a. Interior & Exterior Gypsum Board
1220 × 2400 × 15.9 mm (width × length × thickness) Type X gypsum boards fixed onto galvanised steel (ASTM A653, CS Type B) framing, consisting of 1.2 mm thick studs and tracks, using Ø3.5 mm × 35 mm zinc-coated drywall screws with the long edge along the vertical joints. The board joints shall be covered with fibre-glass multi-purpose self-adhesive plasterboard jointing tape and a jointing compound composed of calcium sulphate-based mineral fillers

6b. Steel Studs and Tracks
Galvanised steel (ASTM A653, CS Type B) studs 93 × 32 × 34 × 9 × 1.2 mm (web × flange × flange × lip × thickness) and tracks 95 × 32 × 32 × 1.2 mm (web × flange × flange × thickness) welded directly to the test frame.

F. Approved Manufacturing Location

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