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

Modern Industrial Co. Ltd.

Sudair Industrial and Business City, Sudair,
Riyadh, Kingdom of Saudi Arabia

for

"Unibond FR-A2"
4 mm thick Aluminium Composite Panel Exterior Cladding System
Test Method: NFPA 285 – 2025 Edition
(System Designation: A114B61-4)

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 26th day of December 2025

THOMAS BELL-WRIGHT INTERNATIONAL CONSULTANTS
103239
CERTIFIED

Sandy Dweik
Chief Executive Officer

Nicholas Purcell
Director of Certification

Certificate Number: TBW0301188

Initial registration: December 26, 2025 Issued: December 26, 2025 Expiration: December 25, 2028
File Name: YI068_CRT_SD03FP_Issue1_1188_(f) Issue 1

"Unibond FR-A2"
4 mm thick Aluminium Composite Panel Exterior Cladding System (System Designation: A114B61-4)

A. Certification is given for "Unibond FR-A2" 4 mm thick Aluminium Composite Panel Exterior Cladding System, which has successfully met the requirements for fire propagation characteristics when evaluated against NFPA 285 – 2025 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 YI070-1 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 – 2025 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.

NFPA 285 2025 Edition

Certificate No.: TBW0301188

Director of Certification
Nicholas Purcell

Seal No.: 103239

Issued: 26 Dec 2025
Valid to: 25 Dec 2028

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:

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
i. Other characteristics such as durability, weather-resistance, water absorption, physical and mechanical properties etc.

E. System Configuration

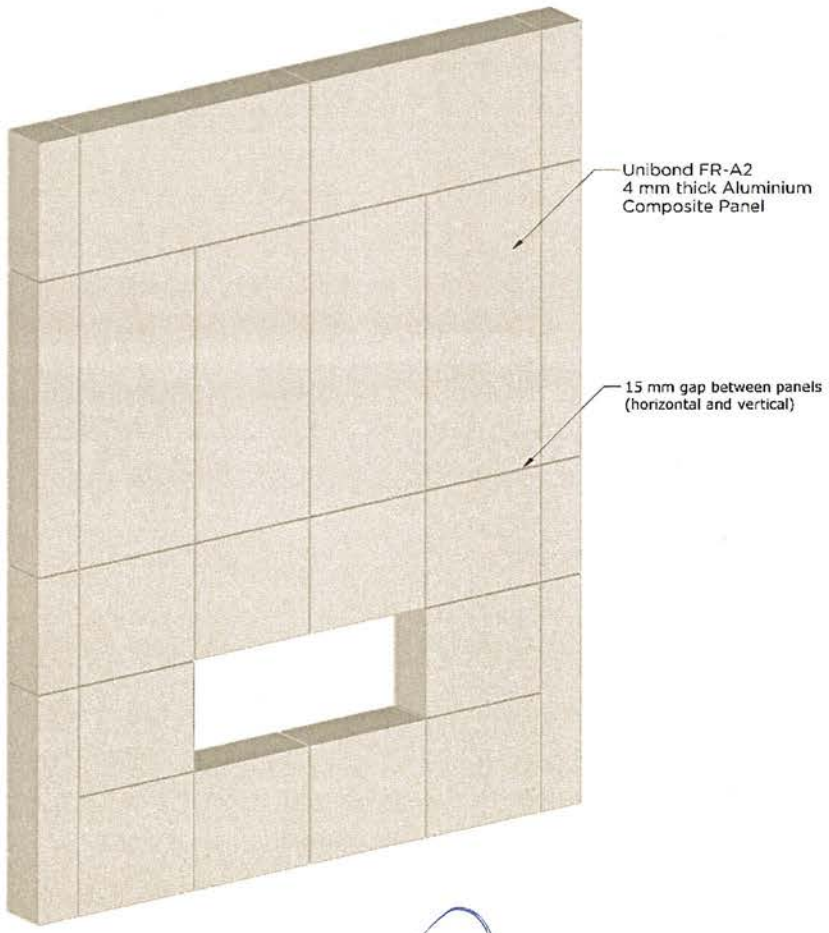

Figure 1. *Non-Loadbearing Exterior Wall Assembly – Typical Details*

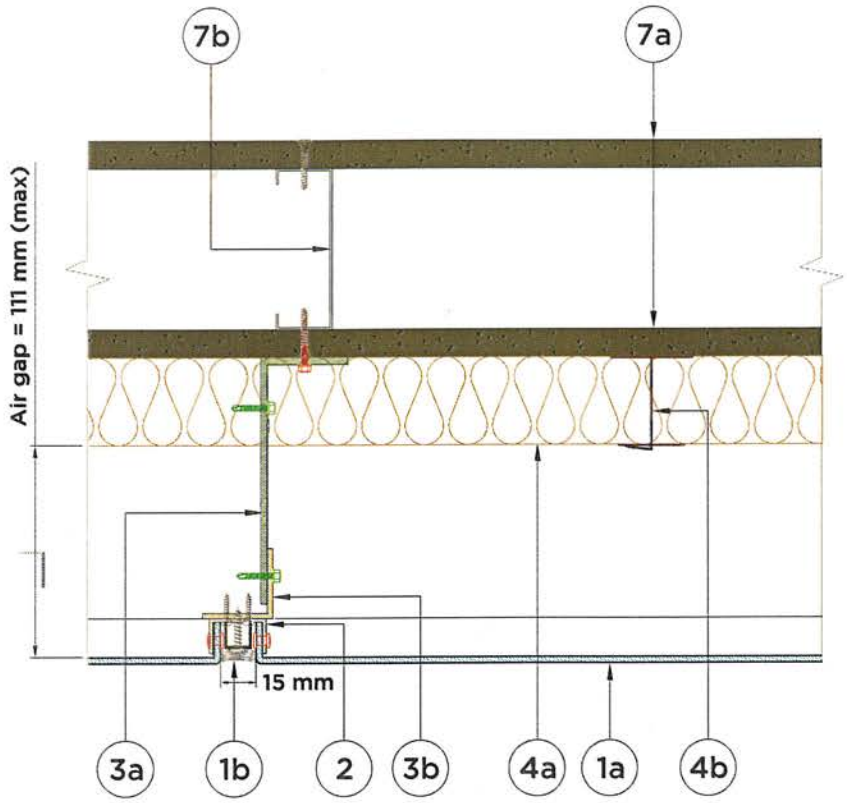

Figure 2. Joint section details - horizontal

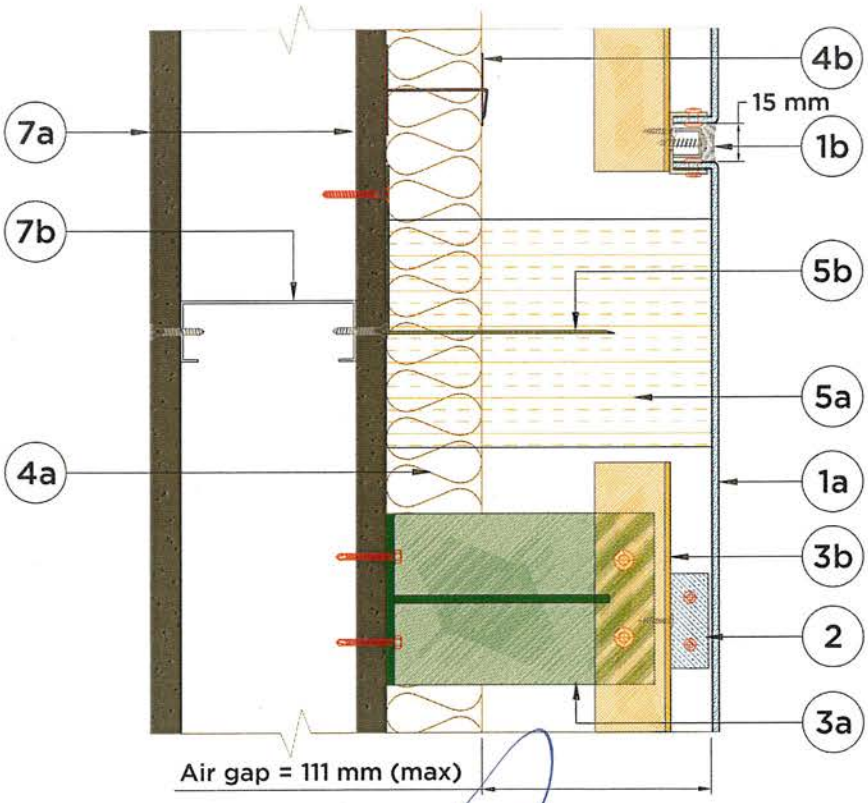

Figure 3. Joint section details- vertical

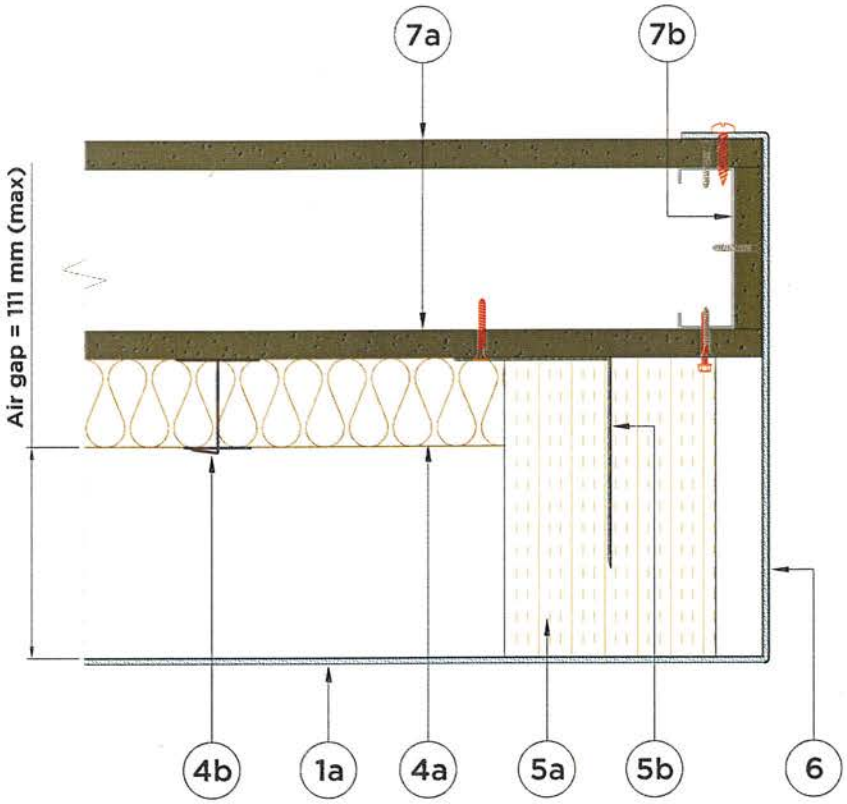

Figure 4. Aperture horizontal section details

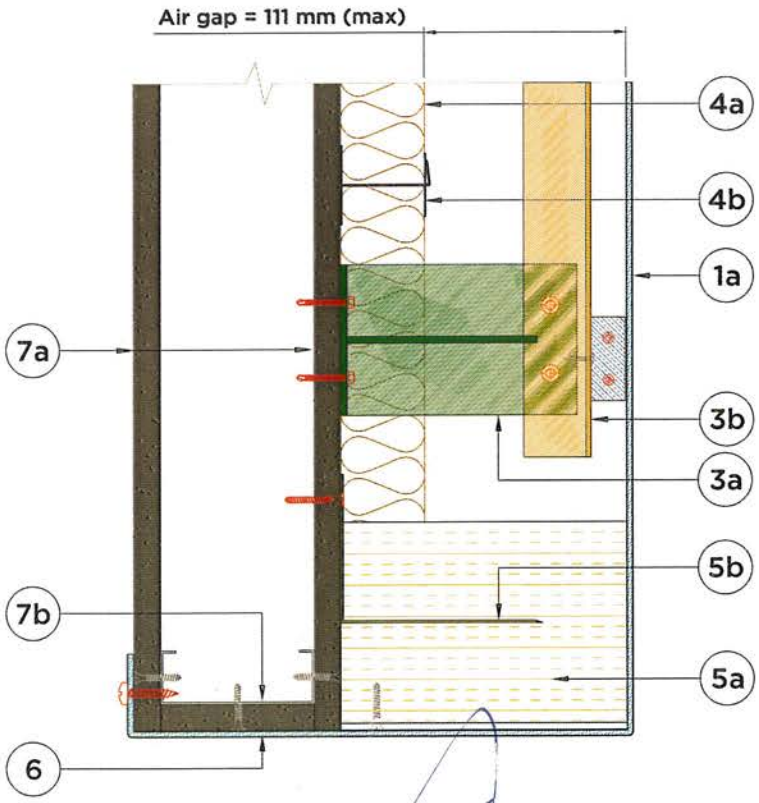

Figure 5. Aperture vertical section details

1. Cladding element

1a. Aluminium Composite Panel

"Tray profile" Aluminium Composite Panels (ACP) with 22mm deep flanges. The corners of the tray shall be further reinforced with 60 × 60 × 4 mm (leg × leg × thickness) "L" shaped ACP trimmings using Ø4.2 × 19 mm aluminium blind rivets. The details of the ACP are as follows.

Table 1. *Panel Details*

Weight	8.68 ± 0.32 kg/m²
Top Skin (exterior skin)	0.5 ± 0.02 mm thick, Aluminium Alloy 3003-H16, Polyvinylidene Fluoride (PVDF) finish, 29 maximum microns coating thickness
Bottom Skin (interior skin)	0.5 ± 0.02 mm thick, Aluminium Alloy 3003-H16, Polyester (PE) finish, 12 microns maximum coating thickness
Adhesive Film	"Polyethylene-based film" Reference: "AF5008" Nominal density: 926 kg/m³ Nominal Thickness: 80 microns
Core	3.0 mm thick, mineral-filled polymer based core Density: 1700-1850 kg/m³
Panel Thickness	4 ± 0.2 mm
Maximum Panel Width	1932 mm
Maximum Panel Height	2078 mm
Minimum Panel Width	324 mm
Minimum Panel Height	814 mm

1b. Joint seal

A maximum gap of 15 mm shall be maintained at the vertical and horizontal joints between adjacent panels. The gap shall be fitted with a 10 × 10 × 1.5 mm (web × flange × thickness) Aluminium (Alloy 6063-T6) U-channel using Ø4.2 × 38mm stainless steel self-drilling screw and capped with "Sikasil – 403 Fire" Silicone sealant, extruded smoothly at a nominal depth of 6-8 mm and flush with the exterior surface of the ACP cladding.

2. Cladding Fixing

Aluminium angles (Alloy 6063), 20 × 20 × 40 × 1.5 mm (leg × leg × width × thickness) shall be fixed on the flanges of the tray using Ø3.8 × 12 mm aluminium blind rivets 150-200 mm from corners and 300-400 mm centres. The aluminium angles shall be fixed to the runners using Ø4.5 × 24 mm pan-head self-tapping stainless-steel screw.

3. Sub-Frame

3a. Wall Brackets

Galvanised steel (IS 2062 Grade E250A), 50 × 141 × 90 × 4 mm (leg × leg × length × thickness), shall be fixed to the substrate using two nos. Ø5.2 × 38 mm self-drilling hex-head steel screw nut and washer. The wall brackets shall be fixed at a nominal spacing 304 to 320-1223 mm centres vertically and 948 to 1947 mm horizontally.

3b. Runners

Description: Aluminium Angle
Material: Aluminium (Alloy 6063 – T6)
Dimension: 40 × 40 × 3 mm (leg × leg × thickness)
Fixing: It shall be fixed vertically against the wall brackets using Ø5.5 × 25 mm self-drilling hex-head 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 111 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 70 mm wide aluminium foil tape (Airmaster).
Manufacturer: Saudi International Insulation Manufacturing Co. LLC (SIIMCO)
Reference: "KIMMCO ISOVER COMFORT SA SLAB 50 FS"
Nominal Density: 50 kg/m³
Slab Dimension: 1200 × 600 mm (length × width)

4b. Insulation Fastener

Description: Galvanized steel with steel washer (self-adhesive type)
Manufacturer: TORQ
Reference: "Metal Insulation Holder TMD"
Dimension: Ø 8 × 90 mm
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: 161 × 120 mm (depth × thickness)
Nominal Density: 75 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. The joints between the adjacent slabs shall be sealed using 120 mm wide aluminium foil tape (Siderise RFT120).

5b. Cavity Barrier Bracket

The brackets shall be bent into an "L" shape with the short leg fixed to the base wall using Ø4.2 × 38 mm steel screws and the long leg impaling the cavity barrier. The fixings shall be located at a nominal centre spacing of 400-600 mm horizontally and 600 mm vertically.
Material: Galvanised Steel
Reference: "B195 (G)"
Dimension: 320 × 25 × 1 mm (total length× width × thickness)
Manufacturer: Siderise Insulation Ltd., UK

6. Aperture Flashing

The aperture perimeter shall be covered by extending the flange of the cladding panels. The window flashing shall be fastened to the base wall using Ø4.2 × 38 mm stainless steel screw at a nominal spacing of 100 mm from the edges and 300 mm centres. The angles shall be fixed to the base wall using Ø4 × 55 mm pan head screws.

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.

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 x thickness) welded directly to the base frame according to the gypsum board dimensions.

F. Approved Manufacturing Location

Sudair Industrial and Business City, Sudair,
Riyadh, Kingdom of Saudi Arabia
