

THOMAS BELL-WRIGHT

A PHENNA GROUP COMPANY



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

to

Alucopanel Middle East LLC

P.O. Box 416557, National Industries Park,
Dubai, United Arab Emirates

for

“Alucopanel® A1”

**4 mm thick Aluminium Composite Panel Roof
Covering Assembly with Mineral Wool Insulation
(Classification according to EN 13501-5:2016)**

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 30th day of August 2024



Sandy Dweik

Sandy Dweik
Chief Executive Officer

Nicholas Purcell

Nicholas Purcell
Director of Certification

Certificate Number: TBW0300736

Initial registration: August 19, 2021 Issued: August 30, 2024
File Name: YF146_CRT_SD03RT_A1_736_Issue2_(f)

Expiration: August 18, 2027
Issue 2

This certificate and schedules are held in force by regular Factory Inspections by Thomas Bell-Wright International Consultants (TBWIC).
Refer to www.tbwcert.com or contact TBWIC Certification Division to validate the current status of the Certification.
This certificate remains a property of Thomas Bell-Wright International Consultants.
P.O. Box 26385, Dubai, UAE. | Tel: +971 4 8215777 | Email: certification@bell-wright.com | Web: www.bell-wright.com
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F 19 Scheme Certificate Issue 8 Issued Mar 2024

“Alucopanel® A1”
4 mm thick Aluminium Composite Panel Roof
Covering Assembly with Mineral Wool Insulation

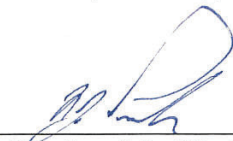
- A. Certification is given for “Alucopanel® A1” 4 mm thick Aluminium Composite Panel Roof Covering Assembly with Mineral Wool Insulation for Reaction to Fire classification according to EN 13501-5:2016 “Fire classification of construction products and building elements – Part 5: Classification using external fire exposure to roofs tests”, subject to the limitations stated herein. The summary of the scope of certification is stated below.

Table 1. Summary of the Scope of Certification

Product Name/Reference	Reaction to Fire Performance		Report Reference
	Result	Standard	
“Alucopanel® A1” 4 mm thick Aluminium Composite Panel Roof Covering Assembly with Mineral Wool Insulation	BR00F (t4)	EN 13501-5:2016	FIRES-CR-034- 21-AUPE

- 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 11), which includes pre-test sampling, evidence of performance (under report reference(s) in Table 1), 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 specifications of the products as described in Sections E.
- D.2. The test standard covered under this Certification was used to measure the response of materials, products, or system assemblies to heat and flame under controlled conditions. The results described in each particular test report on its own shall not be used as the sole criteria for fire-hazard or fire-risk assessment of the materials, products, or system assemblies under actual fire conditions.
- D.3. No variations are allowed in material composition and manufacturing process unless recognised and approved by this Certification.
- D.4. This Certification is valid only for the fire performance of roof assembly when subjected to external fire exposure. Internal fire exposure is not considered.
- D.5. Panels shall be fastened to structural supports with panel joints secured with fasteners.
- D.6. The classification is valid for the following configurations:
- Roof pitch: 45° to 70° inclination from the horizontal plane
 - Deck type: Installations without continuous deck
 - Supporting structure: Aluminium profile supports (non-combustible)

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D.7. This Certification does not address the following:

- a. Air and Water Permeability
- b. Measurement of heat transmission
- c. Effect of aggravated flame spread behaviour of an assembly resulting from the proximity of combustible walls and ceilings
- d. Classification or definition of material as non-combustible
- e. Any Resistance to Fire rating
- f. The toxicity level of smoke developed during combustion
- g. Fire propagation characteristics when tested as large-scale façade cladding assembly

E. System Details

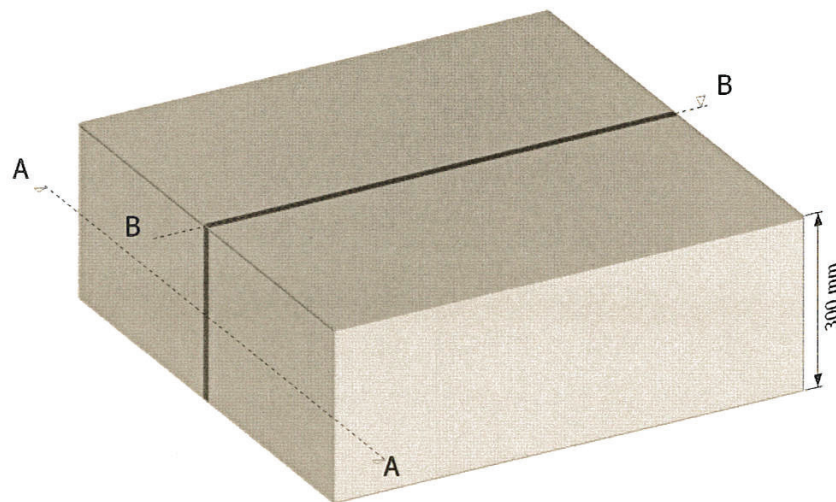


Figure 1. Exterior Roof Covering Assembly

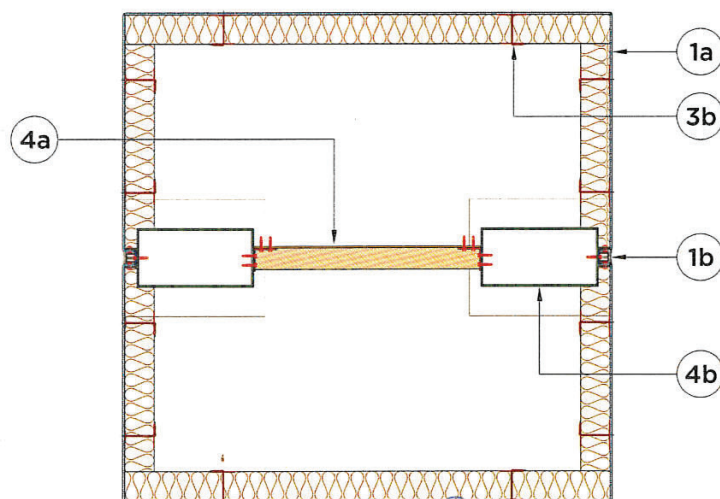


Figure 2. Section A-A

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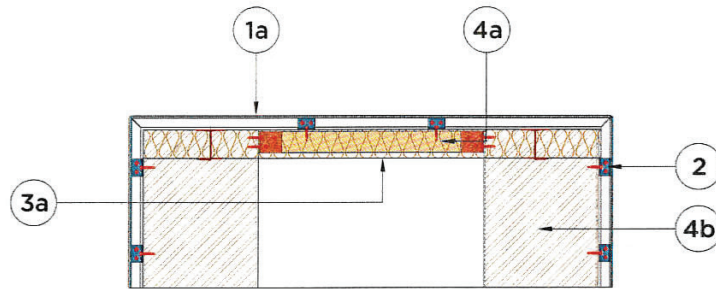


Figure 3. Section B-B

1. Roof Covering Element

1a. Aluminium Composite Panel

Aluminium Composite Panel formed into a “tray profile”, with 300 mm high flanges on the exterior and 20 mm on the panel joints, shall be mechanically fixed to the structural support framing along the vertical and horizontal joints. Refer to Table 2 below for the details of the ACP panel.

Table 2. Aluminium Composite Panel Details

Reference	“Alucopanel® A1”
Panel Thickness	4 ± 0.2 mm
Weight Per Unit Area	7.8 ± 0.5 kg/m ²
Exterior Facing (top skin)	0.5 ± 0.02 mm thick, Aluminium Alloy 3105-H16, 25-27 microns thick Polyvinylidene Fluoride (PVDF) coating
Interior Facing (bottom skin)	0.5 ± 0.02 mm thick, Aluminium Alloy 3105-H16, 5-7 microns thick Polyester (PE) coating
Core	Material: Inorganic modified mineral core Thickness: 3 ± 0.1 mm Density: 1600 - 1900 kg/m ³
Adhesive	Material: Polyethylene-based film Thickness: 30 ± 2 microns Density: 920 ± 10 kg/m ³

1b. Panel Joint Seal

A gap of 20 mm shall be maintained between the joints of the panels. The joints shall be fitted with an aluminium (Alloy 6063-T6) “U” channel, 15 × 15 × 15 × 1.3 mm (web × flange × flange × thickness), fixed with Ø4.6 × 38 mm self-drilling hex head screws and capped with Silicone-based sealant DOWSIL™ 813C, applied at a nominal depth of 6 mm, extruded smoothly and flush with the exterior surface of the ACP cladding.

2. Cladding Fixing

Aluminium (Alloy 6063-T6) angles, 20 × 20 × 50 × 1.5 mm (leg × leg × length × thickness), shall be fixed on flanges of the tray using 2 nos. of Ø4 × 21 mm aluminium blind rivets within 100 mm from the corners and at 150 mm centres nominal spacing. The angles shall be fixed to the sub-framing using Ø4.6 × 38 mm self-drilling hex head screws. The angles shall be fixed to the sub-framing using Ø4.6 × 38 mm self-drilling hex head screws.

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3. Insulation

3a. Mineral Wool

A single layer of mineral wool with an aluminium foil facing on one side shall be fixed to the rear face of the roof covering element using insulation board fasteners.

Reference: "S2XX"

Manufacturer: Fujairah Rockwool Factory

Density: 50 kg/m³

Thickness: 50 mm

3b. Insulation Fastener

Description: Self-adhesive metal pin with 50 mm x 50 mm metal base

Reference: "Self-stick insulation pins."

Manufacturer: HVAC Insulation Supplies Co., Ltd.

Fixing: 8 nos. per square metre

4. Framing

4a. Sub-frame

Description: Aluminium angle

Material: Aluminium, Alloy 6063-T6

Dimensions: 40 x 40 x 3mm (leg x leg x thickness)

Fixing:

- Fixed to the structural support using Aluminium (Alloy 6063-T6) angle, 40 x 40 x 37 x 3 mm (leg x leg x length x thickness), fastened with 4 nos. of Ø4.6 x 38 mm hex head self-drilling screws
- The intersection between sub-frames shall be fastened using Aluminium (Alloy 6063-T6) angle, 40 x 40 x 37 x 3 mm (leg x leg x length x thickness), fastened with 4 nos. of Ø4.6 x 38 mm hex head self-drilling screws

4b. Structural support

Description: Rectangular hollow section profile

Material: Aluminium, Alloy 6063-T6

Dimensions: 200 x 100 x 3 mm (width x depth x wall thickness)

F. Approved Manufacturing Location

Sublease Plot # TP010105B,
National Industries Park,
P.O. Box 416557,
Dubai, United Arab Emirates

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