ESL

مختبر الإمارات للسلامة
EMIRATES SAFETY LABORATORY

ESLGlobal.com

CERTIFICATE OF CONFORMITY

Issue: **01**

Certificate number: **ESL-25-11758**

Pursuant to provisions of the Certification scheme on Global Conformity Certification of fire and life safety products (CS-GCC, scheme type 5), Emirates Safety Laboratory hereby grants this certificate of conformity to the product described below:

Exterior Wall Cladding System with 3 mm thick Coated Solid Aluminium Panel
(ESL system designation: FSAN-0269-11758)

Placed on the market under the name or trade mark of:

Inventure Façade Contracting LLC
Office No. 804, Le Solarium Building, Dubai Silicon Oasis,
P.O. Box 119920, Dubai, United Arab Emirates

Manufactured in the following location(s):

Inventure Metal Products Industries LLC
PLM143 Al Ghail Industrial Zone - NFZ
Ras Al Khaimah, United Arab Emirates

Complies with the requirements of the standard(s) as detailed below:

NFPA 285 (2023) Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components

The certificate was first issued on **13 January 2025** and remains valid under the condition that the Certificate Holder fulfils the requirements of the agreement on certification supervision no. **0353/SA/25**.

Signed for ESL	Tomasz Kielbasa Certification Manager	13 January 2025 Date of issue	12 January 2028 Expiry date

This Certificate remains valid till date stated above, unless suspended, withdrawn or terminated. This certificate will not be valid if the manufacturer makes any changes affecting product conformity, which have not been notified to, and agreed in writing with ESL. This Certificate is an electronic document and shall not be reproduced (in any form) except in full. Certificate holder is under an obligation to make references to issued certificate only in conjunction with product(s) that conform to evaluated product construction. Prior to use of this certificate, please verify its validity at ESL.directory

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GCC ACCREDITATION CENTER GAC
Product Certification
ISO/IEC 17065:2012
APC 0097

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CERTIFIED PRODUCT:

Product / System Description:

Exterior Wall Cladding System with 3 mm thick Coated Solid Aluminium Panel is a non-loadbearing external façade wall system/assembly design where a cladding panel (referred to as "3 mm Thick Coated Solid Aluminium Panel") are installed on the aluminium extruded profile runner fixed to a wall bracket. Glass wool insulation slabs are installed onto the base wall (substrate) using galvanized steel insulation anchors. Cavity barriers are installed horizontally between the base wall and solid aluminium panels where the glass wool insulation slab is interrupted perpendicularly. The vertical panel joint gaps were fitted with aluminium angle, a pressure fitted backer rod, and fire-rated sealant. The horizontal panel joint gaps were closed by overlapping the bottom panel edge with top panel edge, and a fire-rated sealant applied over a pressure fitted backer rod.

System testing according to NFPA 285 (2023) Edition:

1. NFPA 285 standard provides a test method for determining the fire propagation characteristics (on post-flashover fires of interior origin) of exterior wall assemblies and panels used as components of curtain wall assemblies that are constructed using combustible material or that incorporate combustible components.
2. Overall test result: ***PASSED***

Test Performance Evaluation Summary Table			
No.	Tested Requirements	Test Observation	Pass / Fail
1	**Flame propagation: Exterior face of the test specimen** Flames emitting from the surface of the exterior face of the test specimen shall not reach a height of 10 ft or greater above the top of the window opening.	Flames **did not reach** 10 ft above the window opening.	**Pass**
2	**Flame propagation: Exterior face of the test specimen** Flames emitting from the surface of the exterior face of the test specimen shall not reach a horizontal distance of 5 ft or greater from the vertical centerline of the window opening.	Flames **did not reach** a lateral distance of 5 ft from the vertical centerline.	**Pass**
3	**Flame propagation to adjacent horizontal spaces** Flames shall not occur beyond the intersection of the test specimen and the side walls of the test apparatus.	There was **no** visible flaming beyond the intersection of the side walls and test apparatus.	**Pass**
4	**Flames in second-story test room** Flames shall not occur in the second-story test room.	There was **no** visible flaming in the second-story test room.	**Pass**
5	**Flame propagation: Exterior face of the test specimen** Temperatures measured at specified locations shall not exceed 1000 °F.	Temperatures **did not exceed** the 1000 °F limit.	**Pass**
6	**Horizontal Flame propagation: Combustible components and insulation** Temperatures measured at specified locations in the wall cavity air space shall not exceed 1000 °F.	Temperatures **did not exceed** the 1000 °F limit.	**Pass**
7	**Vertical Flame propagation: Combustible components and insulation** Temperatures measured at specified locations in the wall cavity air space shall not exceed 1000 °F.	Temperatures **did not exceed** the 1000 °F limit.	**Pass**
8	**Temperatures in second-story test room** Temperatures measured 1 in. (25 mm) from the interior surface of the test specimen within the second-story test room shall not exceed 500 °F above the ambient air temperature of the test facility at the start of the fire test.	Temperatures **did not exceed** 500 °F above the ambient air temperature.	**Pass**

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3. Details of external façade wall assembly/system components specifications covered in this certificate.

a. Design no. (reference drawings by sponsor):

IMPI-0001 to IMPI-0008

b. Base Wall Assembly:

The base wall, made of a 15.9 mm thick Type X (GW-TX) Knauf gypsum board material is constructed to a galvanized steel framing via 92 x 32 x 1.2 mm (w x h x t) studs using Knauf TB ø 3.5 x 35 mm self-tapping screws. A single strip of 50 mm wide Knauf joint tape & Knauf ready gips jointing compound is applied along all exterior meeting edges of the boards, including all exposed screw heads.

c. Framing System:

i. Wall Brackets: Mild Steel (Grade: S275 by Inventure Façade Contracting LLC); Dimensions: 328 x 80 x 150 x 8 mm (l x w x h x t).
ii. Fasteners: Stainless steel SS316 grade, M8 x 60 mm long machine screw – by Inventure Façade Contracting LLC.
iii. Runner Profiles: Aluminium (alloy: AA6063 T5, by Inventure Façade Contracting LLC); Dimensions: 60 x 135 mm (w x d).
iv. Round Tube Support: Stainless steel SS316 grade, ø8 x 50 mm long – by Inventure Façade Contracting LLC.

d. Cavity Insulation & Cavity Fire Barrier System:

i. Single layer of 50 mm thick insulation installed on the entire exterior face of base wall: Insulation made of a glass wool slab with aluminium facing in one side, with density - 32 kg/m³ & dimensions, 1200 x 1000 x 50 mm (h x w x t) by KIMMCO Isover (+) Galvanized steel insulation anchors, M8x140 mm long by Rawl (+) Aluminium joint tape, 120 mm wide.
ii. Cavity Fire Barrier System (see Note 2):
Fixed horizontally, pre-compressed stone wool slab – 75 kg/m³ & pre-cut dimensions (437-uncompressed x 120 mm: d x t) by Siderise Insulation Ltd. ref. CH/CB constructed from CWFS-120 (+) Fixing brackets, galvanized steel, 505 x 25 x 0.9 mm (l x w x t), by Siderise Insulation Ltd. ref. B355 (+) Self-drilling screw, ø6.2 x 50 mm long (+) Aluminium joint tape, 120 mm wide by Siderise Insulation Ltd. ref. RFT120.

e. Exterior Cladding & Support Hardware:

i. Panels are comprised of a 3mm thick (nominal) Coated Solid Aluminium Panel by Inventure Metal Products Industries LLC, ref. as **"3 mm Coated Solid Aluminium Panel"** coated with AkzoNobel – Interpon D2525 powder coating, fabricated and folded into tray profile with a nominal return bend of 20 mm on the edges. The panels were slotted onto round tube support of the runner profile with support of aluminium panel cleats with SS pan head tapping screws ø4.8 x 19 mm.
ii. The window header, jambs, & sill are not covered with any material. The panel terminates at the outer window side. Gap between the return flange and the substrate is filled with Dow Corning FS700 fire-rated sealant applied over pressure-fitted Cordon fire-rated backer rod.
iii. Perimeter edges (top & sides) are not covered with any material. The panel terminates at the outer perimeter side. Gap between the return flange and the substrate is filled with Dow Corning FS700 fire-rated sealant applied over pressure-fitted Cordon fire-rated backer rod.
iv. Total of 17 nos. panels with a maximum dimension of 1430 x 3100 mm (w x h) and a minimum dimension of 815 x 310 mm (w x h).
v. Total gap = 430 mm bet. panel exterior face & base wall, Total gap = 427 mm bet. panel interior face & base wall, Total air cavity = 377 mm bet. panel interior face and insulation material.

f. Panel Gap & Termination Details:

An aluminium angle initially inserted into a 15 mm wide vertical gap filled with Dow Corning FS700 fire-rated sealant applied over pressure-fitted Cordon fire-rated backer rod was used to cover the vertical panel joint gap. 15 mm wide horizontal panel joint gaps were closed by overlapping bottom panel edge with top panel edge, and with Dow Corning FS700 fire-rated sealant applied over pressure-fitted Cordon fire-rated backer rod.

Note: * - Based on the analysis, the tested coated solid aluminium panel is interchangeable with following types:

- Solid Aluminium Panel (3mm thick) with AkzoNobel - Interpon D2525 Powder Coating
- Solid Aluminium Panel (3mm thick) with Trinar® 3-coat PVDF coating

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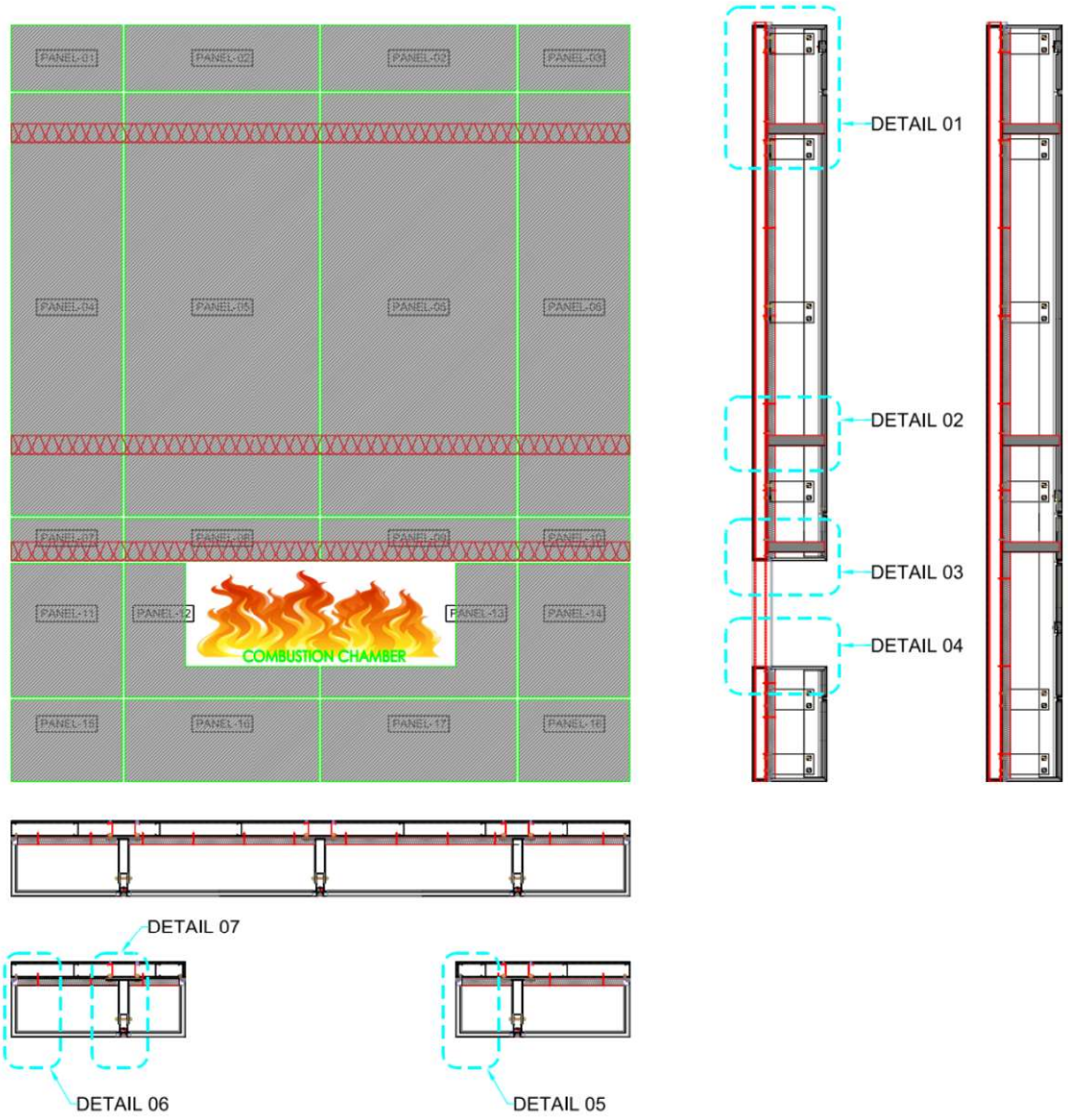
4. Exterior wall assembly specific section details (see section 3.a. reference design no.):



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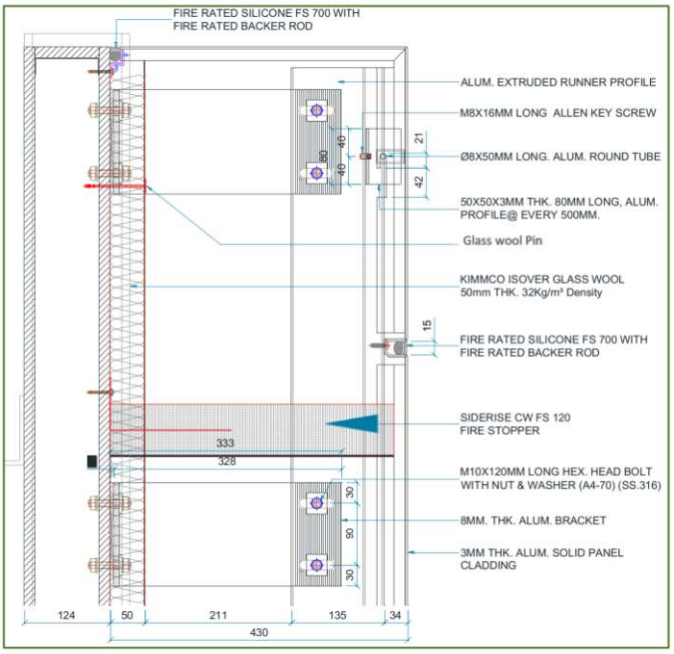
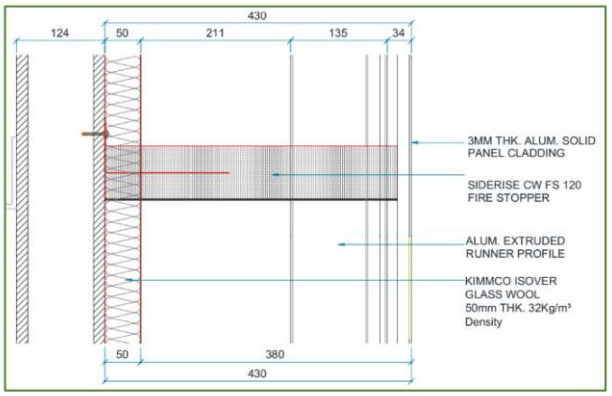
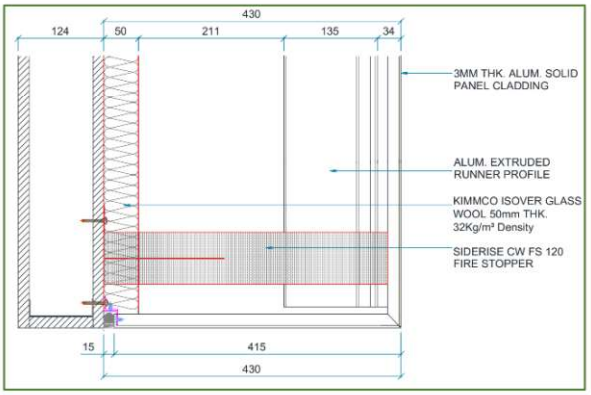


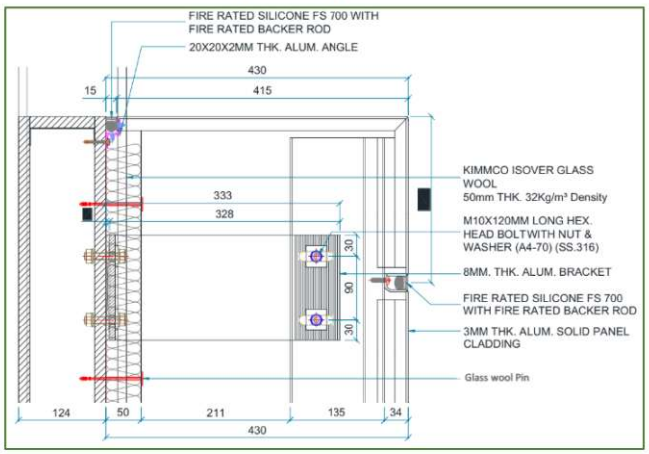
Detail 1: Typical Top/Bottom Detail



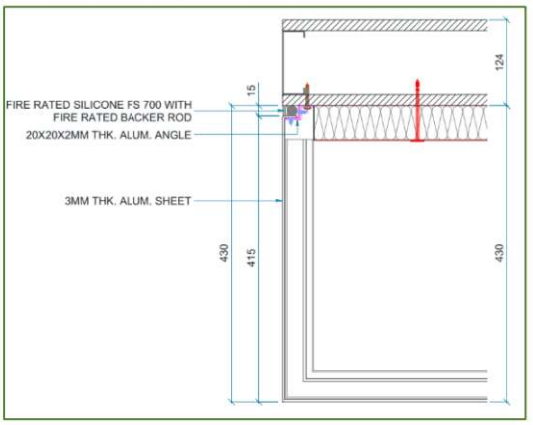
Detail 2: Typical Fixing Detail (Horizontal)



Detail 3: Window Header Detail



Detail 4: Window Sill Detail



Detail 5: Window Jamb Detail

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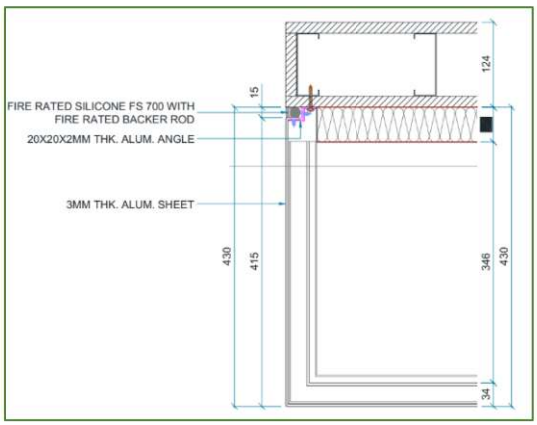
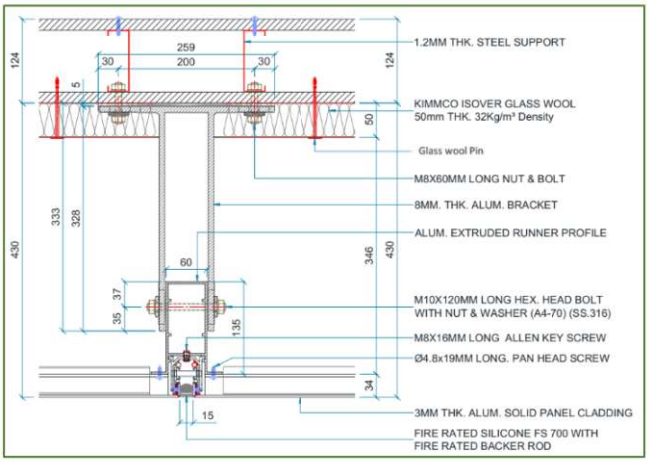


Detail 6: Typical Side Detail



Detail 7: Typical Fixing Detail (Vertical)

Limitation of use:

1. This certification covers only those exterior wall assembly/system components specifications described in section 3 above.
2. This certification does not cover the fire resistance performance of the exterior wall assembly.
3. Actual construction referred to the system/assembly in this certificate shall conform to the design of the tested system/assembly.

Additional notes:

1. System/Assembly testing and certification in compliance with NFPA 285 (2023) covers the evaluation of the performance of the exterior wall assembly and panels used as a component of the curtain wall assembly. It does not provide an evaluation of individual components (e.g. thermal insulation, cavity fire barriers, weather silicon as a joint sealant, etc.) incorporated within the wall assembly.
2. Based on the NFPA 285 testing, the cavity fire barrier consists of a horizontally non-ventilated type of cavity fire barrier only. Although the assembly passed the NFPA 285 test, Authority Having Jurisdiction may require including a vertically oriented cavity fire barrier supplied by the same manufacturer for compliance.

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