THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS

UKAS PRODUCT CERTIFICATION
6762

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

to

Interplast Co. Ltd.

PO Box 4679, Industrial Area 13, Sharjah, UAE.

for

"Alupex A2"
Aluminum Composite Material

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, Cladding, Curtain Walls, Building Materials, Products and Assemblies*

In witness whereof this Certificate is issued this 26th day of February 2017

THOMAS BELL-WRIGHT INTERNATIONAL CONSULTANTS 100173 CERTIFIED

Thomas F. Bell-Wright
Certification Director

Nick J. Purcell
Certification Manager

Certificate Number: TBW0300152

Initial registration: February 26, 2017 Issued: February 26, 2017 Expiration: February 25, 2020
File Name: QI032 Interplast Co. Ltd Save Date: 26/02/17 8:40 AM

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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 Fire Compliance Division to validate the current status of Certification. This certificate remains the property of THOMAS BELL-WRIGHT INTERNATIONAL CONSULTANTS, PO BOX 26385, DUBAI, UAE.
Tel: +971 4 333 2692, Email: fire@bell-wright.com. Web: www.bell-wright.com **F 19 Scheme Certificate Issue 5. Dec 2016**

"Alupex A2" Aluminium Composite Material

1. Certification is given for the "Alupex A2" Aluminium Composite Material Reaction to Fire Test to test standard ASTM E84-16 for Flame Spread Index (FSI) and Smoke Developed Index (SDI), Self & Flash ignition performance to test method ASTM D1929-16 and Fire classification of construction products and building elements Part 1: Classification using data from reaction to fire test to EN 13501-1:2007+A1:2010, subject to the limitations below. Readers of this document should be familiar with Reaction to Fire Testing and the requirements of ISO/IEC 17065:2012. This certification covers the product tested in the following configurations to the appropriate test standards:

   1.1. "Alupex A2" 3 mm thick core of Aluminium Composite Material tested for Flame Spread Index (FSI) and Smoke Developed Index (SDI) according to ASTM E84-16, and Self & Flash ignition performance according to ASTM D1929-16 and Fire Classification using data from reaction to fire test according to EN 13501-1:2007+A1:2010.

   1.2. "Alupex A2" 4 mm thick Aluminium Composite Material tested with top and bottom skin tested for Flame Spread Index (FSI) and Smoke Developed Index (SDI) according to ASTM E84-16, Self & Flash ignition performance according to ASTM D1929-16 and Fire Classification using data from reaction to fire test according to EN 13501-1:2007+A1:2010.

2. The Certification will be listed on www.tbwcert.com, while it remains current. This Certification is not valid if it is not listed.

3. The product is approved on the basis of TBWIC Product Certification Scheme SD03 for Exterior Wall Assemblies, Cladding, Curtain Walls, Building Materials, Products and Assemblies which includes pre-test sampling, evidence of performance (under ref: TBWIC Test Report No. TBW/QJ064-3, Intertek/G4872.01-106-31, Applus/16/13355-2280 Part 2, Applus/16/13355-2281 Part 2), Technical Verification and Proof of Performance, compliance to Factory Production Control requirements and surveillance & Re-certification Inspection/ Audits. This Certification covers performance against the following test standards.

   3.1.1. ASTM E84-16 (Steiner Tunnel) -Standard test method for Surface Burning Characteristics of Building Materials
   3.1.2. ASTM D1929-16 - Standard Test Method for Determining Ignition Temperature of Plastics
   3.1.3. EN 13501-1:2007+A1:2010 - Fire Classification of Construction products and building elements – Part 1: Classification using data from reaction to fire tests

4. Limitations

   4.1. This Certification covers the specifications of the aluminium composite material and core material as tested which are described in more detail in Section 5 and 6.

   4.2. The tests standards covered under this certification were used to measure the response of materials, products, or system assemblies to heat and flame under controlled conditions. The results describe in each particular test reports on its own shall not be used as sole criteria for fire-hazard or fire-risk assessment of the materials, products, or system assemblies under actual fire conditions.

   4.3. This certification pertains to the tested material only and does not include the system or wall structure it will be installed into.

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4.4. The test (and Certification) do not address the following:

4.4.1. Measurement of heat transmission

4.4.2. Effect of aggravated flame spread behavior of an assembly resulting from proximity of combustible walls and ceilings.

4.4.3. Classification or definition of material as noncombustible.

4.4.4. Any Resistance to Fire rating.

4.4.5. Toxicity level of smoke developed during combustion.

5. Product details and test results

5.1. Product Name

"Alupex A2" 4.0 mm thick Aluminium Composite Material with 3 mm core

5.2. Product details

a. Core Thickness
Thickness: 3.0 mm thick
Material: "Mineral filled non-combustible/fire retardant core"
Minimum Density: 1600 kg/m^3

b. Exterior Skin (top skin)
Minimum Thickness: 0.5 mm
Material: Aluminium, Alloy 3003-H16
Paint Type: Polyvinylidene Fluoride (PVDF)
Maximum Paint Thickness: 25 to 35 microns

c. Interior Skin (bottom skin)
Minimum Thickness: 0.5 mm
Material: Aluminium, Alloy 3003-H16
Paint Type: Primer Coating-Polyester (PE) coating
Maximum Paint Thickness: 10 to 15 microns

d. Weight per square metre: 7.95 kg ±4%

e. Adhesive Film
Material: Polymeric Adhesive Film
Thickness: 80 microns
Density: 1000 kg/m^3

f. Maximum Panel Thickness: 4.0 ±0.2 mm

5.3. Test Results

a. When tested in accordance with ASTM E84-16, the 3-mm thick core of Aluminium Composite Material meets the criteria for a classification Class A or Class 1 (International Building Code 2012)
Test Report Reference: QJ064-3

Flame Spread Index (FSI)	**10**
Smoke Developed Index (SDI)	**15**

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b. When tested in accordance with ASTM D1929-16, the 3-mm thick core Aluminium Composite Material ignition temperatures are as follows:
Test Report Reference: G4872.01-106-31

Self-Ignition	**530°C**
Flash Ignition	**520°C**

c. When tested in accordance with ASTM D1929-16, the 4-mm thick Aluminium Composite Material ignition temperatures are as follows:
Test Report Reference: G4872.01-106-31

Self-Ignition	**490°C**
Flash Ignition	**470°C**

d. When tested in accordance with test requirements of EN 13501-1:2007+A1:2010, the Aluminium Composite Material achieves the classification of **Class A2-s1, d0.**
Test Report Reference: 16/13355-2280 Part 2

6. "Alupex A2" Aluminium Composite Material typical details

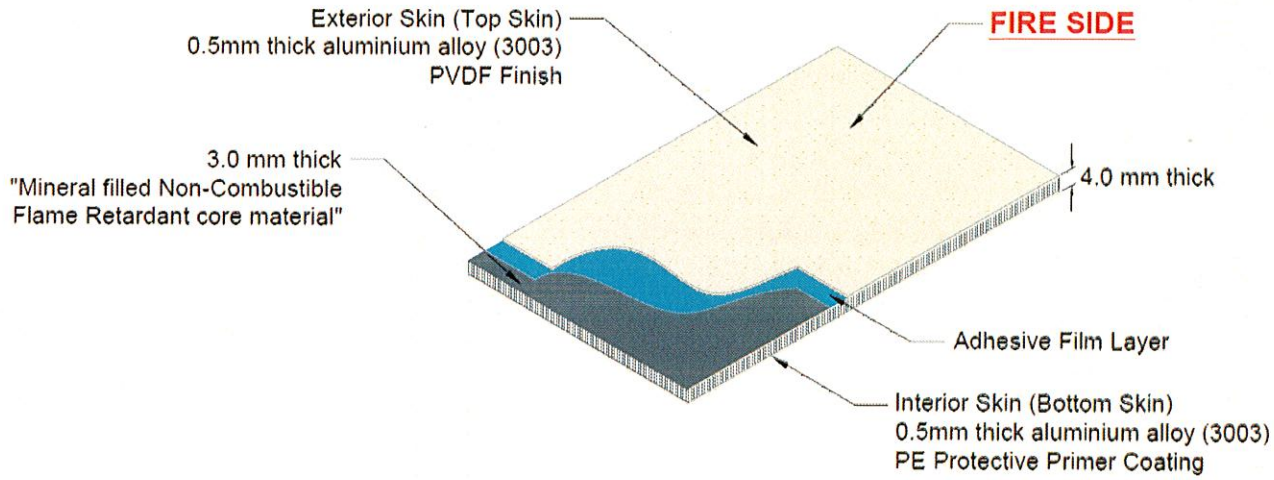

Figure 1. "Alupex A2" 4.0 mm thick Aluminium Composite Material

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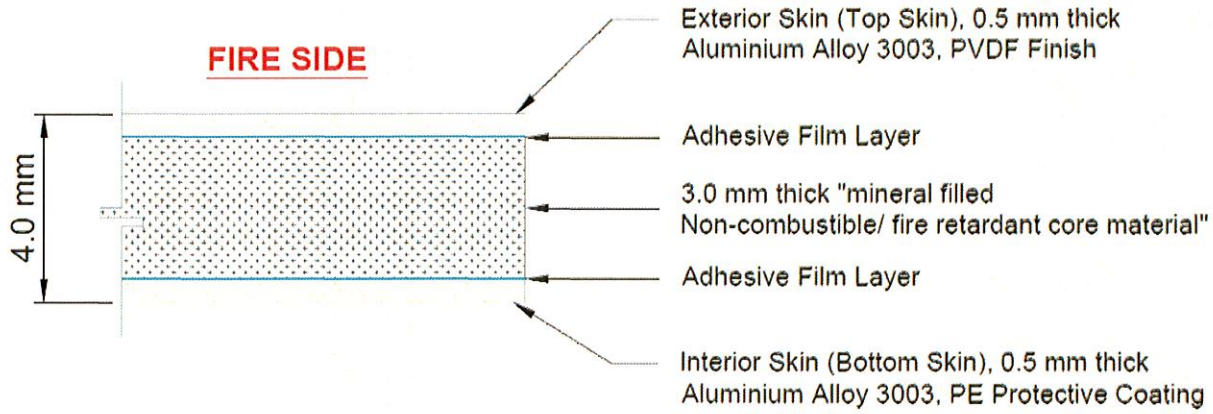

Figure 2. "Alupex A2" 4.0 mm thick Aluminium Composite Material cross-section

7. Approved Manufacturing Location:

   Plot # 689/106 St. # 27-28,
   Industrial Area 13,
   PO Box 4679
   Sharjah, United Arab Emirates

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