

TEST REPORT

REACTION TO FIRE TEST

Test Sponsor:

International Development Company Metal Industries LLC
PO Box No. 2621,
Abu Dhabi, United Arab Emirates
Telephone: +971 2 504 6300, Fax: +971 2 582 3088
Website: www.idcuae.com

Test Material/Assembly:

4mm thick "Aluclad" Aluminum Composite Panel (ACP) with PVDF Coating

Test Standard:

BS EN 11925-2: 2010 - Ignitability of products subjected to direct impingement of flame (Part2: Single-flame source test)



**THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS**

Test Date: 11-May-20
Issue Date: 17-May-20
Test Reference No: UC146-2

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DUBAI

ABU DHABI

DOHA



Accreditation

ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories with:

United Kingdom Accreditation Service (UKAS) - Testing Laboratory: **4439**
www.ukas.com



Memberships

Members of European Group of Organization for Fire Testing, Inspection and Certification

www.egolf.org.uk

Member of International Trade Council

www.thetradecouncil.com

Member of Association for Specialist Fire Protection

www.asfp.org.uk

Member of Centre for Window and Cladding Technology

www.cwct.co.uk



The work which is the subject of this report falls under the accreditations of **ISO 17025 UKAS**.



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1. INTRODUCTION

Determination of the performance of 4mm thick Aluclad Aluminum Composite Panel with PVDF Coating when subjected to the conditions of the test specified in BS EN ISO 11925-2:2010 “Reaction to Fire tests - Ignitability of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test”.

2. SPONSOR

Name: International Development Company Metal Industries LLC
 Address: PO Box No. 2621,
 Abu Dhabi, United Arab Emirates
 Telephone: +971 2 504 6300, Fax: +971 2 582 3088
 Website: www.idcuae.com

3. TESTING LABORATORY

Name: Thomas Bell-Wright International Consultants (TBWIC)
 Address: Corner of 46th and 47th Streets,
 Jebel Ali Industrial Area 1
 Dubai, United Arab Emirates
 T: +971 4 821 5777
 Website: www.bell-wright.com

3. DATE OF TEST

Sample received: 23-Apr-20
 Test date: 11-May-20

The test had not been witnessed by the sponsor.

4. SPECIMEN DESCRIPTION

Note: The testing laboratory does not hold any responsibility for the information that has been provided by the test sponsor which could not be verified by the testing laboratory, as this could affect the validity of the test result. All information that could not be verified will be indicated by an asterisk () mark.*

Description	Aluminium Composite Panel with PVDF Coating* (Stated)		
Product name	"Aluclad"* (Stated)		
Manufacturer	International Development Company Metal Industries LLC* (Stated)		
Overall Thickness	4mm (Measured by TBWIC)		
Area weight	7 kg/m ² (Measured by TBWIC)		
Product Details	Layer 1	Description	Topcoat* (Stated)
		Paint type	Polyvinylidene fluoride (PVDF) * (Stated)
		Manufacturer	Good Luck Decorative Materials Manufacturer LLC* (Stated)
		Colour	Silver* (Stated)
		Thickness	0.02mm* (Stated)
		Area Density	0.055 kg/m ² * (Stated)



	Layer 2	Description	Primer* (Stated)
		Paint type	Polyester* (Stated)
		Manufacturer	Good Luck Decorative Materials Manufacturer LLC* (Stated)
		Colour	White* (Stated)
		Thickness	0.006mm* (Stated)
		Area Density	0.007 kg/m ² * (Stated)
	Layer 3	Description	Top Sheet* (Stated)
		Material	Aluminum* (Stated)
		Manufacturer	Good Luck Decorative Materials Manufacturer LLC* (Stated)
		Alloy Grade	3003-H16* (Stated)
		Thickness	0.5mm* (Stated)
		Density	2710 kg/m ³ * (Stated)
		Area Density	1.355 kg/m ² * (Stated)
	Layer 4	Description	Adhesive* (Stated)
		Material	Maleic Anhydride Modified Polyethylene* (Stated)
		Manufacturer	Emirates Panel Plastic Industries* (Stated)
		Colour	Ivory* (Stated)
		Thickness	0.05mm* (Stated)
		Area Density	0.932 g/cm ² * (Stated)
	Layer 5	Description	Core* (Stated)
		Material	Non-combustible mineral-filled core* (Stated)
		Manufacturer	Jiashan Rixin New Material Co. Ltd* (Stated)
		Thickness	3mm* (Stated)
		Area Density	5 kg/m ² * (Stated)
	Layer 6	Description	Adhesive* (Stated)
		Material	Maleic Anhydride Modified Polyethylene* (Stated)
		Manufacturer	Emirates Panel Plastic Industries* (Stated)
		Color Code	Ivory* (Stated)
Thickness		0.05mm* (Stated)	
Area Density		0.932 g/cm ² * (Stated)	
Layer 7	Description	Bottom Sheet* (Stated)	
	Material	Aluminum* (Stated)	
	Manufacturer	Jiangsu Metcoplus* (Stated)	
	Alloy Grade	3003-H16* (Stated)	
	Thickness	0.5mm* (Stated)	
	Density	2710 kg/m ³ * (Stated)	
	Area Density	1.355 kg/m ² * (Stated)	
Layer 8	Description	Service Coat* (Stated)	
	Paint type	Polyester* (Stated)	
	Manufacturer	Jiangsu Metcoplus* (Stated)	
	Colour	Grey* (Stated)	
	Thickness	0.006mm* (Stated)	
	Area Density	0.007 kg/m ² * (Stated)	
Specimen dimensions		250 x 90mm, l x w (Measured by TBWIC)	



Specimen placement	The tests were conducted as per below exposure conditions: 1.Surface exposure - The flame was applied on the centerline of the specimen, 40mm above the bottom edge. 2. Edge exposure - The flame was applied on the centrewidth of the bottom edge of the test specimen.
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5. SPECIMEN VERIFICATION

The choice and design and the definition of the specimen have been made by International Development Company Metal Industries LLC, and TBWIC testing laboratory has not been involved in the selection or design of the specimen. The results apply to the sample as received.

Note: There are contexts where information has been provided by the sponsor and verification of information has been done through either technical datasheet or other document submission, or as indicated directly by the sponsor. For this reason, materials have been tested in an as-received condition and TBWIC bears no liability for the legitimacy of the submitted information.

6. METHOD OF TEST

6.1. Test Procedure

The test was performed in accordance with the requirements of BS EN ISO 11925-2:2010 “Reaction to Fire tests - Ignitability of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test.”.

6.2. Conditioning

After delivery on 23-Apr-20, the specimens were conditioned to constant weight at 21 to 25 °C and 45 to 55% relative humidity as per BS EN 13238:2010 “Reaction to fire tests for building products – Conditioning procedures and general rules for selection of substrates”.

7. SUMMARY OF RESULTS

The test specimen has been evaluated in accordance with BS EN ISO 11925-2:2010 “Reaction to Fire tests - Ignitability of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test.

The test results are:

Specimen No.	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (mm)	Flaming Droplets/ particles	Glowing
1 - Crosswise	No	Not Reached	<150	Nil	Nil
2 - Crosswise	No	Not Reached	<150	Nil	Nil
3 - Crosswise	No	Not Reached	<150	Nil	Nil
4 - Lengthwise	No	Not Reached	<150	Nil	Nil
5 - Lengthwise	No	Not Reached	<150	Nil	Nil
6 - Lengthwise	No	Not Reached	<150	Nil	Nil

Table 1: Test Flame Application Position and Time - Surface Exposure for 30 seconds



Specimen No.	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (mm)	Flaming Droplets/ particles	Glowing
1 - Crosswise	No	Not Reached	<150	Nil	Nil
2 - Crosswise	No	Not Reached	<150	Nil	Nil
3 - Crosswise	No	Not Reached	<150	Nil	Nil
4 - Lengthwise	No	Not Reached	<150	Nil	Nil
5 - Lengthwise	No	Not Reached	<150	Nil	Nil
6 - Lengthwise	No	Not Reached	<150	Nil	Nil

Table 2: Test Flame Application Position and Time - Edge Exposure for 30 seconds

8. LIMITATION

The test results relate to the behavior of the test specimens of a product under the particular conditions of the test; they are not intended to be sole criterion for assessing the potential fire hazard of the product in use - Clause 9r, BS EN 11925-2:2010.

This report and all records of the test to which it relates may not be retained by TBWIC further than 5 years from the date of testing.

This test report is respectfully submitted by: Thomas Bell-Wright International Consultants

Prepared by:

Reviewed and Approved by:


Rachel Marie Novelo
Fire Testing Engineer



Suketa Tyagi
Reaction to Fire Manager



----End of Test Report----