

# TEST REPORT

## REACTION TO FIRE TEST

### Test Sponsor:

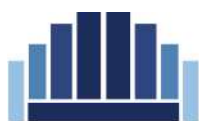
Jadara Building Materials Co.  
Dammam Industrial Area 2  
Kingdom of Saudi Arabia  
T: +966 55 502 9208  
Website: [www.deltasaudi.com](http://www.deltasaudi.com)

### Test Material / Assembly:

4mm thick Delta Aluminium Composite Panel

### Test Standard

BS EN 11925-2: 2020 - Ignitability of products subjected to direct impingement of flame  
(Part2: Single-flame source test)



**THOMAS BELL-WRIGHT**  
**INTERNATIONAL CONSULTANTS**

Test Date: 30-Mar-23  
Issue Date: 22-May-23  
Test Reference No: WL072-3

PO BOX 26385, DUBAI UAE    T +971 (0)4 821 5777    [fire@bell-wright.com](mailto:fire@bell-wright.com)    [www.bell-wright.com](http://www.bell-wright.com)

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## Accreditation

### Testing

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](http://www.ukas.com)



## Memberships

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

[www.egolf.org.uk](http://www.egolf.org.uk)

Member of Association for Specialist Fire Protection

[www.asfp.org.uk](http://www.asfp.org.uk)

Member of Centre for Window and Cladding Technology

[www.cwct.co.uk](http://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 Delta Aluminium Composite Panel when subjected to the conditions of the test specified in BS EN ISO 11925-2:2020 "Reaction to Fire tests - Ignitability of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test".

## **2. SPONSOR**

Name: Jadara Building Materials Co.  
Address: Dammam Industrial Area 2  
Kingdom of Saudi Arabia  
T: +966 55 502 9208  
Website: [www.deltasaudi.com](http://www.deltasaudi.com)

## **3. TESTING LABORATORY**

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

## **4. DATE OF TEST**

Sample received: 22-Mar-23  
Test date: 30-Mar-23

The test was not witnessed by the sponsor



## 5. 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.*

<b>Product Description</b>		4mm thick Delta Aluminium Composite Panel*	
<b>Product Reference</b>		Delta Aluminium Composite Panels*	
<b>Manufacturer</b>		Jadara Building Materials Co.*	
<b>Mass per unit area</b>		7.16 kg/m <sup>2</sup> (measured by TBWIC)	
<b>Thickness</b>		4mm (measured by TBWIC)	
<b>Color</b>		White (observed by TBWIC)	
<b>Product Details</b>	<b>Top Coat (fireside)</b>	Product Name	Delta*
		Manufacturer	Jadara Building Materials Co.*
		Thickness	27 µm* (stated)
		Density	2.70 g/cm <sup>3</sup> * (stated)
	<b>Top Aluminium skin</b>	Product Name	Aluminium Top Coil*
		Manufacturer	
		Thickness	0.28mm* (stated)
		Mass per unit area	0.83 kg/m <sup>2</sup> * (stated)
	<b>Adhesive</b>	Product Name	Adhesive Film*
		Manufacturer	
		Thickness	0.05mm* (stated)
		Mass per unit area	0.092 kg/m <sup>2</sup> * (stated)
	<b>Fire Retardant Core</b>	Product Name	Fire Retardant Core*
		Manufacturer	
		Thickness	4mm* (stated)
		Mass per unit area	5.10 kg/m <sup>2</sup> * (stated)
	<b>Adhesive</b>	Product Name	Adhesive Film*
		Manufacturer	
		Thickness	0.08mm* (stated)
		Mass per unit area	0.092 kg/m <sup>2</sup> * (stated)
	<b>Back Aluminium skin</b>	Product Name	Aluminium Back Coil*
		Manufacturer	
		Thickness	0.28mm* (stated)
		Mass per unit area	0.79 kg/m <sup>2</sup> * (stated)
<b>Back Coat</b>	Product Name	Delta*	
	Manufacturer	Jadara Building Materials Co.*	
	Thickness	31 µm* (stated)	



	Density	2.70 g/cm <sup>3</sup> * (stated)
<b>Dimensions per panel</b>	250 x 90 x 4 mm (l x w x t)(measured by TBWIC)	
<b>Specimen placement</b>	<p>The test specimen was restrained to the specimen holder using screws. The tests were conducted as per below exposure conditions:</p> <ol style="list-style-type: none"> <li>1. Surface exposure – The flame was applied on the centerline of the specimen, 40mm above the bottom edge.</li> <li>2. Edge exposure – The flame was applied on the centre width of the bottom edge of the test specimen 1.5mm behind the surface.</li> </ol>	

*Note: The sponsor has declared that the sample submitted for testing has been selected by Jadara Building Materials Co., for the requirement given in Section 6.7 of SASO 2752/2019 (Aluminum Composite Panel for External Cladding and Internal Finish) standard.*

## 6. SPECIMEN PREPARATION

The choice and design and the definition of the specimen have been made by Jadara Building Materials Co., and TBWIC testing laboratory has not been involved in the selection or design of the specimen. The results of the test apply only to the samples 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.*

## 7. METHOD OF TEST

### 7.1. Test Procedure

The test was carried out in accordance with BS EN ISO 11925-2:2020, “Reaction to Fire tests - Ignitability of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test”.

### 7.2. Conditioning

After delivery on 22-Mar-23, 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”.

Note: There were deviations observed in the temperature and relative humidity in 4 separate probes of thermo-hygrometer in our conditioning room, however the average values were within the limit.



## 8. SUMMARY OF RESULTS

The test specimen has been evaluated in accordance with BS EN ISO 11925-2:2020 "Reaction to Fire tests - Ignitability of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test.

Deviations: No deviations from the test method.

### 8.1. Test results:

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

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

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

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



### 9. 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 the sole criterion for assessing the potential fire hazard of the product in use” – Clause 9r, BS EN ISO 11925-2.

This report and all records of the test to which it relates may be 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 Authorized by:



Malak Megly  
Junior Fire Testing Engineer

Suketa Tyagi  
Manager – Reaction to Fire

Report Revision Tracking		
Revision No.	Date Issued	Notes & Amendments
Rev. 00	22-May-23	This is the first issue of the report. No revisions are included.

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



# TEST REPORT

## REACTION TO FIRE TEST

### Test Sponsor:

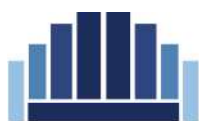
Jadara Building Materials Co.  
Dammam Industrial Area 2  
Kingdom of Saudi Arabia  
T: +966 55 502 9208  
Website: [www.deltasaudi.com](http://www.deltasaudi.com)

### Test Material / Assembly:

4mm thick Delta Plus Aluminium Composite Panel

### Test Standard

BS EN 11925-2: 2020 - Ignitability of products subjected to direct impingement of flame  
(Part2: Single-flame source test)



**THOMAS BELL-WRIGHT  
INTERNATIONAL CONSULTANTS**

Test Date: 31-Mar-23  
Issue Date: 22-May-23  
Test Reference No: WL072-7

PO BOX 26385, DUBAI UAE    T +971 (0)4 821 5777    [fire@bell-wright.com](mailto:fire@bell-wright.com)    [www.bell-wright.com](http://www.bell-wright.com)

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## **1. INTRODUCTION**

Determination of the performance of 4mm thick Delta Plus Aluminium Composite Panel when subjected to the conditions of the test specified in BS EN ISO 11925-2:2020 "Reaction to Fire tests - Ignitability of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test".

## **2. SPONSOR**

Name: Jadara Building Materials Co.  
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T: +971 4 821 5777  
Website: [www.bell-wright.com](http://www.bell-wright.com)

## **4. DATE OF TEST**

Sample received: 22-Mar-23  
Test date: 31-Mar-23

The test was not witnessed by the sponsor



## 5. 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.*

<b>Product Description</b>		4mm thick Delta Plus Aluminium Composite Panel*	
<b>Product Reference</b>		Delta Aluminium Composite Panels*	
<b>Manufacturer</b>		Jadara Building Materials Co.*	
<b>Mass per unit area</b>		7.79 kg/m <sup>2</sup> (measured by TBWIC)	
<b>Thickness</b>		4mm (measured by TBWIC)	
<b>Color</b>		White (observed by TBWIC)	
<b>Product Details</b>	<b>Top Coat (fireside)</b>	Product Name	Delta Plus*
		Manufacturer	Jadara Building Materials Co.*
		Thickness	38 µm* (stated)
		Density	2.70 g/cm <sup>3</sup> * (stated)
	<b>Top Aluminium skin</b>	Product Name	Aluminium Top Coil*
		Manufacturer	
		Thickness	0.45mm* (stated)
		Mass per unit area	1.328 kg/m <sup>2</sup> * (stated)
	<b>Adhesive</b>	Product Name	Adhesive Film*
		Manufacturer	
		Thickness	0.05mm* (stated)
		Mass per unit area	0.092 kg/m <sup>2</sup> * (stated)
	<b>Fire Retardant Core</b>	Product Name	Fire Retardant Core*
		Manufacturer	
		Thickness	4mm* (stated)
		Mass per unit area	5.10 kg/m <sup>2</sup> * (stated)
	<b>Adhesive</b>	Product Name	Adhesive Film*
		Manufacturer	
		Thickness	0.08mm* (stated)
		Mass per unit area	0.092 kg/m <sup>2</sup> * (stated)
	<b>Back Aluminium skin</b>	Product Name	Aluminium Back Coil*
		Manufacturer	
		Thickness	0.45mm* (stated)
		Mass per unit area	1.264 kg/m <sup>2</sup> * (stated)
<b>Back Coat</b>	Product Name	Delta Plus*	
	Manufacturer	Jadara Building Materials Co.*	
	Thickness	36 µm* (stated)	



	Density	2.70 g/cm <sup>3</sup> * (stated)
<b>Dimensions per panel</b>	250 x 90 x 4 mm (l x w x t)(measured by TBWIC)	
<b>Specimen placement</b>	<p>The test specimen was restrained to the specimen holder using screws. The tests were conducted as per below exposure conditions:</p> <ol style="list-style-type: none"> <li>1. Surface exposure – The flame was applied on the centerline of the specimen, 40mm above the bottom edge.</li> <li>2. Edge exposure – The flame was applied on the centre width of the bottom edge of the test specimen 1.5mm behind the surface.</li> </ol>	

*Note: The sponsor has declared that the sample submitted for testing has been selected by Jadara Building Materials Co., for the requirement given in Section 6.7 of SASO 2752/2019 (Aluminum Composite Panel for External Cladding and Internal Finish) standard.*

## 6. SPECIMEN PREPARATION

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## 8. SUMMARY OF RESULTS

The test specimen has been evaluated in accordance with BS EN ISO 11925-2:2020 “Reaction to Fire tests - Ignitability of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test.

Deviations: No deviations from the test method.

### 8.1. Test results:

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

Specimen No.	Orientation of the specimen	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (mm)	Flaming Droplets/ particles (Y/N)	Glowing (Y/N)
1	Lengthwise	No	Not Reached	<150	Nil	Nil
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5	Crosswise	No	Not Reached	<150	Nil	Nil
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**Table 2: Test Flame Application Position and Time – Edge Exposure for 30 seconds**

Specimen No.	Orientation of the specimen	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (mm)	Flaming Droplets/ particles (Y/N)	Glowing (Y/N)
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This test report is respectfully submitted by: Thomas Bell-Wright International Consultants

Prepared by:

Reviewed and Authorized by:



Malak Megly  
Junior Fire Testing Engineer

Suketa Tyagi  
Manager – Reaction to Fire

Report Revision Tracking		
Revision No.	Date Issued	Notes & Amendments
Rev. 00	22-May-23	This is the first issue of the report. No revisions are included.

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