

# TEST REPORT

## REACTION TO FIRE TEST

### Test Sponsor:

Alstone Manufacturing Pvt. Ltd.  
15th Floor, Vijaya Building,  
17, Barakhamba Road, Connaught Place  
New Delhi-110001, India  
T: +91-011-41232400  
Website: [www.alstoneindia.com](http://www.alstoneindia.com)

### Test Material:

4mm thick 'Alstone® Zinc FR B' Zinc 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: 23-Sep-22  
Issue Date: 5-Oct-22  
Test Reference No: WH149-2

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DUBAI

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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 accreditation of **ISO 17025 UKAS**.



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## 1. INTRODUCTION

Determination of the performance of 4mm thick 'Alstone® Zinc FR B' Zinc 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: Alstone Manufacturing Pvt. Ltd.  
Address: 15th Floor, Vijaya Building,  
17, Barakhamba Road, Connaught Place  
New Delhi-110001, India  
T: +91-011-41232400  
Website: [www.alstoneindia.com](http://www.alstoneindia.com)

## 3. MANUFACTURER

Name: Alstone Manufacturing Pvt. Ltd.  
Address: Khasra No: 1393, Langha Road Industrial Area  
Village Chharba, P.O. Sahaspur, Dehradun 248197  
Uttarakhand, India

## 4. 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)

## 5. DATE OF TEST

Sample received: 19-Sep-22  
Test date: 23-Sep-22

The test was not witnessed by the sponsor.



## 6. 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 Zinc Composite Panel*	
<b>Product Reference</b>		Alstone® Zinc FR B*	
<b>Manufacturer</b>		Alstone Manufacturing Pvt. Ltd.*	
<b>Thickness</b>		4mm* (stated) 4.17mm (measured by TBWIC)	
<b>Area Weight of Product</b>		9.5 ± 0.5 kg/m <sup>2</sup> * (stated) 9.9 kg/m <sup>2</sup> (measured by TBWIC)	
<b>Product Details</b>	<b>Topcoat (Fire Exposed Face)</b>	Material	Quartz pigment treated (Pre-patinated)*
		Manufacturer	VMZINC Citi Solutions - India*
		Thickness	22-25µm* (stated)
		Colour	Matt Grey Patina*
		Area Weight	0.16 kg/m <sup>2</sup> * (stated)
	<b>Metal Top Skin</b>	Description	Zinc Alloy*
		Manufacturer	VMZINC*
		Alloy	Z20*
		Thickness	0.5mm* (stated)
		Density	7310 kg/m <sup>3</sup> * (stated)
	<b>Adhesive</b>	Material	Polyfine film*
		Manufacturer	Ecoplast*
		Thickness	80µm* (stated)
		Area Weight	0.075 kg/m <sup>2</sup> * (stated)
		Density	940 kg/m <sup>3</sup> * (stated)
	<b>Core</b>	Material	FR B Core*
		Manufacturer	Carbo Industries*
		Thickness	3.1mm* (stated)
		Area Weight	4.8 kg/m <sup>2</sup> * (stated)
		Density	1800 kg/m <sup>3</sup> * (stated)
	<b>Adhesive</b>	Material	Polyfine film*
		Manufacturer	Ecoplast*
		Thickness	80µm* (stated)
Area Weight		0.075 kg/m <sup>2</sup> * (stated)	
Density		940 kg/m <sup>3</sup> * (stated)	
		Material	Aluminium*



	<b>Metal Bottom Skin</b>	Manufacturer	DEJU*
		Alloy	AA3003 H16* (stated)
		Thickness	0.5mm* (stated)
		Density	2710 kg/m <sup>3</sup> * (stated)
	<b>Back coat</b>	Material	PE Service Coat*
		Manufacturer	DEJU*
		Thickness	5-8µm* (stated)
		Area Weight	0.007 kg/m <sup>2</sup> * (stated)
<b>Dimensions per panel</b>		250 x 90 mm x 4.17 mm (h x w x t) (measured by TBWIC)	
<b>Specimen placement</b>		<p>The test specimens were restrained to the specimen holder using screw. The tests were conducted as per below exposure:</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 center width of the bottom edge of the test specimen 1.5mm behind the surface.</li> </ol>	

## 7. SPECIMEN PREPARATION

The choice, design and definition of the specimen have been made by Alstone Manufacturing Pvt. Ltd., and TBWIC Testing Laboratory has not been involved in the selection or design of the specimen. The results apply 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.*

## 8. METHOD OF TEST

### 8.1. 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”.

### 8.2. Conditioning

After delivery on 19-Sep-22, 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.

## 9. 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.

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	Glowing
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 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	Glowing
1	Lengthwise	No	Not Reached	<150	Nil	Yes
2	Lengthwise	No	Not Reached	<150	Nil	Yes
3	Lengthwise	No	Not Reached	<150	Nil	Yes
4	Crosswise	No	Not Reached	<150	Nil	Yes
5	Crosswise	No	Not Reached	<150	Nil	Yes
6	Crosswise	No	Not Reached	<150	Nil	Yes

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



## 10. 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:

Sam Sancho Thomas  
Fire Testing Engineer

Reviewed and Approved by:

Suketa Tyagi  
Manager – Reaction to Fire



Report Revision Tracking		
Revision No.	Date Issued	Notes & Amendments
Rev.00	05-Oct-22	This is the first issue of the report. No revisions are included.

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