

**Test Report**

Report Number:151117004SHF-BP-1

Applicant Name: Wisdom Metal Composites Ltd

Original Report Date: November 30, 2015

Applicant Address: Room 1002, Building 17, 88# Baiqiao Road,  
Zhangjiagang city, Jiangsu Province, China .215699.

Attn: EVIN FENG

**Sample Description:**

Product: Aluminium Composite Panel with Profiled Aluminium Core

Model: ALUCOSUN® A2

Manufacturer: Wisdom Metal Composites Ltd

Samples Quantity: 1.5×1.0(m) 5pcs; 1.5×0.5(m) 5pcs; aluminium sheet 4 pcs; adhesive film 2m<sup>2</sup>; paint 50g

Sample ID: S151117004SHF-001~016

Date Received: 2015-11-16

Date Test Conducted: 2015-11-23~2015-11-26

**Tests Conducted:**

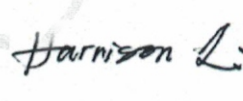
Test Methods: BS EN 13501-1:2007+A1:2009

**Conclusion:**

For details refer to attached page(s).

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

Should you have any queries about the test report, please contact:

**Approved by:****Checked by:****Prepared by:**Sun Sun  
Assistant ManagerHarrison Li  
Senior Project EngineerPing Rao  
Project Engineer

**Test Items, Method and Results:****1.1 HEAT OF COMBUSTION TEST**

The test was conducted in accordance with EN ISO 1716. This test evaluates the gross heat of combustion (QPCS) of products at constant volume in a bomb calorimeter.

**1.2 SINGLE BURNING ITEM TEST**

The test was conducted in accordance with EN 13823. This test evaluates the potential contribution of a product to the development of a fire, under a fire situation simulating a single burning item near to the product.

**1.3 CLASSIFICATION CRITERIA**

The classification was determined in accordance with EN 13501-1: 2007+A1: 2009. The classes A2 with their corresponding fire performance are given in the table below.

Table- Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products

Class	Test Method(s)	Classification criteria	Additional classifications
A2	EN ISO 1716 and	$PCS \leq 3,0 \text{ MJ/Kg}^a$ and $PCS \leq 4,0 \text{ MJ/m}^{2b}$ $PCS \leq 4,0 \text{ MJ/m}^{2c}$ and $PCS \leq 3,0 \text{ MJ/Kg}^d$	-
	EN 13823	$FIGRA \leq 120 \text{ W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 7,5 \text{ MJ}$	Smoke production <sup>e</sup> and Flaming droplets/particles <sup>f</sup>

**Note:**

- a. For homogeneous products and substantial components of non-homogeneous products.
  - b. For any external non-substantial component of non-homogeneous products.
  - c. For any internal non-substantial component of non-homogeneous products.
  - d. For the product as a whole.
  - e. In the last phase of the development of the test procedure, modifications of the smoke measurement system have been introduced, the effect of which needs further investigation. This may result in a modification of the limit values and/or parameters for the evaluation of the smoke production.
- s1 = SMOGRA  $\leq 30\text{m}^2/\text{s}^2$  and TSP<sub>600s</sub>  $\leq 50\text{m}^2$ ; s2 = SMOGRA  $\leq 180\text{m}^2/\text{s}^2$  and TSP<sub>600s</sub>  $\leq 200\text{m}^2$ ; s3 = not s1 or s2.
- f. d0 = no flaming droplets/ particles in EN 13823 within 600 s;  
d1 = no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600s;  
d2 = not d0 or d1.



**RESULTS AND OBSERATIONS**

The test results were shown in Table below.

Method	Parameter	Result	
EN ISO 1716	PCS	Paint, MJ/m <sup>2</sup>	1.3
		Aluminium Substrate, MJ/kg	0.0
		Adhesive, MJ/m <sup>2</sup>	2.3
		Aluminium Sheet, MJ/kg	0
		Adhesive, MJ/m <sup>2</sup>	2.3
		Aluminium Substrate, MJ/kg	0
		Paint, MJ/m <sup>2</sup>	0.4
		The whole product, MJ/kg	1.4
EN 13823	FIGRA, W/s	0	
	THR <sub>600s</sub> , MJ	0	
	LFS, m	< Edge of Specimen	
	SMOGR <sub>A</sub> , m <sup>2</sup> /s <sup>2</sup>	0	
	TSP <sub>600s</sub> , m <sup>2</sup>	7	
	Flaming Droplets/ Particles	No flaming droplets/ particles occur within 600s	

Note:

1. This test was conducted at the external approved facility, located at Guangzhou.
2. Per EN 13823, the samples were free standing at a distance of 80 mm from a 9 mm thick calcium silicate board. The density of the calcium silicate board was 900Kg/m<sup>3</sup>.

**Classification:**

The classification has been carried out in accordance with BS EN 13501-1.

Fire behaviour		Smoke production		Flaming Droplets	
<b>A2</b>	<b>-</b>	<b>s</b>	<b>1</b>	<b>d</b>	<b>0</b>

Reaction to fire classification: *A2-s1,d0*

Appendix A: Test photos



Fig.1 Before SBI test (long wing)



Fig.2 Before SBI test (short wing)



Fig.3 After SBI Test (long wing)



Fig.4 After SBI Test (short wing)

The End of Report

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