

Test Report

Report Number:151125001SHF-BP-1

Applicant Name: XINCAI AIKEN Metal Technology Co., Ltd

Original Report Date: December 14, 2015

Applicant Address: North of Yueliangwan Road,
Industrial Cluster, XINCAI City, Henan Province

Attn: Li Na Na

Sample Description:

Product: Aluminum Core Composite Panel

Model: Alucoper-01

Samples Quantity: 1.5x1.0(m) 5pcs; 1.5x0.5(m) 5pcs; face coating 50g; primer coating 50g; adhesive film 50g;
top aluminium 1 pc; aluminium core 1pc; bottom aluminium 1pc;

Sample ID: S151125001SHF-001~016

Date Received: 2015-11-13, 2015-11-16, 2015-11-23

Date Test Conducted: 2015-11-25~2015-12-11

Tests Conducted:

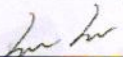
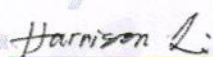
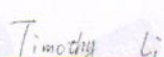
Test Methods: BS EN 13501-1:2007+A1:2009

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 Manager
Harrison Li
Senior Project Engineer
Timothy Li
Testing Engineer

1. 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 ^e and Flaming droplets/particles ^f

Note:

- For homogeneous products and substantial components of non-homogeneous products.
- For any external non-substantial component of non-homogeneous products.
- For any internal non-substantial component of non-homogeneous products.
- For the product as a whole.
- 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.

$s1 = \text{SMOGRA} \leq 30\text{m}^2/\text{s}^2$ and $\text{TSP}_{600s} \leq 50\text{m}^2$; $s2 = \text{SMOGRA} \leq 180\text{m}^2/\text{s}^2$ and $\text{TSP}_{600s} \leq 200\text{m}^2$; $s3 = \text{not } s1 \text{ or } s2$.

f. $d0 = \text{no flaming droplets/ particles in EN 13823 within 600 s}$;

$d1 = \text{no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600s}$;

$d2 = \text{not } d0 \text{ or } d1$.

RESULTS AND OBSERATIONS

The test results were shown in Table below.

Test Items	Measure Unit	Classification criteria		Test results
Face coating (PCS)	MJ/m ²	A2	≤4.0	0.3
Top Aluminum (PCS)	MJ/kg		≤3.0	0
Adhesive Film (PCS)	MJ/m ²		≤4.0	4.0
Aluminum Core (PCS)	MJ/kg		≤3.0	0
Adhesive Film (PCS)	MJ/m ²		≤4.0	4.0
Bottom Aluminum (PCS)	MJ/kg		≤3.0	0
Primer Coating (PCS)	MJ/m ²		≤4.0	0.3
The whole product	MJ/kg		≤3.0	2.0
FIGRA	W/s		≤120	15
LFS	m		<Edge of specimen	<Edge of specimen
THR _{600S}	MJ	≤7.5	0.5	
SMOGRA	m ² /s ²	s1	≤30	1
TSP _{600S}	m ²		≤50	12
Flaming Droplets/Particles	---	d0	No flaming droplets/particles occur within 600s	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/m³.
3. The surface density of each layer of the specimen is declared by the sponsor.

Classification:

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

Fire behaviour		Smoke production		Flaming Droplets	
A2	-	s	1	d	0

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

Appendix A: Sample photos

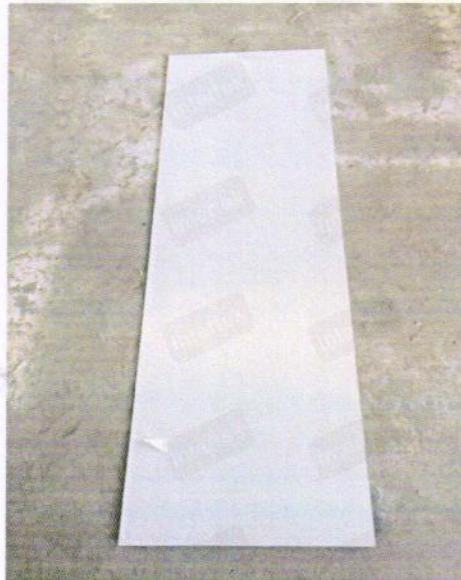


Fig.1 Sample as received

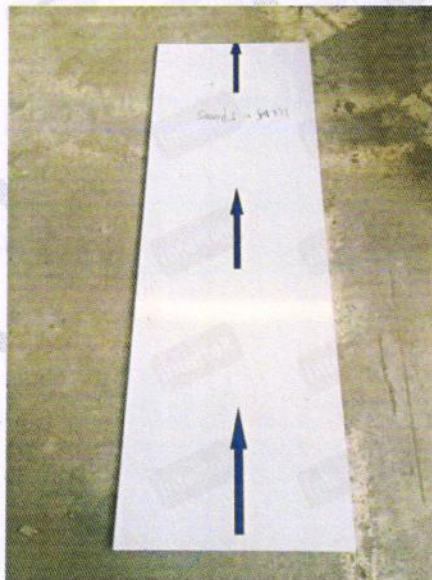


Fig.2 Sample as received

Appendix B: Test photos



Fig.3 Before SBI test(long wing)



Fig.4 Before SBI test(short wing)



Fig.5 After SBI Test (long wing)



Fig.6 After SBI Test(short wing)

The End of Report

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

