

TOP ACE DEVELOPMENT LIMITED

TEST REPORT

REPORT NUMBER

190430011SHF-007

ISSUE DATE

2019/5/17

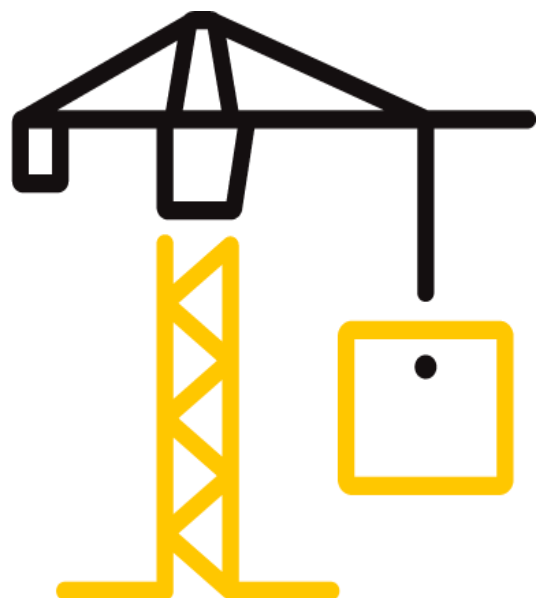
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DOCUMENT CONTROL NUMBER

LFT-APAC-SHF-OP-10k

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Applicant: TOP ACE DEVELOPMENT LIMITED

Applicant Address: 708, No.341, Fude Road, Qiaonan Street, Panyu District, Guangzhou, China

Attn: Anson

SUBJECT: Performance testing
Aluminum composite panel

BRAND NAME : ACEBOND

Dear Sir,

This test report represents the results of our evaluation of the above referenced product(s) to the requirements contained in the following standards:

TEST METHODS AND STANDARDS	
Refer to the next following Pages.	

SAMPLE ID	MODEL	SPECIFICATION
S190430011SHF.007	FR	4MM(0.50+0.50) PVDF

SAMPLE RECEIVED: 2019/4/30
TESTED FROM: 2019/4/30 TO 2019/5/17

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Test Items, Method and Results:

EN 13501-1:2007+A1:2009 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

1.1 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.

1.2 IGNITABILITY TEST

The test was conducted in accordance with EN ISO 11925-2. This test evaluates the ignitability of a product under exposure to a small flame.

1.3 CLASSIFICATION CRITERIA

The classification was determined in accordance with EN 13501-1:2007+A1:2009. The class B with its corresponding fire performance is 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
B	EN 13823 and	FIGRA ≤ 120 W/s and LFS < edge of specimen and THR _{600s} ≤ 7.5 MJ	Smoke production ^a and Flaming droplets/particles ^b
	EN ISO 11925-2 ^c Exposure = 30 s	FS ≤ 150 mm within 60 s	

Note:

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

b. d0 = no flaming droplets/particles in EN 13823 within 600s;

d1 = no flaming droplets/particles persisting longer than 10s in EN 13823 within 600s;

d2 = not d0 or d1.

Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

c. Under conditions of surface flame attack and, if appropriate to the end use application of the product, edge flame attack.

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Test Items, Method and Results:

2 RESULTS AND OBSERATIONS

Method	Parameter	Result
EN 13823:2010+A1:2014*	FIGRA _{0.2MJ} , W/s	9
	THR _{600s} , MJ	1.0
	LFS, m	<Edge of Specimen
	SMOGR _A , m ² /s ²	2
	TSP _{600s} , m ²	30
	Flaming Droplets/Particles	No flaming droplets/particles occur within 600s
EN ISO 11925-2:2010 Exposure = 30 s	F _s ≤ 150 mm within 60 s	Yes
	Ignition of the paper	No

Note

1. Test item marked with * was conducted at the external approved facility, located at Guangzhou.
2. Per EN 13823, the samples were free standing at a distance of 80mm from the backing board. Backing board was a 12mm thick calcium silicate board. The density of the calcium silicate board was 900kg/m³.

3 CLASSIFICATION

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

Fire behaviour		Smoke production			Flaming droplets	
<i>B</i>	-	<i>s</i>	<i>1</i>	-	<i>d</i>	<i>0</i>

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

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4 Test Photos of EN 13823



Before test (Long wing)



Before test (Short wing)



After test (Long wing)



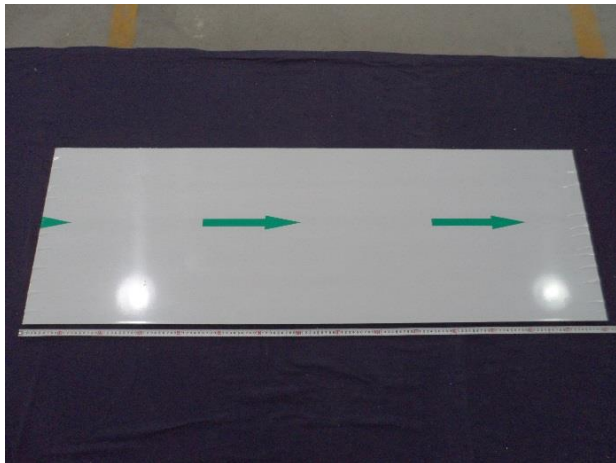
After test (Short wing)

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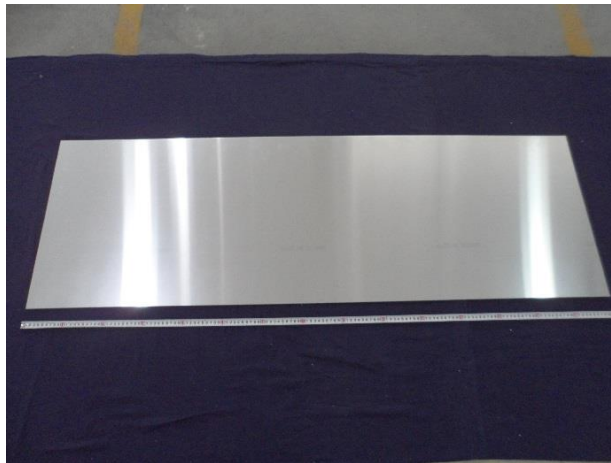
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APPENDIX: SAMPLE RECEIVED PHOTO



Front View (Test Face)



Back View

REPORT AUTHORIZED

When signed with physical or electronic signature, the contents of this report have been prepared and approved per Intertek's quality process in accordance with ISO 17025.



Sally Xie Tod Qian
 Name: Sally Xie Name: Tod Qian
 Title: Reviewer Title: Project Engineer

Revision:

NO.	DATE	CHANGES	AUTHOR	REVIEWER
190430011SHF-007	2019/5/17	First issue	Tod Qian	Sally Xie