FOSHAN VANCO BUILDING MATERIALS CO., LIMITED

ROOM 1027 COUBON, NO.13, RONGQI RD., RONGQI, SHUNDE, FOSHAN, CHINA

The following sample(s) was / were submitted and identified on behalf of the client as:

Sample Name	:	FIREPROOF ALUMINIUM COMPOSITE PANEL MODEL NO.: SA-131-2
SGS reference No.	:	AJD201405939
Spec.	:	PANEL THICKNESS: 4MM ALUMINIUM THICKNESS: 0.50+0.50MM
Sample Information	:	BRAND NAME: ALCATOP®
Test Requested	:	EN 13501-1:2007+A1:2009 Fire classification of construction products and building elements—Part 1: Classification using data from reaction to fire tests, class B.
Date of Receipt	:	Jul.16, 2014
Test Period	:	Jul.16, 2014 to Jul. 29, 2014

Test result(s) : Please refer to the following page(s)

Signed for and on behalf of
SGS-CSTC Ltd.

Ramber Li
Authorized Signatory

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I. Test conducted

This test is conducted as per EN 13501-1:2007+A1:2009 Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests. And the test methods as following:

1. EN 13823:2010 Reaction to fire tests for building products – Building products excluding floorings exposed to the thermal attack by a single burning item.
2. EN ISO 11925-2:2010 Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 2: Single-flame source test.

II. Details of classified product

a) Nature and end use application

The product “Fireproof Aluminium Composite Panel” is defined as a decorative sheet. Its end use application: Decorative wall surface.

b) Description

Color	Silver Metallic
Thickness (mm)	About 4.3mm
Mass per unit area	About 7.9kg/m^2

Mounting and fixing:

Fire cement board, with its density approximate 1800kg/m^3, thickness 9mm, is as the substrate. The test specimens are fixed mechanically to the substrate with no cavity behind it. No joint in the long wing of the specimen.

III. Test results

Test method	Parameter	Number of tests	Results
EN 13823	FIGRA（W/s）	3	2.2
	LFS < edge of specimen		Yes
	THR_{600s}（MJ）		0
	SMOGRA（m^2/s^2）		0
	TSP_{600s}（m^2）		1.6
	Flaming particles or droplets		No
EN ISO 11925-2 Exposure = 30 s	*Fs* ≤ 150 mm	6	Yes
	Ignition of the filter paper		No

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IV. Classification and direct field of application

This classification has been carried out in accordance with **EN 13501-1:2007+A1:2009.**

a) Classification

The product, “Scaffolding Sheet”, classification is as following,

Fire behaviour		Smoke production			Flaming droplets	
B	—	s	1	,	d	0

Reaction to fire classification: B—s1, d0

Remark: The classes with their corresponding fire performance are given in annex A.

b) Field of application

This classification for the submitted sample is valid for the following end use condition:

--- With all substrates classified A1 and A2

--- With mechanically fixed

--- No joint

--- No an air gap

This classification is valid for the following product parameters:

---Characteristics are described in § II b) of this test reports.

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Statement: The test results relate to the behaviour 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.

Warning:

This classification report does not represent type approval or certification of the product.

The test laboratory has, therefore, play no part in sampling the product for the test, although it holds appropriate references to the manufacturer’s factory production control that is aimed to be relevant to the samples tested and that will provide for their traceability.

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Annex A

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

Class	Test method(s)		Classification criteria	Additional classification
A1	EN ISO 1182 [a] and		$\Delta T \leq 30℃$, and $\Delta m \leq 50\%$, and $t_f = 0$(i.e. no sustained flaming)	-
	EN ISO 1716		*PCS*≤2.0MJ/kg [a] and *PCS*≤2.0MJ/kg [b c] and *PCS*≤1.4MJ/m^2 [d] and *PCS*≤2.0MJ/kg [e]	-
A2	EN ISO 1182 [a] or	and	$\Delta T \leq 50℃$, and $\Delta m \leq 50\%$, and $t_f \leq 20$ s	-
	EN ISO 1716		*PCS*≤3.0MJ/kg [a] and *PCS*≤4.0MJ/m^2 [b] and *PCS*≤4.0MJ/m^2 [d] and *PCS*≤3.0MJ/kg [e]	-
	EN 13823		*FIGRA*≤120W/s and *LFS*＜edge of specimen and THR_{600s}≤7.5MJ	Smoke production [f] and Flaming droplets/particles [g]
B	EN 13823 and		*FIGRA*≤120W/s and *LFS*＜edge of specimen and THR_{600s}≤7.5MJ	Smoke production [f] and Flaming droplets/particles [g]
	EN ISO 11925-2 [i] Exposure =30s		within 60s *Fs*≤150mm	
C	EN 13823 and		*FIGRA*≤250W/s and *LFS*＜edge of specimen and THR_{600s}≤15MJ	Smoke production [f] and Flaming droplets/particles [g]
	EN ISO 11925-2 [i] Exposure=30s		*Fs*≤150mm within 60 s	
D	EN 13823 and		*FIGRA*≤750W/s	Smoke production [f] and Flaming droplets/particles [g]
	EN ISO 11925-2 [i] Exposure=30s		*Fs*≤150mm within 60 s	
E	EN ISO 11925-2 [i] Exposure =15s		*Fs*≤150mm within 20 s	flaming droplets/particles [h]

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F	No performance determined

[a] For homogeneous products and substantial components of non-homogeneous products.
[b] For any external non-substantial component of non-homogeneous products.
[c] Alternatively, any external non-substantial component having a PCS ≤ 2,0 MJ/m^2 , provided that the product satisfies the following criteria of EN 13823: FIGRA ≤ 20 W/s, and LFS < edge of specimen, and THR_{600s} ≤ 4,0 MJ, and s1, and d0.
[d] For any internal non-substantial component of non-homogeneous products.
[e] For the product as a whole.
[f] 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 ≤ 30m^2/s^2 and TSP_{600s} ≤ 50m^2 ; s2 = SMOGRA ≤ 180m^2/s^2 and TSP_{600s} ≤ 200m^2; s3 = not s1 or s2
[g] 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 600 s;
d2 = not d0 or d1.
Ignition of the paper in EN ISO 11925-2 results in a d2 classification.
[h] Pass = no ignition of the paper (no classification);
Fail = ignition of the paper (d2 classification).
[i] Under conditions of surface flame attack and, if appropriate to the end–use application of the product, edge flame attack.

Note: The above test was carried out by a SGS laboratory.

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Standards Technical Services Materials Laboratory.
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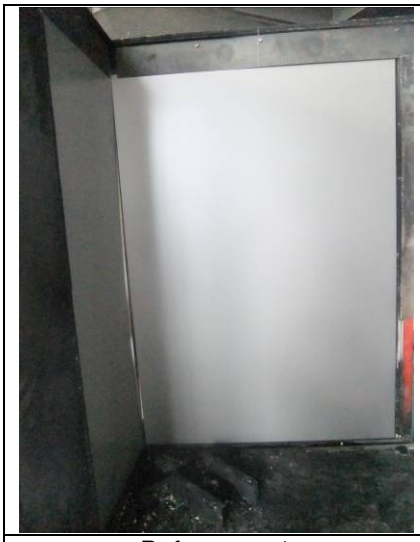
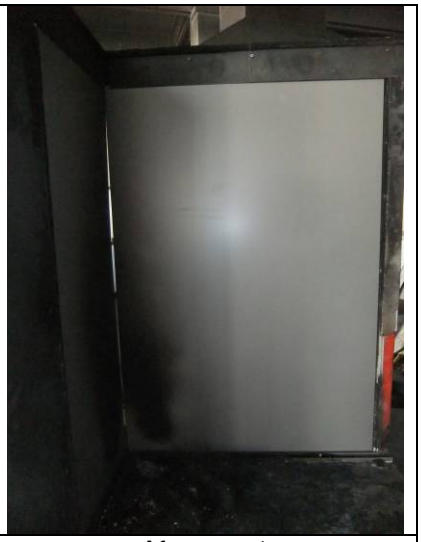
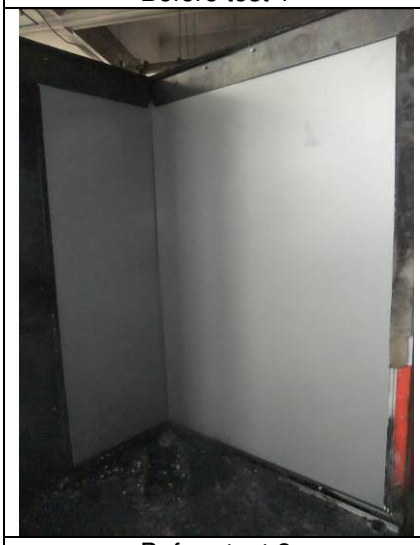
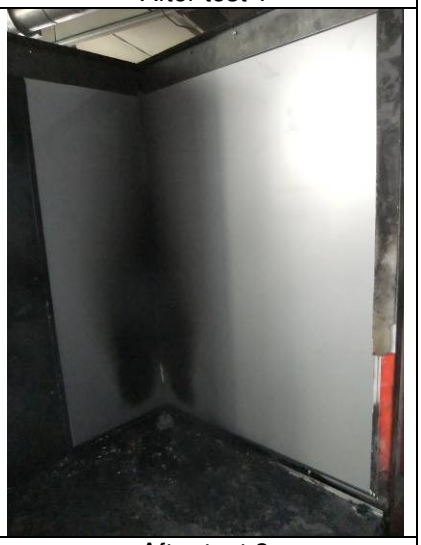
Photos Appendix:

	
Before test 1	After test 1
	
Before test 2	After test 2

********End of report********

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