

ALCOPANEL CO., LTD

TEST REPORT

SCOPE OF WORK

ALCOPANEL A2

REPORT NUMBER

210205007SHF-001

TEST DATE(S)

2021-02-05 - 2021-02-26

ISSUE DATE

2021-02-26

PAGES

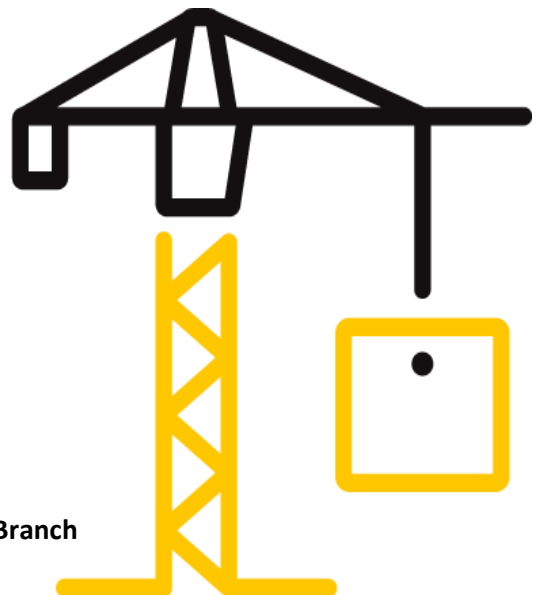
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Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch



Test Report

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Test Report

Issue Date: 2021-02-26 Intertek Report No. 210205007SHF-001
Applicant: ALCOPANEL CO., LTD
Address: 7F, GANGNAM MAIN TOWER, 275, GANGNAM-DAERO, SEOCHO-GU, SEOUL, KOREA
Attn: Yangkwan Kim
Manufacturer : ALCOPANEL CO., LTD
Address : 7F, GANGNAM MAIN TOWER, 275, GANGNAM-DAERO, SEOCHO-GU, SEOUL, KOREA
Test Type : Performance test, samples provided by the applicant.

Product Information

Product Name	ALCOPANEL A2	Brand	/
Sample Description	Good Condition	Sample Amount	3 package + 10 pcs
		Received Date	2021-02-05
Sample ID	Model	Specification	
S210205007SHF.001~004	ALCOPANEL A2	Al 0.5mm + A2 Core 3mm + Al 0.5mm	

Test Methods And Standards

Test Standard	EN ISO 1716:2010 and EN 13823:2010+A1:2014*
Specification Standard	EN 13501-1:2018
Test Conclusion	The samples were tested according to the above standards, and the results are shown in the following page.

Note:

1.This report relates specifically to the sample(s) that were drawn and provided by the applicant or their nominated third party. The reported result(s) provide no warranty or verification on the sample(s) representing any specific goods and/or shipment and only relate to the sample(s) as received and tested.

Report Authorized


Sally Xie Jay Gong
Name: Sally Xie Name: Jay Gong
Title: Reviewer Title: Project Engineer

Test Report

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Test Items, Method and Results:

EN 13501-1:2018 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

1.1 HEAT OF COMBUSTION TEST

The test was conducted in accordance with EN ISO 1716. This test evaluates the gross heat of combustion (Q_{PCS}) 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 13501-1:2018. The class A2 with its corresponding fire performance is given in the table below.

Table - Class 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 $PCS \leq 4.0 \text{ MJ/m}^2^b$ and $PCS \leq 4.0 \text{ MJ/m}^2^c$ and $PCS \leq 3.0 \text{ MJ/kg}^d$	--
	EN 13823	$FIGRA_{0.2MJ} \leq 120 \text{ W/s}$ and LFS < edge of specimen and $THR_{600s} \leq 7.5 \text{ MJ}$	Smoke production ^e and Flaming droplets/particles ^f

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. $s1 = SMOGRA \leq 30 \text{ m}^2/\text{s}^2$ and $TSP_{600s} \leq 50 \text{ m}^2$; $s2 = SMOGRA \leq 180 \text{ m}^2/\text{s}^2$ and $TSP_{600s} \leq 200 \text{ m}^2$; $s3 = \text{not } s1 \text{ or } s2$.
 - f. $d0 = \text{no flaming droplets/particles in EN 13823 within 600s}$;
 - $d1 = \text{no flaming droplets/particles persisting longer than 10s in EN 13823 within 600s}$;
 - $d2 = \text{not } d0 \text{ or } d1$.
- Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

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Test Items, Method and Results:

2 RESULTS AND OBSERATIONS

Method	Parameter	Result
EN ISO 1716:2010	Color coating, MJ/m ²	1.0639
	Aluminium skin, MJ/kg	0
	Adhesive film, MJ/m ²	3.0441
	Mineral core, MJ/kg	11.4808
	Adhesive film, MJ/m ²	3.0441
	Aluminium skin, MJ/kg	0
	The whole product, MJ/kg	8.4
EN 13823:2010+A1:2014 *	FIGRA _{0.2MJ} , W/s	4
	THR _{600s} , MJ	0.6
	LFS, m	<Edge of specimen
	SMOGR _A , m ² /s ²	1
	TSP _{600s} , m ²	19
	Flaming droplets/particles	No flaming droplets/particles occur within 600s

Note

- *Test item is subcontracted on accreditation by CNAS L0057.
- 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.
- The information of each component of the product was declared by applicant, see below table.

Layer No. (from face to back)	Material of each Layer	Mass per unit area (kg/m ²)	Thickness (mm)
1	Color coating	0.08	0.025
2	Aluminium skin	1.35	0.5
3	Adhesive film	0.07	0.07
4	Mineral core	5.72	3.735
5	Adhesive film	0.07	0.07
6	Aluminium skin	1.35	0.5

3 CLASSIFICATION

The test result didn't meet the requirement of class A2.

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Test Items, Method and Results:

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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Appendix A: Sample Received Photo



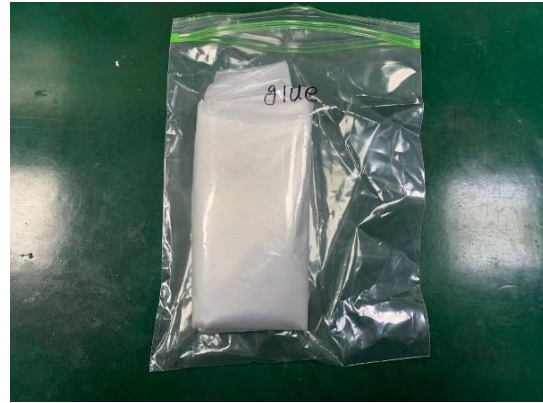
Front view



Back view



Color coating



Adhesive film



Mineral core

Revision:

NO.	Date	Changes	Author	Reviewer
210205007SHF-001	2021-02-26	First issue	Jay Gong	Sally Xie

