

Guangdong Bolliya Metal Building Materials Co., Ltd

TEST REPORT

SCOPE OF WORK

A2 FR Aluminium Corrugated Panel

REPORT NUMBER

190530003SHF-001-R1

TEST DATE(S)

2019-05-30 - 2019-06-21

ISSUE DATE

2019-06-21

REVISED DATE

2019-06-21

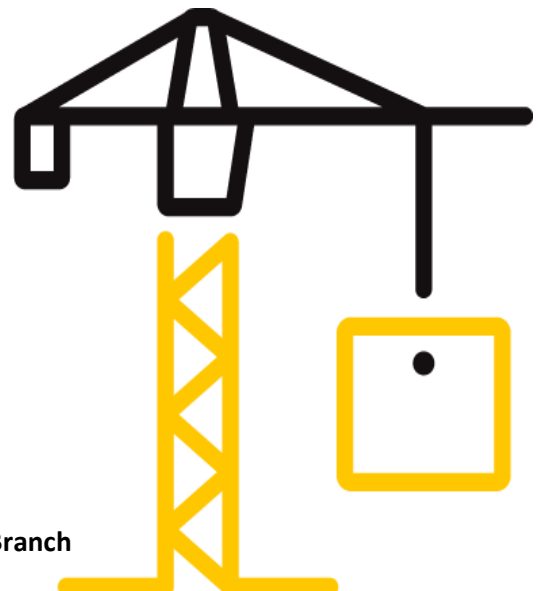
PAGES

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DOCUMENT CONTROL NUMBER

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Test Report

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Test Report

Issue Date: 2019-06-21 Intertek Report No. 190530003SHF-001-R1
 Applicant: Guangdong Bolliya Metal Building Materials Co., Ltd
 Address: No.9 Xingye Rd, Yanyuan Industrial Zone, Xingtan, Shunde, Foshan, Guangdong 528325
 Attn: Leo Chen
 Manufacturer : Guangdong Bolliya Metal Building Materials Co., Ltd
 Address : No.9 Xingye Rd, Yanyuan Industrial Zone, Xingtan, Shunde, Foshan, Guangdong 528325
 Test Type : Performance test, samples provided by the applicant.

Product Information

Product Name	A2 FR Aluminium Corrugated Panel	Brand	Bolliya
Sample Description	Good Condition	Sample Amount	30pcs, 2 packages
		Received Date	2019-05-29
Sample ID	Model	Specification	
S190530003SHF.001~002	A2 Fire Retardant	4MM(0.5+0.5)	


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

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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 MJ/kg ^a and PCS \leq 4.0 MJ/m ² ^b and PCS \leq 4.0 MJ/m ² ^c and PCS \leq 3.0 MJ/kg ^d	--
	EN 13823	FIGRA _{0.2MJ} \leq 120 W/s and LFS < edge of specimen and THR _{600s} \leq 7.5 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 30m²/s² and TSP_{600s} \leq 50m²; s2 = SMOGRA \leq 180m²/s² and TSP_{600s} \leq 200m²; s3 = not s1 or s2.
 - f. 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.

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Test Items, Method and Results:

2 RESULTS AND OBSERATIONS

Method	Parameter		Result
EN ISO 1716:2010	PCS	facing coating , MJ/m ²	0.5
		aluminium sheet, MJ/kg	0
		adhesive film, MJ/m ²	2.2
		aluminium substrate, MJ/kg	0
		the whole product, MJ/kg	1.4
EN 13823:2010+A1:2014 *	FIGRA _{0.2MJ} , W/s		65
	THR _{600s} , MJ		5.1
	LFS, m		<Edge of specimen
	SMOGRA, m ² /s ²		7
	TSP _{600s} , m ²		69
	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	facing coating	0.0310	0.025
2	aluminium sheet	1.3650	0.500
3	adhesive film	0.0480	0.050
4	aluminium substrate	0.6233	2.900
5	adhesive film	0.0480	0.050
6	Aluminium sheet	1.3650	0.500

3 CLASSIFICATION

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

Fire behaviour		Smoke production			Flaming Droplets	
A2	-	s	2	-	d	0

Reaction to fire classification: A2 - s2, d0

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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)



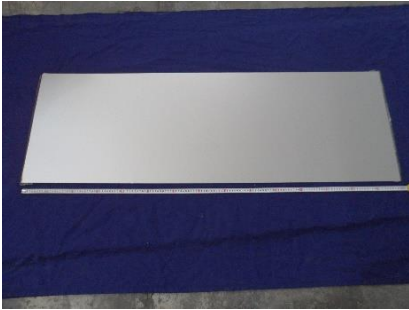
After test (Short wing)

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Appendix A: Sample Received Photo



Front view



Back view



Section view



Adhesive film



Facing coating

Revision:

NO.	Date	Changes	Author	Reviewer
190530003SHF-001	2019-06-21	First issue	Tod Qian	Sally Xie
190530003SHF-001-R1	2019-06-21	Revised sample received photo on Page 7 as per applicant's requirement	Tod Qian	Sally Xie

Note: Since the issue date of 190530003SHF-001-R1 report, the original report 190530003SHF-001 was cancelled at the same time.