

Test Report

No. AJFS3002018539FF

Date: JUL.30, 2020

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ALUCOSITE METAL LTD

110 MAGSLANE, FISHPONDS, BRISTOL BS57EP, ENGLAND

The following sample(s) was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion. results apply to the sample as received.

Sample Name: ALUCOSITE FR ALUMINIUM COMPOSITE PANEL

SGS Ref No.: HZIN1201091786SC

Material and Mark: 5005 ALU

Product Specification: 4MMX0.5MM

Product or Lot No.: ACP20191118

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

Test Results: -- See attached sheet --

Test Period:

Sample Receiving Date : JUL.13, 2020

Test Performing Date : JUL.13, 2020 TO JUL.13, 2021

Signed for and on behalf of
SGS-CSTC Co., Ltd. Anji Branch



Allen Zou
Lab Manager



AJFS1012012530FF



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SGS-CSTC (Shanghai) Inspection & Testing Services Co., Ltd.
Anji Branch Fire Technology Service

No. 331, Sungh Road, 2566, Sungh Industry Zone, Anji County, Zhejiang Province, China 313300 t: (86-572) 538825 f: (86-572) 538825 www.sgs.com.cn
中国·浙江·安吉县阳光工业园区二区阳光大道331号 邮编:313300 t: 86-572 538825 f: 86-572 538825 e: sgs.china@sgs.com

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+A1:2014 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+Cor1:2011 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 "ALUCOSITE FR ALUMINIUM COMPOSITE PANEL" is defined as a decorative sheet. Its classification is valid for the following end use application: Curtain wall, decoration.

b) Description

Description	ALUCOSITE FR ALUMINIUM COMPOSITE PANEL
Color	Gray
Thickness	4.0mm
Bulk Density	1873 kg/m ³

Mounting and fixing:

Calcium silicate board, with its density approximate 900kg/m³, thickness approximate 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 _{0.2MJ} (W/s)	3	14.5
	FIGRA _{0.4MJ} (W/s)		14.5
	Whether lateral flame spread (LFS) to the edge of specimen (Yes/No)		No
	THR _{600s} (MJ)		1.1
	SMOGRA (m ² /s ²)		0.0
	TSP _{600s} (m ²)		2.6
	Flaming particles or droplets (Yes/No)		No

To be continued...



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 中国·浙江·安吉县南苑工业园区二区南苑大道301号 邮编: 313300 t: 86-572 533825 f: 86-572 533828 e: sgs.china@sgs.com

Test method	Parameter	Specimen number	Results
EN ISO 11925-2 Exposure = 30 s	Whether vertical flame spread (Fs) in excess of 150 mm within 60s (Yes/No)	6	No
	Ignition of the filter paper (Yes/No)		No

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, ALUCOSITE FR ALUMINIUM COMPOSITE PANEL, 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 fixing
- No joint

This classification is valid for the following product parameters:

- Characteristics of various layers identical to those as described in section II b) of this test reports.

Statement:

This declaration of conformity is only based on the result of this laboratory activity, the impact of the uncertainty of the results was not included.

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.

To be continued...



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Ajij Branch Fire Technology Service

No. 301, Sungh Road, 2500k Sungh Industry Zone, Ajij County, Zhejiang Province, China 313300 t: 86-571 538625 f: 86-571 538628 www.sgs.com.cn
中国·浙江·安吉县阳光工业园区二区阳光大道301号 邮编:313300 t: 86-571 538625 f: 86-571 538628 e: sgs.china@sgs.com

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.

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	$\Delta T \leq 30^\circ\text{C}$, and $\Delta m \leq 50\%$, and $t_f = 0$ (i.e. no sustained flaming)	-
	EN ISO 1716	$PCS \leq 2.0\text{MJ/kg}$ ^a and $PCS \leq 2.0\text{MJ/kg}$ ^{b-c} and $PCS \leq 1.4\text{MJ/m}^2$ ^d and $PCS \leq 2.0\text{MJ/kg}$ ^e	-
A2	EN ISO 1182 ^a or	and $\Delta T \leq 50^\circ\text{C}$, and $\Delta m \leq 50\%$, and $t_f \leq 20\text{ s}$	-
	EN ISO 1716		-
	EN 13823	$FIGRA \leq 120\text{W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 7.5\text{MJ}$	Smoke production ^f and Flaming droplets/particles ^g
B	EN 13823 and	$FIGRA \leq 120\text{W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 7.5\text{MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ¹ Exposure = 30s	within 60s $F_s \leq 150\text{mm}$	
C	EN 13823 and	$FIGRA \leq 250\text{W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 15\text{MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ¹ Exposure = 30s	$F_s \leq 150\text{mm}$ within 60 s	
D	EN 13823 and	$FIGRA \leq 750\text{W/s}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ¹ Exposure = 30s	$F_s \leq 150\text{mm}$ within 60 s	
E	EN ISO 11925-2 ¹ Exposure = 15s	$F_s \leq 150\text{mm}$ within 20 s	flaming droplets/particles ^h

To be continued...



F	No performance determined
<p> ^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 $\leq 2,0 \text{ MJ/m}^2$, provided that the product satisfies the following criteria of EN 13823: FIGRA $\leq 20 \text{ W/s}$, and LFS < edge of specimen, and THR_{600s} $\leq 4,0 \text{ MJ}$, 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 $\leq 30\text{m}^2/\text{s}^2$ 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 ^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. </p>	

To be continued...



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Photo Appendix:



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End of Report



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