

Test Report

No. SDFS2405003150FF-01

Date: May 28, 2024

Page 1 of 5

JIANGSU HYGROW COMPOSITES CO.,LTD

WEST XULUN RD,XUZHOU INDUSTRY PARK,XUZHOU CITY,JIANGSU, CHINA

Sample Description: ALUMINUM COMPOSITE PANEL

Tested surface: WHITE COATING SIDE

The above data and information 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.

SGS Ref No.: GZIN2405000662CM01

Sample Receiving Date: May 08, 2024

Test Performing Date: May 08, 2024 to May 22, 2024

Test Requested:

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

Test Results: -- See attached sheet --

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



Ada Liu
Approved signatory



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I. Test conducted

This test is conducted as per EN 13501-1:2018 Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests. And the test methods as following:

- EN 13823:2020+A1:2022 Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item.
- EN ISO 11925-2:2020 Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test.

II. Details of classified product

Sample Description	Board
Color	White
Thickness	4.0 mm
Area density	7.0 kg/m ²

Mounting and fixing:

Specimen that was free standing and had no substrate and with no ventilated cavity should be tested at a distance of at least 80 mm from the backing board. There was no joint between specimens.

III. Test results

Test methods	Parameter	Number of tests	Results
EN 13823	FIGRA _{0.2MJ} (W/s)	3	19.3
	FIGRA _{0.4MJ} (W/s)		19.3
	Whether lateral flame spread (LFS) to the edge of specimen (Yes/No)		No
	THR _{600s} (MJ)		0.9
	SMOGRA (m ² /s ²)		2.3
	TSP _{600s} (m ²)		7.3
	Flaming particles or droplets (Yes/No)		No
EN ISO 11925-2 Exposure = 30 s	F _s ≤150mm within 60 s (Yes/No)	12	Yes
	Ignition of the filter paper (Yes/No)		No

Note:

FIGRA_{0.2MJ} - Fire growth rate index at THR threshold of 0,2 MJ [W/s]

FIGRA_{0.4MJ} - Fire growth rate index at THR threshold of 0,4 MJ [W/s]

THR_{600s} -Total heat release within 600 s [MJ]

SMOGRA - Smoke growth rate [m²/s²]

TSP_{600s}- Total smoke production within 600 s [m²]

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IV. Classification and field of application

a) Reference of classification

This classification has been carried out in accordance with **EN 13501-1:2018**.

b) Classification

The product, Aluminum Composite Panel (as described by the sponsor), in relation to its reaction to fire behaviour is classified:

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.

c) Field of application

This classification is valid for the following product parameters:

--- Characteristics as described in section II of this test reports.

This classification is valid for the following end use applications:

--- Without any substrates

--- No joint

--- Free standing

Limitations

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

Warning:

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of the samples tested.

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.

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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	$\Delta T \leq 30^\circ\text{C}$, 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	$FIGRA_{0.2\text{MJ}} \leq 120\text{W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600\text{s}} \leq 7.5\text{MJ}$	Smoke production ^f and Flaming droplets/particles ^g
B	EN 13823 and	$FIGRA_{0.2\text{MJ}} \leq 120\text{W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600\text{s}} \leq 7.5\text{MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s	$F_s \leq 150\text{mm}$ within 60s	
C	EN 13823 and	$FIGRA_{0.4\text{MJ}} \leq 250\text{W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600\text{s}} \leq 15\text{MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s	$F_s \leq 150\text{mm}$ within 60 s	
D	EN 13823 and	$FIGRA_{0.4\text{MJ}} \leq 750\text{W/s}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s	$F_s \leq 150\text{mm}$ within 60 s	
E	EN ISO 11925-2 ⁱ Exposure = 15s	$F_s \leq 150\text{mm}$ within 20 s	flaming droplets/particles ^h
F	EN ISO 11925-2 ⁱ Exposure = 15 s	$F_s > 150\text{mm}$ within 20 s	

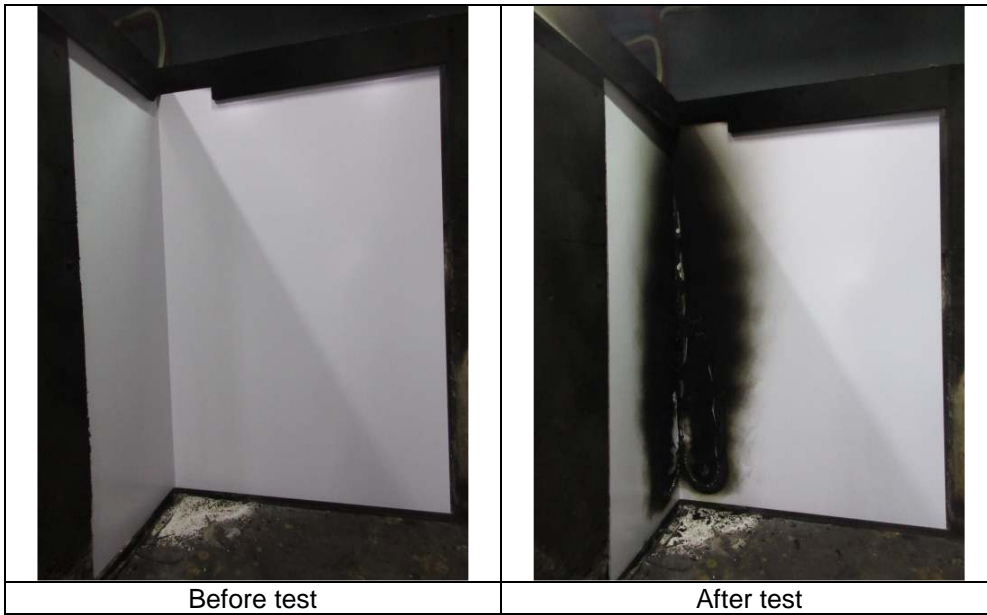


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- ^a For homogeneous products and substantial components of non-homogeneous products.
- ^b For any external non-substantial component of non-homogeneous products.
- ^c Alternatively, any external non-substantial component having a PCS $\leq 2,0 \text{ MJ/m}^2$, 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 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.

Photo Appendix:



SGS authenticate the photo on original report only

Remark: This test report is to supersede No. SDFS2405003150FF test report which was issued on May 24, 2024. And the original test reports (paper and electronic) are invalid.

End of Report



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