



## Test Report

No.: SHHL1911061108FL

Date: DEC. 16, 2019 Page: 1 of 13

JIANGSU ALL MOLDING NEW MATERIAL CO., LTD  
SCIENCE & TECHNOLOGY, INDUSTRIAL PARK, HUTANG TOWN, WUJIN DISTRICT, CHANGZHOU CITY,  
JIANGSU PROVINCE, 213162, CHINA

Sample Description : WPC MOLDING-STAIR TREAD  
Style No. : WPC MOLDING-STAIR TREAD  
Item No. : FPST300  
\*\*\*\*\*  
Sample Receiving Date : NOV. 04, 2019  
Testing Period : NOV. 04, 2019 TO DEC. 16, 2019  
Test Performed : SELECTED TEST(S) AS REQUESTED BY APPLICANT  
Test Requested : SELECTED TEST(S) AS REQUESTED BY APPLICANT  
Test Result(s) : FOR FURTHER DETAILS, PLEASE REFER TO THE  
FOLLOWING PAGE(S)  
Conclusion : THE TEST DATA WERE PROVIDED TO CLIENT FOR  
THEIR OWN ANALYSIS.

Signed for and on behalf of  
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Melody Zhang  
Authorized Signatory



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### Test Conducted:

### Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA19-245756.001	Grey plastic with sticker

### Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

### RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+AMD1:2017, IEC62321-5:2013, IEC62321-7-2:2017 and IEC 62321-6:2015, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND



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Test Item(s)	Limit	Unit	MDL	001
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND

### Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.  
IEC 62321 series is equivalent to EN 62321 series  
[https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)
- (2) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
- (3) The restriction of DEHP, BBP, DBP and DIBP shall not apply to toys which are already subject to the restriction of DEHP, BBP, DBP and DIBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.



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Sample photo:



SHAHG1924575601



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The testing was performed by SGS other internal laboratory

### Test Results:

#### Test Part Description:

SGS Sample ID	Description
CAN19-218937.001	Beige material with light gray surface

#### VOCs and Carbonyl Compounds:

##### Test Method

: With reference to ISO 16000-9:2006 / COR1-2007 &amp; ISO 16000-6:2011 &amp; ISO16000-3:2011.

Testing was performed by Environmental Chamber (50L), followed by sampling using Tenax-TA and DNPH tube, analysis using Thermodesorption System with Gas Chromatography Mass Spectrometry (TDS-GC/MS) and High Performance Liquid Chromatography-DAD (HPLC-DAD).

analysis result	Compound Name	CAS No.	Result [ $\mu\text{g}/\text{m}^3$ ]
			7 day
	Formaldehyde	50-00-0	ND
	Acetaldehyde	75-07-0	ND
	Toluene	108-88-3	8.4
	Tetrachloroethylene	127-18-4	ND
	Xylene	108-38-3&106-42-3&95-47-6	5.5
	1,2,4-Trimethylbenzene	95-63-6	ND
	1,4-Dichlorobenzene	106-46-7	ND
	Ethylbenzene	100-41-4	2.6
	2-Butoxyethanol	111-76-2	ND
	Styrene	100-42-5	3.3
	TVOC	-	51.1



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Remark: 1. ND =not detectable (<MDL)  
2. MDL = 2.0 $\mu$ g/m<sup>3</sup>  
3.  $\mu$ g/m<sup>3</sup>= micrograms per cubic metre

### Evaluation according to Decree 2011-321 relative to the labeling of construction products, floor or wall coverings and paints and lacquers concerning their emission of volatile pollutants

Classes	Calculated Result ( $\mu$ g/m <sup>3</sup> )	C	B	A	A+
Formaldehyde	ND	> 120	< 120	< 60	< 10
Acetaldehyde	ND	> 400	< 400	< 300	< 200
Toluene	8.4	> 600	< 600	< 450	< 300
Tetrachloroethylene	ND	> 500	< 500	< 350	< 250
Xylene	5.5	> 400	< 400	< 300	< 200
1,2,4-Trimethylbenzene	ND	> 2000	< 2000	< 1500	< 1000
1,4-Dichlorobenzene	ND	> 120	< 120	< 90	< 60
Ethylbenzene	2.6	> 1500	< 1500	< 1000	< 750
2-Butoxyethanol	ND	> 2000	< 2000	< 1500	< 1000
Styrene	3.3	> 500	< 500	< 350	< 250
TVOC	51.1	> 2000	< 2000	< 1500	< 1000

Remark:  
Calculated Result = SER / q

The concentrations of exposition are calculated in a conventional reference room of a total volume (V) of 30m<sup>3</sup>, in which is applied a rate of air renewal (n) of 0.5h<sup>-1</sup> and which dimensions are specified here below:

	Surface (S) (m <sup>2</sup> )	Load rate (L=S/V) (m <sup>2</sup> /m <sup>3</sup> )	Surface specific emission output (q=n/L) (m <sup>3</sup> .m <sup>-2</sup> .h <sup>-1</sup> )
Floor	12	0.4	1.25
Ceiling	12	0.4	1.25
One door	1.6	0.05	10
One window	2	0.07	7
Walls (minus door and window)	31.4	1	0.5
Joints (or very small surfaces)	0.2	0.007	70



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### Test condition

Chamber Volume (m <sup>3</sup> )	0.05	Testing Temperature (°C)	23
Testing Humidity (rH%)	50	Air Exchange Rate (1/h)	0.5
Sample Loading (m <sup>2</sup> /m <sup>3</sup> )	0.4		
Tenax Sampling Flow (mL/min)	200	DNPH Sampling Flow (mL/min)	300
Tenax Sampling Time (min)	25	DNPH Sampling Time (min)	60
Tenax Sampling Volume (L)	5	DNPH Sampling Volume (L)	18



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Sample photo:



Product Photo



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The testing was performed by SGS other internal laboratory

### I. Test conducted

This test was 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 ISO 9239-1:2010 Reaction to fire tests for floorings —Part 1: Determination of the burning behaviour using a radiant heat source.
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

Sample description	WPC Molding-Stair Tread
Color	Gray
Thickness	8.5mm
Mass per unit area	9093 g/m <sup>2</sup>

#### Mounting and fixing:

Fibre cement board, with its density approximate 1800kg/m<sup>3</sup>, thickness approximate 9mm, is as the substrate. The test specimens are fixed mechanically to the substrate. No joint in the specimens.

### III. Test results

Test method	Parameter	Number of tests	Results
EN ISO 9239-1	Critical flux (kW/m <sup>2</sup> )	3	8.9
	Smoke (%xminutes)		114.5
EN ISO 11925-2 Exposure = 15 s	Whether vertical flame spread (Fs) in excess of 150 mm within 20 s (Yes/No)	6	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, WPC Molding-Stair Tread, classification is as following,

Fire behaviour		Smoke production	
B <sub>fl</sub>	—	s	1

**Reaction to fire classification: B<sub>fl</sub>—s1**

**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 as A1 and A2
- With mechanically fixing
- No joint

This classification is valid for the following product parameters:

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

### 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.

### 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



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# Test Report

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## Classes of reaction to fire performance for floorings

class	Test methods		Classification	Additional classification
A1 <sub>fl</sub>	EN ISO 1182 <sup>a</sup> and		$\Delta T \leq 30^{\circ}\text{C}$ , and $\Delta m \leq 50\%$ , and $t_{\text{f}}=0$ (i.e. no sustained flaming)	-
	EN ISO 1716		PCS $\leq$ 2.0MJ/kg <sup>a</sup> and PCS $\leq$ 2.0MJ/kg <sup>b</sup> and PCS $\leq$ 1.4MJ/m <sup>2</sup> <sup>c</sup> and PCS $\leq$ 2.0MJ/kg <sup>d</sup>	-
A2 <sub>fl</sub>	EN ISO 1182 <sup>a</sup> or	and	$\Delta T \leq 50^{\circ}\text{C}$ , and $\Delta m \leq 50\%$ , and $t_{\text{f}} \leq 20\text{s}$	-
	EN ISO 1716		PCS $\leq$ 3.0MJ/kg <sup>a</sup> and PCS $\leq$ 4.0MJ/m <sup>2</sup> <sup>b</sup> and PCS $\leq$ 4.0MJ/m <sup>2</sup> <sup>c</sup> and PCS $\leq$ 3.0MJ/kg <sup>d</sup>	-
	EN ISO 9239-1 <sup>e</sup>		Critical flux <sup>f</sup> $\geq 8.0\text{kW/ m}^2$	Smoke production <sup>g</sup>
B <sub>fl</sub>	EN ISO 9239-1 <sup>e</sup> and		Critical flux <sup>f</sup> $\geq 8.0\text{kW/ m}^2$	Smoke production <sup>g</sup>
	EN ISO 11925-2 <sup>h</sup> Exposure =15s		Fs $\leq$ 150mm within 20 s	-
C <sub>fl</sub>	EN ISO 9239-1 <sup>e</sup> and		Critical flux <sup>f</sup> $\geq 4.5\text{kW/ m}^2$	Smoke production <sup>g</sup>
	EN ISO 11925-2 <sup>h</sup> Exposure =15s		Fs $\leq$ 150mm within 20 s	-
D <sub>fl</sub>	EN ISO 9239-1 <sup>e</sup> and		Critical flux <sup>f</sup> $\geq 3.0\text{kW/ m}^2$	Smoke production <sup>g</sup>
	EN ISO 11925-2 <sup>h</sup> Exposure =15s		Fs $\leq$ 150mm within 20 s	-
E <sub>fl</sub>	EN ISO 11925-2 <sup>h</sup> Exposure =15s		Fs $\leq$ 150mm within 20 s	-
F <sub>fl</sub>	No performance determined			

<sup>a</sup> For homogeneous products and substantial components of non-homogeneous products.

<sup>b</sup> For any external non-substantial component of non-homogeneous products.

<sup>c</sup> For any internal non-substantial component of non-homogeneous products.

<sup>d</sup> For the product as a whole.

<sup>e</sup> Test duration = 30 min.

<sup>f</sup> Critical flux is defined as the radiant flux at which the flame extinguishes or the radiant flux after a test period of 30 min, whichever is the lower (i.e. the flux corresponding with the furthest extent of spread of flame).

<sup>g</sup> **s1** = Smoke  $\leq 750$  % minutes;

**s2** = not s1.

<sup>h</sup> Under conditions of surface flame attack and, if appropriate to the end use application of the product, edge flame attack.



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