

No. : XMIN2011010845CM



Date : Nov 25, 2020 Page: 1 of 10

CUSTOMER NAME: HEBEI LUJU PLASTIC PRODUCTS CO., LTD CHENGDONG ECONOMIC DEVELOPMENT ZONE, XIONGXIAN ADDRESS: COUNTY, BAODING CITY, HEBEI PROVINCE

MULTILAYERED FLOORING Sample Name :

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

SGS Ref. No.	:	GZIN2011063171MR
Date of Receipt	:	Nov 06, 2020
Testing Start Date	:	Nov 06, 2020
Testing End Date	:	Nov 25, 2020
Test result(s)	:	For further details, please refer to the following page(s) (Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for SGS-CSTC Standards Technical Services Co., Ltd Xiamen Branch **Testing Center**

Bryan Hong Authorized signatory



agreed in writing, this document is issued by the Company subject to its General Conditions of Ser e on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Doc no to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this mation contained hereon reflects the Company's findings at the time of its intervention only and within ns, if any. The Company's sole responsibility is to its Client and this document does not excenerate exercising all their rights and obligations under the transaction documents. This document cannot be hout prior writtee approach of the Company. Any unsubtorized alteration formery or falicitation of s. This ransaction do uthorized alte ted to the fulle or fals mpa Any of the 30 day 6-755) 8307

No.31 Xianghong Road, Xiang'An Torch Industrial Zone, Xiamen, Fujian Province, China. 361101 t (86-592) 5765857 f (86-592) 5765380 www.sgsgroup.com.cn e sgs.china@sgs.com 中国·福建·厦门·火炬(翔安)产业区翔虹路31号 邮编:361101 t (86-592) 5765857 f (86-592) 5765380

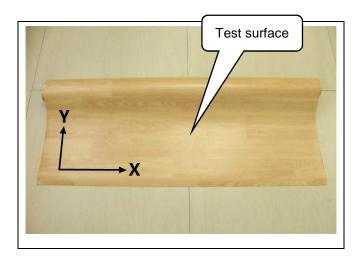


No. : XMIN2011010845CM Date : Nov 25, 2020 Page: 2 of 10

Summary of Results:

No.	Test Item	Test Item Test Method	
	Fire classification for burning	EN 13501-1:2018 Clause 9 &	
1	behavior of flooring material	EN ISO 9239-1:2010 & EN	B _{fl} —s1
	behavior of nooning material	ISO 11925-2:2020	

Original Sample Photo:





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com/en/Terms-and-Conditions.aspx</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com/en/Terms-and-Conditions.spx</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com/en/Terms-and-Conditions/Terms-and-Condit</u>

No.31 Xianghong Road, Xiang'An Torch Industrial Zone, Xiamen, Fujian Province, China. 36 1101 t (86-592) 57655857 f (86-592) 5765580 www.sgsgroup.com.cn 中国•福建•厦门•火炬(翔安)产业区翔虹路31号 邮编:36 1101 t (86-592) 57655857 f (86-592) 5765580 e sgs.china@sgs.com



No. : XMIN2011010845CM Date : Nov 25, 2020 Page: 3 of 10

Test item: Fire Classification for Burning Behavior of Flooring Material

Sample Description: Floor

Test Method: EN 13501-1:2018 Clause 9 & EN ISO 9239-1:2010 & EN ISO 11925-2:2020 Test Result:

I. EN ISO 9239-1:2010 Reaction to fire tests for floorings-Part 1: Determination of the burning

behaviour using a radiant heat source

Specimen: 1050mm × 230mm × 2.0 mm

Flame application time: 10min

Mounting and fixing: Calcium silicate board, with its density about 1016kg/m³, thickness about

21.4mm, is as the substrate. The specimens were fixed mechanically to the substrate.

Specimen No.		Furthest extent of	Critical heat flux	Integrated smoke	
		spread of flame, mm	(CHF), kW/m ²	value, %⋅min	
	1	120	10.64	227.9	
X direction	2	150	10.16	269.5	
	3	130	10.48	247.6	
	Average	130	10.4	248	
	1	100	>11(see note 2)	177.5	
Y direction	2	90	>11(see note 2)	148.6	
	3	100	>11(see note 2)	160.0	
	Average	100	>11(see note 2)	162	

Note:

1. Test specimens were cut from the sample.

2. Specimens that do not ignite or which spread flame less than 110 mm have a critical heat flux ≥ 11kW/m².

3. Observations of the burning characteristics: Charring.

中国·福建·厦门·火炬(翔安)产业区翔虹路31号



In writing, this document is issued by the Company subject to its General Conditions of Servic est or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format do ditions for Electronic Documents at http://www.gs.com/en/Terms-and-Conditions/Terms-e-Docum imitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this do ontained hereon reflects the Company's findings at the time of its intervention only and within the y. The Company's sole responsibility is to its Client and this document does not exonerate pa gall their rights and obligations under the transaction documents. This document cannot be re r written approval of the Company. Any unauthorized alteration, forgery or falsification of the co-ner is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise as a to such a such and the company. ransaction documen uthorized alteration, ted to the fullest extern or fals of the 30 days No.31 Xianghong Road, Xiang'An Torch Industrial Zone, Xiamen, Fujian Province, China. 361101 t (86-592) 5765857 f (86-592) 5765380 www.sgsgroup.com.cn 邮编:361101 t (86-592) 5765857 f (86-592) 5765380 e sgs.china@sgs.com



No. : XMIN2011010845CM Date : Nov 25, 2020 Page: 4 of 10

II. EN ISO 11925-2:2020 Reaction to fire tests-Ignitability of products subjected to direct impingement

of flame-Part 2: Single-flame source test. Specimen: 250mm × 90mm × 2.0 mm

Flame application time: 15s

Exposure	Edge exposure					Surface exposure						
conditions												
Direction	X direction		Y direction		X direction		Y direction					
Specimen	1	2	3	1	2	3	1	2	3	1	2	3
No.	1	2	5	1	2	5	1	2	5		2	5
Whether												
ignition	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
occurs												
Whether the												
flame tip												
reaches 150												
mm above	No	No	No	No	No	No	No	No	No	No	No	No
the flame	INO		INO	INO	INO	INO	INO	INO	NO	INO	NO	INO
application												
point within												
20s												
Whether												
ignition of	No	D NO N	No		Na	No	No	No	No	No	No	No
the filter			No	No	No							
paper occurs												

Note: Test specimens were cut from the sample.

Conclusion:

According to the test result and classification criteria (See table 1), the submitted sample satisfies Class $B_{\rm fl}$

Reaction to fire classification: B_{fl} -s1



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.sapx and, for electronic format documents, subject to its Terms and Conditions for the Electronic Document at http://www.sgs.com/en/Terms-and-Conditions/Terms-Document.sapx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document as advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a prearance of this document is infart. In the company subject to the Company. Any unauthorized alteration, forgery or falsification of the content or speearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing / Inspection report & certificate, please contact us at telephone:(86-755) 8307 1443, or email: CN.Doccheck@ags.com

No.31 Xiargiong Rod, XiargiAn Took hubsiAgalome, Xiang Fujian Povince, Chia. 361101
t (86-582) 576587
f (86-582) 576530
www.sgsgroup.com.on

中国 褚鑫·夏门·火炬 (開安) 产业区期虹路319
鄭編:361101
t (86-582) 576587
f (86-582) 5765380
www.sgsgroup.com.on



No. : XMIN2011010845CM Date : Nov 25, 2020 Page: 5 of 10

Statement: 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.

Class	Test method(s)	Classification criteria	Additional classification
A1 _{fl}	EN ISO 1182 ª	$\Delta T \leq 30$ °C; and	
	and	Δ <i>m</i> ≤ 50 %; and	-
		$t_{\rm f} = 0$ (i.e. no sustained flaming)	
	EN ISO 1716	$PCS \le 2,0 \text{ MJ/kg}^{a}$ and	
		$PCS \le 2,0 \text{ MJ/kg}^{\text{b}} \text{ and}$	
		$PCS \le 1,4 \text{ MJ/m}^2 \text{ c}$ and	-
		PCS ≤ 2,0 MJ/kg ^d	
A2 fl	EN ISO 1182 ª	$\Delta T \le 50$ °C and	
	or	Δ <i>m</i> ≤ 50 % and	-
		<i>t</i> _f ≤ 20 s	
	EN ISO 1716	$PCS \le 3,0 \text{ MJ/kg}^{a}$ and	
	and	$PCS \leq 4,0 \text{ MJ/m}^{2 \text{ b}} \text{ and}$	
		$PCS \le 4,0 \text{ MJ/m}^{2 \text{ c}} \text{ and}$	-
		PCS ≤ 3,0 MJ/kg ^d	
	EN ISO 9239-1 °	Critical flux $f \ge 8,0 \text{ kW/m}^2$	Smoke production ^g
B fl	EN ISO 9239-1 ^e	Critical flux ^f ≥ 8,0 kW/m ²	
	and		Smoke production ^g
	EN ISO 11925-2 h:	$F_{\rm S} \le 150 \text{ mm}$ within 20 s	
	Exposure = 15 s		

Table 1. Classes of reaction to fire performance for floorings



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-en-Document.aspx.termion is a future of the initiation of liability, indemnit cation and jurisdiction issues defined therein. Any holder of this document is a client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exconerate parties to a ransaction from exercising all their rights and obligations under the transaction document is. This document is experiate to the content or of appearance of this document is produced by prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone:(86-755) 8307 1443, or email: Ch.Doccheck@sgs.com

No.31Xianghong Road, Xiang'An Torch Industrial Zone, Xiamen, Fujian Province, China. 361101 t (86-592) 5765857 f (86-592) 5765830 www.sgsgroup.com.cn 中国・福建•厦门•火炬(拥安)产业区朔虹路31号 邮编:361101 t (86-592) 5765857 f (86-592) 5765880 e sgs.china@sgs.com



No. : XMIN2011010845CM Date : Nov 25, 2020 Page: 6 of 10

Class	Test method(s)	Classification criteria	Additional classification
C fl	EN ISO 9239-1 ^e	Critical flux ^f ≥ 4,5 kW/m ²	
	and		Smoke production ^g
	EN ISO 11925-2 ^h :	$F_{\rm S} \le 150$ mm within 20 s	
	Exposure = 15 s		
	EN ISO 9239-1 ^e	Critical flux ^f ≥ 3.0 kW/m ²	
Dfl	and		Smoke production ^g
	EN ISO 11925-2 h:	$F_{\rm S} \le 150 \text{ mm}$ within 20 s	Onloke production *
	Exposure = 15 s		
Efl	EN ISO 11925-2 ^h :	$F_{\rm S} \le 150$ mm within 20 s	_
	Exposure = 15 s		-
F _{fl}	EN ISO 11925-2 ^h :	Fs > 150 mm within 20 s	_
• П	Exposure = 15 s		-

^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 Test duration = 30 min.

^f 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).

 $g s1 = Smoke \le 750 \%$ minutes;

s2 = not s1.

^h Under conditions of surface flame attack and, if appropriate to the end use application of the product, edge flame attack



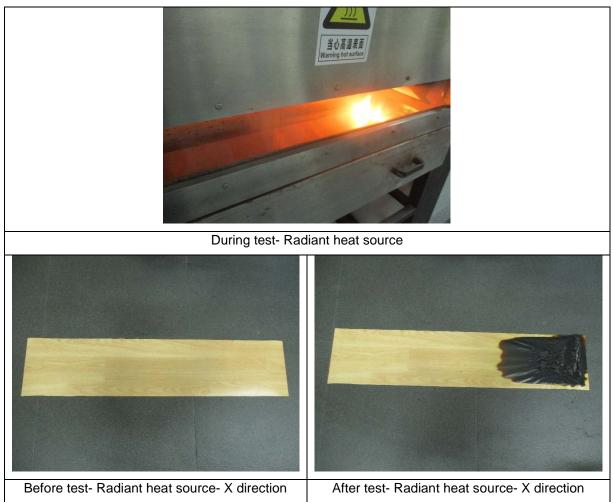
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com/en/Terms-and-Conditions.aspx</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com/en/Terms-and-Conditions/Terms-and-Conditi</u>

中国•福建•厦门•火炬(翔安) 产业区翔虹路31号 邮编:361101 t (86-592) 5765557 f (86-592) 57655380 e sgs.china@sgs.com



No. : XMIN2011010845CM Date : Nov 25, 2020 Page: 7 of 10

Test Photo:



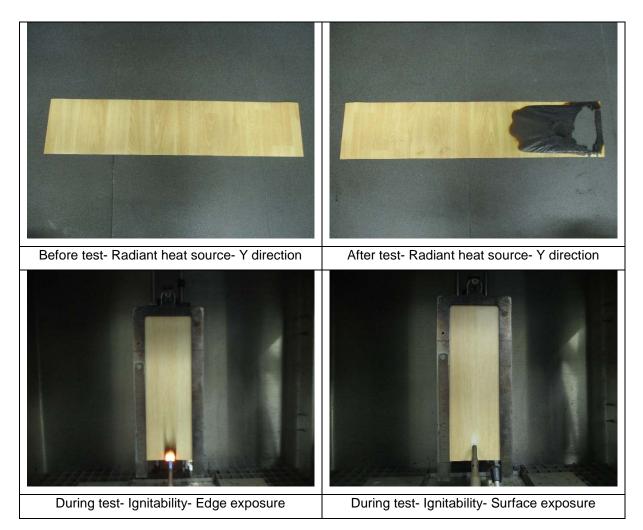


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com/en/Terms-and-Conditions.aspx</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com/en/Terms-and-Conditions/Terms-end-Condition</u>

No.31 Xianghong Road, Xiang'An Torch Industrial Zone, Xiamen, Fujian Province, China. 36 1101 t (86-592) 57655857 f (86-592) 5765580 www.sgsgroup.com.cn 中国•福建•厦门•火炬(翔安)产业区翔虹路31号 邮编:36 1101 t (86-592) 57655857 f (86-592) 5765580 e sgs.china@sgs.com



No. : XMIN2011010845CM Date : Nov 25, 2020 Page: 8 of 10



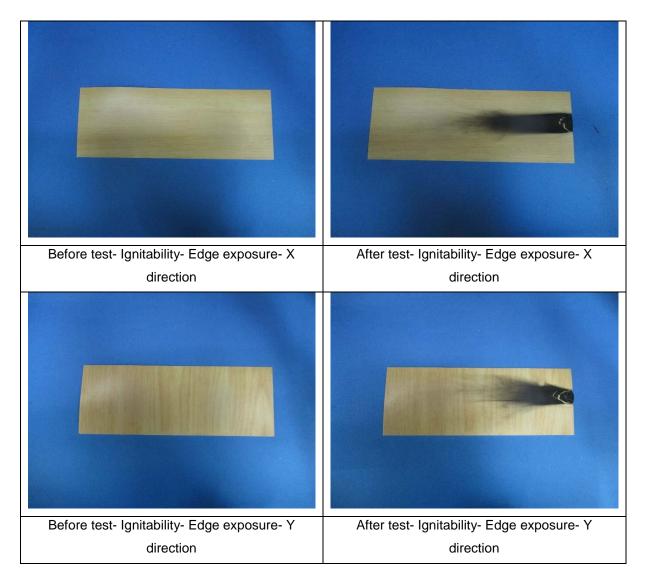


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.asp and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-en-Con

No.31 Xianghong Road, Xiang/An Torch Industrial Zone, Xiamen, Fujian Province, China. 361101 t (86-592) 5765857 f (86-592) 5765380 www.sgsgroup.com.cn 中国•福建•厦门•火炬(翔安)产业区翔虹路31号 邮编:361101 t (86-592) 5765857 f (86-592) 5765380 e sgs.china@sgs.com



No. : XMIN2011010845CM Date : Nov 25, 2020 Page: 9 of 10



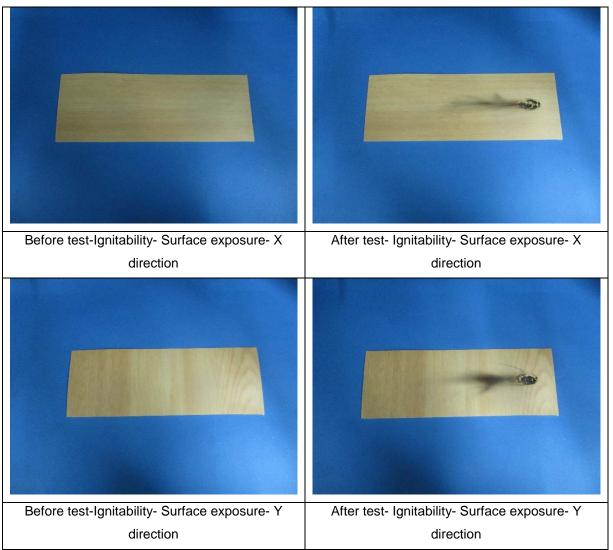


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/terms-en-Document.aspx. Attention is drawn to the limitation or liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of client's instructions, if any. The Company's soft esponsibility is to its Client's instructions, forgery or fasification of the company. Any unauthorized alteration, forgery or fasification of the comtent or appearance of this document is auniavful and offenders may be prosecuted to the fulliset stent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone:(86-755) 8307 1443, or email: CN.Doccheck@ags.com

No.31Xianghong Road, Xiang'An Torch Industrial Zone, Xiamen, Fujian Province, China. 361101 t (86-592) 5765857 f (86-592) 5765380 www.sgsgroup.com.cn 中国•福建•厦门•火炬(拥安)产业区頖虹路31号 邮编:361101 t (86-592) 5765857 f (86-592) 5765380 e sgs.china@sgs.com



No. : XMIN2011010845CM Date : Nov 25, 2020 Page: 10 of 10



Note: The above test was carried out by SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document cannot be reproduced except in full, without prior written approval of the Company. Any unautorized alteration, forgery or faisification of the Content or appearance of this document is unlawfui and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report feer only to the sample(s) tested and such sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone:(86-755) 8307 1443, or email: CN_Doccheck@sgs.com

中国•福建•厦门•火炬(翔安)产业区翔虹路31号 邮编:361101 t (86-592) 5765857 f (86-592) 5765380 e sgs.china@sgs.com