

TEST REPORT

No. : SHIN2104020512CM

Date : Apr 26, 2021

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CUSTOMER NAME: SAIGE LONGLIFE DECKING LIMITED
ADDRESS: VICARAGE BARNES LOWER QUINTON STRATFORD UPON AVON
WARWICKSHIRE CV378SH ENGLAND

Sample Name : SAIGE LONGLIFE DECKING
Product Specification : 143*23mm
Material and Mark : WPC
Other Information : Grey - Fire Resistant - Mid Groove Solid Decking

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.

Test Required : Please see the next page(s)
SGS Ref. No. : NJIN2103001325PS
Ref. Standard : Please see the next page(s)
Date of Receipt : Apr 01, 2021
Testing Start Date : Apr 01, 2021
Testing End Date : Apr 25, 2021
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
Service (Shanghai)Co., Ltd.

Ziven Wang
Authorized signatory

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Summary of Results:

No.	Test Item	Test Method	Result	Conclusion
1	Pendulum Test	BS 7976-2:2002+A1:2013	See result	/
2	Determination of the modulus of elasticity in bending and bending strength of profiles	BS EN 15534-1:2014+A1:2017 Clause 7.3.2 & Annex A	See result	/
3	Fire Classification for Burning Behavior of Flooring Material	BS EN 13501-1:2018 Clause 9 & EN ISO 9239-1:2010 & EN ISO 11925-2:2020	Br-s1	Pass

Note: Pass : Meet the requirements;
Fail : Does not meet the requirements;
/ : Not Apply to the judgment.




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Original Sample Photo(s):

	
<p>Pendulum Test / Determination of the modulus of elasticity in bending and bending strength of profiles (Front View)</p>	<p>Pendulum Test / Determination of the modulus of elasticity in bending and bending strength of profiles (Back View)</p>
	
<p>Fire Classification for Burning Behavior of Flooring Material</p>	

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1. Test Item: Pendulum Test

Test Method: BS 7976-2:2002+A1:2013

Test Condition:

Specimen: 200mm×143mm×23mm, 8pcs

Test Condition: Dry and wet

Testing Surface: Front view and back view

Test direction: Perpendicular to length

Test temperature: 22.6°C

Slider type: TRL

Temperature corrections for PTV: No correction

Lab Environmental Condition: 20±5°C, 50±5%RH

Test result:

Test Item		Test Result					
		PTV				Average of PTV	PTV (Temperature corrections)
Pendulum test – Front view	Dry	73	69	71	70	71	71
	Wet	45	45	46	47	46	46
Pendulum test – Back view	Dry	67	64	64	68	66	66
	Wet	43	40	42	39	41	41

Note: Test specimens were cut from original sample.

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2. Test Item: Determination of the modulus of elasticity in bending and bending strength of profiles

Test Method: BS EN 15534-1:2014+A1:2017 Clause 7.3.2 & Annex A

1) Test Condition:

Specimen: 600mm×143mm×23mm, 5pcs

Test Span: 300mm

Test Rate: 7.2mm/min

Lab Environmental Condition: 23±2°C, 50±5%RH

Test result:

Test item	Test result					
	Individual value					Average value
Bending Strength (MPa)	38.4	39.2	39.5	38.9	37.5	38.7
Modulus of Elasticity (MPa)	5219	5084	4823	5207	4935	5054

2) Test Condition:

Specimen: 600mm×143mm×23mm, 5pcs

Test Span: 350mm

Test Rate: 9.9mm/min

Lab Environmental Condition: 23±2°C, 50±5%RH

Test result:

Test item	Test result					
	Individual value					Average value
Bending Strength (MPa)	37.8	38.5	38.3	38.1	38.3	38.2
Modulus of Elasticity (MPa)	5409	5050	4949	5236	5307	5190

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3) Test Condition:

Specimen: 600mm×143mm×23mm, 5pcs

Test Span: 400mm

Test Rate: 12.9mm/min

Lab Environmental Condition: 23±2°C, 50±5%RH

Test result:

Test item	Test result					
	Individual value					Average value
Bending Strength (MPa)	37.9	37.4	36.9	38.1	37.2	37.5
Modulus of Elasticity (MPa)	4892	4906	4861	4929	5045	4926

Note: Test specimens were cut from original sample.

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3. Test item: Fire Classification for Burning Behavior of Flooring Material

Sample Description: Panel

Test Method: BS 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 x 230mm x23.3 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 spread of flame, mm	Critical heat flux (CHF or HF-30), kW/m ²	Integrated smoke value, %·min
1	10	>11	38.9
2	10	>11	23.5
3	10	>11	33.4
Average	10	>11	32

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 $\geq 11\text{kW/m}^2$.
3. Observations of the burning characteristics: Charring.

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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 x 90mm x 23.3 mm

Flame application time: 15s

Exposure conditions	Edge exposure			Surface exposure		
	1	2	3	1	2	3
Specimen No.	1	2	3	1	2	3
Whether ignition occurs	No	No	No	No	No	No
Whether the flame tip reaches 150 mm above the flame application point within 20s	No	No	No	No	No	No
Whether ignition of the filter paper occurs	No	No	No	No	No	No

Note:

1. Test specimens were cut from the sample.
2. Observations of the burning characteristics: Charring,.

Conclusion:

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

Reaction to fire classification: B_{fl}-s1

Client's Requirement: B_{fl}

Conclusion: Pass

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.

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Table 1. Classes of reaction to fire performance for floorings

Class	Test method(s)	Classification criteria	Additional classification
A1 _{fl}	EN ISO 1182 ^a and	$\Delta T \leq 30 \text{ }^\circ\text{C}$; 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 and $PCS \leq 1,4 \text{ MJ/m}^2$ ^c and $PCS \leq 2,0 \text{ MJ/kg}$ ^d	-
A2 _{fl}	EN ISO 1182 ^a or	$\Delta T \leq 50 \text{ }^\circ\text{C}$ and $\Delta m \leq 50 \%$ and $t_f \leq 20 \text{ s}$	-
	EN ISO 1716 and	$PCS \leq 3,0 \text{ MJ/kg}$ ^a and $PCS \leq 4,0 \text{ MJ/m}^2$ ^b and $PCS \leq 4,0 \text{ MJ/m}^2$ ^c and $PCS \leq 3,0 \text{ MJ/kg}$ ^d	-
	EN ISO 9239-1 ^e	Critical flux ^f $\geq 8,0 \text{ kW/m}^2$	Smoke production ^g
B _{fl}	EN ISO 9239-1 ^e and	Critical flux ^f $\geq 8,0 \text{ kW/m}^2$	Smoke production ^g
	EN ISO 11925-2 ^h : Exposure = 15 s	$F_s \leq 150 \text{ mm}$ within 20 s	-
C _{fl}	EN ISO 9239-1 ^e and	Critical flux ^f $\geq 4,5 \text{ kW/m}^2$	Smoke production ^g
	EN ISO 11925-2 ^h : Exposure = 15 s	$F_s \leq 150 \text{ mm}$ within 20 s	
D _{fl}	EN ISO 9239-1 ^e and	Critical flux ^f $\geq 3,0 \text{ kW/m}^2$	Smoke production ^g
	EN ISO 11925-2 ^h : Exposure = 15 s	$F_s \leq 150 \text{ mm}$ within 20 s	
E _{fl}	EN ISO 11925-2 ^h :	$F_s \leq 150 \text{ mm}$ within 20 s	-

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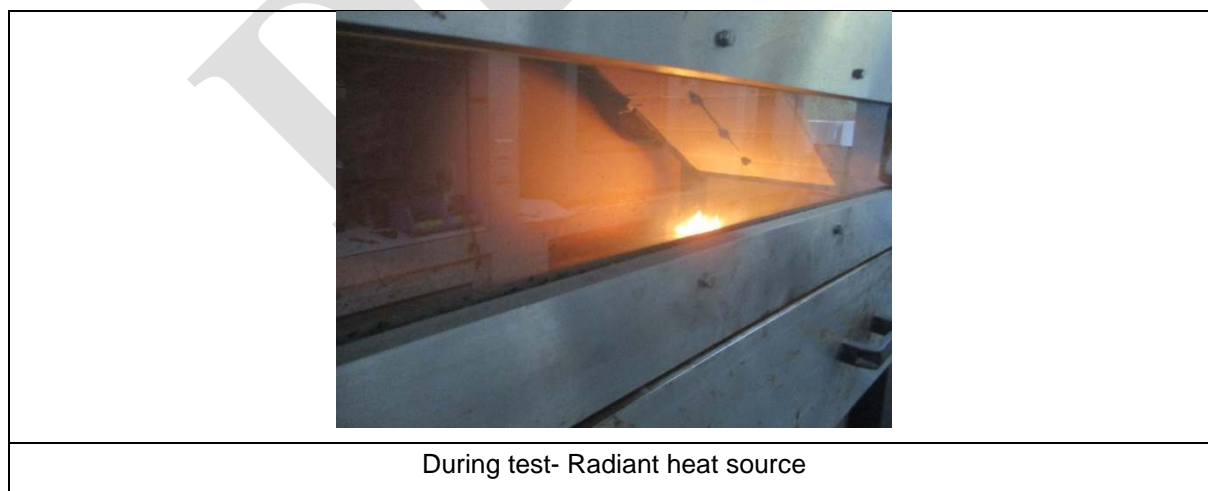
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	Exposure = 15 s		
F _{fl}	EN ISO 11925-2 ^h : Exposure = 15 s	F _s > 150 mm within 20 s	-

^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 ≤ 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

Test Photos:

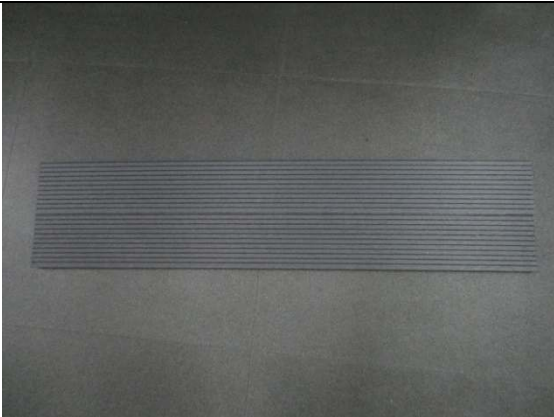





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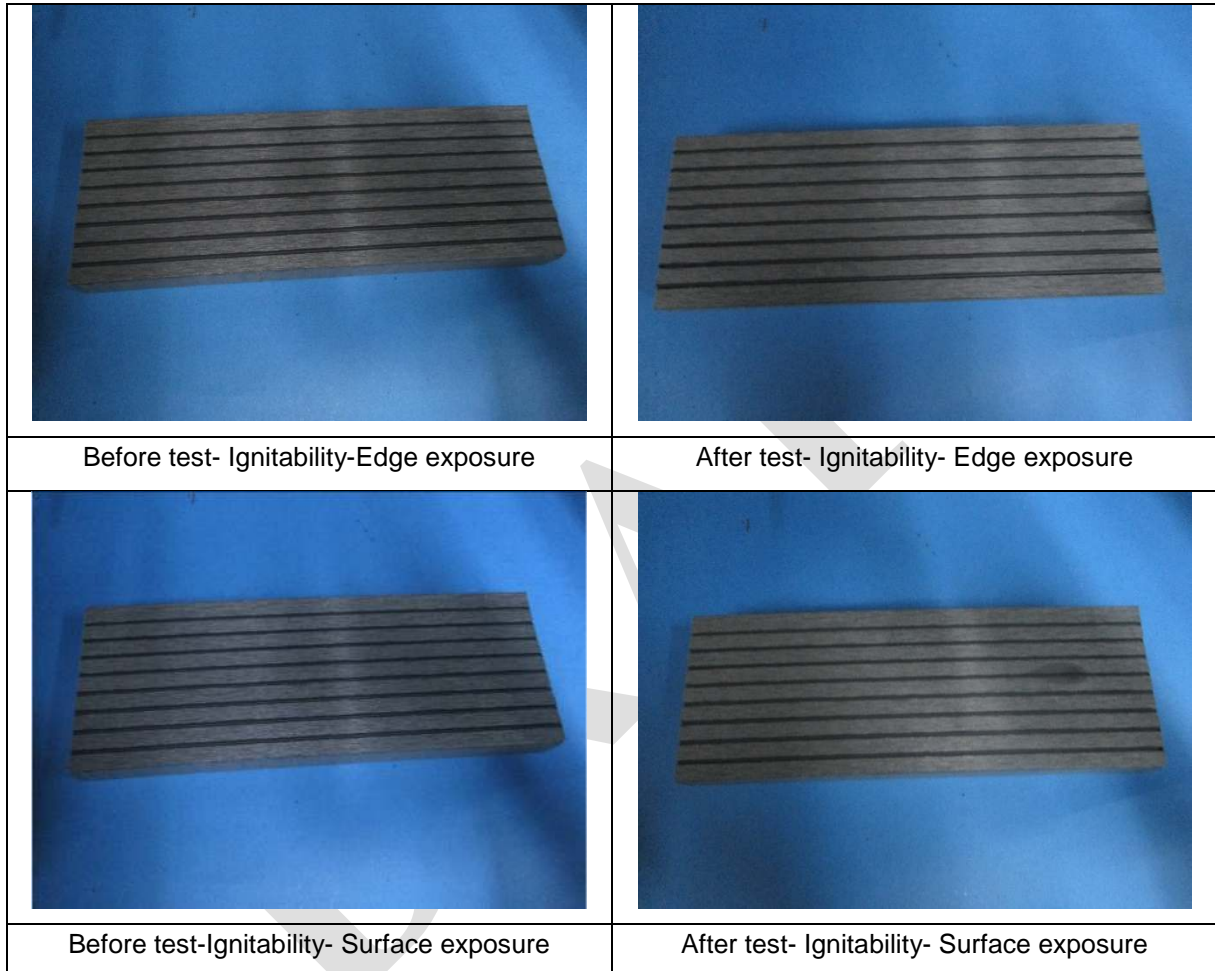
	
<p>Before test- Radiant heat source</p>	<p>After test- Radiant heat source</p>
	
<p>During test- Ignitability- Edge exposure</p>	<p>During test- Ignitability- Surface exposure</p>

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Note: The test was performed by SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Testing Center.

***** End of report*****