Longbanshan Area, Industral Zone,Suichang County,Lishui City,Zhejiang,China

Sample Description : Zhuart outdoor bamboo decking

The above sample(s) and data/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. Results apply only to the sample as received.

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SGS Ref. NO. : NBIN2406000068CM03

Sample Receiving Date : Aug. 12, 2024

Sample Acquisition Method : Customer sends samples by post

Test Performing Date : Aug. 23, 2024 TO Aug. 26, 2024

Test Requested:

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

Classes of reaction to fire performance for flooring, Class B_{fl}.

Test Results: -- See attached sheet --

Conclusion: According to the test result, Combustion properties identified as: B_{fl} -s1

Statement: The evaluation is based only on the actual value of laboratory activities, and the effect of uncertainty of laboratory activities is not included.

Signed for and on behalf of

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Luthor Ming

Approved signatory

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. Testing Center Fire Technology Service Laboratory.

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

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I. Test Conducted

This test was conducted in accordance with EN 13501-1:2018 Fire classification of construction products and building elements - Part 1: Classification using test 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 11925-2:2020 Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test.

II. Sample Details

Specimens Size	EN ISO 9239-1: 1050x230mm EN ISO 11925-2: 250x90mm	Tested Face	Any side
Mounting and fixing (EN ISO 9239-1)	Calcium silicate board, with its density approximate 900kg/m3, thickness approximate 11mm, is as the substrate. The test specimens are fixed mechanically to the substrate. Have joints in the specimens.		

III. Test Results

Test method	Parameter	Number of tests	Results
EN ISO 9239-1:2010	Critical Heat Flux(CHF) (kW/m^2)	4*	≥11
	Smoke(%×min)		91
EN ISO 11925-2:2020 Exposure = 15 s	Fs ≤ 150mm within 20 s	12	Yes

Note:

*- According to EN ISO 9239-1:2010 clause 8.2.6, test two samples in a certain direction and perpendicular to this direction and repeat the test twice in the direction with the lowest test value, a total of four tests. According to EN ISO 9239-1:2010 clause 9.2, calculate the average value of 3 samples in the same direction from the test data.

IV. Classification and field of application

a) Reference of classification

This classification has been carried out in accordance with EN 13501-1:2018. The classes with their corresponding fire performance are given in annex A.

b) Classification

The product, in relation to its reaction to fire behaviour is classified:

MEET	**Class B_{fl}**
Classification	**B_{fl}—s1**

c) Field of application

This classification is valid for the following end use applications:

--- With all substrates classified A1 and A2

--- With mechanically fixing

--- Have joints

This classification is valid for the following product parameters:

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

Annex A

Classes of reaction to fire performance for floorings

Class	Test methods	Classification	Additional classification
$A1_{fl}$	EN ISO 1182 [a] and	$\triangle T \leq 30℃$, and $\triangle m \leq 50\%$, and t_f=0(i.e. no sustained flaming)	-
	EN ISO 1716	PCS≤2.0MJ/kg [a] and PCS≤2.0MJ/kg [b] and PCS≤1.4MJ/m^2 [c] and PCS≤2.0MJ/kg [d]	-
$A2_{fl}$	EN ISO 1182 [a] or	$\triangle T \leq 50℃$, and $\triangle m \leq 50\%$, and $t_f \leq 20s$	-
	EN ISO 1716 and	PCS≤3.0MJ/kg [a] and PCS≤4.0MJ/m^2 [b] and PCS≤4.0MJ/m^2 [c] and PCS≤3.0MJ/kg [d]	-
	EN ISO 9239-1 [e]	Critical flux [f] ≥8.0kW/ m^2	Smoke production [g]
B_{fl}	EN ISO 9239-1 [e] and	Critical flux [f] ≥8.0kW/ m^2	Smoke production [g]
	EN ISO 11925-2 [h] Exposure =15s	Fs≤150mm within 20 s	-
C_{fl}	EN ISO 9239-1 [e] and	Critical flux [f] ≥4.5kW/ m^2	Smoke production [g]
	EN ISO 11925-2 [h] Exposure =15s	Fs≤150mm within 20 s	-

Class	Test methods	Classification	Additional classification
D_{fl}	EN ISO 9239-1 [e] and	Critical flux f ≥3.0 kW/m^2	Smoke production g
	EN ISO 11925-2 [h] Exposure =15s	Fs≤150mm within 20 s	-
E_{fl}	EN ISO 11925-2 [h] Exposure =15s	Fs≤150mm within 20 s	-
F_{fl}	EN ISO 11925-2 [h] Exposure =15s	Fs > 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.

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.
The test results or test reports shall not be used for improper or illegal publicity.
Within the territory of the people's Republic of China, this report is only used for domestic customers' scientific research, teaching, internal quality control and product R & D, and does not have the role of social certification.

Photo Appendix:

SHFS2408001105FF

SGS authenticate the photo on original report only

End of Report