

Test Report

Report No.: YJ2024030117

Page 1 of 5

Company Name: INOVA BUILDING BRANDS LIMITED

Address: LEVEL 1, 320 TI RAKAU DRIVE, BURWOOD, AUCKLAND 2013, NEW ZEALAND

The following sample(s) and sample information was/were submitted and identified on behalf of the client

Sample Name : 100% Polyester fiber
Client's Reference Information : 2024-3-8
Test Requested : EN 13501-1:2018
Test Item(s) : Burning behavior, Class B

Test Information

Sample Received Date : Mar. 18, 2024
Test Period : Mar. 18, 2024 to Mar. 25, 2024
Test Result(s) : Please see attach sheet.
Conclusion : The submitted sample(s) **complied** with the burning behavior requirements of EN 13501-1:2018 Class B(s1,d0).

Approved by: _____

WANG Junyan, Winson
Authorized Signatory

Date: _____ Mar. 25, 2024

Zhejiang CTI Foresight Testing Co., Ltd Room 101, No. 13-1, Building 13, No. 11, Lingang Road, Renhe Street, Yuhang District, Hangzhou, Zhejiang, China

Building 13-1, No. 11, Lingang Road, Renhe street, Yuhang District, Hangzhou, Zhejiang, China



Test Report

Report No.: YJ2024030117

Page 2 of 5

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:

- 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. Sample Details

- Description

Description	Polyester fiber	Color	Black
-------------	-----------------	-------	-------

- Mounting and fixing (EN 13823)

Calcium silicate board, with its density approximate 900kg/m³, thickness approximate 12mm, is as the substrate. The test specimens are fixed mechanically to the substrate. Have joints in the long wing.

III. Test Results

Test method	Parameter	Results
EN 13823	FIGRA _{0.2MJ} (W/s)	78.7
	FIGRA _{0.4MJ} (W/s)	78.7
	LFS < edge of specimen	Yes
	THR _{600s} (MJ)	4.8
	SMOGRAM ² /s ²)	23.9
	TSP _{600s} (m ²)	40.8
	Flaming droplets/particles	No
EN ISO 11925-2 ⁱ Exposure = 30 s	F _s ≤ 150 mm	Yes
	Ignition of the filter paper	No

IV. Classification

This classification has been carried out in accordance with EN 13501-1:2018, see Annex A.

Fire behaviour		Smoke production			Flaming droplets	
B	-	s	1	,	d	0

Reaction to fire classification: B - s1, d0

V. 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.



Test Report

Report No.: YJ2024030117

Page 3 of 5

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	$\Delta T \leq 30 \text{ }^\circ\text{C}$, and $\Delta m \leq 50 \%$, and $t_r = 0$ (i.e. no sustained flaming)	-
	EN ISO 1716	$\text{PCS} \leq 2.0 \text{ MJ/kg}^a$ and $\text{PCS} \leq 2.0 \text{ MJ/kg}^{b,c}$ and $\text{PCS} \leq 1.4 \text{ MJ/m}^2^d$ and $\text{PCS} \leq 2.0 \text{ MJ/kg}^e$	-
A2	EN ISO 1182 ^a or	$\Delta T \leq 50 \text{ }^\circ\text{C}$, and $\Delta m \leq 50 \%$, and $t_r \leq 20 \text{ s}$	-
	EN ISO 1716 and	$\text{PCS} \leq 3.0 \text{ MJ/kg}^a$ and $\text{PCS} \leq 4.0 \text{ MJ/m}^2^b$ and $\text{PCS} \leq 4.0 \text{ MJ/m}^2^d$ and $\text{PCS} \leq 3.0 \text{ MJ/kg}^e$	-
	EN 13823	$\text{FIGRA}_{0.2\text{MJ}} \leq 120 \text{ W/s}$ and LFS < edge of specimen and $\text{THR}_{600\text{s}} \leq 7.5 \text{ MJ}$	Smoke production ^f and Flaming droplets/particles ^g
B	EN 13823 and	$\text{FIGRA}_{0.2\text{MJ}} \leq 120 \text{ W/s}$ and LFS < edge of specimen and $\text{THR}_{600\text{s}} \leq 7.5 \text{ MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30 s	$F_s \leq 150 \text{ mm}$ within 60 s	
C	EN 13823 and	$\text{FIGRA}_{0.4\text{MJ}} \leq 250 \text{ W/s}$ and LFS < edge of specimen and $\text{THR}_{600\text{s}} \leq 15 \text{ MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30 s	$F_s \leq 150 \text{ mm}$ within 60 s	

Test Report

Report No.: YJ2024030117

Page 4 of 5

Class	Test method(s)	Classification criteria	Additional classification
D	EN 13823 And	$FIGRA_{0.4MJ} \leq 750 \text{ W/s}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30 s	$F_s \leq 150 \text{ mm within 60 s}$	
E	EN ISO 11925-2 ⁱ Exposure = 15 s	$F_s \leq 150 \text{ mm within 20 s}$	Flaming droplets/particles ^h
F	EN ISO 11925-2 ⁱ Exposure = 15 s	$F_s \leq 150 \text{ mm within 20 s}$	

- a For homogeneous products and substantial components of non-homogeneous products.
- b For any external non-substantial component of non-homogeneous products.
- c 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 $LFS < \text{edge of specimen}$, and $THR_{600s} \leq 4.0 \text{ MJ}$, and s_1 , and d_0 .
- d For any internal non-substantial component of non-homogeneous products.
- e For the product as a whole.
- f $s_1 = \text{SMOGRA} \leq 30 \text{ m}^2/\text{s}^2$ and $\text{TSP}_{600s} \leq 50 \text{ m}^2$; $s_2 = \text{SMOGRA} \leq 180 \text{ m}^2/\text{s}^2$ and $\text{TSP}_{600s} \leq 200 \text{ m}^2$; $s_3 = \text{not } s_1$ or s_2
- g $d_0 = \text{No flaming droplets/particles in EN 13823 within 600 s}$;
 $d_1 = \text{no flaming droplets/particles persisting longer than 10 s in EN 13823 within 600 s}$;
 $d_2 = \text{not } d_0 \text{ or } d_1$.
 Ignition of the paper in EN ISO 11925-2 results in a d_2 classification.
- h Pass = no ignition of the paper (no classification);
 Fail = ignition of the paper (d_2 classification).
- i Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack.



Test Report

Report No.: YJ2024030117

Page 5 of 5

Photo Appendix



有限公司

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The sample(s) and sample information was/were provided by the client who should be responsible for the authenticity which CTI-FST hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. CTI-FST has, therefore, play no part in the plan and procedure of sampling the product for the test;
5. The test report shall only be used for client scientific research, teaching, internal quality control, product research and development, etc... and just for client internal reference.

End of Report