



中国认可
国际互认
检测
TESTING
CNAS L0599

Test Report

NO.: SHFS2106000170FF

Date: Jun. 15, 2021

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Zenfeel China Co., Ltd

Shanghai, fengxian district, Haikun road 1, block 1

Sample Description : Polyester fiber acoustic panel
Style No. : ZenFelt-9
Thickness : 9mm
Density : 1900 g/m²
Composition : 100% polyester fiber

The above sample(s) 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 to the sample as received.

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 construction products excluding floorings and linear pipe thermal insulation products, Class B.

Test Results : -- See attached sheet --

Test Period

Sample Receiving Date : Jun. 4, 2021
Test Performing Date : Jun. 4, 2021 TO Jun. 15, 2021

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

Alex MAO
Lab Manager



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SHFS

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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 13823:2020 Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item.
- 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	1500x1000mm & 1500x495mm 250x90mm	Tested Face	Front side
Substrate	Calcium silicate board	Fixing method	Fix mechanically
Splicing method	None		
Mounting and fixing	Calcium silicate board, with its density approximate 900kg/m ³ , thickness approximate 9mm, is as the substrate. The Test specimens are fixed mechanically to the substrate. No joint in the long and short wings of the specimen.		

III. Test Results

Test method	Parameter	Results
EN 13823	FIGRA _{0.2MJ} (W/s)	36.2
	FIGRA _{0.4MJ} (W/s)	22.4
	LFS < edge of specimen	Yes
	THR _{600s} (MJ)	2.9
	SMOGR _A (m ² /s ²)	23.3
	TSP _{600s} (m ²)	123.7
	Flaming droplets/particles	No
EN ISO 11925-2 ⁱ Exposure = 30 s	F _s ≤ 150 mm	Yes
	Ignition of the filter paper	No



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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
Classification	B—s2, d0

c) Field of application

This classification is valid for the following end use applications:

- With all substrates classified A1 and A2
- Fix mechanically
- No joint

This classification is valid for the following product parameters:

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

IV. 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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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		$\Delta T \leq 30^{\circ}\text{C}$, 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 c} and PCS $\leq 1.4\text{MJ/m}^2$ ^d and PCS $\leq 2.0\text{MJ/kg}$ ^e	-
A2	EN ISO 1182 ^a or	and	$\Delta T \leq 50^{\circ}\text{C}$, and $\Delta m \leq 50\%$, and $t_f \leq 20\text{ s}$	-
	EN ISO 1716		PCS $\leq 3.0\text{MJ/kg}$ ^a and PCS $\leq 4.0\text{MJ/m}^2$ ^b and PCS $\leq 4.0\text{MJ/m}^2$ ^d and PCS $\leq 3.0\text{MJ/kg}$ ^e	-
	EN 13823		FIGRA _{0,2 MJ} $\leq 120\text{W/s}$ and LFS < edge of specimen and THR _{600s} $\leq 7.5\text{MJ}$	Smoke production ^f and Flaming droplets/particles ^g
B	EN 13823 and		FIGRA _{0,2 MJ} $\leq 120\text{W/s}$ and LFS < edge of specimen and THR _{600s} $\leq 7.5\text{MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s		within 60s Fs $\leq 150\text{mm}$	
C	EN 13823 and		FIGRA _{0,4 MJ} $\leq 250\text{W/s}$ and LFS < edge of specimen and THR _{600s} $\leq 15\text{MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s		Fs $\leq 150\text{mm}$ within 60 s	
D	EN 13823 and		FIGRA _{0,4 MJ} $\leq 750\text{W/s}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s		Fs $\leq 150\text{mm}$ within 60 s	



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E	EN ISO 11925-2 ⁱ Exposure =15s	Fs≤150mm within 20 s	Flaming droplets/particles ^h
F	EN ISO 11925-2 ⁱ Exposure = 15s	Fs>150mm 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 ≤ 2,0 MJ/m², provided that the product satisfies the following criteria of EN 13823: FIGRA ≤ 20 W/s, and LFS < edge of specimen, and THR_{600s} ≤ 4,0 MJ, and s1, and d0.
^d For any internal non-substantial component of non-homogeneous products.
^e For the product as a whole.
^f s1 = SMOGRA ≤ 30m²/s² and TSP_{600s} ≤ 50m²; s2 = SMOGRA ≤ 180m²/s² and TSP_{600s} ≤ 200m²; s3 = not s1 or s2
^g d0 = No flaming droplets/ particles in EN 13823 within 600 s;
d1 = no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600 s;
d2 = not d0 or d1.
Ignition of the paper in EN ISO 11925-2 results in a d2 classification.
^h Pass = no ignition of the paper (no classification);
Fail = ignition of the paper (d2 classification).
ⁱ Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack.



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Photo Appendix:



Before test(EN 13823)

After test(EN 13823)

SGS authenticate the photo on original report only

End of Report

