Polyester panel - EN reaction to fire

Source report: SHFTS24000011R01_CN

English reference translation. Prepared from the supplied Chinese report. This translation is not issued, approved or certified by the testing laboratory. Original-language report and issuer records prevail. Company names and personal names translated or transliterated from Chinese are for identification only, not verified registered English names.

Sample-specific evidence: this document does not establish certification or performance of every HUANGSI pod, or identify the tested sample as SL-XL1.

Report identity

Field	Source information
Report / date	SHFTS24000011R01_CN / 2 January 2025
Client	Nuo'ao (Fujian) Eco-friendly Home Products Co., Ltd. (translated name)
Address	Xingtai Industrial Zone, Changtai Economic Development Zone, Zhangzhou, Fujian
Sample	Flame-retardant environmentally friendly polyester fiber sound-absorbing decorative panel
SGS reference	SHIN2412003048CM01
Receipt / testing	16 December 2024 / 16-30 December 2024
Issuer / signatory	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. / Ming Liang (transliterated)

Sample data and information were supplied and confirmed by the client. SGS disclaims responsibility for their authenticity, completeness and resulting validity of results/conclusions. Results apply to the sample received. The supplied Chinese report is itself a translation of SHFTS24000011R01_EN; the original English report prevails in any discrepancy. That original English issue was not included in this package.

Request and classification

EN 13501-1:2018: fire classification of construction products and building elements, Part 1, using reaction-to-fire test data; non-flooring products excluding linear pipe thermal insulation; requested Class B. Conclusion: **B-s2,d0**. The conformity statement uses actual measured values without accounting for measurement uncertainty.

Methods and mounting

EN 13823:2020+A1:2022 (single burning item for non-flooring building products) and EN ISO 11925-2:2020 (single-flame source ignitability), 30 s ignition. EN 13823 specimens: 1500 x 1000 mm and 1500 x 495 mm; EN ISO 11925-2 specimens: 250 x 90 mm. Calcium-silicate substrate, about 900 kg/m3 and 9 mm thick; mechanical screw fixing; no joints; gray test face.

Parameter	Result
EN 13823 specimens	3
FIGRA0.2MJ / FIGRA0.4MJ	34.1 / 34.1 W/s
LFS below long-wing edge	Yes
THR600s	3.2 MJ
SMOGRA / TSP600s	28.1 m2/s2 / 151.4 m2
Flaming droplets/particles within 600 s	None

Parameter	Result
EN ISO 11925-2 specimens	12
Fs<=150 mm within 60 s	Yes
Filter paper ignited	No

Field of application

Class B; reaction-to-fire classification B-s2,d0. Valid only with A1 or A2 substrates, mechanical screw fixing and no joints, and when specimen parameters match Section II of the source. This is a panel classification under the specified mounting conditions, not a whole-cabin fire-resistance rating.

Appendix A - classification criteria

Translated from the appendix in the supplied report; these are classification criteria, not additional test results for the sample.

Class / method	Classification criteria (as supplied)
A1 / EN ISO 1182; EN ISO 1716	Temperature rise <=30 C; mass loss <=50%; sustained flaming tf=0. PCS <=2.0 MJ/kg (a); <=2.0 MJ/kg (b,c); <=1.4 MJ/m2 (d); <=2.0 MJ/kg (e).
A2 / EN ISO 1182 or EN ISO 1716, and EN 13823	Temperature rise <=50 C; mass loss <=50%; tf<=20 s; or PCS <=3.0 MJ/kg (a), <=4.0 MJ/m2 (b,d), <=3.0 MJ/kg (e). Also FIGRA0.2MJ<=120 W/s, LFS<specimen edge and THR600s<=7.5 MJ. Smoke and droplets classifications apply.
B / EN 13823 and EN ISO 11925-2	FIGRA0.2MJ<=120 W/s; LFS<specimen edge; THR600s<=7.5 MJ. Ignition 30 s: Fs<=150 mm within 60 s. Smoke and droplets classifications apply.
C / same methods	FIGRA0.4MJ<=250 W/s; LFS<specimen edge; THR600s<=15 MJ. Ignition 30 s: Fs<=150 mm within 60 s. Smoke and droplets classifications apply.
D / same methods	FIGRA0.4MJ<=750 W/s. Ignition 30 s: Fs<=150 mm within 60 s. Smoke and droplets classifications apply.
E / EN ISO 11925-2	Ignition 15 s: Fs<=150 mm within 20 s. Filter-paper ignition determines the supplementary droplets classification.
F / EN ISO 11925-2	Ignition 15 s: Fs>150 mm within 20 s.

Notes a-e: (a) homogeneous products and substantial components of non-homogeneous products; (b) external non-substantial components; (d) any internal non-substantial component; (e) the whole product. (c) Alternative for external non-substantial components with PCS<=2.0 MJ/m2: the whole product must satisfy FIGRA<=20 W/s, LFS<specimen edge, THR600s<=4.0 MJ, s1 and d0.

Smoke: s1 requires SMOGRA<=30 m2/s2 and TSP600s<=50 m2; s2 requires SMOGRA<=180 m2/s2 and TSP600s<=200 m2; s3 does not achieve s1 or s2.

Flaming droplets/particles: d0 = none within 600 s; d1 = none persisting longer than 10 s within 600 s; d2 = neither d0 nor d1. Under EN ISO 11925-2, ignition of filter paper leads to d2. For class E, pass means filter paper not ignited; fail means ignited (d2). Flame exposure is to the surface and, where relevant to end use, the edge.

Source declaration: results relate to sample performance under specified test conditions and cannot alone assess potential fire hazard in actual use. Test results and reports must not be used for improper or illegal publicity.

Photographic appendix

Source page 5: before and after EN 13823 testing. Photographs may only be used together with the SGS original report; the complete supplied report follows.

Complete original report

The following appendix reproduces every page of the supplied original report, including photographs, diagrams, signatures, seals and source terms. No translated seal or laboratory signature has been created. Refer to these original pages for graphic details and handwritten signatures.

检测报告

编号: SHFTS24000011R01_CN　日期: 2025 年 1 月 2 日　页码: 第 1 页 共 5 页

诺奥（福建）环保家居用品有限公司

福建省漳州市长泰经济开发区兴泰工业园区

样品描述　：　阻燃环保聚酯纤维吸音装饰板

以上测试样品数据和信息为客户提供并确认，SGS 不对这些数据和信息的真实性、完整性以及由此引发的结果和/或结论的有效性负责。检测结果适用于收到的样品。

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此报告是报告号为 SHFTS24000011R01_EN 的中文译本，如中英文有差异，概以英文为准。

SGS 参考号	：	SHIN2412003048CM01
试样收到日期	：	2024-12-16
测试执行时间	：	2024-12-16 至 2024-12-30
测试要求	：	EN 13501-1:2018 建筑材料及制品燃烧性能分级 第 1 部分：利用火反应数据分级 非铺地及管道隔热产品的燃烧性能等级，B 级
测试结果	：	--参见数据附表--
结论	：	根据测试结果及燃烧性能等级判据，燃烧性能等级为：B -s2, d0
陈述	：	此符合性声明仅基于本次实验室活动的实际值，未将本次实验室活动的结果不确定度影响计入。

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I. 测试方法

试验根据 EN 13501-1:2018 建筑材料及制品燃烧性能分级 第 1 部分：利用火反应数据分级进行， 测试方法如下：

1) EN 13823: 2020+A1:2022 建筑材料燃烧性能测试 除地板外的建筑材料的单体燃烧试验
2) EN ISO 11925-2:2020 燃烧性能测试 建筑材料直接受火的可燃性 第 2 部分：单一火源试验

II. 样品描述

试样大小	EN 13823：1500x1000mm 和 1500x495mm EN ISO 11925-2：250x90mm

EN 13823 试样的安装与固定：

基材	硅酸钙板	安装方式	螺钉机械固定
拼接方式	无	测试面	灰色面
安装与固定	采用密度约 900kg/m³，厚度约 9mm 的硅酸钙板作为基材。 样品采用螺钉机械方式固定于基材上，样品无接缝。		

III. 测试结果

测试方法	参数	样品数量	结果
EN 13823: 2020+A1:2022	燃烧增长速率指数 $FIGRA_{0.2MJ}$ (W/s)	3	34.1
	燃烧增长速率指数 $FIGRA_{0.4MJ}$ (W/s)		34.1
	火焰横向蔓延是否小于试样长翼边缘（是/否）		是
	前 600 秒总放热量 THR_{600s}(MJ)		3.2
	烟气生成速率指数 SMOGRA(m^2/s^2)		28.1
	前 600 秒总产烟量 TSP_{600s}(m^2)		151.4
	600s 内是否有燃烧滴落物/颗粒物 [若有，燃烧时间：(≤10s / >10s)]		无
EN ISO 11925-2:2020 [i] 点火时间 = 30 s	60s 内焰尖高度 Fs≤150mm	12	是
	是否点燃滤纸（是/否）		否

IV. 分级和应用领域

a) 分级依据

依据 EN 13501-1:2018进行分级，分级参数参见附录A。

b) 燃烧分级

所提供样品，分级如下：

符合	**B 级**
燃烧性能等级	**B—s2, d0**

c) 应用领域

本测试分级对于在下述最终应用条件下有效：

--- 基材防火等级达到A1或A2

--- 螺钉机械固定

--- 无接缝

本分级报告仅对试样参数符合本报告第II部分描述时有效。

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附录 A

建筑材料及制品（铺地材料和管状隔热材料除外）燃烧性能分级

等级	试验标准		分级判据	附加分级
A1	EN ISO 1182 [a] 且		△T≤30°C，且 △m≤50%，且 t_f=0（无持续燃烧）	-
	EN ISO 1716		PCS≤2.0MJ/kg [a] 且 PCS≤2.0MJ/kg [b c] 且 PCS≤1.4MJ/m² [d] 且 PCS≤2.0MJ/kg [e]	-
A2	EN ISO 1182 [a] 或	且	△T≤50°C，且 △m≤50%，且 t_f≤20 s	-
	EN ISO 1716		PCS≤3.0MJ/kg [a] 且 PCS≤4.0MJ/m² [b] 且 PCS≤4.0MJ/m² [d] 且 PCS≤3.0MJ/kg [e]	-
	EN 13823 且		$FIGRA_{0,2\ MJ}$≤120W/s 且 LFS<试样边缘且 THR_{600s}≤7.5MJ	产烟量 [f] 且 燃烧滴落物/微粒 [g]
B	EN 13823 且		$FIGRA_{0,2\ MJ}$≤120W/s 且 LFS<试样边缘且 THR_{600s}≤7.5MJ	产烟量 [f] 且 燃烧滴落物/微粒 [g]
	EN ISO 11925-2 [i] 点火时间=30s		60s 内 Fs≤150mm	
C	EN 13823 且		$FIGRA_{0,4\ MJ}$≤250W/s 且 LFS<试样边缘 且 THR_{600s}≤15MJ	产烟量 [f] 且 燃烧滴落物/微粒 [g]
	EN ISO 11925-2 [i] 点火时间=30s		60s 内 Fs≤150mm	
D	EN 13823 且		$FIGRA_{0,4\ MJ}$≤750W/s	产烟量 [f] 且 燃烧滴落物/微粒 [g]
	EN ISO 11925-2 [i] 点火时间=30s		60s 内 Fs≤150mm	
E	EN ISO 11925-2 [i] 点火时间=15s		20s 内 Fs≤150mm	燃烧滴落物/微粒 [h]
F	EN ISO 11925-2 [i] 点火时间=15s		20s 内 Fs>150mm	

a 匀质制品和非匀质制品的主要组份。
b 非匀质制品的外部次要组份。
c 另一个可选择的判据是：对 PCS≤2.0MJ/m² 的外部次要组份，则要求满足 FIGRA≤20W/s、 LFS＜试样边缘、THR_{600s}≤4.0MJ、s1 和 d0。
d 非匀质制品的任一内部次要组份。
e 整体制品。

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等级	试验标准	分级判据	附加分级
f s1=SMOGRA≤30m^2/s^2 且 TSP_{600s}≤50m^2；s2 =SMOGRA≤180m^2/s^2 且 TSP_{600s}≤200m^2； s3=未达到 s1 或 s2。 g d0=按 EN 13823 规定，600s 内无燃烧滴落物/微粒； d1=按 EN 13823 规定，600s 内燃烧滴落物/微粒持续时间不超过 10s； d2=未达到 d0 或 d1。 按照 EN ISO 11925-2 规定，过滤纸被引燃，则该制品为 d2 级； h 通过=过滤纸未被引燃； 未通过=过滤纸被引燃（d2 级）。 i 火焰轰击制品的表面和（如果适合该制品的最终应用）边缘。			

声明：

在特定的试验条件下，试验结果与试样的性能有关；试验结果不能作为评估制品在实际使用条件下潜在火灾危险性的唯一依据。

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附录照片：



测试前(EN 13823)	测试后(EN 13823)

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