

Test Report

No. SDFS2407005363FF

Date: Aug.08, 2024

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DONGGUAN BAORONG PACKAGING MATERIALS CO., LTD

NO. 5, XINGTANG STREET, DATANG VILLAGE, DALINGSHAN TOWN, DONGGUAN CITY

Sample Description: NAUGHTY CASTLE IS IN CHARGE**Product usage:** DECORATIVE MATERIALS FOR ENTERTAINMENT VENUES

The above data and 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.

The report is English version of Chinese test report SDFS2407005363FF_CN. The Chinese version shall prevail in case of discrepancy between the Chinese version and English version.

SGS Ref. No.: SZP24-032440**Sample Receiving Date:** Jul.23, 2024**Test Performing Date:** Jul.23, 2024 to Aug.07, 2024**Test Requested:**

GB 8624-2012 Fire classification for burning behavior of building materials and products

Clause 5.1.1 Table 2 Classes of reaction to fire performance for slab building materials and construction products

Test Results: -- See attached sheet --**Conclusion:** According to the test result, Combustion properties identified as: GB 8624 B₂ (D-s3,d0)

Signed for and on behalf of
 Shunde Branch
 SGS-CSTC Co., Ltd.



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SDFS2407005363FF

 Verification:
 check.sgsonline.com.cn

Liu Nan
 Approved signatory



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I. Test Conducted

GB 8624-2012 Fire classification for burning behavior of building materials and products.

Clause 5.1.1 Table 2 Classes of reaction to fire performance for slab building materials and construction products. And the test methods as following:

1. GB/T 20284-2006 Single burning item test for building materials and products;
2. GB/T 8626-2007 Test method of flammability for building materials;

II. Sample Description

External Diameter	80mm
Wall Thickness	15mm
Exposed surface	One surface

Mounting and fixing (For GB/T 20284):

The sample is installed on the iron mesh and fixed with iron wire, with a distance of 80mm between the sample and the back plate.

III. Test Results:

Test method	Parameter	Number of tests	Results
GB/T 20284-2006	FIGRA _{0.2MJ} (W/s)	3	345.2
	FIGRA _{0.4MJ} (W/s)		345.2
	LFS< edge of specimen (Yes/No)		Yes
	THR _{600s} (MJ)		5.8
	SMOGRA (m ² /s ²)		386.7
	TSP _{600s} (m ²)		154.8
	Flaming particles or droplets within 600s (Yes/No); Combustion time, if any burning time: (≤10s / >10s)		No
GB/T 8626-2007 Exposure = 30 s	Whether vertical flame spread (Fs) in excess of 150 mm within 60s (Yes/No)	6	No
	Ignition of the filter paper within 60s(Yes/No)		No

Remark:

FIGRA-Fire growth rate index used for classification purposes [W/s]



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LFS-Lateral flame spread [m]

THR_{600s}-Total heat release within 600 s [MJ]

SMOGRA-Smoke growth rate [m²/s²]

TSP_{600s} – Total smoke production within 600s[m²]

IV. Classification and direct field of application

This classification has been carried out in accordance with GB 8624-2012 Clause 5.1.1 Table 2 Classes of reaction to fire performance for slab building materials and construction products: The classes with their corresponding fire performance are given in Appendix A.

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

Reaction to fire classification: GB 8624 B₂ (D-s3, d0)

b) Field of application

This classification is valid for the following end use applications:

- With mechanically fixing
- Fixed with iron mesh

Appendix A

GB 8624 Table 2 Classes of reaction to fire performance for slab building materials and construction products

Class		Test method(s)		Classification criteria
A	A1	GB/T 5464 ^a	and	$\Delta T \leq 30^{\circ}\text{C};$
				$\Delta m \leq 50\%;$
				$t_f = 0$
		GB/T 14402		$\text{PCS} \leq 2.0\text{MJ/kg}^{\text{a, b, c, e}};$
				$\text{PCS} \leq 1.4\text{MJ/m}^2^{\text{d}}$
	A2	GB/T 5464 ^a or	and	$\Delta T \leq 50^{\circ}\text{C};$
$\Delta m \leq 50\%;$				
			$t_f \leq 20\text{ s}$	
	GB/T 14402		$\text{PCS} \leq 3.0\text{MJ/kg}^{\text{a, e}};$	
			$\text{PCS} \leq 4.0\text{MJ/m}^2^{\text{b, d}}$	
	GB/T 20284		$\text{FIGRA}_{0.2\text{MJ}} \leq 120\text{W/s};$	
			$\text{LFS} < \text{edge of specimen};$	
			$\text{THR}_{600\text{s}} \leq 7.5\text{ MJ}$	



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Class	Test method(s)	Classification criteria
B ₁	GB/T 20284 and	FIGRA _{0.2MJ} ≤ 120W/s; LFS < edge of specimen; THR _{600s} ≤ 7.5MJ
	GB/T 8626 Exposure = 30s	Fs ≤ 150mm within 60s; No ignition of paper within 60s
	GB/T 20284 and	FIGRA _{0.4MJ} ≤ 250W/s; LFS < edge of specimen; THR _{600s} ≤ 15MJ
	GB/T 8626 Exposure = 30s	Fs ≤ 150mm within 60 s; No ignition of paper within 60s
B ₂	GB/T 20284 and	FIGRA _{0.4MJ} ≤ 750W/s
	GB/T 8626 Exposure = 30s	Fs ≤ 150mm within 60 s; No ignition of paper within 60s
	GB/T 8626 Exposure = 15s	Fs ≤ 150mm within 20 s; No ignition of paper within 20s
B ₃	F	No performance determined

^a For homogeneous products or substantial components of non-homogeneous products.

^b For any external non-substantial component of non-homogeneous products.

^c any external non-substantial component having a PCS ≤ 2.0 MJ/m² , provided that the product satisfies the following criteria of FIGRA_{0.2MJ} ≤ 20 W/s, and LFS < edge of specimen, and THR_{600s} ≤ 4.0 MJ, and s1, and d0 can be defined A1.

^d For any internal non-substantial component of non-homogeneous products.

^e For the product as a whole.

Insulation foam metope, in addition to comply with stipulated in table 2 shall be at the same time satisfy the following requirements: B₁ level oxygen index (OI 30% or higher; B₂ level oxygen index (OI 26% or higher)



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GB 8624 Table B.1 smoke production levels and grading criterion

SMOGRA	Test Method	Requirement
s1	GB/T 20284	SMOGRA $\leq 30\text{m}^2/\text{s}^2$; TSP _{600s} $\leq 50\text{m}^2$
s2		SMOGRA $\leq 180\text{m}^2/\text{s}^2$; TSP _{600s} $\leq 200\text{m}^2$
s3		not s1 or s2

GB 8624 Table B.2 Burning droplets / particles grades and grading criterion

Burning droplets / particles grades	Test Method	Requirement
d0	GB/T 20284	No flaming droplets/ particles within 600 s
d1		Flaming droplets/ particles persisting longer than 10 s within 600 s
d2		not d0 or d1

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.

Photo Appendix:



End of Report



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