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检测
TESTING
CNAS L4743

Test Report

Report No.: AJFS2405005531FF

Date: JUN.04, 2024

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SHANGHAI KINGKUS NEW MATERIAL CO.,Ltd.

602, No.7, PoweLong Business Center, Lane 689 Hope Road, Jiading New City,

Malu Town, Jiading District, Shanghai 201801, China

Sample Description: 9mm POLYESTER FIBER ACOUSTIC PANEL

SGS Ref No.: SHIN2405001128CM01

Material and Mark: POLYESTER ACOUSTIC PANEL

Product Specification: 2440*1220*9mm

Buyer: REM DECO

Style / Item No.: /

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 arising therefrom. Results apply to the sample as received.

Test Requested:

EN 45545-2:2020 Railway applications—Fire protection on railway vehicles Part 2: Requirements for fire behavior of materials and components, and testing according to Table 5 — Material requirement sets (R1).

T11.01 EN 17084:2018 Railway applications – Fire protection on railway vehicles – Toxicity test of materials and components. Method 1, Smoke chamber + FTIR. Heat flux 50kW/m² without pilot flame, test duration is 10min.

Test Results: -- See attached sheet --

Test Period:

Sample Receiving Date : MAY 20, 2024

Test Performing Date : MAY 20, 2024 TO MAY 28, 2024

Signed for and on behalf of

SGS-CSTC Standards Technical Services Co., Ltd. Anji Branch

Echo

Echo Li

Approved Signatory



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I. Description of Test specimens

Sample description	9mm polyester fiber acoustic panel (provided by client)
Color	White
Thickness	About 9.0mm
Exposed (test) surface	Any surface
Size of specimens	75mm×75mm

II. Summary of test results

Requirement set (used for)	Test method reference	Parameter and Unit	Test results *
R1	T11.01 EN 17084 Method 1: 50 kW/m ²	CIT _G dimensionless	0.089

* For the test details, please see the appendix of this test report.



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Test Criteria, EN 45545-2:2020, Table 5, Material requirement sets, R1

Requirement set (used for)	Test method reference	Parameter and unit	Maximum or Minimum	HL1	HL2	HL3
R1 (IN1A; IN1B; IN1D; IN1E; IN4; IN5; IN6A; IN7; IN8; IN9B; IN11; IN12A; IN12B; IN14; EX4A; F5)	T02 ISO 5658-2	CFE kWm ⁻²	Minimum	20 _a	20 _a	20 _a
	T03.01 ISO 5660-1; 50 kWm ⁻²	MARHE kWm ⁻²	Maximum	--	90	60
	T10.01 EN ISO 5659-2; 50 kWm ⁻²	D _s (4) dimensionless	Maximum	600	300	150
	T10.02 EN ISO 5659-2; 50 kWm ⁻²	VOF ₄ min	Maximum	1200	600	300
	T11.01 EN 17084 Method 1 50 kWm ⁻²	CIT _G dimensionless	Maximum	1.2	0.9	0.75

^a If flaming droplets / particles are reported according to 5.3.8 during the test ISO 5658-2, or for the special case of materials which do not ignite in ISO 5658-2 and are additionally reported as unclassifiable, the following requirements shall be added:

Test to the requirements of T05 (EN ISO 11925-2 with 30 s flame application).

The acceptance requirements are:

--- flame spread ≤ 150 mm within 60 s.

--- no burning droplets / particles.

Statements:

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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APPENDIX: T11.01 EN 17084:2018 Railway applications – Fire protection on railway vehicles – Toxicity test of materials and components. Method 1, Smoke chamber + FTIR. Heat flux 50kW/m² without pilot flame, test duration is 10min.

1. Conditioning

T: 23±2°C and R.H 50±5%, until the test sample was conditioned to constant mass.

2. Test results

1) 4 min after the test start

Gas	1	2	3	Average
Carbon Dioxide (CO ₂)	21537.0	23318.6	23786.9	22880.8
Carbon Monoxide (CO)	433.9	556.4	555.3	515.2
Hydrogen Fluoride (HF)	ND	ND	ND	---
Hydrogen Chloride (HCl)	ND	ND	ND	---
Hydrogen Bromide (HBr)	ND	ND	ND	---
Hydrogen Cyanide (HCN)	4.6	3.4	4.1	4.0
Nitrogen Oxides (NO _x)	8.3	9.4	9.2	9.0
Sulphur Dioxide (SO ₂)	ND	ND	ND	---

2) 8 min after the test start

Gas	1	2	3	Average
Carbon Dioxide (CO ₂)	28519.3	27831.0	28585.3	28311.9
Carbon Monoxide (CO)	657.0	653.4	737.8	682.7
Hydrogen Fluoride (HF)	ND	ND	ND	---
Hydrogen Chloride (HCl)	ND	ND	ND	---
Hydrogen Bromide (HBr)	ND	ND	ND	---
Hydrogen Cyanide (HCN)	2.4	2.0	1.7	2.0
Nitrogen Oxides (NO _x)	7.9	6.1	7.3	7.1
Sulphur Dioxide (SO ₂)	ND	ND	ND	---

Where, ND indicates Non-detected.

Note: All values given are in mg/m³.



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3) Calculation of CIT_G

Gas component	Reference concentration; mg/m ³
Carbon Dioxide (CO ₂)	72 000
Carbon Monoxide (CO)	1 380
Hydrogen Bromide (HBr)	99
Hydrogen Chloride (HCl)	75
Hydrogen Cyanide (HCN)	55
Hydrogen Fluoride (HF)	25
Nitrogen Oxides (NO _x)	38
Sulphur Dioxide (SO ₂)	262

$$CIT_G = 0.0805 \cdot \sum_{i=1}^{i=8} \frac{c_i}{C_i}$$

Where,

CIT_G — Conventional Index of toxicity.

c_i — Concentration of the i^{th} gas.

C_i — Reference concentration of the i^{th} gas.

PARAMETER	1	2	3	Average
CIT_G (4 min)	0.074	0.083	0.084	0.081
CIT_G (8 min)	0.090	0.085	0.093	0.089



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Photo Appendix:



SGS authenticate the photo on original report only

End of Report



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