TEST REPORT

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SHIN2507001858CM01
Verification:
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No. : SHIN2507001858CM01_EN
Date : 2025-09-03

CUSTOMER NAME: AREA FLOORS ZEMIN KAPLAMALARI SANAYI VE TICARET ANONIM ŞIRKETI AND AKGÜN YAPI VE ZEMIN KAPLAMALARI SAN. VE DIS. TIC. LTD. STI.

ADDRESS: ÖMERLI, ILGAZ SK. NO:7/1, 34275 ARNAVUTKÖY/İSTANBUL, TURKEY

Sample Name : SPC FLOORING

Other Information : Product description: SPC Flooring, 5+1 mm (IXPE), 0.50 mm wear layer

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

****

Date of Receipt : 2025-07-23

Testing Period : 2025-07-23 ~ 2025-08-26

Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services (Shanghai) Co., Ltd..

Xander Yang

Xander Yang
Authorized signatory

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TEST REPORT

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Summary of Results:

No.	Test Item	Test Method	Result	Conclusion
1	Formaldehyde Emission	With reference to EN 717-1:2004	See Result	N/A
2	Reaction to Fire Tests	EN 13501-1:2018	See Result	N/A
3	Sound Transmission Class*	ASTM E90-23	See Result	N/A
4	Impact Insulation Class*	ASTM E492-22	See Result	N/A

Note: Pass : Meet the requirements;
Fail : Does not meet the requirements;
N/A : Not Apply to the judgment.

Original Sample Photo(s):

Formaldehyde Emission

Reaction to Fire Tests

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Sound Transmission Class* / Impact Insulation Class* - Front View	Sound Transmission Class* / Impact Insulation Class* - Back View

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TEST REPORT

1. Test Item: Formaldehyde Emission

Test Method: With reference to EN 717-1:2004, analysis was performed by UV-Vis.

Test Part Description: Multi-color solid board

Test Result(s):

Test Item(s)	Unit(s)	MDL	001
Formaldehyde Emission (In air)	mg/m³	0.050	ND

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

Notes:

(1) Reference Limit: EN13986:2004+A1:2015

(2) Formaldehyde class E1: ≤0.124 mg/m^3 air

Formaldehyde class E2: ＞0.124 mg/m^3 air

(3) mg/m^3 = milligram per cubic meter

Remark:

The reported result is for reference only.

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2. Test Item: Reaction to Fire Tests

Test Method: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 ISO 9239-1:2010 Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source.
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.

I. Sample Details

Specimens Size	EN ISO 9239-1: 1050x230mm EN ISO 11925-2: 250x90mm	Tested Face	Front side
Mounting and fixing (EN ISO 9239-1)	Calcium silicate board, with its density approximate 900kg/m^3, thickness approximate 11mm, is as the substrate. The test specimens are fixed mechanically to the substrate. No joint in the specimens.		

II. Test Results

Test method	Parameter	Number of tests	Results
EN ISO 9239-1:2010	Critical Heat Flux(CHF) (kW/m^2)	4*	10.4
	Smoke(%×min)		1175
EN ISO 11925-2:2020 Exposure = 15 s	Fs ≤ 150mm within 20 s	12	Yes

Note:

*- According to EN ISO 9239-1:2010 clause 8.2.6, test two samples in a certain direction and perpendicular to this direction and repeat the test twice in the direction with the lowest test value, a total of four tests. According to EN ISO 9239-1:2010 clause 9.2, calculate the average value of 3 samples in the same direction from the test data.

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_{fl}
Classification	B_{fl}—s2

c) Field of application

This classification is valid for the following end use applications:

--- With all substrates classified A1 and A2

--- With mechanically fixing

--- No joint

This classification is valid for the following product parameters:

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

Annex A

Classes of reaction to fire performance for floorings

Class	Test methods	Classification	Additional classification
$A1_{fl}$	EN ISO 1182 [a] and	ΔT≤30℃, and Δm≤50%, and t_f=0(i.e. no sustained flaming)	-
	EN ISO 1716	PCS≤2.0MJ/kg [a] and PCS≤2.0MJ/kg [b] and PCS≤1.4MJ/m² [c] and PCS≤2.0MJ/kg [d]	-

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$A2_{fl}$	EN ISO 1182 [a] or	△T≤50℃, and △m≤50%, and t_f≤20s	-
	EN ISO 1716 and	PCS≤3.0MJ/kg [a] and PCS≤4.0MJ/m² [b] and PCS≤4.0MJ/m² [c] and PCS≤3.0MJ/kg [d]	-
	EN ISO 9239-1 [e]	Critical flux [f] ≥8.0kW/ m²	Smoke production [g]
B_{fl}	EN ISO 9239-1 [e] and	Critical flux [f] ≥8.0kW/ m²	Smoke production [g]
	EN ISO 11925-2 [h] Exposure =15s	Fs≤150mm within 20 s	-
C_{fl}	EN ISO 9239-1 [e] and	Critical flux [f] ≥4.5kW/ m²	Smoke production [g]
	EN ISO 11925-2 [h] Exposure =15s	Fs≤150mm within 20 s	-
D_{fl}	EN ISO 9239-1 [e] and	Critical flux f ≥3.0 kW/m²	Smoke production g
	EN ISO 11925-2 [h] Exposure =15s	Fs≤150mm within 20 s	-
E_{fl}	EN ISO 11925-2 [h] Exposure =15s	Fs≤150mm within 20 s	-
F_{fl}	EN ISO 11925-2 [h] Exposure =15s	Fs > 150 mm within 20 s	

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[a] For homogeneous products and substantial components of non-homogeneous products.
[b] For any external non-substantial component of non-homogeneous products.
[c] For any internal non-substantial component of non-homogeneous products.
[d] For the product as a whole.
[e] Test duration = 30 min.
[f] Critical flux is defined as the radiant flux at which the flame extinguishes or the radiant flux after a test period of 30 min, whichever is the lower (i.e. the flux corresponding with the furthest extent of spread of flame).
[g] s1 = Smoke ≤ 750 % minutes;
s2 = not s1.
[h] Under conditions of surface flame attack and, if appropriate to the end use application of the product, edge flame attack.

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.

The test results or test reports shall not be used for improper or illegal publicity.

Conclusion : According to the test result, Combustion properties identified as: B_{fl} -s2

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3. Test Item: Sound Transmission Class*

I. Test Method

ASTM E90-23 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

II. Sample Details

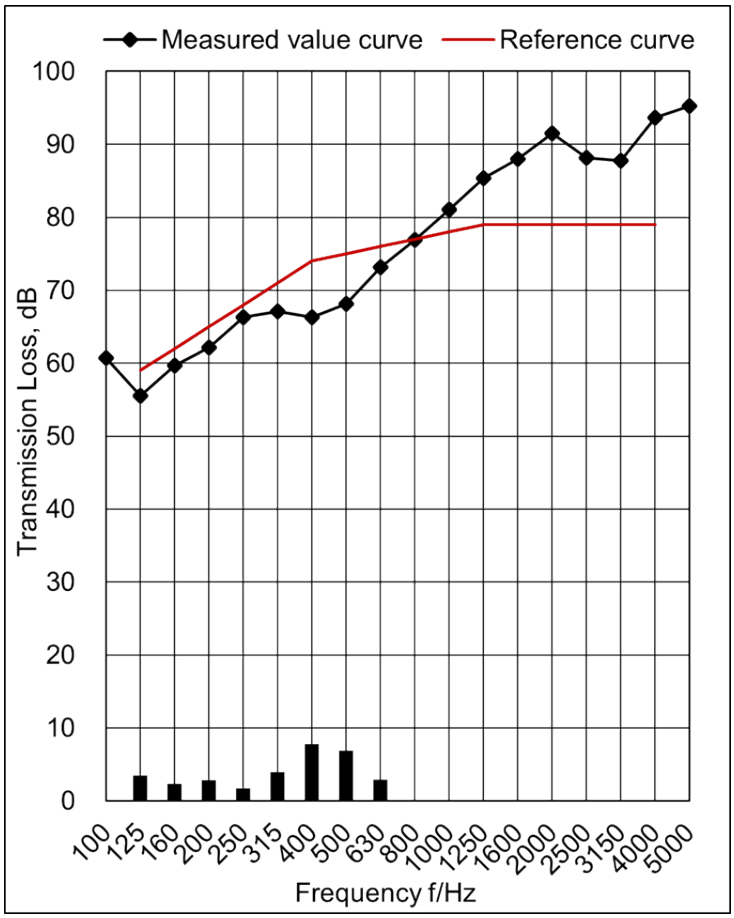
Dimensions	1520mm×228mm×6.0mm
Surface Density	About 10.24kg/m^2

III. Test Condition

Ambient Temperature	28.5℃	Ambient Humidity	73.1%RH
Source Room Volume	70m^3	Receiving Room Volume	58m^3
Description of Test Arrangement	Test Area: 12.46m^2(4.10m×3.04m) After splicing, the test sample is directly laid on the 150mm thick prefabricated floor with a drop ceiling.		

IV. Test Result

Frequency f/Hz	Transmission Loss, TL/dB
100	60.7
125	55.5
160	59.7
200	62.1
250	66.3
315	67.1
400	66.3
500	68.1
630	73.1
800	76.9
1000	81.0
1250	85.3
1600	88.0
2000	91.5
2500	88.2
3150	87.7
4000	93.7
5000	95.2



V. Sound Transmission Class

Rating according to ASTM E413-22:

Sound Transmission Class: STC = 75

Note:

1. The deficiencies are shown as bars at the bottom of the chart. The 8-dB limitation is not invoked.
2. The Sound Transmission Class is for the entire system consist of samples, concrete floors, and the drop ceiling.

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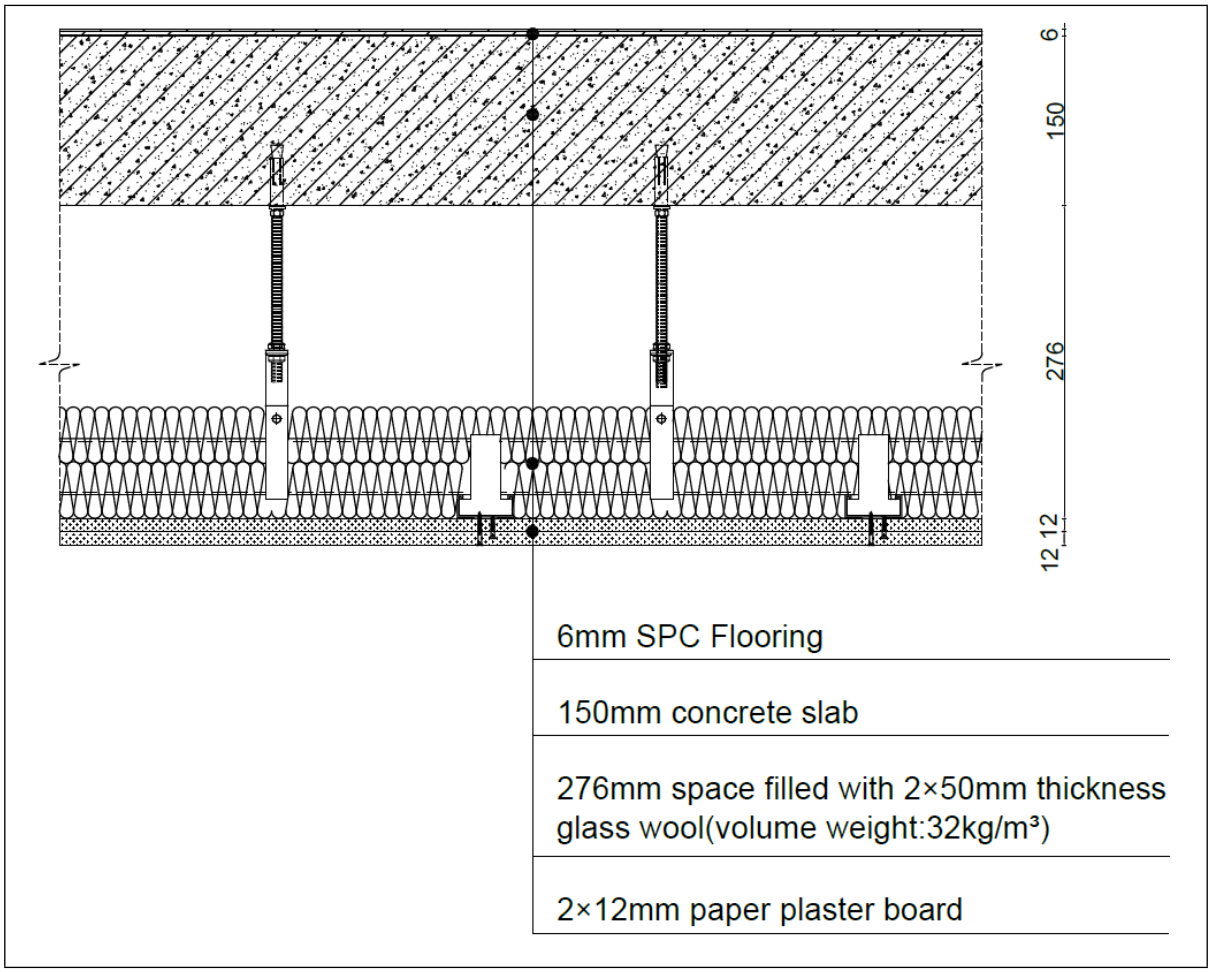
Schematic Diagram



*Test project was carried out by SGS-CSTC Standards Technical Services Co., Ltd. Changzhou Branch Testing Center.

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4. Test Item: Impact Insulation Class*

I. Test Method

ASTM E492-22 Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine

II. Sample Details

Dimensions	1520mm×228mm×6.0mm
Surface Density	About 10.24kg/m^2

III. Test Condition

Ambient Temperature	28.1℃	Ambient Humidity	74.6%RH
Source Room Volume	70m^3	Receiving Room Volume	58m^3
Description of Test Arrangement	Test Area: 12.46m^2(4.10m×3.04m) After splicing, the test sample is directly laid on the 150mm thick prefabricated floor with a drop ceiling.		

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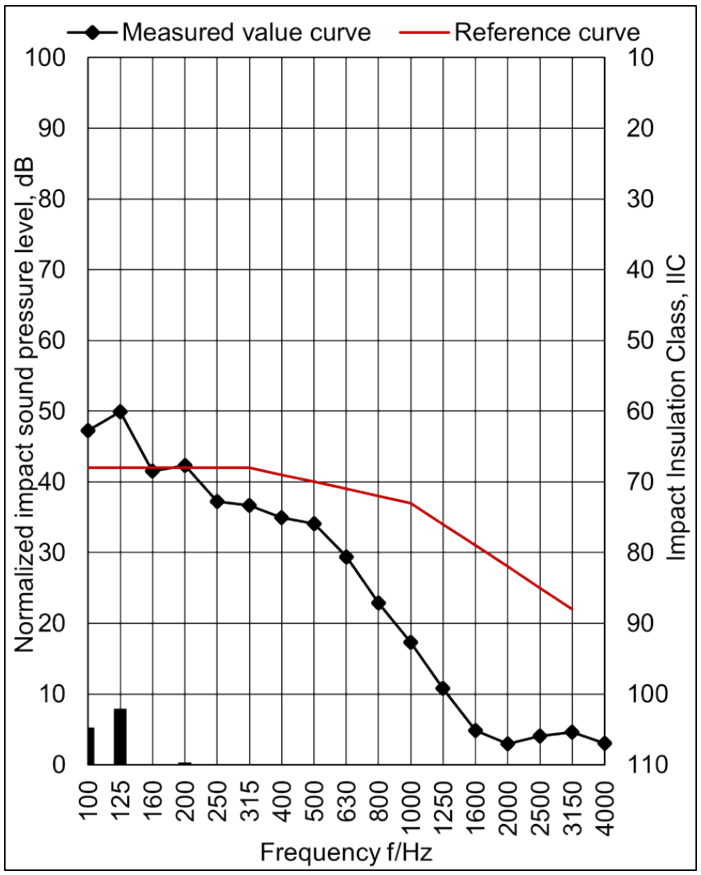
IV. Test Result

f Hz	Ln dB
100	47.2
125	49.9
160	41.5
200	42.3
250	37.2
315	36.6
400	35.0
500	34.1
630	29.4
800	22.9
1000	17.3
1250	10.8
1600	4.8
2000	2.9
2500	4.0
3150	4.6
4000	3.0
5000	/



V. Impact Insulation Class

Rating according to ASTM E989-21:

IIC = 70

Note: The deficiencies are shown as bars at the bottom of the chart. The 8-dB limitation is not invoked.

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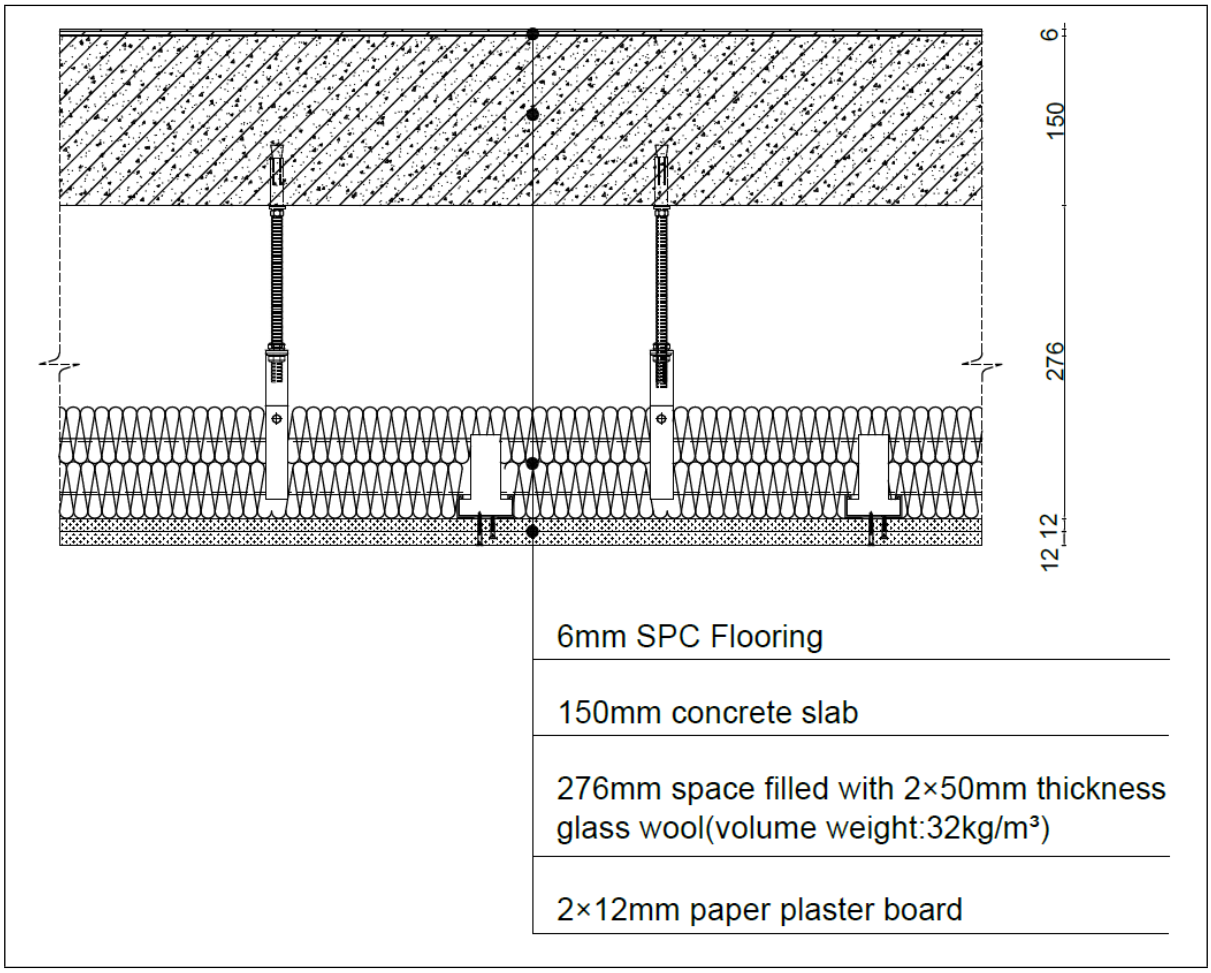
VI. Schematic Diagram



*Test project was carried out by SGS-CSTC Standards Technical Services Co., Ltd. Changzhou Branch Testing Center.

Unless otherwise stated, this report provides a declaration of conformity according to whether the test results are within the specified limits or specifications without considering the measurement uncertainty.

********End of report********

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