TEST REPORT

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SHIN2507001858CM02
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No. : SHIN2507001858CM02_EN
Date : 2025-09-28

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, TURKEY03

Sample Name : WALL PANEL & TILES

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 ~ 2025-09-26

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

No. : SHIN2507001858CM02_EN

Date : 2025-09-28

Summary of Results:

No.	Test Item	Test Method	Result	Conclusion
1	Thermal Resistance	With Reference to EN 13245-1:2010 Clause 6.2 & EN 478:2025	See Result	N/A
2	Water Vapour Resistance	With Reference to EN 13245-1:2010 Clause 6.3 & EN 438-2:2005 Clause 14	See Result	N/A
3	Peel Strength	With Reference to EN 13245-1:2010 Clause 6.4 & Annex C	See Result	N/A
4	Nominal Linear Mass	With Reference to EN 13245-1:2010 Annex A	See Result	N/A
5	Nominal Linear Mass (UV-aged)*	With Reference to EN 13245-1:2010 Annex A & Client's Requirement	See Result	N/A
6	Light Ageing Test-Xenon-arc Exposure*	EN ISO 4892-2:2013+A1:2021 Cycle 2	See Result	N/A
7	Sound Transmission Class*	ASTM E90-23	See Result	N/A
8	Burning performance	EN 13501-1:2018	See Result	N/A
9	Resistance to cross cut*	EN 13245-1:2010 Section 6.1 & EN ISO 2409:2020	See Result	N/A

Note: Pass : Meet the requirements;

Fail : Does not meet the requirements;

N/A : Not Apply to the judgment.

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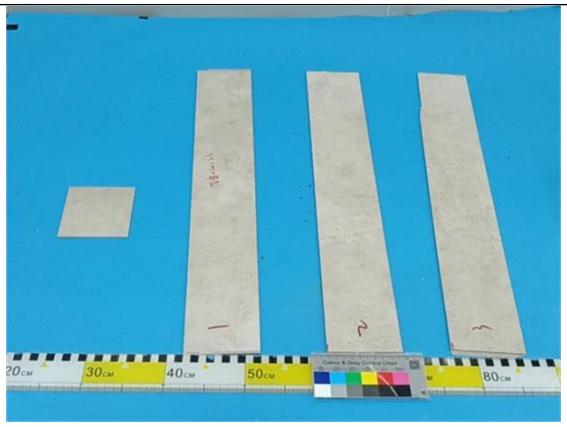
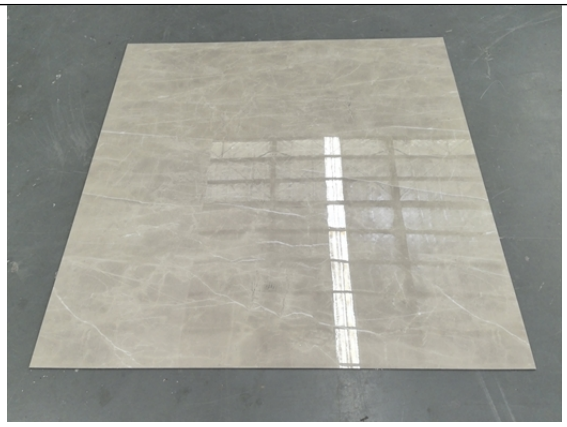
Original Sample Photo(s):

	
Thermal Resistance / Water Vapour Resistance / Peel Strength / Nominal Linear Mass - Front View	Thermal Resistance / Water Vapour Resistance / Peel Strength / Nominal Linear Mass - Back View
	
Nominal Linear Mass (UV-aged)* / Light Ageing Test-Xenon-arc Exposure*	Sound Transmission Class* - Front View

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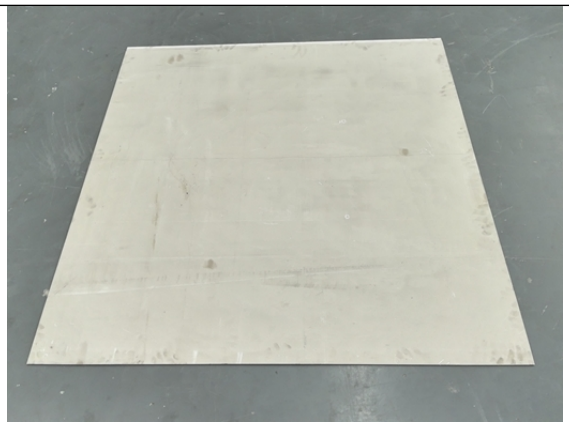
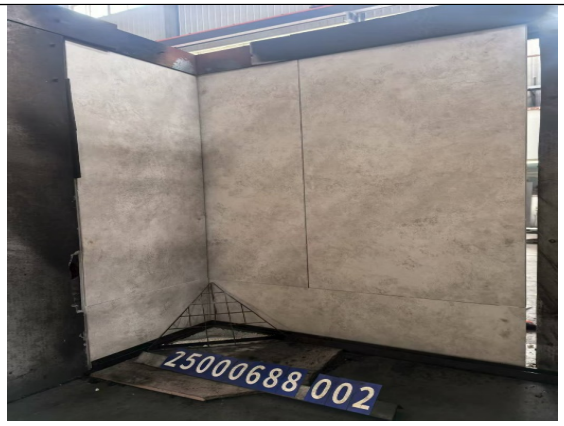
	
Sound Transmission Class* - Back View	Burning performance - Before test(EN 13823)
	
Burning performance - Before test(EN 13823)	Resistance to cross cut*

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TEST REPORT

1. Test Item: Thermal Resistance

Test Method: With Reference to EN 13245-1:2010 Clause 6.2 & EN 478:2025

Test Condition:

Specimen: 200mm×100mm×3.9mm, 1pc

Test condition: 70℃, 24h

Test surface: Front view

Lab Environment Condition:(23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Thermal Resistance	No bubbles, blistering, cracking or any signs of peeling

Note: Test specimen was cut from original sample.

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2. Test Item: Water Vapour Resistance

Test Method: With Reference to EN 13245-1:2010 Clause 6.3 & EN 438-2:2005 Clause 14

Test Condition:

Specimen: 100mm×100mm×3.9mm, 1pc

Test condition: Boiling water ,1h

Test surface: Front view

Lab Environment Condition:(23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Water Vapour Resistance	No bubbles, blistering, cracking or any signs of peeling.

Note: Test specimen was cut from original sample.

3. Test Item: Peel Strength

Test Method: With Reference to EN 13245-1:2010 Clause 6.4 & Annex C

Test Condition:

Specimen: 100mm×20mm×3.9mm, 4pcs

Test speed: 10mm/min

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Peel Strength	The specimens were damaged before peeling.

Note: Test specimens were cut from original sample.

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4. Test Item: Nominal Linear Mass

Test Method: With Reference to EN 13245-1:2010 Annex A

Test Condition:

Specimen: 100mm×600mm×3.9mm, 3pcs

Test surface: Front view

Lab Environment Condition:(23±5)°C, (50±5)%RH

Test Result:

Test Item	Test Result			
	Individual Value			Average Value
Nominal Linear Mass (g/m)	4990	4970	4927	4962

Note: Test specimen was cut from original sample.

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5. Test Item: Nominal Linear Mass (UV-aged)*

Test Method: With Reference to EN 13245-1:2010 Annex A & Client's Requirement

Test Condition:

Specimen: 600mm×100mm×3.9mm, 3pcs

Treatment: UV aging for 500 hours (See test item 6)*

Test surface: Front view

Lab Environment Condition:(23±5)°C, (50±5)%RH

Test Result:

Test Item	Test Result			
	Individual Value			Average Value
Nominal Linear Mass (g/m)	4988	4970	4927	4962

Note: Test specimen was cut from original sample.

* Treatment was carried out by SGS-CSTC Standards Technical Services Co., Ltd. Suzhou Branch Testing Center.

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6. Test Item: Light Ageing Test-Xenon-arc Exposure*

Sample Description: A-panel

Test Method: EN ISO 4892-2:2013+A1:2021 Cycle 2

Test Condition:

Irradiance : (1.10±0.02)W/(m^2·nm)@420nm

Continuous light at (65±3)℃ BST, (38±3)℃ CT, (50±10)%RH

Filter: Window-B/SL

Exposure Period: 500h

Lab Environmental Condition: (23 ± 2) °C, (50 ± 5) %RH

Test Result:

Sample A

Specimen	Appearance	Grey Scale	△E*ab	
			SEI	SCE
1	Visible color change	3	0.92	0.92
2	Visible color change	3	3.75	3.72
3	Visible color change	3	2.10	2.04

Note:

1.According to ISO 105-A02:1993/Cor.2:2005, the grey scale was determined under the D65 standard light, with scale 5 as the best and scale 1 as the worst.

2. According to ASTM D2244-25, ΔE^*_{ab} values were measured by d/8 sphere spectrophotometer. Use D65 standard light source with 10° observer, 25mm aperture. SCE: exclude specular reflection condition, SCI: include specular reflection condition.

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Test Photo(s):

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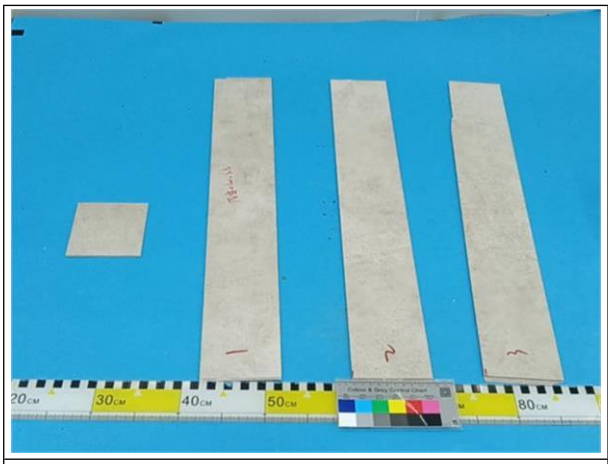
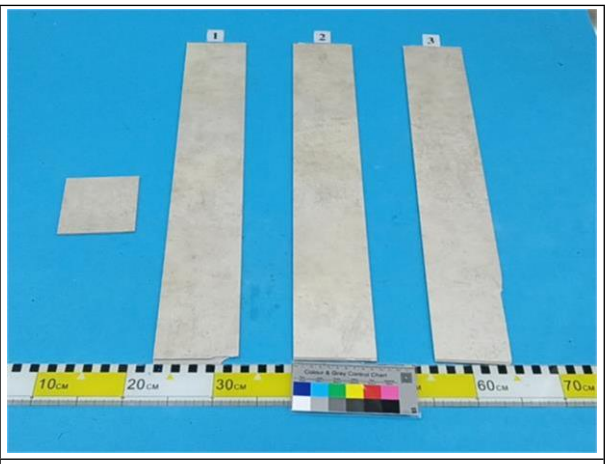
<td>  </td>
<td>  </td>
</tr>
<tr>
<td>Reference sample Test sample
Before Test-Sample A</td>
<td>Reference sample Test sample
After Test-Sample A</td>
</tr>
<tr>
<td colspan="2">  </td>
</tr>
<tr>
<td colspan="2">The close-up after Test-Sample A</td>
</tr>
</table>

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Equipment Information:

Equipment Name	Model	Equipment No.	Calibration date	Next Calibration date
Q-sun Xenon Test Chamber	XE-3-HBS	SUZMR-215	2024-09-18	2025-09-17
Standard Light Box	SpectraLight QC	SUZMR-094	2024-11-12	2025-11-11
Desktop integrating sphere spectrophotometer	color i5	SUZMR-349	2025-05-06	2026-05-05

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7. 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	1200mm×1200mm×4.0mm
Surface Density	About 8.37kg/m^2

III. Test Condition

Ambient Temperature	27.5℃	Ambient Humidity	63.0%RH
Source Room Volume	96m^3	Receiving Room Volume	85m^3
Description of Test Arrangement	Test Area: 1.44m^2 (1.20m×1.20m) There is no decoration on the surface of the sample. Install it to the test hole with the front facing the sound source room. The joint between the sample and the test hole is sealed with cement mortar.		

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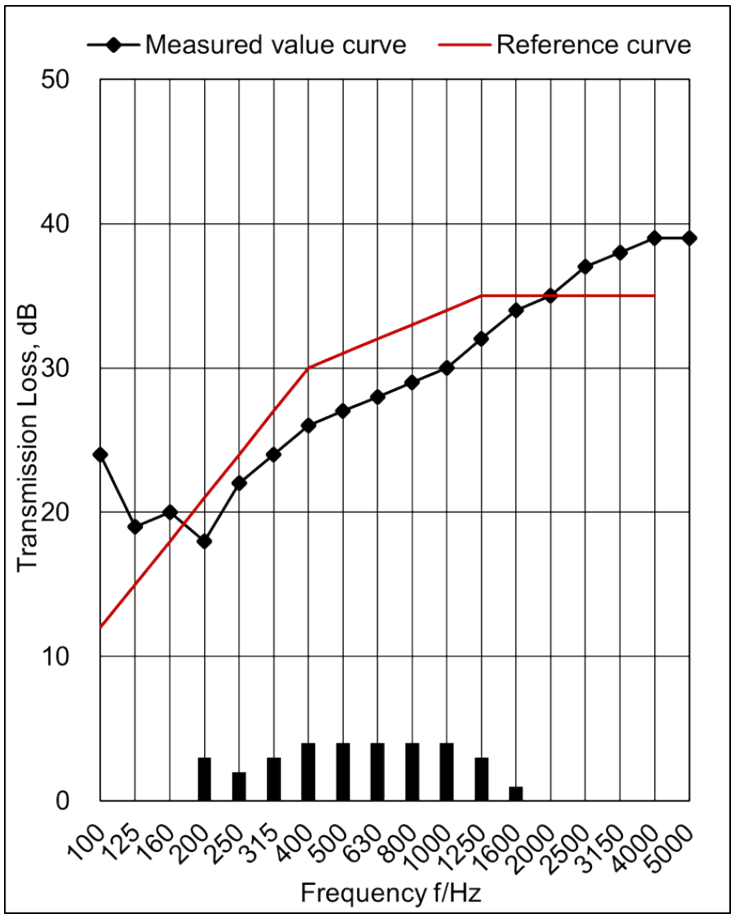
IV. Test Result

Frequency f/Hz	Transmission Loss, TL/dB
100	24
125	19
160	20
200	18
250	22
315	24
400	26
500	27
630	28
800	29
1000	30
1250	32
1600	34
2000	35
2500	37
3150	38
4000	39
5000	39



V. Sound Transmission Class

Rating according to ASTM E413-22:

Sound Transmission Class: STC=31

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

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8. Test Item: Burning performance

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 13823: 2020+A1:2022 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.

I. Sample Details

Specimens Size	EN 13823: 1500x1000mm & 1500x495mm EN ISO 11925-2: 250x90mm

EN13823 Installation and Fixation of Specimens:

Substrate	Calcium silicate board	Fixing method	Glue
Splicing method	Lengthwise in long wing Widthwise in both long and short wings	Tested Face	Front side
Mounting and fixing	Calcium silicate board, with its density approximate 900kg/m^3, thickness approximate 11mm, is as the substrate. The test specimens are Glued to the substrate. Joints in the long and short wings of the specimen. The test specimens long wings are composed of three test specimens with dimensions of 1000 * 300mm, 400 * 1200mm, 600 * 1200mm spliced together. The test specimens short wings are composed of two test specimens with dimensions of 495 * 300mm, 495 * 1200mm, spliced together.		

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II. Test Results

Test method	Parameter	Number of tests	Results
EN 13823: 2020+A1:2022	$FIGRA_{0.2MJ}$ (W/s)	3	46.9
	$FIGRA_{0.4MJ}$ (W/s)		46.9
	LFS < edge of specimen		Yes
	THR_{600s}(MJ)		6.2
	SMOGRA(m^2/s^2)		59.6
	TSP_{600s}(m^2)		834.6
	Flaming particles or droplets within 600s (Yes/No); Combustion time, if any burning time: (≤10s / >10s)		No
EN ISO 11925-2:2020 [i] Exposure = 30 s	Fs ≤ 150 mm within 60s	12	Yes
	Ignition of the filter paper within 60s		No

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－s3, d0

c) Field of application

This classification is valid for the following end use applications:

--- With all substrates classified A1 and A2

--- Fix mechanically

--- With joints

This classification is valid for the following product parameters:

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

……Continued on Next Page

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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		$\triangle T \leq 30°C$, and $\triangle m \leq 50\%$, and $t_f = 0$(i.e. no sustained flaming)	-
	EN ISO 1716		PCS≤2.0MJ/kg [a] and PCS≤2.0MJ/kg [b c] and PCS≤1.4MJ/m² [d] and PCS≤2.0MJ/kg [e]	-
A2	EN ISO 1182 [a] or	and	$\triangle T \leq 50°C$, and $\triangle m \leq 50\%$, and $t_f \leq 20$ s	-
	EN ISO 1716		PCS≤3.0MJ/kg [a] and PCS≤4.0MJ/m² [b] and PCS≤4.0MJ/m² [d] and PCS≤3.0MJ/kg [e]	-
	EN 13823		$FIGRA_{0,2\ MJ} \leq 120$W/s and LFS<edge of specimen and $THR_{600s} \leq 7.5$MJ	Smoke production [f] and Flaming droplets/particles [g]
B	EN 13823 and		$FIGRA_{0,2\ MJ} \leq 120$W/s and LFS<edge of specimen and $THR_{600s} \leq 7.5$MJ	Smoke production [f] and Flaming droplets/particles [g]
	EN ISO 11925-2 [i] Exposure =30s		within 60s Fs≤150mm	

Class	Test method(s)	Classification criteria	Additional classification
C	EN 13823 and	$FIGRA_{0,4\ MJ}$≤250W/s and LFS<edge of specimen and THR_{600s}≤15MJ	Smoke production [f] and Flaming droplets/particles [g]
	EN ISO 11925-2 [i] Exposure=30s	Fs≤150mm within 60 s	
D	EN 13823 and	$FIGRA_{0,4\ MJ}$≤750W/s	Smoke production [f] and Flaming droplets/particles [g]
	EN ISO 11925-2 [i] Exposure=30s	Fs≤150mm within 60 s	
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/m^2 , 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 ≤ $30m^2/s^2$ and TSP_{600s} ≤ $50m^2$; s2 = SMOGRA ≤ $180m^2/s^2$ and TSP_{600s} ≤ $200m^2$; 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.

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Class	Test method(s)	Classification criteria	Additional 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.			

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 -s3,d0

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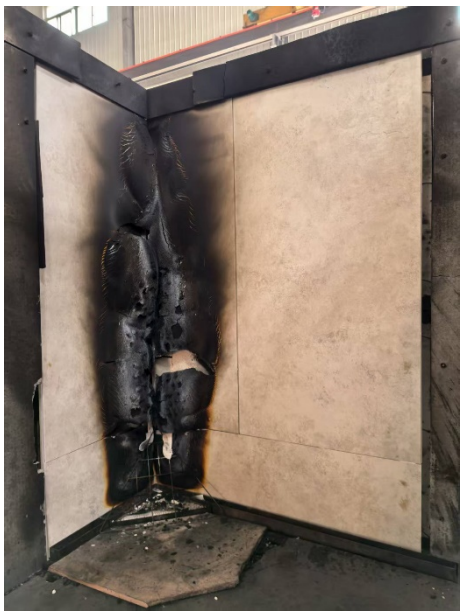
Photo Appendix:



After test(EN 13823)

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9. Test Item: Resistance to cross cut*

Sample Description: A-Panel

Test Method: EN 13245-1:2010 Section 6.1 & EN ISO 2409:2020

Test Condition:

Apace: 1 mm (Provide by client)

Tape: 3M®681#

Lab Environmental Condition: (23 ± 2) °C, (50 ± 5) %RH

Test Result:

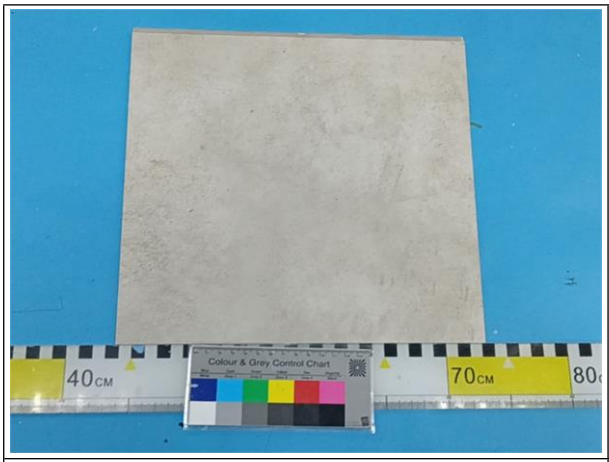
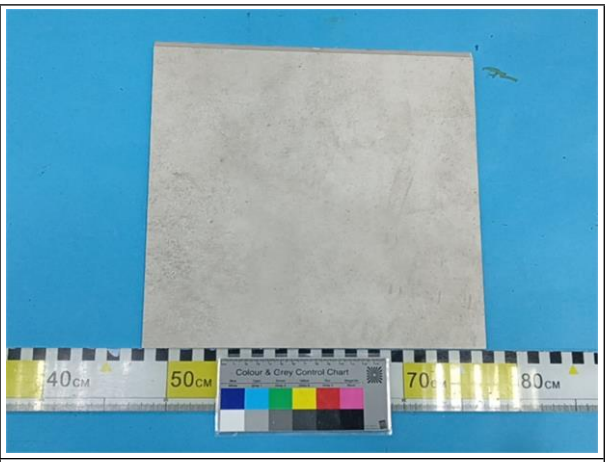
Sample A

Test Item	Adhesion Classification
Resistance to cross cut	0

Note:

According to EN ISO 2409:2020, in the adhesion classification--classification 0 is the best and classification 5 is the worst.

Test Photo:

	
Before Test-Sample A	After Test-Sample A

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The close-up after test-Sample A

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The test report shall only be used for clients' scientific research, teaching, internal quality control, product research and development, etc… and just for internal reference.

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

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