

Area Floors Zemin Kaplamlari A.S.

TEST REPORT

SCOPE OF WORK

SPC FLOORING

REPORT NUMBER

250605015SHF-001

TEST DATE(S)

2025-06-05 - 2025-06-17

ORIGINAL ISSUE DATE

2025-06-17

PAGES

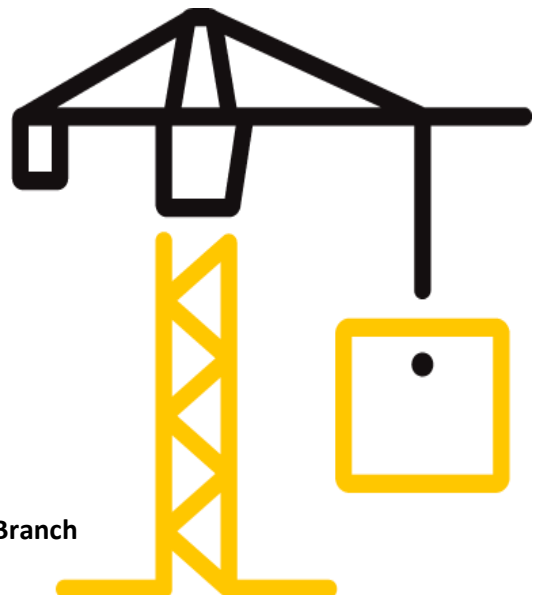
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Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch



Test Report

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Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Applicant: Area Floors Zemin Kaplamalari A.S.

Address: Ilgaz sokak 7, Omerli Mah, Arnavutkoy, Istanbul, Turkiye

Attn: Ferhat Calinalti

Manufacturer: Area Floors Zemin Kaplamalari A.S.

Address: Ilgaz sokak 7, Omerli Mah, Arnavutkoy, Istanbul, Turkiye

Test Type: Performance test, samples provided by the applicant.

Product Information

Product Name	Model	Specification
SPC FLOORING	/	4/0,3+1
Sample ID	Sample Amount	Sample Received Date
S250605015SHF.001~014	40 pcs	2025-04-30
Sample Description		
1220x182x5mm		

Test Standard	ISO 24337:2019, ASTM F2421-19a(2024), ASTM F410-08(2022), ASTM F3261-20 section 8.1, 8.3, ASTM F1914-18(2023), ASTM F2199-20, ASTM F2199-20 and applicant's requirement, With reference to ASTM D7027-20 test mode B and client's requirement, ISO 4918:2016/Amd.1:2018 and applicant's requirement, EN 16094:2021, Procedure A and B, With reference to ASTM F963-23 section 4.3.5.1(2) and 4.3.5.2(2)(b), With reference to CPSC-CH-C1001-09.4
Specification Standard	/
Test Conclusion	The samples were tested according to the above standards, and the results are shown in the following page.

Note:

1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized


Sally Xie

Name: Sally Xie

Title: Reviewer

Daniel Zhang

Name: Daniel Zhang

Title: Project Engineer

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Size

Test Method: ISO 24337:2019

Conditioning: Condition the test specimens at $(23 \pm 2)^{\circ}\text{C}$ and $(50 \pm 5)\%$ relative humidity for at least 24h

Test Result:

Test item	Nominal value (mm)	Tested value (mm)	Tolerance (mm)
Length	1220	1219.26	-0.74
Width	182	181.94	-0.06

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Squareness

Test Method: ASTM F2421-19a(2024)

Conditioning: Condition the test specimens at $(23 \pm 2)^{\circ}\text{C}$ and $(50 \pm 5)\%$ relative humidity for at least 24h

Specified Size:

Length, mm(inches)	Width, mm(inches)
1220(48.031)	182(7.165)

Test Result, mm(inches):

Squareness Deviation	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5
Corner 1	0.02(0.001)	0.03(0.001)	0.02(0.001)	0.02(0.001)	0.03(0.001)
Corner 2	0.02(0.001)	0.02(0.001)	0.03(0.001)	0.02(0.001)	0.02(0.001)
Corner 3	0.02(0.001)	0.02(0.001)	0.03(0.001)	0.02(0.001)	0.02(0.001)
Corner 4	0.03(0.001)	0.02(0.001)	0.02(0.001)	0.02(0.001)	0.02(0.001)

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Wear layer thickness

Test Method: ASTM F410-08(2022)

Conditioning: Condition the test specimens at $(23 \pm 2)^{\circ}\text{C}$ and $(50 \pm 5)\%$ relative humidity for at least 24h

Test Result:

Nominal value:	0.30 mm
Average value:	0.31 mm
Max. value:	0.32 mm
Min. value:	0.30 mm

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Residual indentation

Test Method: ASTM F3261-20 section 8.1 and ASTM F1914-18(2023)

Conditioning: Condition the test specimens at $(23 \pm 2)^{\circ}\text{C}$ and $(50 \pm 5)\%$ relative humidity for at least 24h

Test Condition:

Indenter:	Steel cylindrical foot
Indenter diameter:	6.35 mm
Total load applied:	34 kg
Indentation time:	15 min
Recovery time:	60 min

Test Result:

Residual Indentation	Result (mm)
Specimen 1	0.01
Specimen 2	0.03
Specimen 3	0.02
Average value	0.02
Max. value	0.03

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Dimensional stability and curling

Test Method: ASTM F3261-20 section 8.3 and ASTM F2199-20

Conditioning:

Temperature: 23 °C

Relative humidity: 50 %

Duration: 24 h

Measure the initial length and curling

Test Condition:

Temperature: 70 °C

Duration: 6 h

Reconditioning:

Temperature: 23 °C

Relative humidity: 50 %

Duration: 24 h

Measure the final length and curling

Test Result:

Specimen	Dimensional stability (%)		Curling (in)
	Length direction/Machine direction	Width direction/Across machine direction	
1	-0.01	0.01	0.005
2	0.00	0.01	0.003
3	0.00	0.01	0.004
Average	0.00	0.01	0.004
Max.	-0.01	0.01	0.005

Note:

1. Dimensional stability = (final length - initial length)×100/initial length

A negative value indicates shrinkage, and a positive value indicates expansion.

2. Curling = final curling - initial curling = Curl

Express the average value to the nearest 0.001in

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Dimensional stability and curling

Test Method: ASTM F2199-20 and applicant's requirement

Conditioning:

Temperature: 23 °C

Relative humidity: 50 %

Duration: 24 h

Measure the initial length and curling

Test Condition:

Temperature: 0 °C (Applicant's requirement)

Duration: 6 h

Reconditioning:

Temperature: 23 °C

Relative humidity: 50 %

Duration: 24 h

Measure the final length and curling

Test Result:

Specimen	Dimensional stability (%)		Curling (in)
	Length direction/Machine direction	Width direction/Across machine direction	
1	0.00	0.01	0.001
2	0.00	0.00	0.001
3	0.00	0.01	0.001
Average	0.00	0.01	0.001
Max.	0.00	0.01	0.001

Note:

1. Dimensional stability = (final length - initial length)×100/initial length

A negative value indicates shrinkage, and a positive value indicates expansion.

2. Curling = final curling - initial curling = Curl

Express the average value to the nearest 0.001in

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Scratch resistance
Test Method: With reference to ASTM D7027-20 test mode B and client's requirement
Conditioning: Condition the test specimens at (23 ± 2)°C and (50 ± 5)% relative humidity for 24h
Test Condition:
Scratch stylus: Hemispherical hard-metal tip of diameter (1.00±0.01)mm
Test speed: 100 mm/s

Test Result:

Direction	Test Load(N)	Appearance
Horizontal	30	No visible scratch on the surface.
Vertical	30	Visible scratch on the surface, but no penetration to the substrate

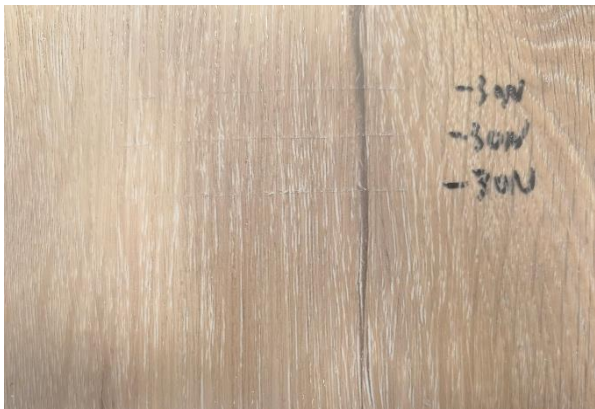
Note:

1. Observation magnification is 4X.

Test photos:



After test (Horizontal)



After test (Vertical)

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Castor chair test

Test Method: ISO 4918:2016/Amd.1:2018 and applicant's requirement

Conditioning: Condition the test specimens at $(23 \pm 2)^{\circ}\text{C}$ and $(50 \pm 5)\%$ relative humidity for at least 24h

Test Condition: At a temperature range of 18°C to 25°C

Load mass: 90 kg

Test castors: Type W

Speed of rotating platform: 20 r/min

Speed of castor assembly: 50 r/min

Total test revolutions: 20000 r (Applicant's requirement)

Mounting of the specimen: Floating installation with click joints

Test Result:		
Type of damage	Observation (Yes/No)	Verdict
Delamination	No	Pass
Opening of joints	No	
Surface damage	No	
Crazing	No	
Maximum opening	0.03mm	No requirement Report the result
Maximum height differences	0.10mm	

Note:

Test specimens were not taken apart for assessment after test as per client's requirement.

Test Photo:



After test

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Micro-scratch resistance

Test Method: EN 16094:2021, Procedure A

Conditioning: Condition the test specimens at $(23 \pm 2)^{\circ}\text{C}$ and $(50 \pm 5)\%$ relative humidity for at least 1 week

Test Condition:

Scrub material: SB 7447 (very fine)

Holder for scrub material: Version 2, 6N

Speed factor: 1

Number of rubs: 80

Glossmeter geometry: 60°

Test Result:

Specimen	Gloss change
1	-0.2
2	-0.5
3	-0.4
Average absolute value of gloss change	0.4
Classification	/(Mat surface)

Classification of mean values of gloss change as per EN 16094 procedure A (except for mat surfaces)

Micro-Scratch resistance class according to procedure A	Change of gloss
MSR-A1	$\leq 10\%$
MSR-A2	$> 10\%$ to $\leq 30\%$
MSR-A3	$> 30\%$ to $\leq 50\%$
MSR-A4	$> 50\%$ to $\leq 70\%$
MSR-A5	$> 70\%$

Note:

1. For mat surfaces(surface with a reflectometer value $R' \leq 7$, measured with 60° geometry), calculate the absolute gloss change.

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Micro-scratch resistance

Test Method: EN 16094:2021, Procedure B

Conditioning: Condition the test specimens at $(23 \pm 2)^{\circ}\text{C}$ and $(50 \pm 5)\%$ relative humidity for at least 1 week

Test Condition:

Scrub material: SB 7440 (medium fine)

Holder for scrub material: Version 1, 4N

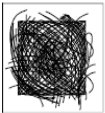
Speed factor: 1

Number of rubs: 160

Reconditioning: Condition the tested specimens at $(23 \pm 2)^{\circ}\text{C}$ and $(50 \pm 5)\%$ for 24 h before visual assessment

Test Result:

Specimen	Visual assessment	Classification
1	Only few scratches	MSR-B2
2	No visible scratches	MSR-B1
3	No visible scratches	MSR-B1
Average value	Only few scratches	MSR-B2

Resistance class	Scratch picture	Explanation
MSR-B1		No visible scratches
MSR-B2		Only few scratches
MSR-B3		Many well visible scratches
MSR-B4		A great many well visible raw and fine scratches, Lissajous figure partly visible
MSR-B5		Mix of Lissajous figure and great many scratches, mat abrasion like area in the middle

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Soluble elements analysis

Test Method: With reference to section 4.3.5.1(2) and 4.3.5.2(2)(b) of the ASTM standard consumer safety specification on toy safety F963-23, acid extraction method was used and heavy metal elements migration content were determined by Inductively Coupled Argon Plasma Spectrometry.

Test component list:

1. Wear Layer
2. Substrate
3. Backing Layer

Test Item	Test Result (ppm) (1+2+3)	Detection Limit (ppm)	Limit in ASTM F963 (ppm)
Soluble Barium (Ba)	ND	5	1000
Soluble Lead (Pb)	ND	5	90
Soluble Cadmium (Cd)	ND	5	75
Soluble Antimony (Sb)	ND	5	60
Soluble Selenium (Se)	ND	5	500
Soluble Chromium (Cr)	ND	5	60
Soluble Mercury (Hg)	ND	5	60
Soluble Arsenic (As)	ND	2.5	25

Note:

1. mg/kg = milligram per kilogram =ppm
2. ND = Not detected (less than the detection limit)
3. Test location: Central Chemical Lab of Intertek Testing Services Ltd., Shanghai
Address: 4-5/F., Block C, No.1218, Wanrong Road, Jing'an District, Shanghai

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Test Items, Method and Results:

Test Item: Phthalate Content Test

Test Method: With reference to CPSC-CH-C1001-09.4, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Test component list:

1. Wear Layer
2. Substrate
3. Backing Layer

No.	Test Item	Cas No.	Test Result (mg/kg) (1+2+3)
1	Di-butyl phthalate (DBP)	84-74-2	ND
2	Di(2-ethyl hexyl) phthalate (DEHP)	117-81-7	ND
3	Benzyl butyl phthalate (BBP)	85-68-7	ND
4	Di-iso-nonyl phthalate (DINP)	28553-12-0	ND
5	Di-n-octyl phthalate (DNOP)	117-84-0	ND
6	Di-iso-decyl phthalate (DIDP)	26761-40-0	ND
7	Di-iso-butyl phthalate (DIBP)	84-69-5	ND
8	Di-n-pentyl phthalate (DnPP/DPENP)	131-18-0	ND
9	Di-cyclohexyl phthalate (DCHP)	84-61-7	ND
10	Di-ethyl phthalate (DEP)	84-66-2	ND
11	Di-nonyl phthalate (DNP)	84-76-4	ND
12	Di-methyl phthalate (DMP)	131-11-3	ND
13	Di-propyl phthalate (DPrP)	131-16-8	ND
14	Di-(iso-octyl) phthalate (DIOP)	27554-26-3	ND
15	Diphenyl phthalate (DPhP)	84-62-8	ND
16	Dibenzyl phthalate (DBzP)	523-31-9	ND

Note:

1. Detection limit = 100 mg/kg
2. ND = Not detected (less than the detection limit)
3. Test location: Central Chemical Lab of Intertek Testing Services Ltd., Shanghai
Address: 4-5/F., Block C, No.1218, Wanrong Road, Jing'an District, Shanghai

Test Report

Original Issue Date: 2025-06-17

Intertek Report No. 250605015SHF-001

Appendix A: Sample Received Photo



Revision:

NO.	Date	Changes
250605015SHF-001	2025-06-17	First issue