



Test report no.: <i>Testrapport nr.:</i>	89218997 001	Order No.: <i>Opdracht nr.:</i>	218997	Page 1 of 5 <i>Pagina 1 van 5</i>
Client Reference No.: <i>Klantreferentie nr.:</i>	N/A	Order date: <i>Opdrachtdatum:</i>	18.05.2021	
Client: <i>Klant:</i>	TRUSA MERMER SAN. TIC. LTD. STİ., Turanköy Mah. Turanköy 7. Sok No: 1, KESTEL/BURSA, Turkey			
Test item: <i>Testvoorwerp:</i>	SPC Vinyl Floor Covering			
Identification/ Type No.: <i>Benaming / Type nr.:</i>	TRU-STONE SPC-CLICK Vinylflooring 4+1mm IXPE 0,55mm			
Order content: <i>Inhoud opdracht:</i>	Determination of selected parameters			
Test specification: <i>Testomschrijving:</i>	ISO 8302:1991 / EN 12667:2001, EN 13893:2002, EN 1815:2016 The determination of the thermal resistance, slip resistance and the assessment of static electrical propensity, walking test.			
Date of sample receipt: <i>Ontvangstdatum monster:</i>	31.05.2021			
Test sample No.: <i>Testproefstuk nr.:</i>	MT21-218997.01			
Testing period: <i>Testperiode:</i>	31.05.2021 - 29.06.2021			
Place of testing: <i>Testlocatie:</i>	Westervoortsedijk 73, 6827 AV Arnhem			
Testing laboratory: <i>Testlaboratorium:</i>	TÜV Rheinland Nederland B.V.			
Test result*: <i>Testresultaat*:</i>	See Other			
tested by: <i>getest door:</i>	<input checked="" type="checkbox"/> 			
Date: 30.06.2021 <i>Datum:</i>	Ondertekend door: Michiel van de Vlekkert	Issue Date: 30.06.2021 <i>Datum uitgave:</i>	Ondertekend door: Ellen Zwier	
Position / functie:	jr. Engineer	Position / functie:	Technician	
Others / <i>Andere:</i>	See individual test results.			
Condition of the test item at delivery: <i>Toestand van het test voorwerp bij ontvangst:</i>	Test item complete and undamaged			
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
* Legenda:	P(ass) = voldoet aan test omschrijving	F(ail) = voldoet niet aan test omschrijving	N/A = niet van toepassing	N/T = niet getest
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				
<i>Dit testrapport heeft alleen betrekking op het voorgenoemde test voorwerp. Zonder toestemming van het testcentrum mag dit testrapport niet in delen worden vermenigvuldigd. Dit keuringsrapport geeft geen recht op het dragen van enig keurmerk.</i>				

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Remarks
Opmerkingen

1	<p>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request. For the influence of the measuring uncertainties on the results, reference is made to the validation of the respective methods.</p> <p><i>De apparatuur welke tijdens de gespecificeerde testperiode is gebruikt, is gekalibreerd volgens ons kalibratieprogramma. De apparatuur voldoet aan de eisen welke zijn opgenomen in de relevante normen. De traceerbaarheid van de gebruikte testapparatuurs is gewaarborgd door naleving van de voorschriften in ons kwaliteitsmanagementsysteem. Gedetailleerde informatie over testomstandigheden, apparatuur en meetonzekerheid is beschikbaar in het testlaboratorium en kan op verzoek worden verstrekt. Voor de invloed van de meetonzekerheden op de resultaten wordt verwezen naar de validatie van de respectievelijke methode c.q. verrichting</i></p>
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3	<p>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Tests clauses marked with ^a are performed under ISO 17025 accreditation. Deviations of testing specification(s), test locations or customer requirements are listed in specific test clause in the report. No opinions or interpretation are included in this report. This test report consists of multiple pages and is only to be read as a whole. The number of pages can be seen in the header on the top right of each page, the report ends when the last page is reached. TÜV Rheinland Nederland B.V. is solely responsible for the content.</p> <p><i>Test onderdelen welke met * zijn gemarkeerd zijn uitbesteed aan gekwalificeerde onderaannemers en zijn beschreven in het respectievelijke test onderdeel van dit rapport. Test onderdelen welke met ^a zijn gemarkeerd zijn onder ISO 17025 accreditatie uitgevoerd. Afwijkingen van testspecificatie(s), testlocaties of klant eisen zijn vermeld in het van toepassing zijnde onderdeel in het rapport. Er zijn geen opinies en interpretaties opgenomen binnen het rapport. Dit rapport bestaat uit meerdere pagina's en dient als geheel gelezen te worden. Het aantal pagina's is rechtsboven in de koptekst van dit rapport vermeld en eindigt wanneer de laatste pagina is bereikt. TÜV Rheinland Nederland is als enige verantwoordelijk voor de inhoud van het rapport.</i></p>
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Product description
Product omschrijving

1	Product details: <i>Product details:</i>	Product name: TRU-STONE SPC-CLICK Vinylflooring 4+1mm IXPE 0,55 mm
2	Other: <i>Andere:</i>	Test sample(s), as well sample information, description, product details and intended usage was provided by customer.
3	Test sample obtaining: <i>Selectie van het proefstuk:</i>	<input checked="" type="checkbox"/> Sending by customer <input type="checkbox"/> Sampling by TÜV Rheinland Group <input type="checkbox"/> others:

Figure 1: Picture of the received sample (surface)



Figure 2: Picture of the received sample (back)



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Clause Deel	Requirements - Tests / Vereisten - Tests	Measuring results – Remarks Meetresultaten – Opmerkingen	Result Resultaat
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1.1.	Determination of thermal resistance (thermal conductivity) ISO 8302:1991 and EN 12667:2001				
	Pre conditioning		23 ± 2°C and 50 ± 5% relative humidity		
	Conditioning period		≥ 24 h		
	Description of used method		Guarded hotplate, a sample is placed between a cold and a warm plate. The cold and the warm plate are kept at constant temperature. The amount of energy needed to keep the temperature of the warm and cold plate constant is an indication for the heat transmission.		
	Requirements according to EN 14041:2004/AC:2005		Thermal conductivity and resistance values shall be calculated or measured. For floor coverings its common to expressed as the 23 °C value of, either: - Thermal resistance, R_{23} , in m ² ·K/W, or alternatively - Thermal conductivity, λ_{23} , in mW/m·K.		
	Test result(s)				
	Thermal resistance				
	Temperature		Temperature difference	Thermal resistance R in m ² . K/W	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>
	R ₁₈	18 °C	10 K	0.034	
	R ₂₃	23 °C	10 K	0.034	
R ₂₈	28 °C	10 K	0.033		
Thermal conductivity					
Temperature		Temperature difference	Thermal conductivity λ in mW/m.K		
λ_{18}	18 °C	10 K	148.38		
λ_{23}	23 °C	10 K	150.82		
λ_{28}	28 °C	10 K	152.99		
Thermal resistance at 23°C, R_{23} , (m ² ·K/W)			0.034		

Test report no.: 89218997 001
 Testrapport nr.:

Clause Deel	Requirements - Tests / Vereisten - Tests	Measuring results – Remarks Meetresultaten – Opmerkingen	Result Resultaat
----------------	---	---	---------------------

1.2.	Determination of dynamic coefficient of friction on dry floor surfaces EN 13893:2002			
	Remark	This result can also be used for: TRU-STONE SPC-CLICK Vinylflooring 4+1mm IXPE 0,30mm		
	Test conditions	23 ± 2°C and 50 ± 5% relative humidity		
	Conditioning period	≥ 24 days		
	Type of test location	Laboratory		
	Date of test	08.06.2021		
	Test conditions	Dry		
	Pre-treatment	None		
	Used slider	Leather/rubber combination		
	Requirements according to EN 14041:2004/AC:2005	≥ 0,30 μ		
	Test result(s)			
		Length direction	Width direction	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
Measurement 1 (μ)	0.44	0.47		
Measurement 2 (μ)	0.42	0.44		
Measurement 3 (μ)	0.41	0.42		
Measurement 4 (μ)	0.41	0.38		
Measurement 5 (μ)	0.39	0.37		
Average measurement 3, 4 and 5 (μ)	0.40	0.39		

1.3.	Assessment of static electrical propensity EN 1815:2016, method A			
	Test conditions	23 ± 1°C and 25 ± 2% relative humidity		
	Conditioning period	≥ 7 days		
	Sole material	Rubber		
	Installation system (top to bottom)	Test specimen Earthed metal plate		
	Requirement according EN 14041:2004/AC:2005	Antistatic floor coverings: ≤ 2.0 kV		
	Test result(s)			
	Measurement 1 (kV)	0.6		P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
	Measurement 2 (kV)	0.6		
	Measurement 3 (kV)	0.6		
Average result (kV)	0.6			
Assessment:	Antistatic			

TFI Report 21-001015-01

Functional and Quality Tests

Customer

TRUSA MERMER SAN. TIC LTD. STI
Turanköy Mah. Turanköy 7. Sok No: 1
KESTEL/BURSA
TURKEY

Product

resilient floor covering
TRU-STONE SPC-CLICK Vinylflooring 4+1 mm IXPE 0,55mm

This report includes 2 pages and 1 annex.

Responsible at TFI

Dipl.-Ing. Cornelia Schiffer
- Senior Engineer -
Tel: +49 241 9679 150
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Aachen, 06.09.2021

Dr. Andreas Zoëga
- Head of testing laboratory -



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1 Transaction

Test order	Dimensional stability according to EN ISO 23999:2018
Order date	06.08.2021
Your reference	I. Baysal
Product designation	TRU-STONE SPC-CLICK Vinylflooring 4+1 mm IXPE 0,55mm
TFI sample number	2101595
Date of sample receipt	09.08.2021
Sampling performed by	Customer

2 Product Specification

Use surface	not known
Construction	heterogeneous
Structure	embossed
Pattern	tonal effect without pattern
Colour of the use surface	grey, light grey
Type of delivery	planks

3 Results

Parameter	Result
Dimensional stability	individual results cf. annex MW

The measurement results are evaluated without consideration of the measurement uncertainty with reference to compliance with limit values, unless otherwise specified by the test standard.

4 Annexes

Dimensional Stability MW 21-001015-01

The annexes marked ^a are based on tests accredited in accordance with EN ISO/IEC 17025.

Annex MW - Dimensional Stability

1 Transaction

Product designation	TRU-STONE SPC-CLICK Vinylflooring 4+1 mm IXPE 0,55mm
TFI sample number	2101595
Testing period	11.08.2021 – 01.09.2021

2 Test Method / Requirements

EN ISO 23999:2018	Determination of dimensional stability and curling after exposure to heat
Additional measurement according annex A, dimensional stability due to heat	no
Test temperature	80 °C
Deviations	None
History of the sample	not known

The test was performed by an authorized subcontractor in Arnhem, Netherlands.

3 Results

3.1 Dimensional stability after conditioning

Parameter	Result
Average dimensional change production direction [%]	-0.05
Average dimensional change cross production direction [%]	0.00
Maximum dimensional change production direction [%]	-0.10
Maximum dimensional change cross production direction [%]	0.03
Average curling [mm]	0.9
Average initial curling [mm]	0.5

Comments: none

5190243IB02

2021160410



Test Result : B_{fl}, s1

Report No : 2021160410

Applicant : TRUSA MERMER SAN. TİC. LTD. ŞTİ.

Adress : Turanköy Mah. Turanköy 7. Sokak No:1/4 KESTEL/BURSA

Contact Person : Erol UZUNCA

Telephone : 05414478663

E-Mail : ctstone@trusa.net

Sample Accepted on : 16.03.2021

Report Date : 24.03.2021

Total Number of Pages : 6 (Pg)

Sample ID : TRU-STONE / ROKPLANK SPC Rigid Core Vinyl Flooring
(0,3mm/0,55mm)

	TEST	METHOD	RESULT
*	Fire classification of construction products and building elements-Part 1: Classification using test data from reaction to fire tests.	EN 13501-1	PASS
			B _{fl} s1

Results: Flame spread is not highly flammable, no melt droplets, smoke formation has been.



Seal



Customer Representative
Hasan KUTLU



Laboratory Manager
Hava Sarıaydın

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Environment

The requirements and standards apply to equipment intended for use in:

X	Residential (domestic) environment
X	Commercial and light-industrial environment
X	Industrial environment
X	Medical environment

**TS EN ISO 13501-1: Building products and structural elements, fire classification. Part 1:
Classification by using data obtained from the behavior tests against fire****Scope**

This standard covers the behavior of all building products, including products used in combination with structural elements, against flame.

Classes of reaction to fire performance for floorings (B_{fl})

Class	Test method	Classification criteria	Additional classification
B _{fl}	EN ISO 9239-1 ^a and	Critical flux ^b ≥ 8,0 kW/m ²	Smoke production ^c
	EN ISO 11925-2 ^d : Exposure = 15 s	F _s ≤ 150 mm within 20 s	

^a Test duration = 30 min.

^b 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).

^cs1 = Smoke ≤ 750 % minutes;

s2 = not s1.

^d Under conditions of surface flame attack and, if appropriate to the end use application of the product, edge flame attack

EN ISO 9239-1: Reaction to fire tests for floorings—Part 1: Determination of the burning behaviour using a radiant heat source

Scope

This part of ISO 9239 describes a method for evaluating the reaction to fire versus airflow and the propagation of flame in horizontally arranged floor coverings exposed to a heat flow gradient in a test chamber and ignited by a pilot flame. .

This test method applies to all floor coverings such as: textile floor coverings, cork, wood, rubber and plastic coverings as well as coverings. The results obtained with this test method show the fire behavior of the entire tested floor covering, including any carrier plate.

Procedure

At intervals of 10 minutes from the start of the test and when the flame is extinguished, the burning distances shall be measured as the distance rounded to the nearest 10 mm between the flame front and the sample zero line. All special observations should be recorded, such as flickering, melting, bubble formation, duration and location of the glow after the flame is extinguished, burning on the carrier plate.

Test Results

Sample	Furthest extent of spread of flame(mm)	Critical Heat Flux (CHF or HF-30) kW/m ²	Comments and Observation
# 1	155	10.06	There were cracks on the surface in the direction of the flame source applied in the sample, but no flame was observed.
# 2	160	10.12	
# 3	165	10.14	
The mean value for the critical heat flux (CHF and/or HF-30) of the three specimens from the same orientation: 10.11 kW/m ²			

EN ISO 11925-2: Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 2: Single-flame source test

Scope

This part of ISO 11925 specifies a method of test for determining the ignitability of products by direct small flame impingement under zero impressed irradiance using vertically oriented test specimens.

Procedure

There are two flame application times, either 15 seconds or 30 seconds. The starting time of the test depends on the application of the flame.

Conditioning

Temperature (°C)	23 ± 2
Relative Humidity (%)	50 ± 5

Test Results

Ignition Position	Face Ignition and Edge ignition
Flame Application Time	15s

Expression of results	Results					
	Face Ignition			Edge ignition		
# Sample No	#1	#2	#3	#4	#5	#6
Whether ignition occurs (Yes/No)	No	No	No	Yes	Yes	Yes
Whether the flame tip reaches 150 mm above the flame application point, and the time at which this occurs (No/Time)	No	No	No	No	No	No
Whether ignition of the filter paper occurs (Yes/No)	No	No	No	No	No	No

Classification of Air Duct based on fire behavior:

B_{fl}

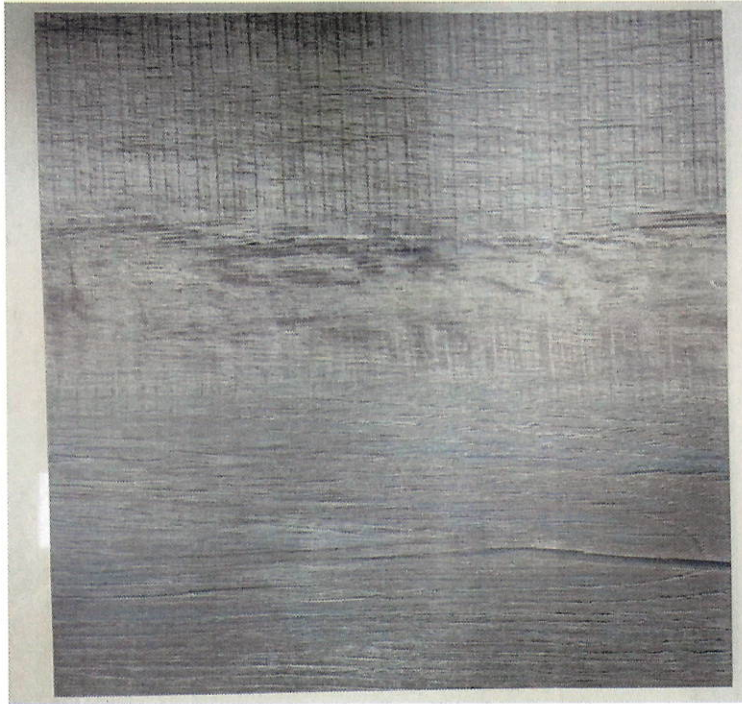
Additional classification for smoke formation:

s1

Reaction to fire for SPC Rigid Core Vinyl Flooring

Flammability Behavior	Smoke	
B _{fl}	s	1

SAMPLE IMAGE



****** End Of Report ******



CERTIFIED
CLEAN AIR GOLD

Intertek does hereby certify that an independent assessment has been conducted on behalf of

TRU STONE SPC

Certificate Number: 104517965GRR-001a

Certification valid until: 29 December 2021

Applicant Address: 6251 Hwy 7
Woodbridge, ON L4H DL1, Canada

Product Category: Building Products, Flooring

Product Details: See Appendix

Conformance Criteria: California Department of Public Health (CDPH) Standard Method v1.2: Private Office and School Classroom.

Issuing Office Name & Address: Intertek Testing Services NA, Inc.
4700 Broadmoor Ave SE, Suite 200
Kentwood, MI 49512 USA
Ph: +1-616-656-7401

A handwritten signature in blue ink, reading 'Jesse Ondersma', positioned above a horizontal line.

Jesse Ondersma
Certification Officer
30 December 2020

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CERTIFIED
CLEAN AIR GOLD

Certificate Appendix

TRU STONE SPC

Certificate Number: 104517965GRR-001a

Product Category	Flooring
Model Name(s)	SPC Rigid Core Vinyl Flooring
Product Restrictions	None
TVOC Range*	0.5 mg/m³ or less

**TVOC range stated is based on the most stringent modeling scenario as listed in the Conformance Criteria on page 1.*

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TRU-STONE TEST REPORT

SCOPE OF WORK

Standard Method Version 1.2 for CDPH 01350 on 5mm SPC Rigid Core Flooring

REPORT NUMBER

104517965GRR-002

ISSUE DATE

22-December-2020

PAGES

12

DOCUMENT CONTROL NUMBER

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TEST REPORT FOR TRU-STONE

Report No.: 104517965GRR-002

Date: 22-December-2020

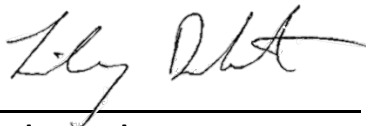
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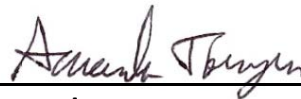
SECTION 1

CLIENT INFORMATION

Attention: Sedat Bayramoglu
Tru-Stone
6251 Hwy 7
Woodbridge, ON L4H 0L1 Canada
Phone: +1 416-410-0411
Email: sedat@tru-stone.net



Lindsay Delamarter
Project Engineer



Amanda Tongen
Project Reviewer

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SECTION 2

SUMMARY AND CONCLUSION

Test Method: Standard Method Version 1.2 for CDPH 01350
 Modeling Scenario: Private office (PO), school classroom (SC) and single family residence (R)

DESCRIPTION OF SAMPLES

Manufacturer / Location: TRU-STONE SPC / Bursa, Turkey
 Product Name: 5mm SPC Rigid Core Flooring
 Product Number: Not Specified
 Date of Manufacture: 09-October-2020
 Date of Collection: 18-November-2020
 Date of Shipment: 18-November-2020
 Date Received by Lab: 25-November-2020
 Date of Test Start: 03-December-2020
 As Received Sample Condition: Okay Condition – Not wrapped in foil
 Lab Sample ID: GRR2011250013

WORK REQUESTED/APPLICABLE DOCUMENTS

VOC Emissions Analysis: CDPH Standard Method v1.2
 Intertek Quote: Qu-01127963

TEST RESULTS

MODELING SCENARIO	RESULT (PASS/FAIL)	TVOC (mg m ⁻³)
Private Office (PO)	PASS	< 0.1
School Classroom (SC)	PASS	< 0.1
Single Family Residence (R)*	PASS	< 0.1

*Note: The single family residence scenario is not yet a CDPH requirement. It is provided for informational purposes only.

SAMPLE DISPOSITION

At the completion of testing, samples were disposed of in a routine manner.

SECTION 3**CDPH STANDARD METHOD V1.2**

Date Received: 25-November-2020
Dates Tested: 03-December-2020 to 18-December-2020

DESCRIPTION OF SAMPLES:

Product Description: Stone Polymer Composite 5mm thick with 1mm IXPE Pad
Material Submitted: Four (4) stacked pieces of flooring

ACCEPTANCE CRITERIA:

Referencing: CDPH Standard Method v1.2, Table 4.1
LEED v4 - Low Emitting Materials
LEED v4 - TVOC Ranges: $\leq 0.5 \text{ mg m}^{-3}$
 $0.5 \text{ to } 5.0 \text{ mg m}^{-3}$
 $\geq 5.0 \text{ mg m}^{-3}$

TEST NOTES OR DEVIATIONS:

The sample was not collected and shipped within 7 days of production. Testing was not performed within 5 weeks of production.

TEST SUMMARY:

The emissions testing was performed according to "Standard Method for the Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers Version 1.2". A photograph of the tested sample is included herein. The sample was attached to a stainless-steel plate using strips of aluminized tape and placed into the test chamber with top surface exposed. Air samples were collected prior to the sample being placed in the test chamber (0 hours) and at 264, 288, and 336 hours after being placed in the test chamber. Samples analyzed for individual VOCs and TVOC were collected on multi-sorbent tubes containing glass wool, Tenax TA 35/60 and Carbograph 5 TD 40/60. These VOC samples were analyzed by thermal desorption-gas chromatography/mass-spectrometry, TD-GC/MS. TVOC was calculated through integration of the chromatogram from n-pentane through n-heptadecane using toluene as a surrogate. Individual VOCs were calculated using calibration curves based on pure standards unless otherwise noted. Samples analyzed for low molecular weight aldehydes were collected on cartridges treated with 2,4-di-nitrophenylhydrazine (DNPH). Low molecular weight aldehydes were analyzed using high performance liquid chromatography, HPLC.

RESULTS:**Table 1: Sample and Chamber Conditions during Test Period**

PARAMETER		SYMBOL	VALUE	UNITS
Sample Dimensions	Length	-	0.223	m
	Width	-	0.245	m
	Thickness	-	N/A	m
Exposed Sample Surface Area		<i>A</i>	0.055	m ²
Chamber Volume		<i>V</i>	0.1163	m ³
Chamber Loading Factor		<i>L</i>	0.47	m ² m ⁻³
Inlet Air Flow Rate		<i>Q</i>	0.1158	m ³ h ⁻¹
Air Change Rate		<i>N_{ACH}</i>	1.00	h ⁻¹
Area Specific Flow Rate		<i>q_A</i>	2.12	m h ⁻¹
Chamber Pressure (Range)		<i>P</i>	17.6 (12.0-23.3)	Pa
Average Temperature (Range)		<i>T</i>	23.1 (22.8-23.3)	°C
Average Humidity (Range)		RH	50.0 (46.6-52.3)	% RH
Testing Duration		<i>t</i>	336	h

Table 2: Test chamber background VOC concentrations in µg m⁻³.

COMPOUND	CAS No.	<i>C₁₀</i>
Formaldehyde	50-00-0	< 0.7
TVOC	-	12.6

Table 3: Test chamber TVOC and formaldehyde concentrations in µg m⁻³.

COMPOUND	CAS No.	264 H	288 H	336 H
Formaldehyde	50-00-0	< 2.0	< 2.0	< 2.0
TVOC	-	12.6	21.9	10.6

Table 4: Test chamber TVOC and formaldehyde emission factors in µg m⁻² h⁻¹.

COMPOUND	CAS No.	264 H	288 H	336 H
Formaldehyde	50-00-0	< 3.5	< 3.5	< 3.5
TVOC	-	BB*	19.6	BB*

*BB = Below Blank

Individual emitted VOCs identified above the lower limits of quantitation are listed in Table 5; VOCs which are listed on chemical of concern lists or have CRELs are indicated.

The measured chamber concentrations and corresponding emission factors of identified individual VOCs and TVOCs are listed in Table 6.

In Tables 4, 6 and 7, emission factors were calculated using equation 3.1 in CDPH Standard Method V1.2:

$$EF_{Ai} = \frac{Q \times (C_{it} - C_{i0})}{A_c}$$

The inlet flow rate, Q ($m^3 h^{-1}$), is the measured flow rate of air into the chamber. The chamber concentration, C_{it} ($\mu g m^{-3}$), is the concentration of a target VOC_i, formaldehyde and other carbonyl compounds measured at time t . The chamber background concentration, C_{i0} ($\mu g m^{-3}$), is the corresponding concentration measured with the chamber operating without a test specimen. The exposed surface area of the test specimen in the chamber, A_c (m^2), is determined from the measurements made at the time of specimen preparation.

Table 5: VOCs detected above lower limits of quantitation in air samples at 336 hours.

VOC	CAS No.	SURROGATE ¹	CREL ² ($\mu g m^{-3}$)	CARB TAC ³	PROP 65 LIST ⁴
*					

*No individual VOCs were detected.

¹Indicates which non-listed VOCs were quantified using surrogate compounds, all other compounds were quantified using pure compounds.

²Chronic Reference Exposure Level (CREL) as defined by California Office of Environmental Health Hazard Assessment.

³Substance is listed on California Air Resource Board’s (CARB) Toxic Air Contaminate (TAC) identification list.

⁴Substance known to the state of California to cause cancer or reproductive toxicity according to California’s Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

Table 6: Measured chamber concentrations and corresponding emission factors of individual VOCs listed in Table 4-1 of CDPH 01350 V1.2. at 336 hours.

VOC	CAS No.	CHAMBER CONCENTRATION ($\mu\text{g m}^{-3}$)	EMISSION FACTOR ($\mu\text{g m}^{-2} \text{h}^{-1}$)
Formaldehyde	50-00-0	< 2.0	< 3.5
Acetaldehyde	75-07-0	< 2.0	< 1.3
Vinyl acetate	108-05-4	< 0.5	< 1.2
Epichlorohydrin	106-89-8	< 0.3	< 0.7
Ethanol, 2-methoxy-, acetate	110-49-6	< 0.9	< 2.0
Isopropyl Alcohol	67-63-0	< 0.3	< 0.5
Ethene, 1,1-dichloro-	75-35-4	< 0.3	< 0.5
Methylene chloride	75-09-2	< 4.2	< 8.8
Carbon disulfide	75-15-0	< 0.3	< 0.5
Methyl tert-butyl ether	1634-04-4	< 1.8	< 3.9
n-Hexane	110-54-3	< 0.4	< 0.8
Trichloromethane (Chloroform)	67-66-3	< 0.3	< 0.5
Ethanol, 2-methoxy-	109-86-4	< 0.3	< 0.7
Ethane, 1,1,1-trichloro-	71-55-6	< 0.3	< 0.5
Benzene	71-43-2	< 0.3	< 0.5
Carbon Tetrachloride	56-23-5	< 0.3	< 0.5
2-Propanol, 1-methoxy-	107-98-2	< 0.3	< 0.5
Ethylene glycol	107-21-1	< 20.0	< 42.4
Trichloroethylene	79-01-6	< 0.3	< 0.5
1,4-Dioxane	123-91-1	< 0.3	< 0.5
Ethanol, 2-ethoxy-	110-80-5	< 0.4	< 0.7
Toluene	108-88-3	< 0.3	< 0.5
Formamide, N,N-dimethyl-	68-12-2	< 0.6	< 1.4
Tetrachloroethylene	127-18-4	< 0.3	< 0.5
Benzene, chloro-	108-90-7	< 0.3	< 0.5
Ethylbenzene	100-41-4	< 0.3	< 0.5
Xylene (-m, -p, & -o)	108-38-3, 95-47-6, 106-42-3	< 0.4	< 0.9
Styrene	100-42-5	< 0.3	< 0.5
2-Ethoxyethyl acetate	111-15-9	< 0.3	< 0.5
Phenol	108-95-2	< 0.3	< 0.6
Benzene, 1,4-dichloro-	106-46-7	< 0.3	< 0.5
Isophorone	78-59-1	< 0.3	< 0.5
Naphthalene	91-20-3	< 0.3	< 0.5

Table 7: Measured chamber concentrations and corresponding emission factors of identified non-listed individual VOCs and TVOC at 336 hours.

VOC	CAS No.	CHAMBER CONCENTRATION ($\mu\text{g m}^{-3}$)	EMISSION FACTOR ($\mu\text{g m}^{-2} \text{h}^{-1}$)
TVOC	-	10.6	< 21.2

Exposure Scenario Modeling and Evaluation:

Estimated building concentrations for the listed scenarios were calculated using equation 3.2a of CDPH Standard Method V1.2:

$$C_{Bi} = \frac{EF_{Ai} \times A_B}{Q_B}$$

The area specific emission rate EF_A at 336 hours (14 days) total exposure time is multiplied by the ratio of the exposed surface area of the installed material in the building, A_B (m^2), to the flow rate of outside ventilation air, Q_B ($\text{m}^3 \text{h}^{-1}$).

The modeling parameters used for the given scenarios are listed in Table 8. The modeled concentrations of identified individual VOCs are listed in Tables 9 & 10. Whether the modeled concentrations meet the maximum allowable concentration requirements specified in Table 4.1 of CDPH Standard Method V1.2 are also indicated.

Table 8: Standard modeling parameters for flooring.

PARAMETER	SYMBOL	VALUE	UNITS
Exposed Surface Area Installed in <i>Private Office (PO)</i>	A_B	11.1	m^2
Air flow rate of <i>Private Office (PO)</i>	Q_B	20.7	$\text{m}^3 \text{h}^{-1}$
Exposed Surface Area Installed in <i>Classroom (SC)</i>	A_B	89.2	m^2
Air flow rate of <i>Classroom (SC)</i>	Q_B	191	$\text{m}^3 \text{h}^{-1}$
Exposed Surface Area Installed in <i>Residence (R)</i>	A_B	211	m^2
Air flow rate of <i>Residence (R)</i>	Q_B	127	$\text{m}^3 \text{h}^{-1}$

Table 9: Modeled concentrations of individual VOCs specified in Table 4-1 of CDPH 01350 V1.2.

VOC	CAS NO.	MODELED CONCENTRATION ($\mu\text{g m}^{-3}$)			CONC. LIMIT ($\mu\text{g m}^{-3}$)	RESULT Pass (P) /Fail (F)		
		PO	SC	R		PO	SC	R
Formaldehyde	50-00-0	< 2.3	< 2.0	< 7.0	9	P	P	P
Acetaldehyde	75-07-0	< 2.3	< 2.0	< 7.0	70	P	P	P
Vinyl acetate	108-05-4	< 0.6	< 0.5	< 1.9	100	P	P	P
Epichlorohydrin	106-89-8	< 0.4	< 0.3	< 1.2	1.5	P	P	P
Ethanol, 2-methoxy-, acetate	110-49-6	< 1.1	< 0.9	< 3.3	45	P	P	P
Isopropyl Alcohol	67-63-0	< 0.3	< 0.2	< 0.9	3,500	P	P	P
Ethene, 1,1-dichloro-	75-35-4	< 0.3	< 0.2	< 0.9	35	P	P	P
Methylene chloride	75-09-2	< 4.7	< 4.1	< 14.7	200	P	P	P
Carbon disulfide	75-15-0	< 0.3	< 0.2	< 0.9	400	P	P	P
Methyl tert-butyl ether	1634-04-4	< 2.1	< 1.8	< 6.4	4,000	P	P	P
n-Hexane	110-54-3	< 0.4	< 0.4	< 1.3	3,500	P	P	P
Trichloromethane (Chloroform)	67-66-3	< 0.3	< 0.2	< 0.9	150	P	P	P
Ethanol, 2-methoxy-	109-86-4	< 0.4	< 0.3	< 1.2	30	P	P	P
Ethane, 1,1,1-trichloro-	71-55-6	< 0.3	< 0.2	< 0.9	500	P	P	P
Benzene	71-43-2	< 0.3	< 0.2	< 0.9	1.5	P	P	P
Carbon Tetrachloride	56-23-5	< 0.3	< 0.2	< 0.9	20	P	P	P
2-Propanol, 1-methoxy-	107-98-2	< 0.3	< 0.2	< 0.9	3,500	P	P	P
Ethylene glycol	107-21-1	< 22.7	< 19.8	< 70.4	200	P	P	P
Trichloroethylene	79-01-6	< 0.3	< 0.2	< 0.9	300	P	P	P
1,4-Dioxane	123-91-1	< 0.3	< 0.2	< 0.9	1,500	P	P	P
Ethanol, 2-ethoxy-	110-80-5	< 0.4	< 0.3	< 1.2	35	P	P	P
Toluene	108-88-3	< 0.3	< 0.2	< 0.9	150	P	P	P
Formamide, N,N-dimethyl-	68-12-2	< 0.7	< 0.6	< 2.3	40	P	P	P
Tetrachloroethylene	127-18-4	< 0.3	< 0.2	< 0.9	17.5	P	P	P
Benzene, chloro-	108-90-7	< 0.3	< 0.2	< 0.9	500	P	P	P
Ethylbenzene	100-41-4	< 0.3	< 0.2	< 0.9	1,000	P	P	P
Xylene (-m, -p, & -o)	108-38-3, 95-47-6, 106-42-3	< 0.5	< 0.4	< 1.4	350	P	P	P
Styrene	100-42-5	< 0.3	< 0.2	< 0.9	450	P	P	P
2-Ethoxyethyl acetate	111-15-9	< 0.3	< 0.2	< 0.9	150	P	P	P
Phenol	108-95-2	< 0.3	< 0.3	< 1.0	100	P	P	P
Benzene, 1,4-dichloro-	106-46-7	< 0.3	< 0.2	< 0.9	400	P	P	P
Isophorone	78-59-1	< 0.3	< 0.2	< 0.9	1,000	P	P	P
Naphthalene	91-20-3	< 0.3	< 0.2	< 0.9	4.5	P	P	P

Table 10: Modeled concentrations of identified non-listed individual VOCs.

VOC	CAS NO.	MODELED CONCENTRATION ($\mu\text{g m}^{-3}$)			CONC. LIMIT ($\mu\text{g m}^{-3}$)	Result Pass (P) /Fail (F)		
		PO	SC	R		PO	SC	R
TVOC _{Toluene}	-	< 11.4	< 9.9	< 35.2	-	-	-	-

PHOTOGRAPHS:

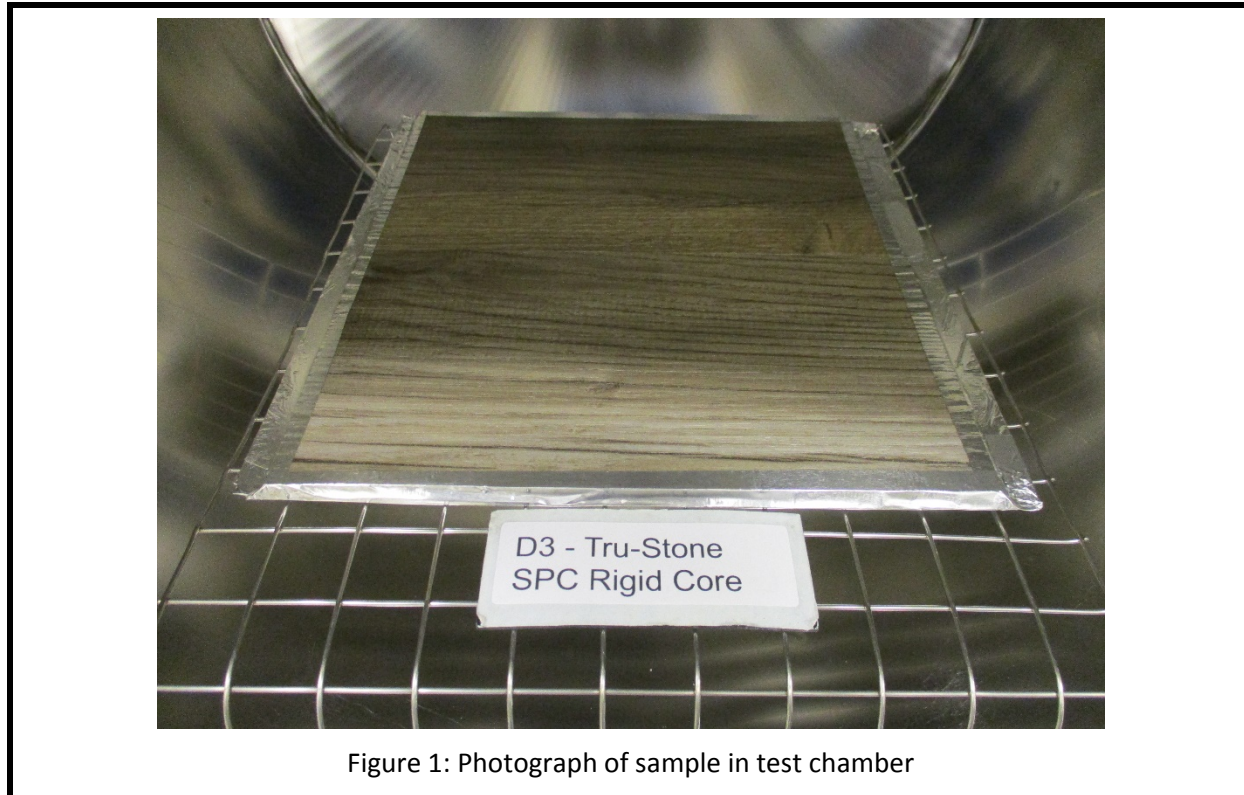


Figure 1: Photograph of sample in test chamber



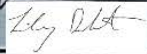
SECTION 4

FACILITIES AND EQUIPMENT:

GCMS	
INSTRUMENTATION USED:	Markes TD-100 Thermal Desorption Agilent 7890A GC Agilent 5975C MS
COLUMN USED:	AGILENT HP-5MS (GC)
HPLC	
INSTRUMENTATION USED:	Agilent 1260 Infinity Series
COLUMN USED:	Poroshell 120 EC-C18

SECTION 5

CHAIN OF CUSTODY

	Ship To:		Chain of Custody for Chemical Testing	
	Attn: VOC Laboratory 4700 Broadmoor Ave SE Suite 200 Kentwood, MI 49512 Phone: 616-656-7401		Intertek Quotation Number: 01127963-0 Purchase Order (enter Company and Number): TRU-STONE - 18.11.20	
Customer Information			Shipping Details	
Company: TRU-STONE			Packed & Shipped By: Sedat Bayramoglu	
Street Address: 6251 Hwy 7			Shipping Date: November 18 2020	
City/State/Postal code: Woodbridge Ontario L4H 0L1			Carrier/Airbill Number:	
Country: Canada			Requested Testing	
Contact Name & Title (for reporting): Sedat Bayramoglu - Management			Test to be performed: Clean Air Certification	
Contact Phone/Fax Numbers: 416 836 2274 / 647 724 1615			Customer Request for Certification	
Contact E-mail Address: sedat@tru-stone.net			Clean Air Silver™ Certification: <input type="checkbox"/> YES	
Financially Responsible Co.:			Clean Air Gold™ Certification: <input checked="" type="checkbox"/> YES	
Manufacturer Information (If Different)			Special Customer Instructions	
Company: TRU-STONE SPC			Please kindly complet at your earliest convenience	
City/State/Country: Bursa / Turkey				
Contact Name/Title: Erol Yuce / Production Manager				
Phone Number/E-mail Address: erol.trustone@gmail.com +90 0				
Sample Details				
Product Commercial Name*: 5mm SPC Rigid Core Flooring				
Product Commercial Part No.(if not part of the name)*:				
Manufacturer Sample Tracking ID: 5mm SPC Rigid Core Flooring				
Date Manufactured*: October 9 2020				
Product Category & Use*: 5mm SPC Rigid Core Flooring				
Sample Construction Materials*: Rigid Core Flooring				
Stone Polymer Composite / 5mm Thick / Includes 1mm IXPE Pad				
Plant Name & Location*: TRU-STONE SPC				
Collection Location within Plant: Packaging Area				
Date & Time Collected*: November 18 2020				
Number of Sample Pieces*: 2 planks of 7x48 inch size				
Sample Collected by*: Sedat Bayramoglu				
Phone/Fax Numbers*: 416 836 2274				
E-mail Address*: sedat@tru-stone.net				
Customer Authorizes Laboratory to Submit Copies of Test Reports To:				
Contact: Sedat Bayramoglu				
Email Address: sedat@tru-stone.net				
Organization: TRU-STONE				
Contact:				
Email Address:				
Organization:				
Intertek Use Only				
Condition of Shipping Package: Good Condition				
Condition of Sample: Okay Condition - not wrapped in foil				
Sample ID: GRR2011250013				
GIN: G104517965				
*Indicates required field				
Sample Handling*				
	Printed Name*	Signature*	Date*	Company*
Relinquished By:	Sedat Bayramoglu		November 18 2020	TRU-STONE
Received by:	Lindsay Delamarter		November-27-2020	Intertek



TRU-STONE

CLEAN AIR CERTIFICATION REPORT

SCOPE OF WORK

Clean Air Certification of Building Products

REPORT NUMBER

104517965GRR-001

ISSUE DATE

30 December 2020

PAGES

7

DOCUMENT CONTROL NUMBER

SFT-CLEAN AIR-OP-19c (29-April-2019)

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CLEAN AIR CERTIFICATION REPORT

SECTION 1 Applicant Information

Report Number	104517965GRR-001	Issue Date	30 December 2020	Revised	N/A
Applicant	TRU-STONE	Manufacturer	TRU-STONE SPC		
Address	6251 Hwy 7 Woodbridge, ON L4H DL1	Address	Turankoy Sanayi Bolgesi, 16000, 7. Sokak #1 Kestel, Bursa, Turkey		
Country	Canada	Country	Turkey		
Contact	Sedat Bayramoglu	Contact	Erol Yuce, Production Manager		
Phone	+1 (416) 410-0411	Phone	+90 (541) 447-8663		
FAX	Not Specified	FAX	Not Specified		
Email	sedat@tru-stone.net	Email	info@tru-stone.net		

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CLEAN AIR CERTIFICATION REPORT

SECTION 2 Product Grouping

Clean Air GOLD: Conforms to California Department of Public Health (CDPH) Standard Method v1.2:
Private Office and School Classroom

Certificate	104517965GRR-001a
Product Category	Building Products
Product Type	Flooring
Brand name	TRU STONE SPC
Models	SPC Rigid Core Vinyl Flooring
Product Restrictions	None
TVOC Range*	0.5 mg/m ³ or less



CLEAN AIR CERTIFICATION REPORT

SECTION 4 Private Label

MULTIPLE LISTEE 1	
Company Name:	Brand Name:
Address:	
Contact:	Email:
Phone Number:	Note:
Multiple Listee Model	Basic Listee Correlated Model
MULTIPLE LISTEE 2	
Company Name:	Brand Name:
Address:	
Contact:	Email:
Phone Number:	Note:
Multiple Listee Model	Basic Listee Correlated Model



CLEAN AIR CERTIFICATION REPORT

SECTION 5 Revision History

Date	Project Number	Revision Description	Revised By	Signature

CLEAN AIR CERTIFICATION REPORT

SECTION 6 Conclusion

<p>Representative samples of the products covered by this report have been evaluated and found to comply with the applicable requirements of the standards indicated above.</p> <p>Please note, this Report does not represent authorization for the applicant or manufacturer to apply Intertek Certification Marks.</p>			
Completed by:	Lisa Henderson	Reviewed by:	Jesse Ondersma
Title:	Sustainability Program Administrator	Title:	Certification Officer
Signature:	<i>Lisa Henderson</i>	Signature:	<i>Jesse Ondersma</i>

TECHNICAL PRODUCT SPECIFICATIONS SUMMARY

CHARACTERISTIC		TECHNOLOGY TARGET			REMARKS
Determination of Geometrical Characteristics	Thickness	5.146			ISO 24337
	Length	1219.291			
	Width	177.915			
	Squareness (out of square)	Max: 0.160 / Avg: 0.073			
	Straightness	0.058			
	Width Flatness	Max: 0.132 (0.074%) / Avg: 0.097 (0.055%) - Convex			
	Length Flatness	Max: 0.172 (0.014%) / Avg: 0.131 (0.011%) - Convex			
	Openings Between Elements	Max: 0.183 / Avg: 0.091			
	Height Difference Between Elements	Max: 0.114 / Avg: 0.075			
Curling after exposure to heat (%)	SPC Length: ≤0.01 (70°C/ 6Hr) SPC Width: ≤0.01 (70°C/ 6Hr)			ISO 23999 ASTM F3261	
Wear Layer Thickness of Resilient Floor Coverings by Optical Measurement	Average Total Thickness: 0.011 Inch/ 0.28mm			ASTM F410	
Resistance to Chemicals	Chemicals	Surface Dulling	Surface Attack	Color Change	ASTM F925
	5% Acetic Acid	0	0	0	
	70% Isopropyl Alcohol	0	0	0	
	Mineral Oil	0	0	0	
	5% Sodium Hydroxide	0	0	1	
	5% Hydrochloric Acid	0	0	0	
	5% Ammonia	0	0	0	
	Bleach	0	0	0	
	5% Phenol	0	0	0	
	Gasoline	0	0	0	
	Sulfuric Acid	0	0	0	
Kerosene	0	0	0		
Olive Oil	0	0	0		
Static Load Limit Measuring Thickness of Resilient Floor Covering with Foam Layer	Specified Load: 250psi		Residual Compression:0.003mm	ASTM F970	
Determination of Flexibility	Average Total Thickness: 0.202 inch			ASTM F387	
RESIDUAL INDENTATION AT 75 Lbs	PASSES 115 mm Mandrel			ASTM F137	
Squareness Gage	0.000 Inch			ASTM F1914	
Length Deviation	≤0.25mm			ASTM F2421	
Width Deviation	≤0.15mm				
Squareness Deviation	≤0.15mm				
Squareness Deviation	≤0.15mm				



TEST REPORT

DATE: 10-02-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	Test Summary
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

TEST RESULTS

TEST METHOD	PASS/FAIL
ASTM F137	Meets the requirements of ASTM F137
ASTM F970	Meets the requirements of ASTM F3261
ASTM F925	Meets the requirements of ASTM F925
ASTM F387	Meets the requirements of ASTM F387
ASTM F1914	Meets the requirements of ASTM F1914
ISO 24337	Meets the requirements of ISO 24337
ISO 23999	Meets the requirements of ISO 23999
ASTM F410	Meets the residential requirement for wear layer via ASTM F3261.

APPROVED BY: *Gary Anthony*

This report is provided for the exclusive use of the client to whom it is addressed. It may be used in its entirety to gain product acceptance from duly constituted authorities. This report applies only to those samples tested and is not necessarily indicative of apparently identical or similar products. This report, or the name of Professional Testing Laboratory Inc. shall not be used under any circumstance in advertising to the general public.



TEST REPORT

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ISO 24337 Laminate Floor Coverings - Determination of Geometrical Characteristics
------------------------------	---



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The submitted goods were measured to determine geometrical values for size, squareness, straightness, height deviations, and gapping when applied together. All values listed are in mm.

TEST RESULTS

CHARACTERISTIC	VALUE (mm)
Thickness	5.146
Length	1219.291
Width	177.915
Squareness (out of square)	Max: 0.160 / Avg: 0.073
Straightness	0.058
Width Flatness	Max: 0.132 (0.074%) / Avg: 0.097 (0.055%) - Convex
Length Flatness	Max: 0.172 (0.014%) / Avg: 0.131 (0.011%) - Convex
Openings Between Elements	Max: 0.183 / Avg: 0.091
Height Difference Between Elements	Max: 0.114 / Avg: 0.075

APPROVED BY:

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TEST REPORT

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F137 Test Method for Flexibility of Resilient Flooring Materials with Cylindrical Mandrel Apparatus
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The flexibility of a specimen is determined by flexing the material around mandrels of varying sizes. The mandrel sizes range from 6 mm to 120 mm in diameter. The specimen is flexed 180° around the mandrel and then examined for cracking or breaking. If none exists, the procedure is repeated on the next smaller mandrel. The procedure is continued until the material breaks or cracks or until the smallest mandrel is passed.

TEST RESULTS

RESULT	PASSES	115 mm Mandrel
---------------	--------	----------------

APPROVED BY:

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TEST REPORT

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F387 Standard Test Method for Measuring Thickness of Resilient Floor Covering with Foam Layer
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The total thickness of a resilient flooring material is determined through measurements made using a .250 inch presser foot and a dial micrometer. The average of 5 total measurements is reported as the average total thickness.

TEST RESULTS

		THICKNESS
	SPECIMEN 1	0.202 Inch
	SPECIMEN 2	0.204 Inch
	SPECIMEN 3	0.201 Inch
	SPECIMEN 4	0.202 Inch
	SPECIMEN 5	0.203 Inch
AVERAGE TOTAL THICKNESS		0.202 Inch

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TEST REPORT

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F410 Standard Test Method for Wear Layer Thickness of Resilient Floor Coverings by Optical Measurement
------------------------------	---



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The thickness of the wear layer of resilient non-textile floor coverings is determined by microscopic optical measurement. The specimen is examined in five areas and measurements are made on the outer most layer of the composite material. The measurements are recorded to the .001 inch and averaged.

TEST RESULTS

		THICKNESS	
	SPECIMEN 1	0.012 inch	0.30 mm
	SPECIMEN 2	0.009 inch	0.24 mm
	SPECIMEN 3	0.011 inch	0.29 mm
	SPECIMEN 4	0.010 inch	0.25 mm
	SPECIMEN 5	0.011 inch	0.28 mm
AVERAGE TOTAL THICKNESS		0.011 Inch	0.27 mm

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TEST REPORT

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F925 (Regular) Standard Test Method for Resistance to Chemicals of Resilient Flooring
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

TEST RESULTS

5 MINUTE RATINGS	24 HOUR RATINGS
------------------	-----------------

STAINING AGENT	SURFACE DULLING	SURFACE ATTACK	COLOR CHANGE	SURFACE DULLING	SURFACE ATTACK	COLOR CHANGE
5% Acetic Acid	0	0	0	0	0	0
70% Isopropyl Alcohol	0	0	0	0	0	0
Mineral Oil	0	0	0	0	0	0
5% Sodium Hydroxide	0	0	0	0	0	1
5% Hydrochloric Acid	0	0	0	0	0	0
5% Ammonia	0	0	0	0	0	0
Bleach	0	0	0	0	0	0
5% Phenol	0	0	0	0	0	0
Gasoline	0	0	0	0	0	0
Sulfuric Acid	0	0	0	0	0	0
Kerosene	0	0	0	0	0	0
Olive Oil	0	0	0	0	0	0

RATING KEY
0 - No change (----)
1 - Slight change
2 - Moderate change
3 - Severe change

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TEST REPORT

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F970 Standard Test Method for Static Load Limit
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

This test determines the recovery properties of resilient floor covering after long term indentation test (24 hours) under a specified load.

PROCEDURE

The test sample is conditioned to equilibrium at 73° F and 50% relative humidity. The initial thickness of the sample is determined using a dial micrometer with a flat presser foot .250 inches in diameter. A specified load is applied to the sample over a 1.125 inch diameter indenter foot for 24 hours. After removal of the load, the sample is allowed to recover for 24 hours. The sample is regauged using the .250 inch diameter presser foot. The difference between the two measurements is reported as the residual compression.

TEST RESULTS

SPECIFIED LOAD	RESIDUAL COMPRESSION
250 psi	0.003 Inch

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TEST REPORT

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F1914 Test Method for Short-Term Indentation and Residual Indentation of Resilient Floor Covering
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
-----------------------------------	--

IDENTIFICATION	Rok Plank
-----------------------	-----------

PROCEDURE

A test sample is loaded with 75 lbs. on a presser foot .250 inches in diameter for 15 minutes. After 60 minutes of recovery time the indentation is measured again and compared to the original thickness of the sample.

TEST RESULTS

RESIDUAL INDENTATION AT 75 Lbs.	0.000 Inch
--	------------

**Surface Integrity – No puncture through wear layer/décor into rigid core.*

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TEST REPORT

DATE: 10-01-2019

Page 1 of 3

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F2421 Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

This test method covers the determination of both dimensions (length and width) and squareness of resilient floor tile. The gage dials were set and reported as deviation from the zero point of the specified size. Results are listed in inches.

TEST RESULTS

Specified Size in Inches	
Length	Width
48.000	7.000

#1		Squareness Gage	Gage B	Gage C	Gage D	Gauge E
First Set	1	0.000	7.006	7.008	7.008	48.010
Rotation 1	2	0.001	7.008	7.008	7.006	48.010
Flip 1	3	0.002				
Rotation 2	4	0.006				

		Per Linear Ft
Length Deviation	0.010	0.002
Width Deviation Left	0.006	0.010
Width Deviation Center	0.008	0.014
Width Deviation Right	0.008	0.014

Squareness Deviation	
Corner 1	0.000
Corner 2	0.001
Corner 3	0.002
Corner 4	0.006

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TEST REPORT

DATE: 10-01-2019

Page 2 of 3

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F2421 Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

#2		Squareness Gage	Gage B	Gage C	Gage D	Gauge E
First Set	1	0.002	7.006	7.001	7.002	47.996
Rotation 1	2	0.005	7.002	7.001	7.006	47.996
Flip 1	3	0.006				
Rotation 2	4	0.002				

		Per Linear Ft
Length Deviation	-0.004	-0.001
Width Deviation Left	0.006	0.010
Width Deviation Center	0.001	0.002
Width Deviation Right	0.002	0.003

Squareness Deviation	
Corner 1	0.002
Corner 2	0.005
Corner 3	0.006
Corner 4	0.002

#3		Squareness Gage	Gage B	Gage C	Gage D	Gauge E
First Set	1	0.002	7.006	7.005	7.004	47.992
Rotation 1	2	0.003	7.004	7.005	7.006	47.992
Flip 1	3	0.006				
Rotation 2	4	0.005				

		Per Linear Ft
Length Deviation	-0.008	-0.002
Width Deviation Left	0.006	0.010
Width Deviation Center	0.005	0.009
Width Deviation Right	0.004	0.007

Squareness Deviation	
Corner 1	0.002
Corner 2	0.003
Corner 3	0.006
Corner 4	0.005

APPROVED BY: *Gary Anthony*

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TEST REPORT

DATE: 10-01-2019

Page 3 of 3

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F2421 Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

#4		Squareness Gage	Gage B	Gage C	Gage D	Gauge E
First Set	1	0.001	7.003	7.005	7.004	48.006
Rotation 1	2	0.000	7.004	7.005	7.003	48.006
Flip 1	3	0.000				
Rotation 2	4	0.005				

		Per Linear Ft
Length Deviation	0.006	0.002
Width Deviation Left	0.003	0.005
Width Deviation Center	0.005	0.009
Width Deviation Right	0.004	0.007

Squareness Deviation	
Corner 1	0.001
Corner 2	0.000
Corner 3	0.000
Corner 4	0.005

#5		Squareness Gage	Gage B	Gage C	Gage D	Gauge E
First Set	1	0.004	7.001	7.004	7.003	48.014
Rotation 1	2	0.001	7.003	7.004	7.001	48.014
Flip 1	3	0.005				
Rotation 2	4	0.002				

		Per Linear Ft
Length Deviation	0.014	0.004
Width Deviation Left	0.001	0.002
Width Deviation Center	0.004	0.007
Width Deviation Right	0.003	0.005

Squareness Deviation	
Corner 1	0.004
Corner 2	0.001
Corner 3	0.005
Corner 4	0.002

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TEST REPORT

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ISO 23999 ASTM F3261 Standard Specification for Resilient Flooring in Modular Format with Rigid Polymeric Core
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

This International Standard specifies a method for determining dimensional stability and curling of resilient floor coverings, in the form of sheets and tiles, in linear dimensions after exposure to heat. The vertical deformations are measured in the test specimen after the specified heat treatment. Test specimens are placed in an oven at an elevated temperature, after which curl and dimensional stability are determined. In the case of domed material, turn the test specimen over to measure inverted or with the back of the sample facing up.

TEST RESULTS

IDENTIFICATION	TEMPERATURE	RESULT	INITIAL CURL	FINAL CURL
Length mean	70° C	-0.025 mm (0.01%)	0 mm	0 mm
Width mean	70° C	-0.380 mm (0.12%)		

IDENTIFICATION	TEMPERATURE	RESULT	INITIAL CURL	FINAL CURL
Length mean	70° C	-0.127 mm (0.04%)	0 mm	0 mm
Width mean	70° C	-0.169 mm (0.06%)		

IDENTIFICATION	TEMPERATURE	RESULT	INITIAL CURL	FINAL CURL
Length mean	70° C	+0.025 mm (0.01%)	0 mm	0 mm
Width mean	70° C	+0.042 mm (0.01%)		

NOTE: LVT/LVP-ISO 23999 Resilient Floor Covering – Determination of Dimensional Stability and Curling after Exposure to Heat

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TEST REPORT

DATE: 10-18-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F1514 Measuring Heat Stability of Resilient Flooring by Color Change
------------------------------	---



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The test specimens are exposed to heat for 7 continuous days in an air circulating chamber. The materials are read using a spectrophotometer for the baseline color value and then read after the exposure. The Delta E is listed to show the color value change resulting from each exposure.

TEST RESULTS

	DELTA E (ΔE) Rating	Gray Scale Rating
Heat Aged Sample 1	0.04	5.0
Heat Aged Sample 2	0.11	5.0
Heat Aged Sample 3	0.04	5.0

Test requirements of < 8.0 Delta E were met by the tested samples.

AATCC RATING KEY	
5	No change
4	Slight change
3	Noticeable change
2	Considerable change
1	Severe change

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TEST REPORT

DATE: 10-18-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
---------------	-----------

TEST METHOD CONDUCTED	ASTM F1515 Measuring Light Stability of Resilient Flooring by Color Change
------------------------------	--



DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The test specimens are exposed to accelerated light via xenon light using the standard irradiance as listed in the method. The materials are read using a spectrophotometer for the baseline color value and then read after 100, 200, and 300 hours of exposure. The Delta E is listed to show the color value change resulting from each exposure.

TEST RESULTS

	DELTA E (ΔE) Rating	Gray Scale Rating
100 AFU Exposed Sample	0.21	5.0
200 AFU Exposed Sample	0.30	5.0
300 AFU Exposed Sample	0.24	5.0

Test requirements of < 8.0 Delta E MEETS specified criteria.

AATCC RATING KEY	
5	No change
4	Slight change
3	Noticeable change
2	Considerable change
1	Severe change

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Test Items, Method and Results:

Test Method: ASTM E492-09

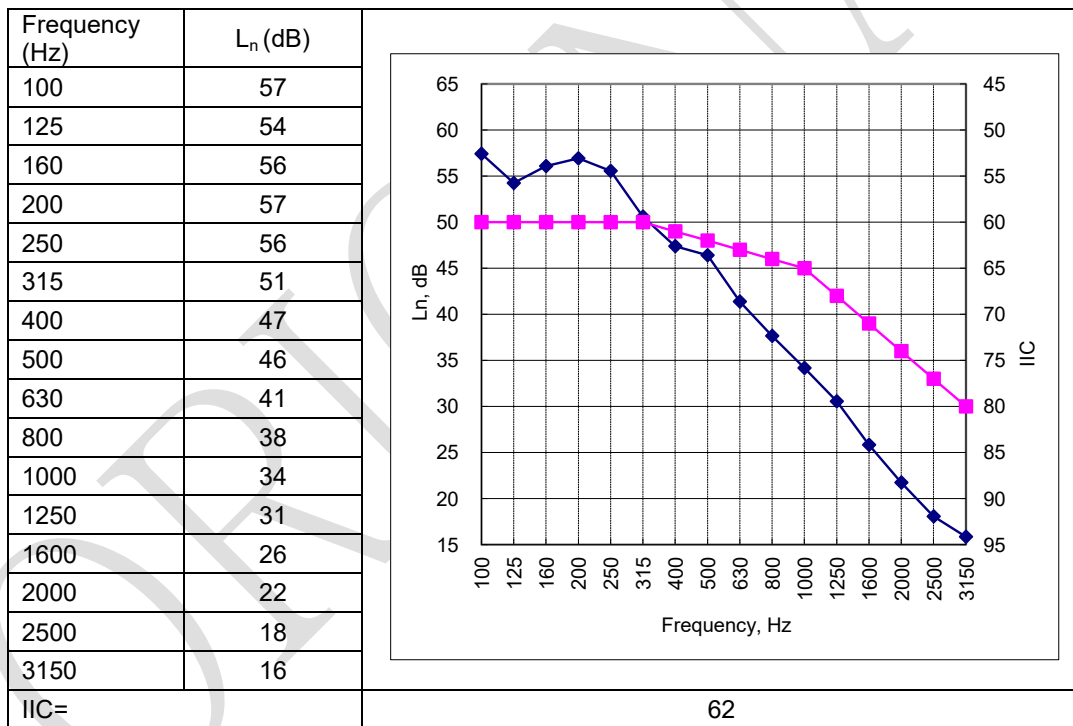
Temperature: 25°C

Relative Humidity: 63%

Specimen area: 10.5m²

Volume of the receiving room: 111m³

Floor/ceiling Assembly: The system consisted of 150mm thick concrete floor with a drop ceiling below forming the horizontal separation between two rooms, one directly above the other. The drop ceiling consisted of 350mm deep light steel bar joists spaced 1200mm on centre. The 12mm thick gypsum boards were fixed on the bar. 100mm thick fibre glass sound batts were placed in the 350mm space. A high density cross-link polyethylene underlayment was placed upon the concrete and the 5.5mm thick PVC flooring specimens were placed on the top of the whole system.



Calculated Impact Insulation Class: IIC 62

Note:

1. L_n = Normalized Sound Pressure Level for Covering over Floor/ceiling System
2. Classified IIC in accordance with ASTM E989-12, Standard Classification for Determination of Impact Insulation Class.
3. The IIC was for the whole floor/ceiling assembly system.

Appendix A: Sample photos



Test sample

The End of Report

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PRODUCT SOUND QUALITY RESULTS

CALCULATED IMPACT INSULATION CLASS: IIC 62

TEST METHOD: ASTM E492-09

TEMPERATURE: 25 C

RELATIVE HUMMIDITY: 63%

SPECIMEN AREA: 10.5m²

VOLUME OF THE RECEIVING ROOM: 111m³

- NORMALIZED SOUND PRESSURE LEVEL FOR COVERING OVER THE FLOOR / CEILING SYSTEM
- CLASSIFIED IIC IN ACCORDANCE WITH E989-12, STANDARD CLASSIFICATION FOR DETERMINATION OF IMPACT INSULATION
- THE IIC WAS FOR THE WHOLE FLOOR / CEILING ASSEMBLY SYSTEM.

CALCULATED SOUND TRANSMISSION CLASS: STC 60

TEST METHOD: ASTM E90-09

TEMPERATURE: 25 C

RELATIVE HUMMIDITY: 63%

SPECIMEN AREA: 10.5m²

VOLUME OF THE RECEIVING ROOM: 111m³

- 1 TRANSMISSION LOSS, THE PARTITION WAS THE FLOOR / CEILING ASSEMBLY SYSTEM
- CLASSIFIED STC IN ACCORDANCE WITH ASTM E413-10, CLASSIFICATION FOR RATING SOUND INSULATION
- THE STC WAS FOR THE WHOLE FLOOR / CEILING ASSEMBLY SYSTEM

RESULTS BASED ON PRODUCTS WITH 1MM IXPE UNDERPADS WITH 100KG/M³ DENSITY. SUPPLIED BY RUNYANG

1.5MM UNDERPADS AVAILABLE FOR SPECIAL ORDER FOR PROJECTS THAT REQUIRE HIGHER RATINGS



TEST REPORT

DATE: 04-21-2020

Page 1 of 1

TEST NUMBER: 0266662

CLIENT	Rok Plank
TEST METHOD CONDUCTED	ISO 4918 Resilient, Textile and Laminate Floor Coverings - Castor Chair Test
DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	RokPlank
COLOR	RokPlank
CONSTRUCTION	SPC

GENERAL PRINCIPLE

This test is designed to determine what effect the action of rolling traffic has on a particular flooring surface. The sample is subjected to the reciprocating action of a chair base which is loaded with weight. The chair castors are set to cause a circular cycling motion resulting in a circle shaped wear pattern.

TEST RESULTS

NUMBER OF CYCLES	APPEARANCE RATING
25,000	No delamination or seam separation. Per client's request, sample was rated for surface change only.



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MERKEZİ BAŞKANLIĞI
Yapı Malzemeleri Laboratuvarı Ankara
Müdürlüğü



TURKISH STANDARDS INSTITUTION
HEADSHIP OF TEST and CALIBRATION CENTER
Construction Materials Laboratory (Ankara)
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www.tse.org.tr

AB-0001-T
626892
08-21

MUAYENE VE DENEY RAPORU
TEST REPORT

Deneysel Talep Eden/Firma (Adı, Adresi, Şehir vb.) <i>Requesting/Customer</i> (Name, Address, City etc.)	: TRUSA MERMER SAN. TİC. LTD. ŞTİ. (TURANKÖY MAH. TURANKÖY 7.SOK. NO: 1/4 Kestel-BURSA)
Deneysel Talep Tarihi/No <i>Order Date / No</i>	: 17.08.2021 / 616530
Numunenin Tanımı (No, Cins, Marka, Tip, Tür, Model vb.) <i>Sample Description (No, Type, Model etc.)</i>	: 800159, 0.00 - 800159, TRU-STONE SPC CLICK Vinyl Flooring 4-1 mm IXPE 0,55 mm, Product specifications: SPC (Parke): 4 mm IXPE PAD (Mattress): 1 mm Dimensions: 181 mm*1219,2 mm,.,0,00 -
Numune Kabul Tarihi <i>Test Item Receipt Date</i>	: 17.08.2021
Deneysel Yapıldığı Tarih <i>Date of Test</i>	: 17.08.2021 - 18.08.2021
Uygulanan Standard / Metod <i>Applied Standard/Method</i>	: İlgili standartlar müteakip sayfalarda verilmiştir. <i>The standards were given in the next pages.</i>
Raporun Sayfa Sayısı <i>Number of pages of the report</i>	: 2
Açıklamalar <i>Remarks</i>	: <i>Private Investigation</i> <i>This report is the translation of the the test report with 13.08.2021 date and 626129 report number and the results in this report based on the results in the previous report in question. New test has not been conducted.</i>
Deneysel laboratuvarları olarak faaliyet gösteren TSE Deneysel ve Kalibrasyon Merkezi Başkanlığı Deneysel Laboratuvarları TÜRKAK'tan AB-0001-T ile TS EN ISO/IEC 17025:2012 standardına göre akredite edilmiştir. <i>TSE Headship of Test and Calibration Center Testing Laboratories accredited by TÜRKAK under registration number AB-0001-T for TS EN ISO/IEC 17025:2012 as test laboratory.</i>	
TÜRKAK deneysel raporlarının tanınırlığı konusunda Avrupa Akreditasyon Birliği (EA) ile Çok Taraflı Anlaşma ve Uluslararası Laboratuvar Akreditasyon Birliği (ILAC) ile karşılıklı tanıma anlaşması imzalamıştır. <i>TURKAK is a signatory to the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the recognition of test reports.</i>	
Deneysel ve/veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deneysel metodları bu raporun tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir. <i>The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.</i>	



Mühür
Seal
Tarih
Date
18.08.2021
Deneysel Sorumlusu
Person in charge of tests
Ömer KORKMAZGÖZ
Deneysel Personel
Testing Expert

Onaylayan
Approved by
Hasan AKSU
Laboratuvar Müdürü V.
Laboratory Manager Dep.

Bu rapor, hazırlayan laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve mühürlü raporlar geçersizdir. Bu rapor, sadece deneysel yapılan numune için geçerlidir ve "Ürün Belgesi" yerine geçmez.
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HEADSHIP OF TSE TEST and CALIB. CENTRE CONSTRUCTION MATERIALS LABORATORY (ANKARA)

MUAYENE - DENEY SONUÇLARI TEST RESULTS

AB-0001-T

626892

08-21

TESTS; Are performed at 23 ± 2 °C temperature and 50 ± 5 humidity.

NOTE: The samples are conditioned for one week at 23 ± 2 °C and 50 ± 5 % relative humidity

Table 1- Tests and properties

PROPERTIES	TEST METHOD	UNIT	RESULTS
Assessment of the surface resistance to microscratching	TS EN 16094 (Procedure A)	% Change	-Brightness before test 60° (Gloss)= 4,8-4,6-4,6-4,6 Average.= 4,65 -Brightness after test 60° (Gloss)= 4,7-4,6-4,6-4,6 Average = 4,63 Change: %0,4 (MSR-A1)
Assessment of the surface resistance to microscratching	TS EN 16094 (Procedure B)	Change	MSR-B1 (No visible scratches)
(*)Resistance to staining	TS EN 438-2	Class	5 No change Test area indistinguishable from adjacent surrounding area 5 staining agents marked with * in Table 7 of TS EN 438-2 were used.

-This test report represents only tested sample(s), and shall not be used as Product Certificate

-This report is arranged at 18.08.2021 as two pages and two copies.

LAB-D-FR-36/11.06.2020-6

(*) Marked articles are accredited by TÜRKAK

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TURKISH STANDARDS INSTITUTION
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MUAYENE VE DENEY RAPORU
TEST REPORT

620996

07-21

Deneysel Talep Eden/Firma (Adı, Adresi, Şehir vb.) <i>Requesting/Customer</i> (Name, Address, City etc.)	: TRUSA MERMER SAN. VE TİC. LTD. ŞTİ (TRUSA MERMER SAN. TİC. LTD. ŞTİ.: TURANKÖY MAH. TURANKÖY 7.SOK. NO:1/4 Kestel-BURSA)
Deneysel Talep Tarihi/No <i>Order Date / No</i>	: 27.05.2021 / 586505
Numunenin Tanımı (No, Cins, Marka, Tip, Tür, Model vb.) <i>Sample Description (No, Type, Model etc.)</i>	: 773248, YER DÖŞEMESİ, , , , , , 20,00 adet 773248, FLOOR COVERING, , , , , , 20,00 item
Numune Kabul Tarihi <i>Test Item Receipt Date</i>	: 27.05.2021
Deneylemlerin Yapıldığı Tarih <i>Date of Test</i>	: 28.05.2021 - 14.07.2021
Uygulanan Standard / Metod <i>Applied Standard/Method</i>	: TS EN 16511+A1: 2019-09 Gevşek-döşenen paneller - Yarı-rijit çok tabakalı, aşınmaya dayanıklı üst tabakası olan modüler yer kaplama paneller (MMF) TS EN 16511+A1: 2019-09 Loose-laid panels - Semi-rigid multilayer modular floor covering (MMF) panels with wear resistant top layer
Raporun Sayfa Sayısı <i>Number of pages of the report</i>	: 3
Açıklamalar <i>Remarks</i>	: Bu rapor 14/07/2021 tarih ve 620996 sayılı raporun yerine geçmektedir. 14/07/2021 tarihli raporun 2'nolu sayfasına firma beyanı eklenmiştir. Yeniden deney yapılmamış redaksiyonel düzeltme yapılmıştır. <i>This report replaces 07/14/2021 dated and 620996 numbered report. Firm declaration is added to the second page of 07/14/2021 dated report. New test were not performed. Editorial corrections were made.</i>

Yukarıda tanımlanan numune için laboratuvarımızda yapılan muayene ve deneylerden elde edilen sonuçlar müteakip sayfalarda verilmiştir.
The testing and/or measurement results are given on the following pages which are part of this report.

Numune müşteri tarafından alınmıştır, bu rapordaki sonuçlar numunenin teslim alındığı hali için geçerlidir. Bu rapor özel deney talebine istinaden düzenlenmiş olup, Standartlara Uygunluk Belgesi niteliğinde değildir. Partiyi temsil etmez. Piyasa Gözetim ve Denetim Faaliyetlerine esas oluşturamaz, ilan, reklam ve ihalelerde 6102 sayılı Türk Ticaret Kanunu'nun 54. ve 55. Maddelerinde yer alan haksız rekabet hükümlerine aykırılık teşkil edecek şekilde kullanılamaz. Söz konusu hususlara aykırı hareket edilmesi halinde hukuki ve cezai açıdan TSE sorumlu tutulamaz.

The sample was taken by the customer and the results in this report are valid for the status of the sample being received. This report has been prepared in accordance with the request for special tests and is not qualified as a Certificate of Conformity to Standards. It does not represent the party, does not constitute a basis for Market Surveillance and Audit Activities, and cannot be used in announcement, advertisements and tenders in contradiction with the provisions of unfair competition in Articles 54 and 55 of the Turkish Commercial Law No. 6102. TSE cannot be held responsible in case of violation of these issues in legal and criminal terms.

Mühür **Tarih**

Seal Date

Deneysel Sorumlusu

Person in charge of tests

Onaylayan

Approved by

İlkay AKPINAR
Deneysel Personeli
Testing Expert

Ahmet Onder ELİRİ
Laboratuvar Müdürü V.
Laboratory Manager Dep.

Bu rapor hazırlayan laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve mühürsüz raporlar geçersizdir. Bu rapor, sadece deneyi yapılan numune için geçerlidir ve "Ürün Belgesi" yerine geçmez.
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MUAYENE - DENEY SONUÇLARI TEST RESULTS

Company declaration: 1219,2 mmX 181 mm X 4mm

4.1- General requirements (Table 1)

REQUIREMENT OF THE STANDARD	OBTAINED VALUES	
Thickness t, ISO 24337 , Δt average $\leq 0,50$ mm,relative to nominal value $t_{max} - t_{min} \leq 0,50$ mm	0,73	
	0,10	
Length, l ISO 24337 , l For the nominal values given, no measured value shall exceed: $l \leq 1500$ mm: $\Delta l \leq 0,5$ mm $l > 1500$ mm: $\Delta l \leq 0,3$ mm/m	0,2	
Width, w ISO 24337 , Δw avg $\leq 0,10$ mm,relative to nominal value $w_{max} - w_{min} \leq 0,20$ mm	0,07	
	0,16	
Squareness, q, ISO 24337 , $q_{max} \leq 0,20$ mm	0,15	
Straightness, s, ISO 24337 , $s_{max} \leq 0,30$ mm/m	0,13	
Maximum single values: fw , concave $\leq 0,15$ %, fw , convex $\leq 0,20$ % fl , concave $\leq 0,50$ %, fl , convex $\leq 1,00$ %	fw concave	%0,00
	fw convex	%0,08
	fl concave	%0,00
	fl convex	%0,27
Openings, ISO 24337, o $O_{avg} \leq 0,15$ mm $O_{max} \leq 0,20$ mm	O avg	0,00
	O max	0,00
Height difference, ISO 24337, h $h_{avg} \leq 0,10$ mm $h_{max} \leq 0,15$ mm	h avg	0,01
	hmax	0,04
Static indentation (EN ISO 24343-1) for class 21-22, 23, 31 $\leq 0,3$ mm, for class 32, 33 $\leq 0,2$ mm, for class 34 $\leq 0,15$ mm	0,01	

Company declaration: TRU-STONE SPC-CLICK Vinyl flooring 4+1 mm IXPE 0,55MM



MUAYENE - DENEY SONUÇLARI TEST RESULTS

4.2 General requirements (Table 2)

REQUIREMENT OF THE STANDARD	OBTAINED VALUES
Abrasion resistance for method A EN 13329:2006+A1:2008 (EK-E) for class 21-22 ≥ 200 rotation, for class 23 ≥ 400 rotation, for class 31 ≥ 600 rotation , for class 32 ≥ 1200 rotation, for class 33 ≥ 2000 rotation , for class 34 ≥ 4000 rotation,	CLASS 33 (3400 ROTATION)
Impact resistancei (Big Ball) EN 13329:2006+A1:2008 (EK-F^f) for class21-22 ≥ 400 mm, for class 23 ≥ 600 mm, for class31 ≥ 800 mm, for class 32 ≥ 1200 mm, for class33 ≥ 1600 mm, for class 34 ≥ 1800 mm,	>2000 mm
Effect of a furniture leg (EN 424, 0 leg type) No requirement for class 21,22,23,31 class For the other classes, no damage shall be visible,when tested with foot type 0	NO DAMAGE
Effect of a castor chair(TS EN ISO 4918) No requirement for class 21,22,23 class for class 31 10000 rotation ^{a, c} for class32, 33, 34 25000 rotation ^{a, c}	NO DAMAGE (25000 ROTATION)
Thickness swelling*(%) (ISO 24336) for class 21-22, 23, 31 $\leq \% 20,0$ for class 32 , 33, $\leq \% 18,0$ for class34 $\leq \% 12$	%1,8
Determination of locking strength^{bi} ** (kN/m) (ISO 24334) No requirement for Class 21, Class 22, Class 23, Class 31 for class 32, 33 (length) 1 kN/m , (width) 1,5 kN/m for class (length)r 2.0 kN/m, (width) 3,5 kN/m Determination of locking strength^{bi} * (ISO 24334) No requirement for Class 21, Class 22, Class 23, Class 31 for class 32, 33 (length) 1 kN/m,(width) 2,0 kN/m for class 34 (length) 1,0 kN/m,(width) 3,5 kN/m	The experiment could not be conducted due to device failure.
a No disturbance to the surface only gloss changes, no delamination, cracks or disruptions. b Only for loose-laid panels. d Take the maximum of Cavg from wet climate (23 °C, 85 % relative humidity) and the minimum of Cavg from dry climate (23 °C, 30 % relative humidity) for the evaluation. c Tested with soft wheels on loose laid panels without underlayment * Only for panels with substrates or layers with hygroscopic properties, e.g. HDF or cork. ** Only for products with significant reaction on temperature changing, e.g. thermoplastic vinyl core.	
Company declaration: TRU-STONE SPC-CLICK Vinyl flooring 4+1 mm IXPE 0,55MM	