Test report no.: *Testrapport nr.:*	**89218997 001**	**Order No.:** *Opdracht nr.:*	218997	Page 1 of 5 *Pagina 1 van 5*
Client Reference No.: *Klantreferentie nr.:*	N/A	**Order date:** *Opdrachtdatum:*	18.05.2021	
Client: *Klant:*	TRUSA MERMER SAN. TİC. LTD. STİ., Turanköy Mah. Turanköy 7. Sok No: 1, KESTEL/BURSA, Turkey			
Test item: *Testvoorwerp:*	SPC Vinyl Floor Covering			
Identification/ Type No.: *Benaming / Type nr.:*	TRU-STONE SPC-CLICK Vinylflooring 4+1mm IXPE 0,55mm			
Order content: *Inhoud opdracht:*	Determination of selected parameters			
Test specification: *Testomschrijving:*	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: *Ontvangstdatum monster:*	31.05.2021
Test sample No: *Testproefstuk nr.:*	MT21-218997.01
Testing period: *Testperiode:*	31.05.2021 - 29.06.2021
Place of testing: *Testlocatie:*	Westervoortsedijk 73, 6827 AV Arnhem
Testing laboratory: *Testlaboratorium:*	TÜV Rheinland Nederland B.V.
Test result*: *Testresultaat*:*	See Other

tested by: *getest door:*	X Ondertekend door: Michiel van de Vlekkert	**authorized by:** *geautoriseerd door:*	X Ondertekend door: Ellen Zwier
Date: 30.06.2021 *Datum:*		**Issue Date:** 30.06.2021 *Datum uitgave:*	
Position / *functie*:	jr. Engineer	**Position** / *functie*:	Technician

Others / *Andere*: See individual test results.

Condition of the test item at delivery: *Toestand van het test voorwerp bij ontvangst:* 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*

Test report no.: 89218997 001
Testrapport nr.:

Remarks
Opmerkingen

1	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. *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*
2	As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and is unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. *Zoals contractueel overeengekomen is dit document enkel digitaal ondertekend. TÜV Rheinland heeft niet geverifieerd en kan niet verifiëren welke wettelijke of andere vereisten van toepassing zijn op dit document. Een dergelijke verificatie valt onder de verantwoordelijkheid van de gebruiker van het document. Op verzoek van de opdrachtgever kan TÜV Rheinland de geldigheid van de digitale handtekening bevestigen door een apart document. Een dergelijk verzoek moet worden gericht aan onze verkoopafdeling. Voor een dergelijke extra service zal een milieutoeslag in rekening worden gebracht.*
3	Test clauses with remark of * are subcontracted to qualified subcontractors and descripted 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 is 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. *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.*
4	

Test report no.: 89218997 001
Testrapport nr.:

Product description
Product omschrijving

1	**Product details:** *Product details:*	Product name: TRU-STONE SPC-CLICK Vinylflooring 4+1mm IXPE 0,55 mm
2	**Other:** *Andere:*	Test sample(s), as well sample information, description, product details and intended usage was provided by customer.
3	**Test sample obtaining:** *Selectie van het proefstuk:*	☒ Sending by customer ☐ Sampling by TÜV Rheinland Group ☐ others:

Figure 1: Picture of the received sample (surface)

Figure 2: Picture of the received sample (back)

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

1.1. **Determination of thermal resistance (thermal conductivity)**
ISO 8302:1991 and EN 12667:2001

Pre conditioning	23 ± 2ºC 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 m²·K/W, or alternatively - Thermal conductivity, λ_{23}, in mW/m·K.

Test result(s)

Thermal resistance

Temperature		Temperature difference	Thermal resistance R in m² . K/W
R_{18}	18 ºC	10 K	0.034
R_{23}	23 ºC	10 K	0.034
R_{28}	28 ºC	10 K	0.033

Thermal conductivity

Temperature		Temperature difference	Thermal conductivity λ in mW/m.K
λ_{18}	18 ºC	10 K	148.38
λ_{23}	23 ºC	10 K	150.82
λ_{28}	28 ºC	10 K	152.99

Thermal resistance at 23°C, $R_{23,}$ (m²·K/W)	**0.034**

P ☐
F ☐
N/A ■
N/T ☐

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 ± 2ºC 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 ■ F ☐ N/A ☐ N/T ☐
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 ± 1ºC 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 ■ F ☐ N/A ☐ N/T ☐
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
c.schiffer@tfi-aachen.de

Aachen, 06.09.2021

Dr. Andreas Zoëga
- Head of testing laboratory -

The present document is provided with an advanced electronic signature.

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.

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HRB 8157 Aachen
VAT No. DE209411312
Managing Director
Dr.-Ing. Bayram Aslan

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

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HRB 8157 Aachen
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Managing Director
Dr.-Ing. Bayram Aslan

EUROLAB Laboratory Services

TEST / INSPECTION REPORT

EUROLAB LABORATORY SERVICES

TÜRCERT TEKNİK KONTROL VE BELGELENDİRME A.Ş.

UNITED ACCREDITATION FOUNDATION UAF

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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EUROLAB ® (TÜRCERT TEKNİK KONTROL VE BELGELENDİRME A.Ş.)

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

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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/m2	Smoke production[c]
	EN ISO 11925-2 [d]: Exposure = 15 s	Fs ≤ 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).

[c] **s1** = 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

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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/m²	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/m2			

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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 (^{0}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

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Classification of Air Duct based on fire behavior:

B_{fl}

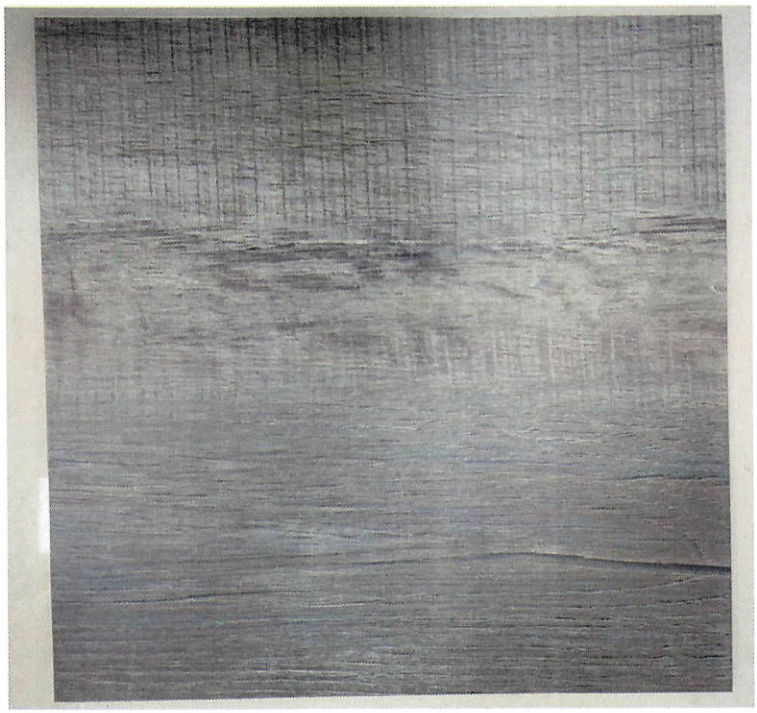
Additional classification for smoke formation:

s1

***Reaction to fire for* SPC Rigid Core Vingl Flooring**

Flammability Behavior	Smoke	
B_{fl}	s	1

SAMPLE IMAGE



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

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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

Jesse Ondersma
Certification Officer
30 December 2020

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/m^3 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
Per GFT-OP-10 (6-March-2017)

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TEST REPORT FOR TRU-STONE

Report No.: 104517965GRR-002
Date: 22-December-2020
P.O.: 181120

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

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:	≤ 0.5 mg m^{-3}
	0.5 to 5.0 mg m^{-3}
	≥ 5.0 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		*A*	0.055	m^2
Chamber Volume		*V*	0.1163	m^3
Chamber Loading Factor		*L*	0.47	$m^2\ m^{-3}$
Inlet Air Flow Rate		*Q*	0.1158	$m^3\ h^{-1}$
Air Change Rate		N_{ACH}	1.00	h^{-1}
Area Specific Flow Rate		q_A	2.12	$m\ h^{-1}$
Chamber Pressure (Range)		P	17.6 (12.0-23.3)	Pa
Average Temperature (Range)		T	23.1 (22.8-23.3)	°C
Average Humidity (Range)		RH	50.0 (46.6-52.3)	% RH
Testing Duration		t	336	h

Table 2: Test chamber background VOC concentrations in µg m^{-3}.

COMPOUND	CAS No.	C_{i0}
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.
[1]Indicates which non-listed VOCs were quantified using surrogate compounds, all other compounds were quantified using pure compounds.
[2]Chronic Reference Exposure Level (CREL) as defined by California Office of Environmental Health Hazard Assessment.
[3]Substance is listed on California Air Resource Board's (CARB) Toxic Air Contaminate (TAC) identification list.
[4]Substance 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 ($\mu g\ m^{-3}$)	EMISSION FACTOR ($\mu g\ m^{-2}\ h^{-1}$)
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 (µg m^{-3})	EMISSION FACTOR (µg m^{-2} 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 (m^3 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 *Private Office (PO)*	A_B	11.1	m^2
Air flow rate of *Private Office (PO)*	Q_B	20.7	m^3 h^{-1}
Exposed Surface Area Installed in *Classroom (SC)*	A_B	89.2	m^2
Air flow rate of *Classroom (SC)*	Q_B	191	m^3 h^{-1}
Exposed Surface Area Installed in *Residence (R)*	A_B	211	m^2
Air flow rate of *Residence (R)*	Q_B	127	m^3 h^{-1}

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

VOC	CAS NO.	MODELED CONCENTRATION (µg m^{-3})			CONC. LIMIT (µg 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 (µg m^{-3})			CONC. LIMIT (µg m^{-3})	Result Pass (P) /Fail (F)		
		PO	SC	R		PO	SC	R
$TVOC_{Toluene}$	-	< 11.4	< 9.9	< 35.2	-	-	-	-

PHOTOGRAPHS:

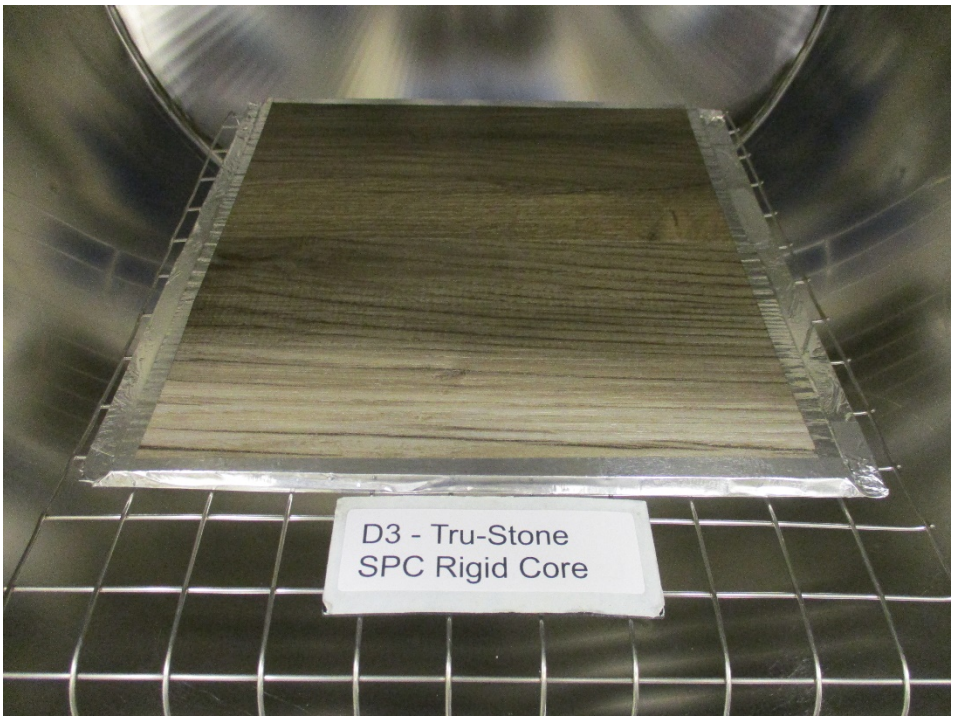

Figure 1: Photograph of sample in test chamber

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

intertek sustainability

Ship To:
Attn: VOC Laboratory
4700 Broadmoor Ave SE
Suite 200
Kentwood, MI 49512
Phone: 616-656-7401

Chain of Custody for Chemical Testing	
Intertek Quotation Number:	01127963-0
Purchase Order (enter Company and Number):	
TRU-STONE - 18.11.20	

Shipping Details	
Packed & Shipped By:	Sedat Bayramoglu
Shipping Date:	November 18 2020
Carrier/Airbill Number:	

Requested Testing	
Test to be performed:	Clean Air Certification

Customer Information	
Company:	TRU-STONE
Street Address:	6251 Hwy 7
City/State/Postal code:	Woodbridge Ontario L4H 0L1
Country:	Canada
Contact Name & Title (for reporting):	
Sedat Bayramoglu - Management	
Contact Phone/Fax Numbers:	416 836 2274 / 647 724 1615
Contact E-mail Address:	sedat@tru-stone.net
Financially Responsible Co. :	

Customer Request for Certification	
Clean Air Silver™ Certification:	☐ YES
Clean Air Gold™ Certification:	☑ YES

Manufacturer Information (If Different)	
Company:	TRU-STONE SPC
City/State/Country:	Bursa / Turkey
Contact Name/Title:	Erol Yuce / Production Manager
Phone Number/E-mail Address:	erol.trustone@gmail.com +90 0

Special Customer Instructions
Please kindly complet at your earliest convenience

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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Kentwood, MI, 49512 USA

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www.intertek.com

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

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 3 Testing Results

Date Tested	Product Category	Product Name	Product ID	Test Method	Result	TVOC Range*	Report Number
12/03/2020	Flooring	5mm SPC Rigid Core Flooring	Not specified	CDPH SM v1.2	CDPH SM v1.2: SC, PO, SR	< 0.1	104517965GRR-002

*TVOC range is based on the most stringent modelling scenario (excludes Single Family Residence). All values are reported as mg m–3 (milligram per cubic meter) corresponding to the LEED v4 TVOC ranges.

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

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. Please note, this Report does not represent authorization for the applicant or manufacturer to apply Intertek Certification Marks.			
Completed by:	Lisa Henderson	**Reviewed by:**	Jesse Ondersma
Title:	Sustainability Program Administrator	**Title:**	Certification Officer
Signature:	Lisa Henderson	**Signature:**	Jesse Ondersma

ROKplank
STONE COMPOSITE FLOORS

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 (70ºC/ 6Hr) SPC Width: ≤0.01 (70ºC/ 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		Specified Load: 250psi		Residual Compression:0.003mm	ASTM F970
Measuring Thickness of Resilient Floor Covering with Foam Layer		Average Total Thickness: 0.202 inch			ASTM F387
Determination of Flexibility		**PASSES** 115 mm Mandrel			ASTM F137
RESIDUAL INDENTATION AT 75 Lbs		0.000 Inch			ASTM F1914
Squareness Gage		≤0.25mm			ASTM F2421
Length Deviation		≤0.15mm			
Width Deviation		≤0.15mm			
Squareness Deviation		≤0.15mm			

Professional Testing Laboratory, Inc.

TEST REPORT

DATE: 10-02-2019 **Page 1 of 1** **TEST NUMBER:** 0260689

CLIENT	Rok Plank

TEST METHOD CONDUCTED	Test Summary

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 A. Curry

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

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: Gary Cathey

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Professional Testing Laboratory, Inc.

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: Gary Asbury

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Professional Testing Laboratory, Inc.

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

APPROVED BY: Gary Calvery

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Professional Testing Laboratory, Inc.

TEST REPORT

DATE: 10-01-2019 **Page 1 of 1** **TEST NUMBER**: 0260689

CLIENT	Rok Plank

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

APPROVED BY: Gary Cathey

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

Professional Testing Laboratory, Inc.

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

APPROVED BY: Gary Cathey

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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 indentor 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

APPROVED BY: Gary Asbury

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

Professional Testing Laboratory, Inc.

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.

APPROVED BY: Gary Ashley

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

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

APPROVED BY: Gary Ashley

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

TEST REPORT

DATE: 10-01-2019 **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 Calvery

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

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

APPROVED BY: Gary Cathey

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

Professional Testing Laboratory, Inc.

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

APPROVED BY: Gary Calvery

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

Professional Testing Laboratory, Inc.

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 (∆E) 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

APPROVED BY: Gary McCurry

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

Professional Testing Laboratory, Inc.

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 (∆E) 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

APPROVED BY: Gary Ashley

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

Test Items, Method and Results:

Test Method: ASTM E492-09

Temperature: 25ºC

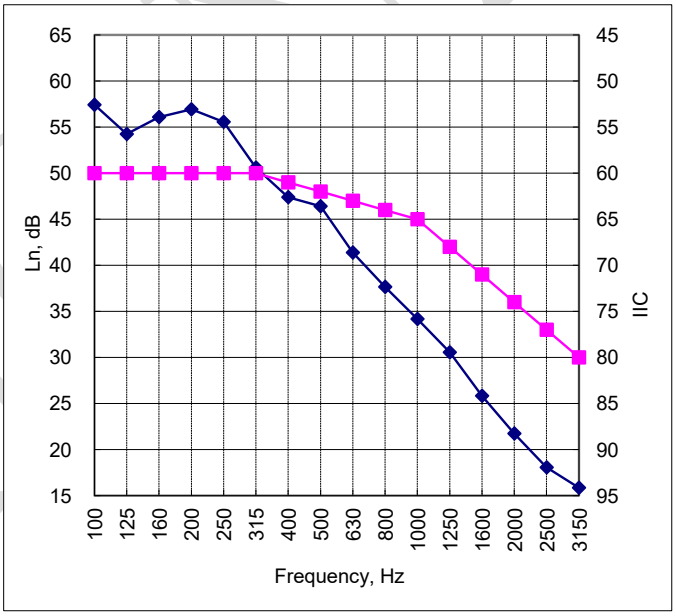
Relative Humidity: 63%

Specimen area: 10.5m^2

Volume of the receiving room: 111m^3

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.

Frequency (Hz)	L_n (dB)
100	57
125	54
160	56
200	57
250	56
315	51
400	47
500	46
630	41
800	38
1000	34
1250	31
1600	26
2000	22
2500	18
3150	16
IIC=	62



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

ROKplank
STONE COMPOSITE FLOORS

MADE IN USA

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 TRANSMISSISION 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

Professional Testing Laboratory, Inc.

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.

APPROVED BY: Gary A. Avery

714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us

TÜRK STANDARDLARI ENSTİTÜSÜ
DENEY ve KALİBRASYON
MERKEZİ BAŞKANLIĞI
Yapı Malzemeleri Laboratuvarı Ankara Müdürlüğü

TURKISH STANDARDS INSTITUTION
HEADSHIP OF TEST and CALIBRATION CENTER
Construction Materials Laboratory (Ankara)
Necatibey Cad. No:112 06100 Bakanlıklar Çankaya / ANKARA
Tel: +90 (312) 416 65 28 Fax: +90 (312) 416 66 18 E-posta: insaatlab@tse.org.tr
www.tse.org.tr

AB-0001-T
626892
08-21

MUAYENE VE DENEY RAPORU
TEST REPORT

Deneyi Talep Eden/Firma (Adı,Adresi,Şehir vb.) *Requesting/Customer (Name,Adress,City etc.)*	:	TRUSA MERMER SAN. TİC. LTD. ŞTİ. (TURANKÖY MAH. TURANKÖY 7.SOK. NO:1/4 Kestel-BURSA)
Deney Talep Tarihi/No *Order Date / No*	:	17.08.2021 / 616530
Numunenin Tanımı (No,Cins, Marka, Tip, Tür, Model vb.) *Sample Description(No,Type,Model etc.)*	:	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 *Test Item Receipt Date*	:	17.08.2021
Deneylerin Yapıldığı Tarih *Date of Test*	:	17.08.2021 - 18.08.2021
Uygulanan Standard / Metod *Applied Standard/Method*	:	İlgili standardlar müteakip sayfalarda verilmiştir. *The standards were given in the next pages.*
Raporun Sayfa Sayısı *Number of pages of the report*	:	2
Açıklamalar *Remarks*	:	*Private Investigation* *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.*

Deney laboratuvarları olarak faaliyet gösteren TSE Deney ve Kalibrasyon Merkezi Başkanlığı Deney Laboratuvarları TÜRKAK'tan AB-0001-T ile TS EN ISO/IEC 17025:2012 standardına göre akredite edilmiştir.
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.
TÜRKAK deney raporlarının tanınırlığı konusunda Avrupa Akreditasyon Birliği (EA) ile Çok Taraflı Anlaşma ve Uluslararası Laboratuvar Akreditasyon Birliği(ILAC) ile karşılıklı tanıma anlaşması imzalamıştır.
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.

Deney ve/veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deney metodları bu raporun tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.
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.

Mühür *Seal*	**Tarih** *Date*	**Deney Sorumlusu** *Person in charge of tests*	**Onaylayan** *Approved by*
TÜRK STANDARDLARI ENSTİTÜSU YAPI MALZEMELERİ LABORATUVARI MÜDÜRLÜĞÜ TSE	18.08.2021	Önder KORKMAZGÖZ Deney Personeli Testing Expert	Hasan AKSU Laboratuvar Müdürü V. Laboratory Manager Dep.

MUAYENE - DENEY SONUÇLARI *TEST RESULTS*

AB-0001-T
626892
08-21

TESTS; Are perfromed at 23 ± 2 ^{0}C temperature and %50 ± 5 humidity.
NOTE: The samples are conditioned for one week at 23 ± 2 ^{0}C and 50± 5 % realtive 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 60^0 (Gloss)= 4,8-4,6-4,6-4,6 Avarage.= 4,65 -Brightness after test 60^0 (Gloss)= 4,7-4,6-4,6-4,6 Avarage = 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.

TÜRK STANDARTLARI ENSTİTÜSÜ TSE YAPI MALZEMELERİ LABORATUVARI ANKARA MÜDÜRLÜĞÜ

(*) Marked articles are accredited by TÜRKAK

TÜRK STANDARDLARI ENSTİTÜSÜ
DENEY ve KALİBRASYON
MERKEZİ BAŞKANLIĞI
Yapı Malzemeleri Laboratuvarı Gebze
Müdürlüğü

TURKISH STANDARDS INSTITUTION
HEADSHIP OF TEST and CALIBRATION CENTER
Construction Materials Laboratory (Gebze)
TSE Gebze Kampusü Cumhuriyet Mahallesi 2258 Sokak No:10 Çayırova Tren İstasyonu Yanı
Gebze / KOCAELİ
Tel: +90 (262) 723 14 57 Fax: +90 (262) 723 16 15 E-posta: ymlab@tse.org.tr
www.tse.org.tr

620996
07-21

MUAYENE VE DENEY RAPORU
TEST REPORT

Deneyi Talep Eden/Firma (Adı,Adresi,Şehir vb.) *Requesting/Customer (Name,Adress,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)
Deney Talep Tarihi/No *Order Date / No*	:	27.05.2021 / 586505
Numunenin Tanımı (No,Cins, Marka, Tip, Tür, Model vb.) *Sample Description (No,Type,Model etc.)*	:	773248,YER DÖŞEMESİ, , , - , - , 20.00 adet *773248,FLOOR COVERING,,,,,20,00 item*
Numune Kabul Tarihi *Test Item Receipt Date*	:	27.05.2021
Deneylerin Yapıldığı Tarih *Date of Test*	:	28.05.2021 - 14.07.2021
Uygulanan Standard / Metod *Applied Standard/Method*	:	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 *Number of pages of the report*	:	3
Açıklamalar *Remarks*	:	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. *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.*

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.

Mühür / Tarih *Seal / Date*	Deney Sorumlusu *Person in charge of tests*	Onaylayan *Approved by*
03.08.2021	İlkay AKPINAR Deney Personeli Testing Expert	Ahmet Önder ELİRİ Laboratuvar Müdürü V. Laboratory Manager Dep.

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 , Δ t average ≤ 0,50 mm,relative to nominal value t max.- t min ≤ 0,50 mm	0,73	
	0,10	
Length, l ISO 24337, l For the nominal values given, no measured value shall exceed: l ≤ 1500mm: Δl ≤ 0,5 mm l > 1500mm: Δl ≤ 0,3 mm/m	0,2	
Width, w ISO 24337, Δw avg ≤ 0,10 mm,relative to nominal value wmax - wmin ≤ 0,20 mm	0,07	
	0,16	
Squareness, q, ISO 24337, qmax ≤ 0,20 mm	0,15	
Straightness, s, ISO 24337, smax ≤ 0,30 mm/m	0,13	
Maximum single values: fw, concave ≤ 0,15 %, fw, convex ≤ 0,20 % fl, concave ≤ 0,50 %, fl, convex ≤ 1,00 %	fw concave	%0,00
	fw convex	%0,08
	fl concave	%0,00
	fl convex	%0,27
Openings, ISO 24337, o Oavg ≤ 0,15 mm O max ≤ 0,20 mm	O avg	0,00
	O max	0,00
Height difference, ISO 24337, h h avg ≤ 0,10 mm hmax ≤ 0,15 mm	h avg	0,01
	hmax	0,04
Static indentation (EN ISO 24343-1) for class 21-22, 23, 31 ≤ 0,3mm, for class 32, 33 ≤ 0,2mm, for class 34 ≤0,15mm	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 ≤ % 20,0 for class 32 , 33, ≤ % 18,0 for class34 ≤ % 12	%1,8
Determination of locking strength [b;] ** (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 [b;] * (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 før 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

ULUSAL ZEMİN GÜVENLİĞİ ENSTİTÜSÜ

Ulusal Zemin Güvenliği Enstitüsü Tic.San.Ltd.Şti

National Floor Safety Institute Trade Industry Limited Company

CT STONE INC İTHALAT İHRACAT SAN.TIC.LTD

Test Sonuç Raporu

Test Result Report

Sivas – 2024

UZGE - KYF 780 Test Raporu / *Test Report*

Müşteri *Customer Name*	: CT STONE INC İTHALAT İHRACAT SAN.TIC.LTD
Müşterinin Adresi *Customer Address*	: Turanköy Mahallesı Bulut Sokak No:1/A Kestel,Bursa TÜRKİYE
Talep Numarası *Order Number*	: 2024 / 064
Numunenin Kabul Tarihi *The Date Of Sample Induction*	: 04.10.2024
Teste Başlama Tarihi *Test Starting Date*	: 05.10.2024
Testin Bitiş Tarihi *Test Finishing Date*	: 05.10.2024
Raporun Sayfa Sayısı *Number of Pages of The Report*	: 3

Deney laboratuvarı olarak faaliyet gösteren Ulusal Zemin Güvenliği Enstitüsü Tic. San.Ltd. Şti. (UZGE), TÜRKAK'tan AB-1346 T dosya numarası ile TS EN 17025:2017 standardına göre akredite edilmiştir. Türk Akreditasyon Kurumu (TÜRKAK) deney raporlarının tanınırlığı konusunda Avrupa Akreditasyon Birliği (EA) ile Çok Taraflı Anlaşma ve Uluslararası Laboratuvar Akreditasyon Birliği (ILAC) ile karşılıklı tanıma anlaşması imzalamıştır.

National Floor Safety Institute Trade Industry Limited Company accredited by TÜRKAK under registration number AB-1346-T for TS EN 17025:2017 as test laboratory. Turkish Accreditation Agency (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.

Deney ve/veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (ihtiyaç olması halinde) ve deney metotları bu sertifikanın tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.

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.

Mühür *Seal*	*Tarih* *Date*	*Test Sorumlusu* *Person İn Charge of Test*	*Onaylayan* *Approving*
	07.10.2024	**Doç. Dr. Gültekin ÇOŞKUN**	**Doç. Dr. Gültekin ÇOŞKUN**

Ulusal Zemin Güvenliği Enstitüsü Tic. San.Ltd.Şti.

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Laboratuvar : Kardeşler Mah. 35-51 Sok. No: 8 B Sivas / TÜRKİYE

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UZGE - KYF 780 Test Raporu / *Test Report*

Test / Analiz *Test / Analysis*	: *TS EN 16165 EK – B "Yaya yürüme yüzeylerinin kayma direncinin tayini – Değerlendirme Yöntemleri/Ayakkabı Rampası Testi" – *"Determination of slip resistance of pedestrian surfaces - Methods of evaluation / Shod Ramp Test"- **Formerly Named As DIN 51130***
Numune Adı ve Özellikleri *Sample Name and Specifications*	: FloorLaBs SPC (Stone Plastic Composite) Flooring / Kalsit Yer Döşemesi
Numune Rengi *Sample Color*	: Krem / *Cream*
Numune Durumu *Sample Status*	: Yeni / *New*

Test Koşulları / *Test Conditions*

Test Cihazı / *Test Device*	: Eğik Düzlem Test Cihazı / *Ramp Tester*		
Test Ölçüm Yönü *Test Measurement Direction*	: Destek Çubuguna Dikey / *Vertical to Support Bar*		
Test Sıvısı *Test Liquid*	: 10/30 Motor Yağı - *10/30 Engine Oil*		
Test Yapılan Yer *Testing Location*	: UZGE Laboratuvar / UZGE Lab.		
Sıcaklık (C^0) / *Temperature (C^0)*	: 22,7	**Nem (%)** / Moisure (%)	: 35

Bu raporda (*) şeklinde işaretlenmiş deney sonuçları TÜRKAK tarafından akreditedir.
In this report (*) marked test results are accredited by Turkish Accreditation Agency (TÜRKAK)

Test Sorumlusu
Person İn Charge of Test
Doç. Dr. Gültekin COŞKUN

Numune alma işlemi müşteriye aittir, laboratuvarın herhangi bir sorumluluğu yoktur. Sonuçlar, sadece deneyi yapılan numuneye aittir.
Sampling is customer's responsibility, the laboratory does not have any responsibility. The results belong to the tested samples only.

UZGE - KYF 780 Test Raporu / *Test Report*

Test Ölçüm Sonucu / *Result of Test*

Kayma Açısı Testi / *Slip Angle Test*		
Numune Kodu ve Adı *Sample Code and Name*	**Kayma Açısı Ölçüm Sonucu** (°) *Slip Angle Result Of Measure (°)*	**Sınıflama** *Classification*
FloorLaBs SPC (Stone Plastic Composite) Flooring / Kalsit Yer Döşemesi	16,2°	R 10

Sınıflandırma Kaynağı: TS EN 16165 EK-B "Yaya yürüme yüzeylerinin kayma direncinin tayini – Değerlendirme Yöntemleri/Ayakkabı Rampası Testi"
Classification Source: *TS EN 16165 Annex-B "Determination of slip resistance of pedestrian surfaces - Methods of evaluation / Shod Ramp Test"*

Test Sorumlusu
Person İn Charge of Test
Doç. Dr. Gültekin ÇOŞKUN

Numune alma işlemi müşteriye aittir, laboratuvarın herhangi bir sorumluluğu yoktur. Sonuçlar, sadece deneyi yapılan numuneye aittir.
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