



COMMERCIAL TESTING COMPANY

1215 South Hamilton Street • Dalton, Georgia 30720
Telephone (706) 278-3935 • Facsimile (706) 278-3936

Report Number 18-08281

Shaw Contract
Dalton, Georgia

Test Number 5258-8740-0818R
July 10, 2018

Dimensional Stability Test

Test Method: The test was conducted in accordance with International Standard ISO PAS 17984-2001, previously ISO 2551, *Machine-Made Textile Floor Coverings – Determination of Dimensional Changes Due to the Effects of Varied Water and Heat Conditions*. The ISO standard is the technical equivalent of DIN 54318, which has been withdrawn. In this method, comparison is made between dimensions of specimens after conditioning in the standard atmosphere for testing textiles, 20°C and 65% relative humidity, and then after being subjected to specified varied water and heat conditions. Three specimens are reference marked at two locations along both the machine and cross-machine directions. Initial measurements are made on the conditioned specimens. They are then placed in a hot-air oven maintained at 60°C for two hours, removed, and the dimensions determined within 6.5 minutes after their removal. The specimens are then immersed in 20°C water for two hours, removed, and the dimensions determined within 5 minutes after their removal. The specimens are then dried 24 hours in a circulating air oven maintained at 60°C and the dimensions again determined. Finally, the specimens are conditioned for 48 hours in the standard atmosphere for testing textiles, and the final dimensions determined at the marked locations. Dimensional change is calculated for each condition and expressed as percentage change. Shrinkage is indicated by a minus sign, and an increase in dimensions by a plus sign.

Material Tested:

Identification: 5T265 Dream Tile
Construction: Loop Pile Carpet Tile
Roll Number: T1018ED

Backing Type: Ecoworx
MO Number: 36115
Shaw Test Number: R-180621-50671

Test Result:

Condition	Dimensional Change			
	(inch)		(%)	
	Length	Width	Length	Width
Bone Dry	+0.001	+0.002	+0.01	+0.02
Wet	-0.005	+0.011	-0.04	+0.09
Dried	+0.003	±0.000	+0.02	±0.00
Final	±0.000	±0.000	±0.00	±0.00

Requirement: ISO 2551 requires dimensional change to be calculated and reported as a percentage. The GSA requires dimensional change to be calculated and reported as inches in publication 3FNE-00-591a, *Technical Requirements Booklet for Carpet, Carpet Tiles and Carpet Cushion*. The relative requirement stated therein is a dimensional change not exceeding ± 0.027 inch (machine direction) and ± 0.027 inch (cross-direction).

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(Authorized Signature)

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TEST REPORT

CLIENT:

Company:	Shaw Contract	Report Number:	74910A
Address:	PO Drawer 2128	Lab Test Number:	3046-7643
	Dalton, GA 30722-2128	Test Completion Date:	9/4/2018
		Report Date:	9/4/2018
Requested By:	Stuart Bartenfield	Page:	1 of 1

TEST MATERIAL:

Material Type:	Carpet	Date Received:	8/23/2018
Material Condition:	EXCELLENT: XXX GOOD: POOR: REJECTED:		
Style#	5T265		
Style Name:	Dream Tile		
Backing	ECOWORX		
MO#	49683		
Test#	082218-2		

TESTING METHODS REQUESTED:

<i>Testing Services Inc. was instructed by the client to test for the following...</i>			
Standard:	ASTM E648, NFPA 253, FTM Standard 372	Test Method:	Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source

SAMPLING PLAN:

Sampling Date:	8/23/2018
<ul style="list-style-type: none"> Specimen sampling is performed in the sampling department at TSI. The sampling size of specimens is determined by the test method requirements. In the event a specific sampling size is not called for, a determination will be made based on previous testing experience, and approved for use by an authorized manager. All samples are subjected to the outside environmental conditions of temperature and relative humidity. Sample requiring pre-determined exposure to specified environmental conditions based on a specific test method, take place in the departments in which they are tested 	

DEVIATION FROM TEST METHOD:

State reason for any Deviation from, Additions to, or Exclusions From Test Method.
None

TEST SCOPE:

This test method measures the critical radiant flux of horizontally mounted floor-covering systems exposed to a flaming ignition source positioned on a graded radiant heat energy environment within an enclosed chamber. The results are designed to provide a basis for estimating one aspect of fire behavior of a flooring system.

TEST SUMMARY:

TEST METHOD	TEST DESCRIPTION	TEST RESULT			
		Burn Distance	Time to Flame Out	Critical Radiant Flux	
ASTM E648-17a	Critical Radiant Flux	Specimen #1	38.9 cm	43:00 min	0.51 W/cm ²
		Specimen #2	36.4 cm	47:37 min	0.55 W/cm ²
		Specimen #3	38.3 cm	49:07 min	0.52 W/cm ²
		Average		0.53 W/cm ²	
	NFPA Classification	Class I			
	STDEV	0.02			
	COF of Variation	4.42%			

Mounting Board: Calcium Silicate Board
Conditioning: 96 hours @ 70°F 50% RH

Adhesive: Shaw 5000
Calibration Curve: 362R

Trowel: 1/16" x 1/16" x 1/16" V-Notch
Radiometer #: 5356

Uncertainty:

We undertake all assignments for our clients on a best effort basis. Our findings and judgments are based on the information using the latest test methods available. TSI can only ensure the test results for the specific items tested. Unless otherwise noted in the deviations sections of this report, all tests performed are in compliance with stated test method.

Test Report Approval:

Digitally signed by Erle Miles
DN: cn=Erle Miles, o=Testing
Services Inc., email=erle@testing-services.com, c=US
Date: 2018.09.04 13:23:41 -0400

Erle Miles, III, Lab Director Testing Services Inc.

TSI Accreditation:

Our laboratory is accredited by the US Dept. of Commerce, National Institute of Standards and Technology: ISO/IEC 17025:2005. Our code # is: NVLAP 100108-0.



OUR LETTERS AND REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS. THESE LETTERS AND REPORTS ARE FOR THE USE ONLY OF THE CLIENT TO WHOM THEY ARE ADDRESSED AND THEIR COMMUNICATION TO ANY OTHERS OR THE USE OF THE NAME TESTING SERVICES, INC. MUST RECEIVE OUR PRIOR WRITTEN APPROVAL. OUR REPORTS, LETTERS, NAME, SEALS, OR INSIGNIA ARE NOT UNDER ANY CIRCUMSTANCES TO BE USED IN ADVERTISING TO THE GENERAL PUBLIC.

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Report Number 18-08277

Shaw Contract
 Dalton, Georgia

Test Number 5258-8739-0818R
 July 10, 2018

Smoke Density Test

Test Method: The test was conducted in accordance with the ASTM International fire test response standard E662-17a, *Specific Optical Density of Smoke Generated by Solid Materials*. It provides a means of determining specific optical density of smoke generated by materials mounted in a vertical position. Results are expressed in terms of specific optical density. The method employs an electrically heated radiant-energy source positioned so as to produce an irradiance level of 2.5 W/cm² over the center of a vertically mounted 76.2 mm square specimen. This exposure provides the nonflaming condition of the test. For the flaming condition, a six-tube burner is used to apply a row of equidistant flamelets across the lower edge of the specimen in addition to the specified irradiance level from the heating element. Specimens are exposed to the flaming and nonflaming conditions within a closed chamber while varying light transmission is measured using a photometric system with a vertical light path. These measurements are used to calculate specific optical density of the smoke generated during the time period to reach the maximum value.

Material Tested:

Identification: 5T265 Dream Tile
 Construction: Loop Pile Carpet Tile
 Roll Number: T1018ED
 Backing Type: Ecoworx

MO Number: 36115
 Shaw Test Number: R-180621-50671
 Total Weight 83.8 oz/yd²

Test Result:

Specimen	Flaming Exposure			Non-Flaming Exposure		
	#1	#2	#3	#1	#2	#3
Ds @ 1.5 minutes	10	10	11	0	0	0
Ds @ 4.0 minutes	59	82	69	14	13	16
Dm	95	117	109	259	237	245
Time to Dm	9.6	9.0	9.2	18.4	18.0	17.8
Dc	1	2	1	1	1	2
Dm (corrected)	94	115	108	258	236	243
Average Ds @ 1.5 minutes	10			0		
Average Ds @ 4.0 minutes	70			14		
Average Dm	107			247		
Average Dm (corrected)	106			246		

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Report Number 18-08278

Shaw Contract
Dalton, Georgia

Test Number 5258-8736-0818R
July 10, 2018

Flammability Test

Test Procedure: The flammability was determined in accordance with Title 16 CFR Chapter II, Subchapter D, Part 1630, *Standard for the Surface Flammability of Carpets and Rugs (FF 1-70)*, commonly referred to as the pill test.

Terminology: For purposes of this test, an individual specimen meets the *Test Criteria* if the charred portion does not extend to within 1.0 inch of the edge of the hole in the flattening frame. The *Acceptance Criteria* is based on at least 7 of 8 specimens meeting the Test Criteria in order for the material to conform to this standard.

Material Tested:

Identification: 5T265 Dream Tile
Construction: Loop Pile Carpet Tile
Roll Number: T1018ED

Backing Type: Ecoworx
MO Number: 36115
Shaw Test Number: R-180621-50671

Test Result:

Un-Charred Surface Area (inches)								Test Result
1	2	3	4	5	6	7	8	
>3	>3	>3	>3	>3	>3	>3	>3	PASS

Requirement: For machine-made carpets, at least one test is performed after commencement of production, one test after production of the first 25,000 linear yards, and one test after production of the first 50,000 linear yards. If all 24 specimens of the three required tests meet the test criteria (i.e., Pass 8 of 8), then it is necessary to test after each additional 100,000 linear yards are produced.

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