

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

Report Number 17-11182

Shaw Hospitality Dalton, Georgia Test Number 4990–2607–1117R2 April 26, 2017

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 42JD3 Expanse MO Number: 72819

Construction: Cut & Loop Pile Carpet Tile Shaw Test Number: R-170412-37928

Backing: Ecoworx

Test Result:

Un-Charred Surface Area (inches)						Test		
1	2	3	4	5	6	7	8	Result
>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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Report Number 17-11178

Shaw Hospitality Dalton, Georgia Test Number 4989–2588–1117R2 April 26, 2017

Smoke Density Test

Test Method: The test was conducted in accordance with the ASTM International fire test response standard E662–17, *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 42JD3 Expanse MO Number: 72819

Construction: Cut & Loop Pile Carpet Tile Shaw Test Number: R-170412-37928
Backing: Ecoworx Total Weight 107.3 oz/yd²

Test Result:

	Flaming Exposure			Non–Flaming Exposure		
Specimen	#1	#2	#3	#1	#2	#3
Ds @ 1.5 minutes	14	19	16	0	0	0
Ds @ 4.0 minutes	182	187	185	16	34	24
Dm	185	197	194	301	304	300
Time to Dm	4.2	7.2	6.4	17.8	16.6	16.4
Dc	17	16	17	2	2	2
Dm (corrected)	168	181	177	299	302	298
Average Ds @ 1.5 m	inutes	16			0	
Average Ds @ 4.0 m	inutes	185		25		
Average Dm		192		302		
Average Dm (correc	ted)	175		300		

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Report Number 17-11177

Shaw Hospitality Dalton, Georgia

Test Number 4990–2604–1117R2 April 26, 2017

Flooring Radiant Panel Test

Test Method: The test was conducted in accordance with ASTM International fire test response standard E648–17, *Critical Radiant Flux of Floor–Covering Systems Using a Radiant Heat Energy Source*. This test measures the critical radiant flux at flame–out of horizontally mounted floor–covering systems that duplicate or simulate accepted installation practices. The floor–covering system is exposed to a flaming ignition source in a graded radiant heat energy environment generated by a radiant panel inclined at a 30° angle to the sample. The panel generates a heat distribution along the sample length ranging from a nominal maximum of 1.0 W/cm^2 to a minimum of 0.1 W/cm^2 . Tests on individual components are of limited value and are not valid for evaluation of floor–covering systems.

Floor Covering:

Identification 42JD3 Expanse MO Number: 72819

Construction: Cut & Loop Pile Carpet Tile Shaw Test Number: R-170412-37928
Backing: Ecoworx Total Weight 107.3 oz/yd²

Flooring System: The floor covering was tested as a glue–down application over a simulated concrete (reinforced cement board) subfloor using Shaw 5000 adhesive.

Note: This test report relates to the installation in accordance with the criteria set forth in the report. Any variation in the installation criteria may produce different results.

Test Result:

	#1	#2	#3
Maximum Burn Distance (cm)	27.6	27.8	27.8
Time to Flame Out (min)	25.0	25.8	22.7
Critical Radiant Flux	0.74	0.74	0.74
Average Critical Radiant Flux		0.74 W/cm ²	
Standard Deviation		0.00	

Note: The sample was tested with a longitudinal joint at the approximate centerline of the material under test – Section 9.3 of the test method.

Note Concerning Tiles: The tiles tested measured 12 inches by 48 inches. The test result reported herein is applicable to the size tested and to identical tiles of smaller dimensions, (Reference Section 9.1.1).

Classification: The floor–covering system tested may be classified as a **Class I** based on the NFPA 101 *Life Safety Code*, and the GSA Technical Requirements. However, care must be exercised in their use as a material may be otherwise classified by the authority having jurisdiction.

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Report Number 17-11181

Shaw Hospitality Dalton, Georgia Test Number 4990–2606–1117R2 April 26, 2017

Electrostatic Propensity

Test Method: The test was conducted in accordance with the AATCC Test Method 134, *Electrostatic Propensity of Carpets*. The purpose of the test is to assess the static propensity of carpets under controlled laboratory conditions simulating those that may exist in actual installations. The most important factors in determining the static charge are: (1) the basic natures of the two materials being rubbed together or separated, i.e., shoe soles and carpet; (2) surface contamination on either; (3) the nature of the rubbing or separation, i.e., stepping or scuffing; and, (4) the ambient atmospheric contains. A sample is conditioned at 70°F and 20% relative humidity and the static properties characterized by performing the following tests:

- TEST I The step test is performed by wearing AATCC TM 134 test sandals with NeoliteTM soles and heels and walking on the carpet for one minute.
- TEST II The scuff test is conducted by scuffing or wiping in a backward motion for one minute wearing test sandals with NeoliteTM soles and heels.

Material Tested: Test Conditions:

Identification 42JD3 Expanse Environmental: 21 ± 1 °C, $20 \pm 2\%$ RH

Construction: Cut & Loop Pile Carpet Tile Underlayment: None Backing: Ecoworx Shampoo: None MO Number: 72819

Shaw Test Number: R-170412-37928

Test Result:

Test Mode	Polarity	Voltages
Test I — Step		0.0 kV
Test II — Scuff	negative	0.6 kV

Classification: A carpet classified in accordance with the CRI *Carpet Specifiers Handbook,* Appendix A, Carpet Test Methods and Suggested Physical Requirements, page 72, is suitable for residential use if the maximum voltage is 5.0 kV, and suitable for commercial use if the maximum voltage is 3.5 kV.

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Report Number 17-11183

Shaw Hospitality Dalton, Georgia

Test Number 4992–2653–1117R2 April 26, 2017

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 42JD3 Expanse MO Number: 72819

Construction: Cut & Loop Pile Carpet Tile Shaw Test Number: R-170412-37928

Backing: Ecoworx

Test Result:

	Dimensional Change				
	(in	ch)	(%	%)	
Condition	Length	Width	Length	Width	
Bone Dry	-0.001	-0.002	-0.01	-0.02	
Wet	-0.003	-0.007	-0.02	-0.06	
Dried	-0.004	-0.003	-0.03	-0.02	
Final	-0.005	-0.005	-0.04	-0.04	

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 \pm 0.027 inch (machine direction) and \pm 0.027 inch (cross–direction).

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