

**TESTING SERVICES, INC.**

817 SHOWALTER AVE., PO BOX 2041  
 DALTON, GA 30722-2041  
 PHONE: (706)226-1400 FAX: (706)226-6118

## TEST REPORT

<b>CLIENT:</b>	Shaw Contract	<b>REPORT NUMBER:</b>	61820BR
	PO Drawer 2128	<b>LAB TEST NUMBER:</b>	2645-0982
	Dalton, GA 30722-2128	<b>DATE:</b>	September 12, 2014
		<b>PAGE:</b>	1 of 1

**Test Material:**

<b>Style</b>	5T109 Saturate 9X36
<b>Test #</b>	R-140826-08710

**Test Scope:**

Testing Services Inc was instructed by the client to assess static generating propensity of submitted floor covering material. The test material is brought to equilibrium at controlled atmospheric conditions and is walked on by a test operator in a specified manner with specified shoe soles and heels. The static charge, which builds up on the operator, is monitored continuously by a voltage indicator or recorder. The results of this test relate to the sample tested. Its static performance may be altered in service as a result of wear, soiling, cleaning, temperature, relative humidity, etc.

**Test Method:**

AATCC Method 134: Electrostatic Propensity of Carpets

**Test Equipment:**

Base: Earthed Metal Base Plate 2000 mm x 1000 mm  
 Underlayment: Plate: Earth grounded metal pipe  
 Sandals: Neolite in accordance with Annex A  
 Reference Carpets: AATCC Protected/Un Protected  
 Voltage Measuring: Input Resistor( Leasametric) and Hand Electrode  
 Voltage Recording: Continuous Chart (Esterline Angus)  
 Chamber Measuring: Wall Chart (Dickson)/ Hand Held (Dickson)  
 Chamber Conditions: 70°F ±1° 20% RH ± 3%

**Test Results:**

A 27" X 36" specimen was cut from the sample lot and tested as received after conditioning.

Day	Mode	Reading	Polarity
1	Step	1.25 kv	Negative
2	Step	1.50 kv	Negative
Average	Step	1.38 kv	Negative

Day	Mode	Reading	Polarity
1	Scuff	1.50 kv	Negative
2	Scuff	2.00 kv	Negative
Average	Scuff	1.75 kv	Negative

**Approved By:**

Digitally signed by Erle Miles, Jr. DN: cn=Erle Miles, Jr., o=Testing Services Inc, email=emiles@testing-services.com, c=US, serial=20141128122654-0000

Erle Miles, Jr V.P., Testing Services Inc

**TSI Accreditation:**

Our laboratory is accredited with US Dept of Commerce, National Institute of Standards and Technology: ISO/IEC 17025:2005. Our code # is NVLAP 100108-0. However, it should be noted that some or all of the tests performed are not under our scope of accreditation due to the work not fully conforming to the standard, or it being outside the scope of our accreditation, or subcontracted. The above testing was under our scope of accreditation.

**Uncertainty:**

We undertake all assignments for our clients on a best effort basis. Our findings and judgments are based on the information to us using the latest test methods available.

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. THE REPORTS AND LETTERS, AND OUR NAME, OUR SEALS, OR OUR INSIGNIA ARE NOT UNDER ANY CIRCUMSTANCES TO BE USED IN ADVERTISING TO THE GENERAL PUBLIC.

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## TEST REPORT

<b>CLIENT:</b>	Shaw Contract	<b>REPORT NUMBER:</b>	61820FR
	PO Drawer 2128	<b>LAB TEST NUMBER:</b>	2645-0982
	Dalton, GA 30722-2128	<b>DATE:</b>	September 12, 2014
		<b>PAGE:</b>	1 of 1

Test Material:

<b>Style</b>	5T109 Saturate 9X36
<b>Test #</b>	R-140826-08710

Test Scope:

Testing Services Inc was instructed by the client to perform testing to determine the specific optical density of smoke generated by solid materials and assemblies mounted in a vertical position. This test method employs an electrically heated radiant-energy source where the test specimens are exposed to either flaming or non-flaming (or both modes) conditions within a closed chamber. A photometric system with a vertical light path is used to measure the varying light transmission as smoke accumulates. The light transmittance measurements are used to calculate specific optical density of the smoke generated during the time period to reach the maximum value.

Test Method:

**ASTM E 662-13: Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials, also complies with NFPA 258.**

Chamber Conditions:

Radiometer Output: 8.1 MV  
 Furnace Voltage: 117 V  
 Pressure: Positive Under Three Inches of Water  
 Irradiance: 2.5 watts/cm.<sup>2</sup>  
 Burner Fuel: Propane

Test Data:

Specimen Number:	FLAMING			NON-FLAMING		
	1	2	3	1	2	3
Time to Attain TM (Minutes)	6.1	3.4	2.8	8.9	19.4	15.3
Specific Optical Density (Ds) at 1.5 min.	41	32	35	2	0	1
Specific Optical Density (Ds) at 4.0 min.	114	100	85	22	20	17
Maximum Specific Optical Density (D <sub>M</sub> )	115	104	91	57	105	80
Clear Beam (DC)	10	8	8	3	4	2
DMC (Corrected D <sub>M</sub> )	105	96	83	53	101	78

Test Results:

	FLAMING	NON-FLAMING
Average D <sub>s</sub> , 1.5 Min.	36	1
Average D <sub>s</sub> , 4.0 Min.	100	20
Average D <sub>M</sub>	103	81
Average D <sub>M</sub> , (Corrected)	95	77

\* Meets Local Law # 16 of the City of New York of < 300 @ 4 minutes

Erle Miles, Jr. VP, Testing Services Inc

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## TEST REPORT

<b>CLIENT:</b>	Shaw Contract	<b>REPORT NUMBER:</b>	61820ER
	PO Drawer 2128	<b>LAB TEST NUMBER:</b>	2645-0982
	Dalton, GA 30722-2128	<b>DATE:</b>	September 12, 2014
		<b>PAGE:</b>	1 of 1

Test Material:

<b>Style</b>	5T109 Saturate 9X36
<b>Test #</b>	R-140826-08710

Test Scope:

Testing Services Inc was instructed by the client to perform a procedure for measuring the critical radiant flux of horizontally mounted floor-covering systems exposed to a flaming ignition source in a graded radiant heat energy environment in a test chamber. This fire test standard is designed to provide a basis for estimating one aspect of the fire exposure behavior of a floor-covering system installed in a building corridor.

Test Method:

***ASTM E648-10e1: Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source***

Specimens of the sample were tested for critical radiant flux in accordance with ASTM Test Method E-648, NFPA 253 and FTM Standard 372. The value reported is the average of three specimens, reported as Critical Radiant Flux in units of watts per centimeter squared (W/cm<sup>2</sup>).

Mounting Board: Astone Fabricators Inc. (AFI) Tunnel Board Z Calcium Silicate Board  
Adhesive: Shaw 3500  
Trowel: 1/8" X 1/8" X 1/8" V Notch  
Conditioning: Minimum 96 hrs @ 70°F 50% RH

Classifications:

NFPA: Class I= 0.45 W/cm<sup>2</sup> or higher  
 Class II = 0.22 – 0.44 W/cm<sup>2</sup>  
**No Classification= <0.21 W/cm<sup>2</sup>**

Test Data:

Calibration Curve: 327L Radiometer #: 5356

Specimen	Time	Distance	Critical Radiant Flux
#1	18 min	25.3 cm	0.77 W/cm <sup>2</sup>
#2	21 min	29.7 cm	0.73 W/cm <sup>2</sup>
#3	20 min	29.8 cm	0.70 W/cm <sup>2</sup>
Standard Deviation: 0.05 Coefficient of Variation: 6.91%			

Average Critical Radiant Flux	NFPA Classification
0.71 W/cm <sup>2</sup>	I

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