

RIVERBANK ACOUSTICAL LABORATORIES

1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134

Alion Science and Technology

630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

TEST REPORT

FOR: KM Fabrics, Inc.
Greenville, SC

624

Sound Absorption Test
RAL™-A04-111

ON: Charisma SP Black 624 Velvet 100% Inherently Flame
Retardant Fabric

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CHARISMA

CONDUCTED: 18 June 2004

TEST METHOD

The test method conformed explicitly with the requirements of the ASTM Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423-02a and E795-00. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. A description of the measuring procedure and room qualifications is available separately.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as Charisma SP Black 624 velvet 100% inherently flame retardant fabric. The overall dimensions of the specimen as measured were 2.74 m (108 in.) wide by 2.44 m (96 in.) high and nominal 127 mm (5 in.) thick. The specimen consisted of four (4) pieces. Each piece was 1.37 m (54 in.) wide by 2.44 m (96 in.) long and 2 mm (0.075 in.) thick. Each piece was suspended from the mounting rod with wire spaced 305 mm (12 in.) on center for 100% fullness. The overall width of each piece after folding was 686 mm (27 in.). The pieces were pinned together as necessary to form a continuous specimen. The specimen was tested in the laboratory's 292 m³ (10,311 ft³) test chamber.

The weight of the entire specimen as measured was 16.2 kg (35.75 lbs), an average of 2.4 kg/m² (0.5 lbs/ft²). The area used in the calculations was 6.7 m² (72 ft²). The room temperature at the time of the test was 21°C (71°F) and 61±1% relative humidity.

MOUNTING G-205

Test specimen hung parallel to the test surface. The number designates the distance in mm from the centerline of the hangers to the test surface.

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NVLAP

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TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins
100	0.06	4.02
** 125	0.09	6.48
160	0.20	14.49
200	0.29	21.14
** 250	0.52	37.29
315	0.71	51.32
400	0.77	55.15
** 500	0.99	71.54
630	1.01	73.01
800	1.02	73.29
** 1000	0.97	69.78
1250	0.92	66.56
1600	0.91	65.44
** 2000	0.92	66.23
2500	0.92	65.95
3150	0.89	64.13
** 4000	0.91	65.37
5000	0.90	64.76

SAA = 0.83

NRC = 0.85

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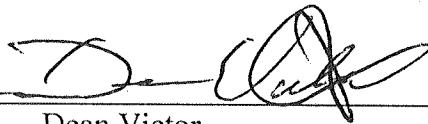
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TEST RESULTS (Continued)

The sound absorption average (SAA) is defined as a single number rating, the average, rounded to the nearest 0.01, of the sound absorption coefficient of a material for the twelve one-third octave bands from 200 through 2500 Hz, inclusive.

The noise reduction coefficient (NRC) is defined from previous versions of this same test method as the average of the coefficients at 250, 500, 1000, and 2000 Hz, expressed to the nearest integral multiple of 0.05.

Tested by



Dean Victor
Senior Experimentalist

Approved by



David L. Moyer
Laboratory Manager

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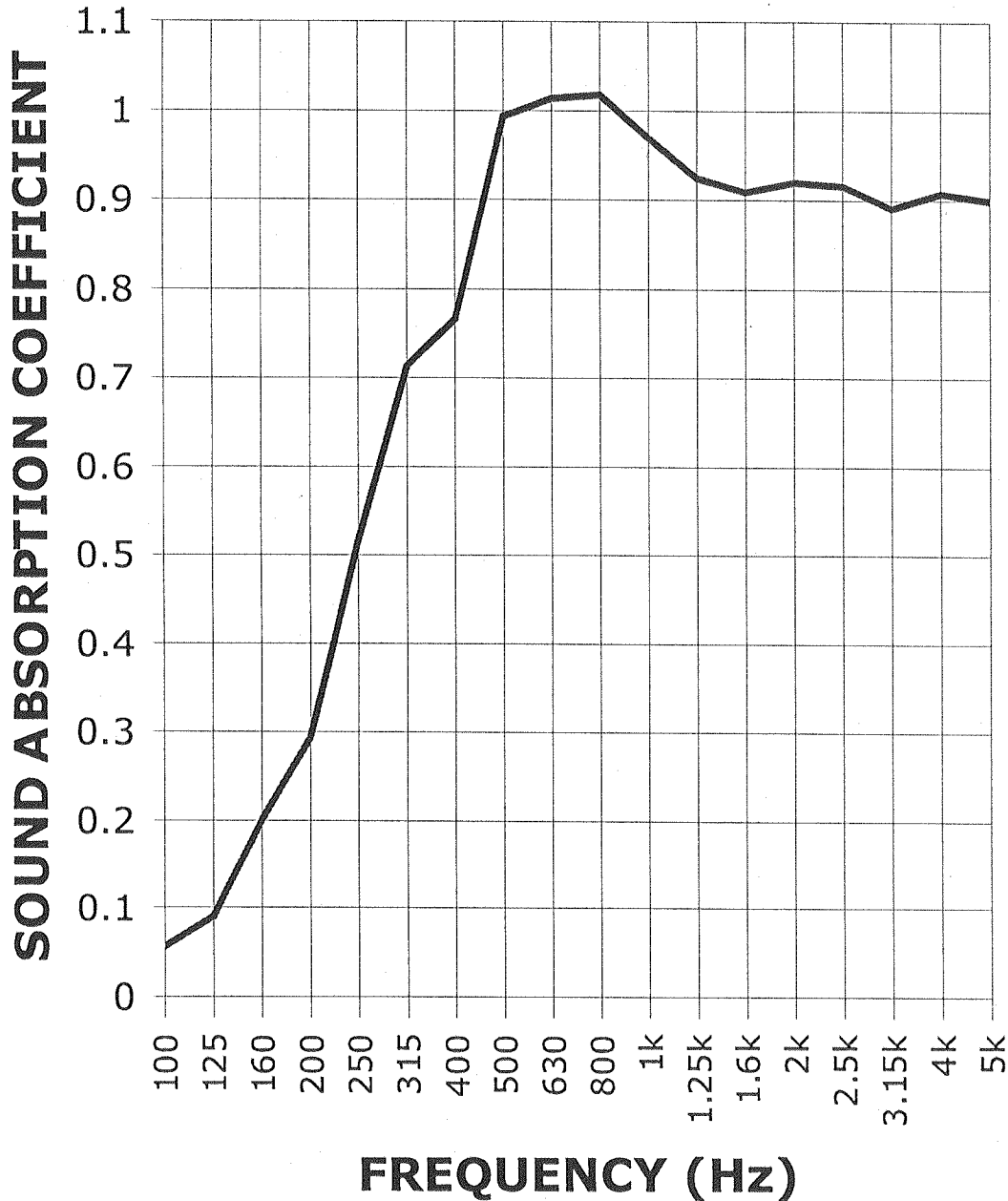
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TEST REPORT

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