

# 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: Auralex Acoustics, Inc.  
Indianapolis, IN

Sound Absorption Test  
RAL™-A06-208

ON: 1" Microsuede Fiberglass Panels

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CONDUCTED: 15 September 2006

### 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 E795-05. 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 (NVLAP Lab Code: 100227-0). 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 1" Microsuede fiberglass panels. The overall dimensions of the specimen as measured were nominally 2.74 m (108 in.) wide by 2.44 m (96 in.) long and 25 mm (1 in.) thick. The specimen consisted of fourteen (14) pieces. Twelve (12) pieces were nominally 406 mm (16 in.) wide by 1.22 m (48 in.) long. Two (2) pieces were nominally 305 mm (12 in.) wide by 1.22 m (48 in.) long. The specimen was tested in the laboratory's 292 m<sup>3</sup> (10,311 ft<sup>3</sup>) test chamber.

The weight of the entire specimen as measured was 20.4 kg (45 lbs), an average of 3 kg/m<sup>2</sup> (0.62 lbs/ft<sup>2</sup>). The area used in the calculations was 6.7 m<sup>2</sup> (72 ft<sup>2</sup>). The room temperature at the time of the test was 21°C (69°F) and 59±2% relative humidity.

### MOUNTING A

The test specimen was laid directly against the test surface. The perimeter was sealed using metal framing.

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THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.



NVLAP Lab Code 100227-0

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ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
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### TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins
100	0.11	7.86
** 125	0.14	10.06
160	0.22	15.95
200	0.41	29.56
** 250	0.51	37.03
315	0.68	48.64
400	0.75	54.01
** 500	0.78	56.23
630	0.83	59.65
800	0.89	63.86
** 1000	0.89	64.18
1250	0.83	60.09
1600	0.83	59.41
** 2000	0.80	57.36
2500	0.78	56.41
3150	0.78	56.12
** 4000	0.78	56.06
5000	0.78	56.42

SAA = 0.75

NRC = 0.75

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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 *D. Victor*  
Dean Victor  
Senior Experimentalist

Approved by *David L. Moyer* *ks*  
David L. Moyer  
Laboratory Manager

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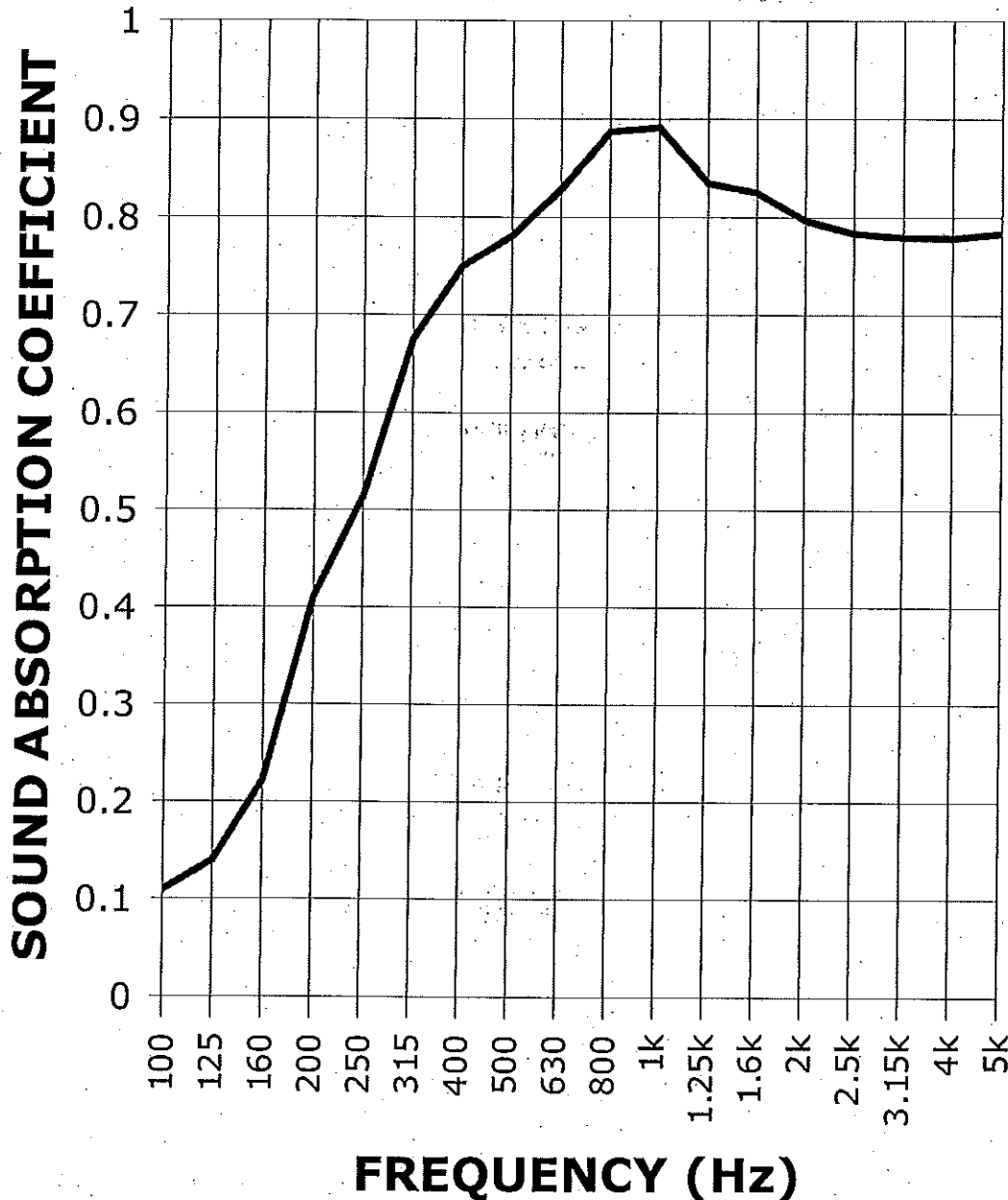
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## TEST REPORT

SOUND ABSORPTION REPORT

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SAA = 0.75

NRC = 0.75

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## TEST REPORT

FOR: Auralex Acoustics, Inc.  
Indianapolis, IN

Sound Absorption Test  
RAL™-A06-207

ON: 1" Microsuede Fiberglass Panels on 3" Spacers

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CONDUCTED: 15 September 2006

### 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 E795-05. 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 (NVLAP Lab Code: 100227-0). 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 1" Microsuede fiberglass panels on 3" spacers. The overall dimensions of the specimen as measured were nominally 2.74 m (108 in.) wide by 2.44 m (96 in.) long and 25 mm (1 in.) thick. The specimen consisted of fourteen (14) pieces with supplied spacers. Twelve (12) pieces were nominally 406 mm (16 in.) wide by 1.22 m (48 in.) long. Two (2) pieces were nominally 305 mm (12 in.) wide by 1.22 m (48 in.) long. The spacers were 76 mm (3 in.) thick and were distributed evenly around the back perimeter of the panels. The entire specimen plus mounting as measured from the test floor was 127 mm (4 in.) thick. The specimen was tested in the laboratory's 292 m<sup>3</sup> (10,311 ft<sup>3</sup>) test chamber.

The weight of the entire specimen as measured was 20.4 kg (45 lbs), an average of 3 kg/m<sup>2</sup> (0.62 lbs/ft<sup>2</sup>). The area used in the calculations was 6.7 m<sup>2</sup> (72 ft<sup>2</sup>). The room temperature at the time of the test was 21°C (69°F) and 58±1% relative humidity.

### MOUNTING F - 75

The test specimen was mounted with an airspace behind it. The suffix designates the airspace in mm from the bottom of the test specimen to the test surface. Perimeter edges were unsealed.

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### TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins
100	0.21	14.91
** 125	0.40	28.81
160	0.44	31.34
200	0.72	51.59
** 250	0.81	58.07
315	0.99	71.05
400	1.04	74.73
** 500	1.04	74.94
630	1.06	76.48
800	1.06	76.21
** 1000	1.06	76.59
1250	1.01	72.39
1600	0.98	70.81
** 2000	0.97	69.93
2500	1.00	71.77
3150	0.99	71.11
** 4000	1.00	71.94
5000	1.02	73.57

SAA = 0.98

NRC = 0.95

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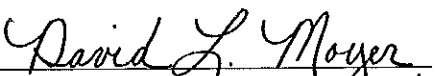
### TEST RESULTS (Continued)


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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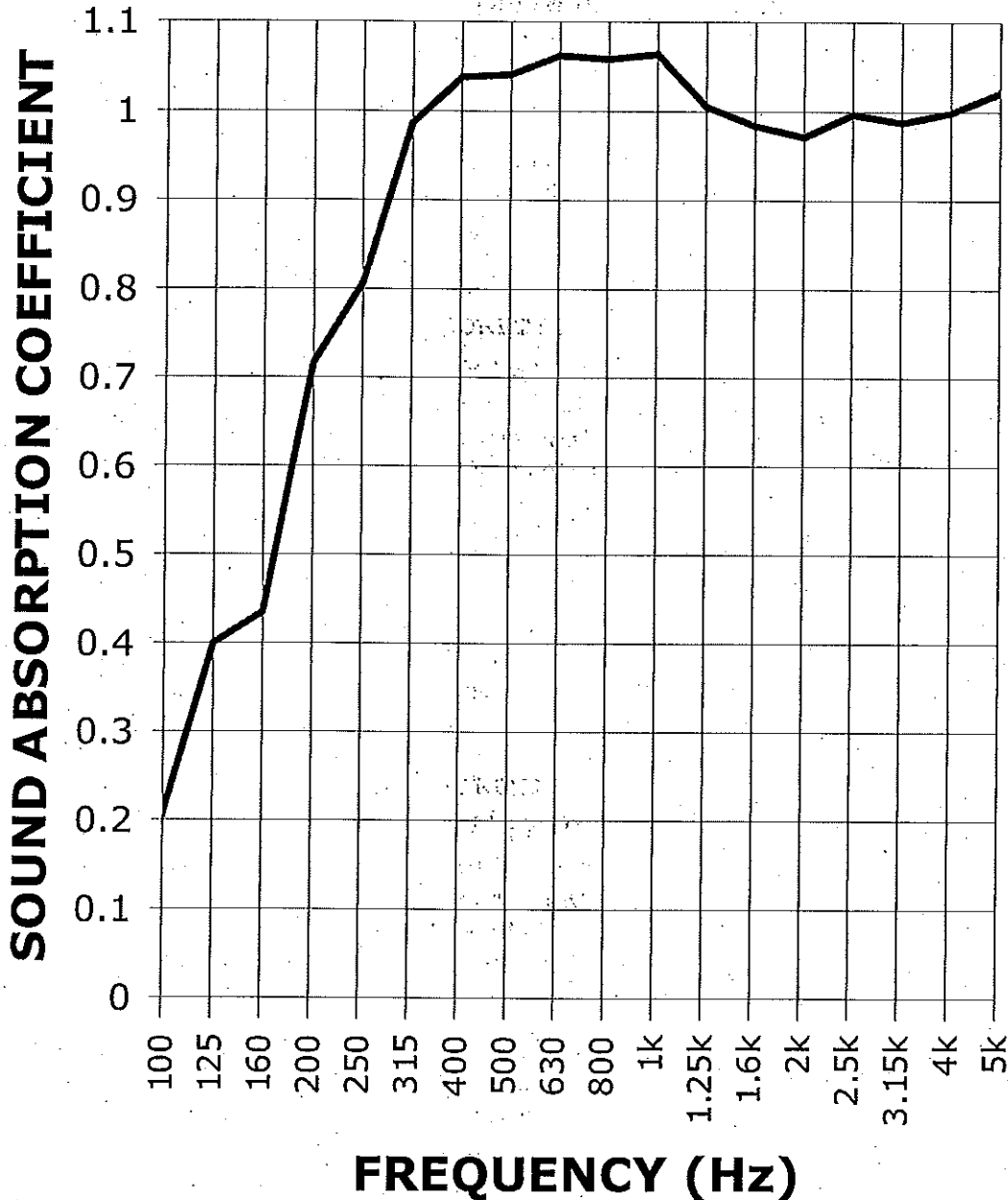
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