

# 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: Foam Factory Inc.  
Clinton Township, MI

Sound Absorption Test  
RAL™-A11-019

ON: Auralex 1 Inch Studiofoam Wedges

Page 1 of 4

CONDUCTED: 27 January 2011

### 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 C423-09a 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 client as Auralex 1 Inch Studiofoam Wedges. The overall dimensions of the specimen as measured were nominally 2.71 m (106.75 in.) wide by 2.43 m (95.5 in.) long and 25 mm (1 in.) thick. The specimen consisted of ten (10) pieces. Eight (8) pieces were nominally 603 mm (23.75 in.) wide by 1.21 m (47.75 in.) long. Two (2) pieces were nominally 298 mm (11.75 in.) wide by 603 mm (23.75 in.) long. The specimen was tested in the laboratory's 292 m<sup>3</sup> (10,311 ft<sup>3</sup>) test chamber.

The description of the specimen was as follows: Auralex 1 Inch Studiofoam Wedges. Flame-retardant stock designed 4516R, density (1.5-1.7 pcf) open polyurethane foam rubber. A visual inspection verified the manufacturer's description of the specimen.

The weight of the entire specimen as measured was 2.8 kg (6.25 lbs), an average of 0.44 kg/m<sup>2</sup> (0.09 lbs/ft<sup>2</sup>). The area used in the calculations was 6.6 m<sup>2</sup> (70.8 ft<sup>2</sup>). The room temperature at the time of the test was 21°C (71±1°F) and 58% relative humidity.

### MOUNTING A

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

This report shall not be reproduced except in full, without the written approval of RAL.

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

ACCREDITED BY DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY  
ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
THE LABORATORY'S ACCREDITATION OR ANY OF ITS TEST REPORTS IN NO WAY CONSTITUTES  
OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NIST.

# 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

Foam Factory Inc.

RAL™-A11-019

27 January 2011

Page 2 of 4

### TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins
100	0.07	5.22
** 125	0.11	7.43
160	0.09	6.32
200	0.09	6.10
** 250	0.11	7.56
315	0.17	11.70
400	0.23	16.03
** 500	0.34	24.25
630	0.49	34.59
800	0.61	43.42
** 1000	0.71	50.50
1250	0.79	56.06
1600	0.87	61.84
** 2000	0.93	66.06
2500	1.01	71.38
3150	1.00	70.60
** 4000	0.94	66.81
5000	0.92	65.16

SAA = 0.53

NRC = 0.50

This report shall not be reproduced except in full, without the written approval of RAL.  
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

ACCREDITED BY DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY  
ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
THE LABORATORY'S ACCREDITATION OR ANY OF ITS TEST REPORTS IN NO WAY CONSTITUTES  
OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NIST.

# 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

Foam Factory Inc.

RAL™-A11-019

27 January 2011

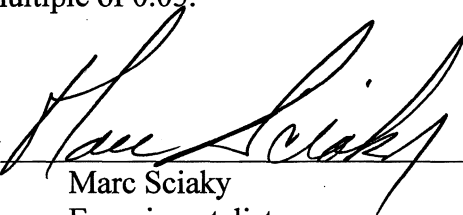
Page 3 of 4

### 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

  
Marc Sciaky  
Experimentalist

Approved by

  
David L. Moyer  
Laboratory Manager

This report shall not be reproduced except in full, without the written approval of RAL.  
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

ACCREDITED BY DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY  
ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
THE LABORATORY'S ACCREDITATION OR ANY OF ITS TEST REPORTS IN NO WAY CONSTITUTES  
OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NIST.

1512 S. BATAVIA AVENUE  
GENEVA, ILLINOIS 60134

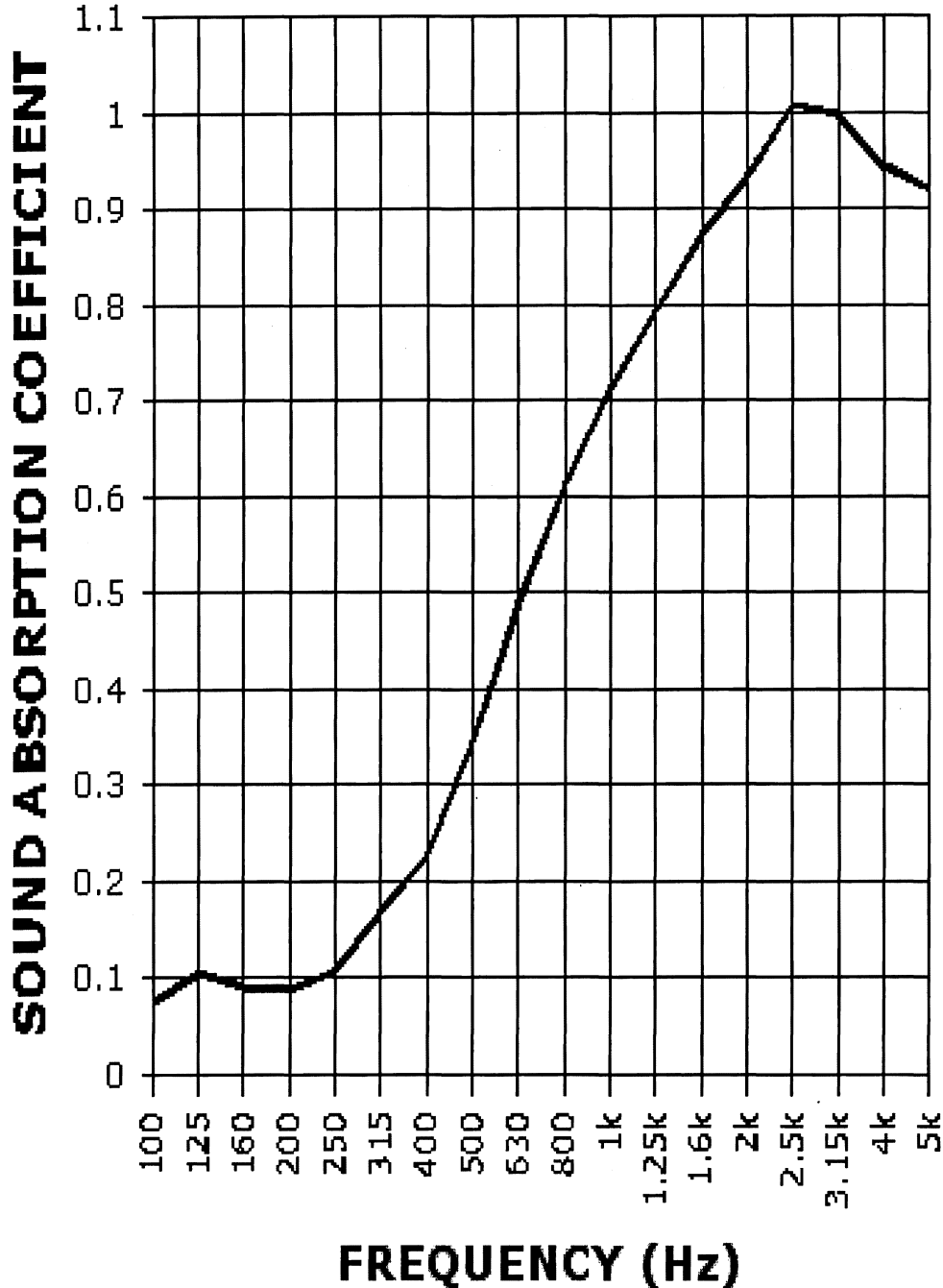
Alion Science and Technology

630/232-0104  
FOUNDED 1918 BY  
WALLACE CLEMENT SABINE

## TEST REPORT

Page 4 of 4

### SOUND ABSORPTION REPORT RAL-A11-019



SAA=0.53  
NRC=0.50

This report shall not be reproduced except in full, without the written approval of RAL.

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

ACCREDITED BY DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY  
ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
THE LABORATORY'S ACCREDITATION OR ANY OF ITS TEST REPORTS IN NO WAY CONSTITUTES  
OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NIST.