

# 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™-A11-153

ON: Foam Factory Male Broadband Absorbers

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CONDUCTED: 14 July 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 manufacturer as Foam Factory Male Broadband Absorbers. The overall dimensions of the specimen as measured were nominally 2.44 m (96 in.) wide by 2.44 m (96 in.) long and 133 mm (5.25 in.) thick. The specimen consisted of sixteen (16) pieces. Each piece was nominally 305 mm (12 in.) wide by 1.22 m (48 in.) long, rectangle with a convex acoustic cut face. The specimen was tested in the laboratory's 292 m<sup>3</sup> (10,311 ft<sup>3</sup>) test chamber.

The manufacturer's description of the specimen was as follows: Open Cell Polyurethane Foam Rubber; Fire Retardant. A visual inspection verified the manufacturer's description of the specimen.

The weight of the entire specimen as measured was 7.9 kg (17.5 lbs), an average of 1.3 kg/m<sup>2</sup> (0.3 lbs/ft<sup>2</sup>). The area used in the calculations was 5.9 m<sup>2</sup> (64 ft<sup>2</sup>). The room temperature at the time of the test was 22°C (71°F) and 62±1% relative humidity.

### MOUNTING A

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

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NVLAP Lab Code 100227-0

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### TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins
100	0.46	29.38
** 125	0.52	33.27
160	0.54	34.53
200	0.67	42.81
** 250	0.78	50.13
315	0.98	62.60
400	1.03	65.96
** 500	1.00	63.81
630	0.97	62.07
800	0.93	59.46
** 1000	0.93	59.59
1250	0.98	62.60
1600	1.00	64.01
** 2000	1.01	64.50
2500	1.05	67.30
3150	1.05	67.11
** 4000	1.07	68.67
5000	1.13	72.03

SAA = 0.94  
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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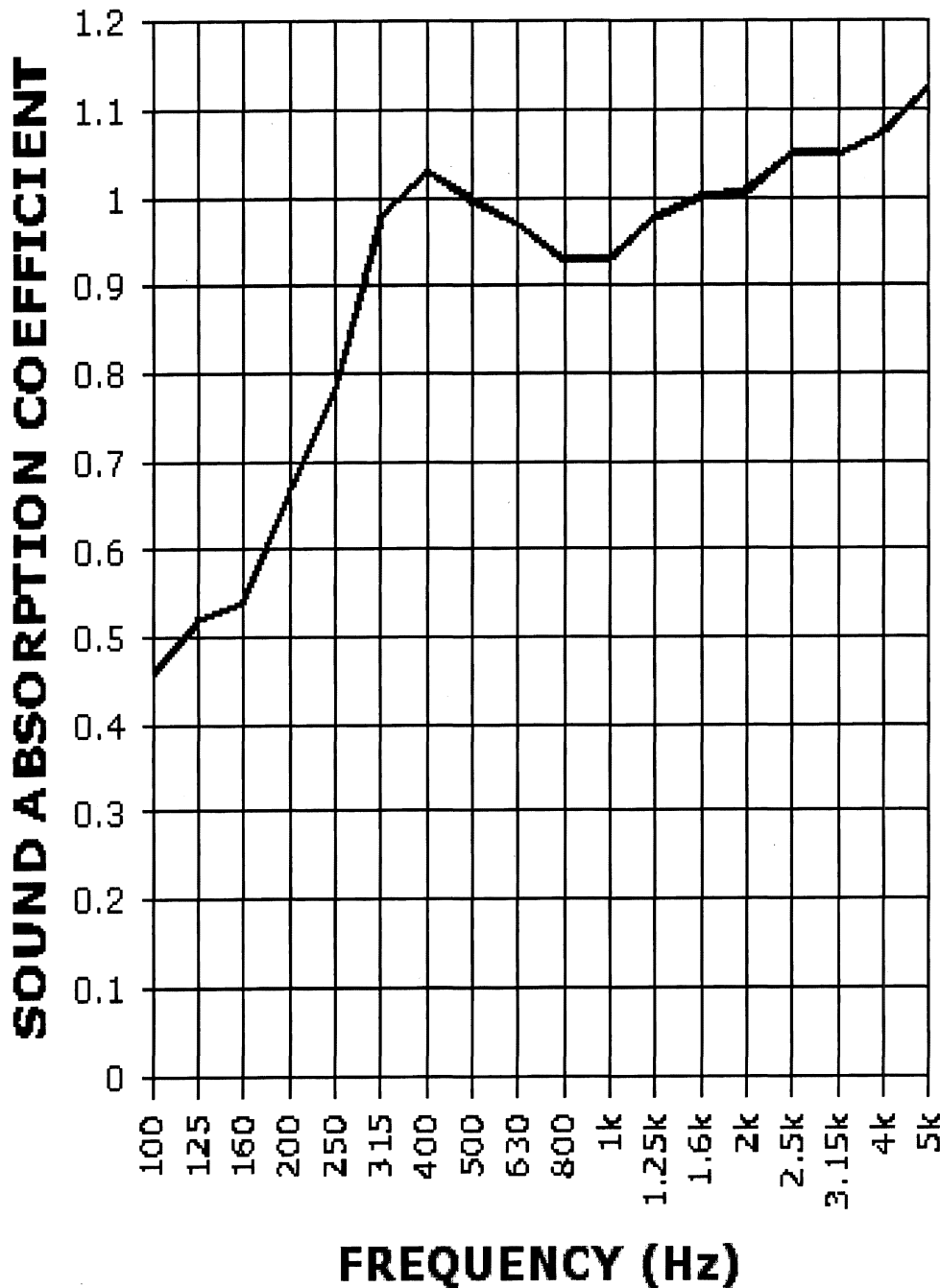


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**TEST REPORT**

**SOUND ABSORPTION REPORT  
RAL-A11-153**



**SAA=0.94  
NRC=0.95**

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