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<sup>TM</sup>-A11-149

ON:

Foam Factory 2" Pyramid Foam

Page 1 of 4

CONDUCTED: 13 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 2" Pyramid Foam. The overall dimensions of the specimen as measured were nominally 2.74 m (108 in.) wide by 2.44 m (96 in.) long and 51 mm (2 in.) thick. The specimen consisted of twelve (12) pieces. Eight (8) pieces were nominally 610 mm (24 in.) wide by 1.22 m (48 in.) long. Four (4) pieces were nominally 305 mm (12 in.) wide by 610 mm (24 in.) long. Valley Depth: 1.5"; Base Thickness: 0.5"; Peak to Peak: 2". 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 3.175 kg (7 lbs), an average of  $0.49 \text{ kg/m}^2$  (0.1 lbs/ft<sup>2</sup>). The area used in the calculations was  $6.7 \text{ m}^2$  (72 ft<sup>2</sup>). The room temperature at the time of the test was  $22^{\circ}\text{C}$  (71°F) and  $62\pm1\%$  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.



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RAL<sup>TM</sup>-A11-149

13 July 2011

Page 2 of 4

## **TEST RESULTS**

1/3 Octave Center Frequency	Absorption Coefficient	Total Absorption In Sabins
(Hz)		
100	0.19	13.92
<b>**</b> 125	0.19	13.71
160	0.18	12.62
200	0.20	14.38
** 250	0.22	16.19
315	0.33	23.67
313	0.55	25.07
400	0.38	27.40
** 500	0.45	32.71
630	0.51	36.44
800	0.55	39.62
** 1000	0.55	39.93
1250	0.54	38.98
1230	U.J <del>-1</del>	30.70
1600	0.55	39.83
** 2000	0.60	43.31
2500	0.65	46.76
3150	0.70	50.26
** 4000	0.76	54.53
	0.86	62.09
5000	0.80	02.03
	SAA = 0.46	
	NRC = 0.45	

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## TEST REPORT

Foam Factory Inc.

RALTM-A11-149

13 July 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

Dean Victor

Senior Experimentalist

Approved by David L. Moyer

Laboratory Manager

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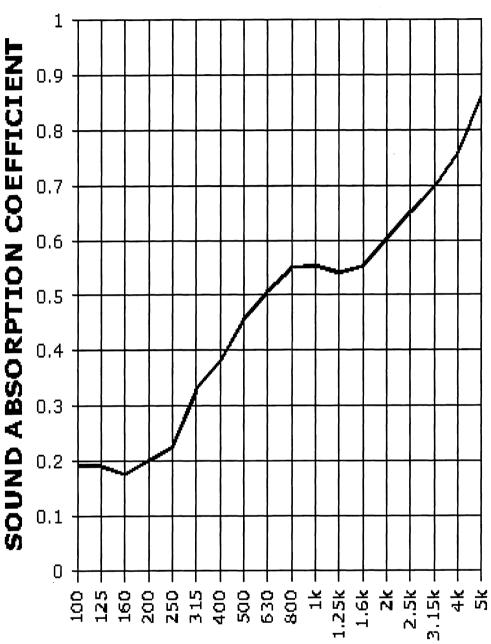
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630/232-0104 FOUNDED 1918 BY WALLACE CLEMENT SABINE

Page 4 of 4

## TEST REPORT

SOUND ABSORPTION REPORT RAL-A11-149



# FREQUENCY (Hz)

SAA=0.46 NRC=0.45

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