

# RIVERBANK ACOUSTICAL LABORATORIES

1512 BATAVIA AVENUE  
GENEVA ILLINOIS 60134

OF  
IIT RESEARCH INSTITUTE

708/232-0104  
FOUNDED 1918 BY  
WALLACE CLEMENT SABINE

## REPORT

FOR: USA Foam

Auralex™  
2" SonoMatt

Sound Absorption Test  
RAL™-A93-289

ON: 2" Thick Sonomat™ Foam

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CONDUCTED: 2 November 1993

### 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 C423-90a and E795-92. 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 technique is available separately. The microphone used was a Bruel & Kjaer serial number 1440522.

### DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as 2" thick Sonomat™ foam. The overall dimensions of the specimen as measured were 2.44 m (96 in.) wide by 2.44 m (96 in.) long and 51 mm (2 in.) thick. The specimen consisted of two units. Each unit measured 1.22 m (48 in.) wide by 2.44 m (96 in.) long by 51 mm (2 in.) thick. 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: The sample consisted of sheets of convoluted open cell foam. The thickness of the foam at the base was 25 mm (1.0 in.). The weight of the specimen as measured was 5.0 kg (11 lbs) an average of 0.8 kg/m<sup>2</sup> (0.17 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 58% relative humidity.

### MOUNTING A

The test specimen was laid directly against the test surface.

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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### TEST RESULTS

1/3 Octave Center Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins	% Of Uncertainty With 95% Confidence Limit With Specimen
100	0.08	4.96	2.99
★ ★ 125	0.13	8.27	2.89
160	0.14	9.26	2.05
200	0.20	12.55	1.90
★ ★ 250	0.27	17.24	1.35
315	0.35	22.58	1.11
400	0.47	30.22	1.24
★ ★ 500	0.62	39.45	1.26
630	0.75	48.12	0.86
800	0.85	54.44	0.79
★ ★ 1000	0.92	58.59	0.83
1250	0.96	61.55	0.65
1600	1.01	64.48	0.67
★ ★ 2000	1.02	65.24	0.58
2500	1.00	64.17	0.48
3150	1.02	65.09	0.51
★ ★ 4000	1.02	65.48	0.48
5000	1.06	68.01	0.47

NRC = 0.70

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NVLAP

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