

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™
1" Studiofoam Wedges

Sound Absorption Test
RAL™-A93-288

ON: 1" Thick Foam Wedges

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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 as 1" thick foam wedges. The overall dimensions of the specimen as measured were 2.44 m (96 in.) wide by 1.83 m (72 in.) long and 25 mm (1 in.) thick. The specimen consisted of six units. Each unit measured 1.22 m (48 in.) wide by 610 mm (24 in.) long by 25 mm (1 in.) thick. The specimen was tested in the laboratory's 292 m³ (10,311 ft³) test chamber. The description of the specimen was as follows: The sample consisted of sheets of open cell foam wedges. The thickness of the foam at the base of the valley was 13 mm (0.5 in.) and the actual wedges measured 13 mm (0.5 in.) high. The weight of the specimen as measured was 2.3 kg (5 lbs) an average of 0.5 kg/m² (.010 lbs/ft²). The area used in the calculations was 4.5 m² (48 ft²). The room temperature at the time of the test was 21°C (70°F) and 61% 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	0.09	4.28	3.63
★ ★ 125	0.10	4.60	2.47
160	0.10	4.79	1.87
200	0.10	4.76	1.62
★ ★ 250	0.13	6.24	1.45
315	0.16	7.52	0.99
400	0.20	9.75	1.08
★ ★ 500	0.30	14.62	1.15
630	0.43	20.56	0.74
800	0.59	28.42	0.75
★ ★ 1000	0.68	32.47	0.62
1250	0.77	36.98	0.60
1600	0.85	40.59	0.57
★ ★ 2000	0.94	44.89	0.52
2500	1.01	48.41	0.51
3150	1.03	49.30	0.47
★ ★ 4000	1.00	47.95	0.47
5000	1.03	49.31	0.46

NRC = 0.50

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NVLAQ

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