

Test ReportFOR: **Auralex Acoustics**
Indianapolis, IN.**Sound Absorption**
RAL™-A15-327

CONDUCTED: 2015-11-05

Page 1 of 7

ON: Studio 6 Foam Panel

TEST METHOD

Riverbank Acoustical Laboratories™ is accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) as an ISO 17025:2005 Laboratory (NVLAP Lab Code: 100227-0) and for this test procedure. The test reported in this document conformed explicitly with ASTM C423-09a: "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method." The specimen mounting was performed according to ASTM E795-05(2012): "Standard Practices for Mounting Test Specimens During Sound Absorption Tests." A description of the measuring procedure and room qualifications is available upon request.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as Studio 6 Foam Panel. A full internal inspection performed on the test specimen by Riverbank personnel verified the manufacturer's description.

Studio6 Foam Panel

Material: Polyurethane foam
Material ID: E-20
Dimensions: Eight at 609.60 mm (24.0 in.) wide by 1.22 m (48.0 in.) long
Thickness: 152.40 mm (6.00 in.)
Density: 32.04 kg/m³ (2.0 lbs.ft³)*

Note: A 69.85 mm (2.75 in.) incision was made down the center of each unit (back surface only)

Physical Measures

Size: 2.44 m (96.00 in.) wide by 2.44 m (96.00 in.) long
Thickness: 152.40 mm (6.00 in.)
Weight: 25.29 kg (55.75 lbs.)
Mass per Unit Area: 4.25 kg/m² (0.87 lbs./ft²)
Area: 5.95 m² (64.00 ft²)

Test Environment

Volume: 292.0 m³ (10,311.0 ft³)
Temperature: 22.5±0.0°C (72.5±0.0°F)
Humidity: 63.0±0.2%
Barometric Pressure: 98.8 kPa.

* = Information provided by manufacturer and not verified by RAL.



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Test Report

Auralex Acoustics
2015-11-05

RAL™-A15-327
Page 2 of 7



Figure 1 - Specimen mounted in the test chamber.



Figure 2 - Detail of the test specimen.



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Test Report**Auralex Acoustics**
2015-11-05**RAL™-A15-327**
Page 3 of 7**MOUNTING METHOD**

Type A Mounting: The test specimen was laid directly against the test surface. The perimeter edges were exposed, as would be typical of an actual installation of this specimen.

TEST RESULTS

1/3 Octave Center Frequency (Hz)	Total Absorption (SI) (m ²)	Total Absorption (IP) (Sabins)	Absorption Coefficient (Sabins / ft ²)
100	6.44	69.35	1.08
** 125	7.30	78.60	1.23
160	7.66	82.44	1.29
200	7.79	83.85	1.31
** 250	9.19	98.93	1.55
315	8.87	95.48	1.49
400	9.33	100.43	1.57
** 500	9.16	98.58	1.54
630	8.95	96.35	1.51
800	8.60	92.58	1.45
** 1000	8.48	91.24	1.43
1250	8.11	87.30	1.36
1600	8.41	90.53	1.41
** 2000	8.25	88.80	1.39
2500	8.20	88.29	1.38
3150	8.01	86.22	1.35
** 4000	7.99	86.00	1.34
5000	7.94	85.52	1.34

SAA = 1.45
NRC = 1.50

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Test Report

Auralex Acoustics
2015-11-05

RAL™-A15-327
Page 4 of 7

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
Marc Sciaky
Experimentalist

Report by Chris Nottoli
Chris Nottoli
Acoustician

Approved by Eric P. Wolfram
Eric P. Wolfram
Laboratory Manager



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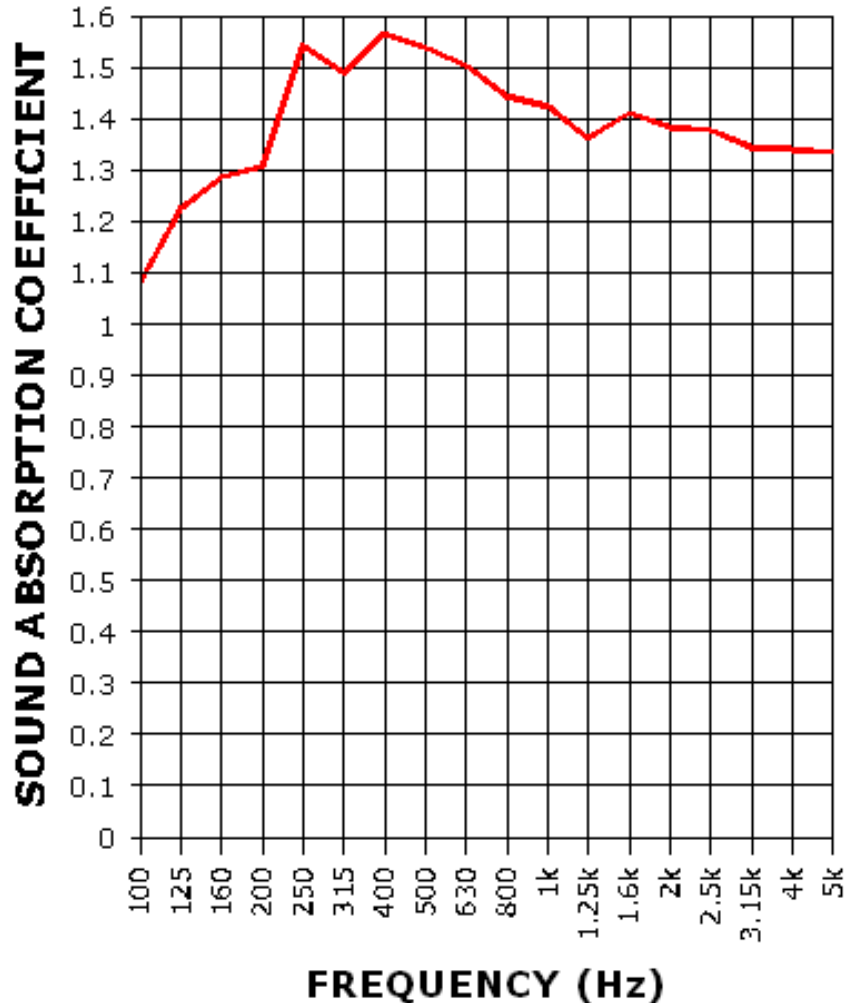
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Test Report

Auralex Acoustics
2015-11-05

RAL™-A15-327
Page 5 of 7

SOUND ABSORPTION REPORT Studio 6 Foam Panel



SAA = 1.45

NRC = 1.50



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Test Report

Auralex Acoustics
2015-11-05

RAL™-A15-327
Page 6 of 7

APPENDIX A: Extended Frequency Range Data

Specimen: Studio 6 Foam Panel (See Full Report)

The following non-accredited data were obtained in accordance with ASTM C423-09a, but extend beyond the defined frequency range of 100Hz to 5,000Hz. These unofficial results are representative of the RAL test environment only and intended for research & comparison purposes.

1/3 Octave Band Center Frequency (Hz)	Total Absorption (Sabins)	Absorption Coefficient (Sabins / ft ²)
31.5	11.74	0.18
40	19.98	0.31
50	15.95	0.25
63	25.37	0.40
80	19.02	0.30
100	69.35	1.08
125	78.60	1.23
160	82.44	1.29
200	83.85	1.31
250	98.93	1.55
315	95.48	1.49
400	100.43	1.57
500	98.58	1.54
630	96.35	1.51
800	92.58	1.45
1000	91.24	1.43
1250	87.30	1.36
1600	90.53	1.41
2000	88.80	1.39
2500	88.29	1.38
3150	86.22	1.35
4000	86.00	1.34
5000	85.52	1.34
6300	85.96	1.34
8000	85.81	1.34
10000	84.99	1.33
12500	82.27	1.29



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RAL™-A15-327
Page 7 of 7

APPENDIX B: Instruments of Traceability

Specimen: Studio 6 Foam Panel (See Full Report)

<u>Description</u>	<u>Model</u>	<u>Serial Number</u>	<u>Date of Certification</u>	<u>Calibration Due</u>
Bruel & Kjaer Pulse Analyzer	Type 3560-C	2647140	2015-04-08	2016-04-08
Bruel & Kjaer Mic And Preamp	Type 4943-B-001	2311427	2015-07-27	2016-07-27
G.R.A.S Pistonphone	Type42AF-1	80001	2015-08-14	2016-08-14
Omega Digital Temp., Humid. And Pressure Recorder	OM-CP- PRHTemp2000	N11105	2015-09-30	2016-09-30

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