

Test Report

FOR: **Auralex Acoustics**
Indianapolis, IN.

Sound Absorption
RAL™-A15-277

CONDUCTED: 2015-10-06

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ON: LENRD Bass Trap

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 LENRD Bass Trap. A full internal inspection performed on the test specimen by Riverbank personnel verified the manufacturer's description.

LENRD Bass Trap (Angled)

Material: Open cell polyurethane foam
Dimensions: 36 at 304.80 mm (12.0 in.) wide by 603.25 mm (23.75 in.) long
Depth: Varies, 304.80 mm (12.0 in.) maximum
Density: 25.63 kg/m³ (1.60 lbs./ft³)*

Physical Measures

Size: 2.73 m (107.50 in.) wide by 2.41 m (95.00 in.) long
Thickness: 304.80 mm (12.00 in.)
Weight: 28.69 kg (63.25 lbs.)
Mass per Unit Area: 4.35 kg/m² (0.89 lbs./ft²)
Area: 6.59 m² (70.90 ft²)

Test Environment

Volume: 292.0 m³ (10,311.0 ft³)
Temperature: 20.7±0.1°C (69.3±0.1°F)
Humidity: 59.0±1.8%
Barometric Pressure: 99.5 kPa.

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



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Figure 1 - Specimen mounted in the test chamber.

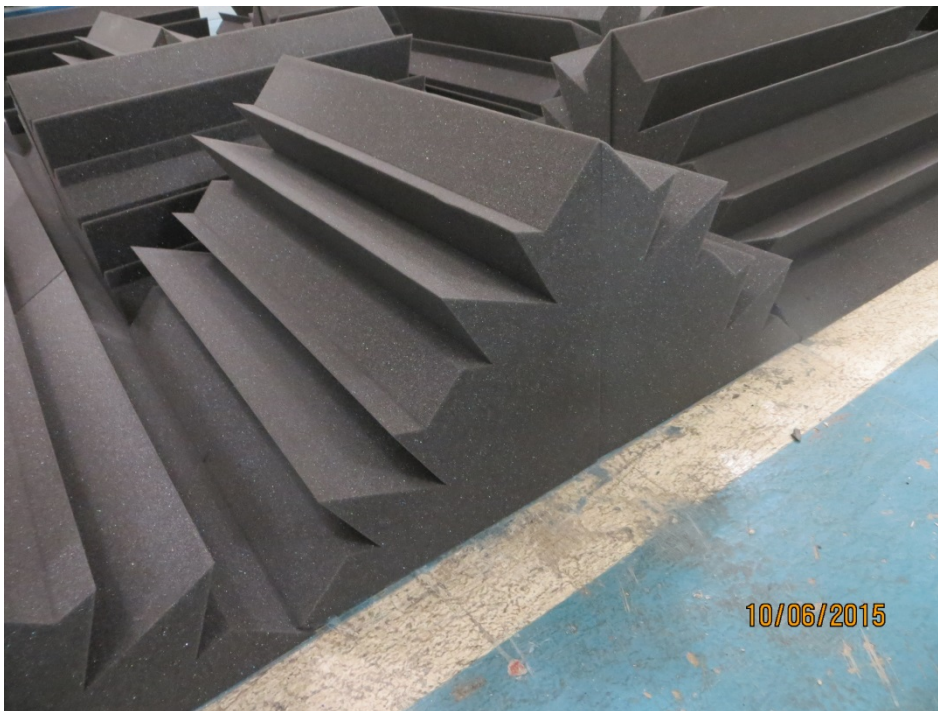


Figure 2 - Detail of the test specimen.



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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	6.89	74.17	1.05
** 125	8.57	92.22	1.30
160	7.99	85.98	1.21
200	9.67	104.08	1.47
** 250	10.24	110.17	1.55
315	9.67	104.13	1.47
400	9.83	105.81	1.49
** 500	10.06	108.26	1.53
630	10.23	110.10	1.55
800	10.02	107.87	1.52
** 1000	9.75	104.95	1.48
1250	9.86	106.13	1.50
1600	9.96	107.18	1.51
** 2000	9.72	104.65	1.48
2500	9.77	105.17	1.48
3150	9.73	104.77	1.48
** 4000	9.93	106.92	1.51
5000	10.15	109.29	1.54

SAA = 1.50
NRC = 1.50



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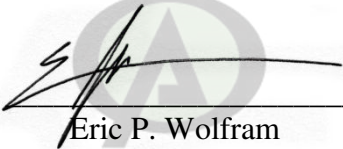
TEST RESULTS (Continued)


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 
Marc Sciaky
Experimentalist

Report by 
Chris Nottoli
Acoustician

Approved by 
Eric P. Wolfram
Laboratory Manager


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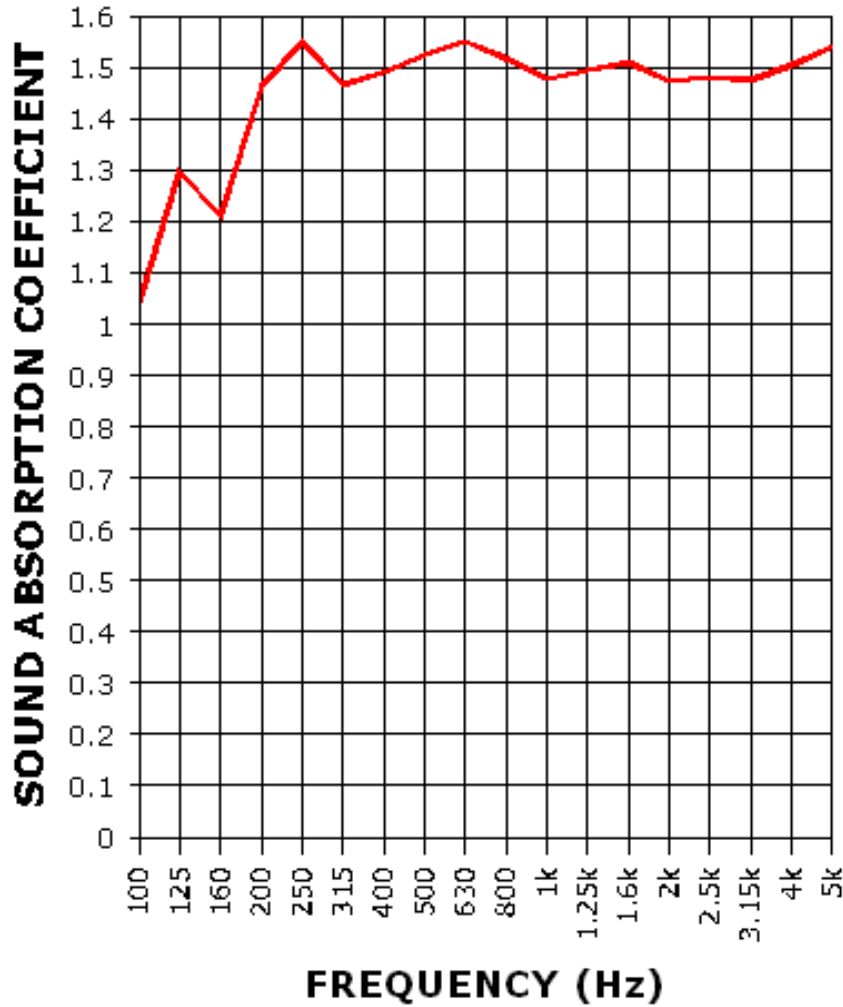
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SOUND ABSORPTION REPORT
LENRD Bass Trap



SAA = 1.50
NRC = 1.50



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APPENDIX A: Extended Frequency Range Data

Specimen: LENRD Bass Trap (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	14.29	0.20
40	14.04	0.20
50	4.70	0.07
63	39.80	0.56
80	34.96	0.49
100	74.17	1.05
125	92.22	1.30
160	85.98	1.21
200	104.08	1.47
250	110.17	1.55
315	104.13	1.47
400	105.81	1.49
500	108.26	1.53
630	110.10	1.55
800	107.87	1.52
1000	104.95	1.48
1250	106.13	1.50
1600	107.18	1.51
2000	104.65	1.48
2500	105.17	1.48
3150	104.77	1.48
4000	106.92	1.51
5000	109.29	1.54
6300	112.27	1.58
8000	121.76	1.72
10000	130.67	1.84
12500	142.04	2.00



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APPENDIX B: Instruments of Traceability
Specimen: LENRD Bass Trap (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
EXTECH-Temp	SD700	Q790841	2015-09-16	2016-09-16

END



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