

Test Report

FOR: **Audimute Soundproofing**
Beachwood, OH.

Sound Absorption
RAL-A16-060

CONDUCTED: 2016-03-28

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ON: 1.5" eco-C-tex™

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 1.5" eco-C-tex™. A full internal inspection performed on the test specimen by Riverbank personnel verified the manufacturer's description.

Detail of Materials

Material: Proprietary blend of recycled cotton and cellulose fibers
Dimensions: 18 at 304.80 mm (12.0 in.) wide by 1.22 m (48.0 in.) long
Thickness: 37.50 mm (1.48 in.)
Density: 96.11 kg/m³ (6.0 lbs./ft³)

Physical Measures

Overall Dimensions: 2.44 m (96.00 in.) wide by 2.74 m (108.00 in.) long
Overall Thickness: 37.50 mm (1.48 in.)
Overall Weight: 26.54 kg (58.50 lbs.)
Area: 6.69 m² (72.00 ft²)
Mass per Unit Area: 3.95 kg/m² (0.81 lbs./ft²)

Test Environment

Volume: 292.0 m³ (10,311.0 ft³)
Temperature: 22.5±0.0°C (72.6±0.0°F)
Humidity: 56.6±0.3%
Barometric Pressure: 98.8 kPa.

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

+ = Approximate measurement; measurement varied.



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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	0.84	9.05	0.13
** 125	1.53	16.47	0.23
160	1.93	20.76	0.29
200	2.85	30.66	0.43
** 250	4.13	44.43	0.62
315	5.80	62.44	0.87
400	6.44	69.30	0.96
** 500	6.97	75.00	1.04
630	7.18	77.31	1.07
800	7.27	78.26	1.09
** 1000	7.45	80.14	1.11
1250	7.63	82.15	1.14
1600	7.36	79.19	1.10
** 2000	7.33	78.94	1.10
2500	7.29	78.48	1.09
3150	7.11	76.57	1.06
** 4000	7.13	76.75	1.07
5000	7.11	76.52	1.06

SAA = 0.97
NRC = 0.95



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GENEVA, IL 60134
630-232-0104

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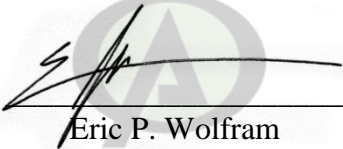
TEST RESULTS (Continued)

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 
Dean Victor
Senior Experimentalist

Report by 
Chris Nottoli
Acoustician

Approved by 
Eric P. Wolfram
Laboratory Manager



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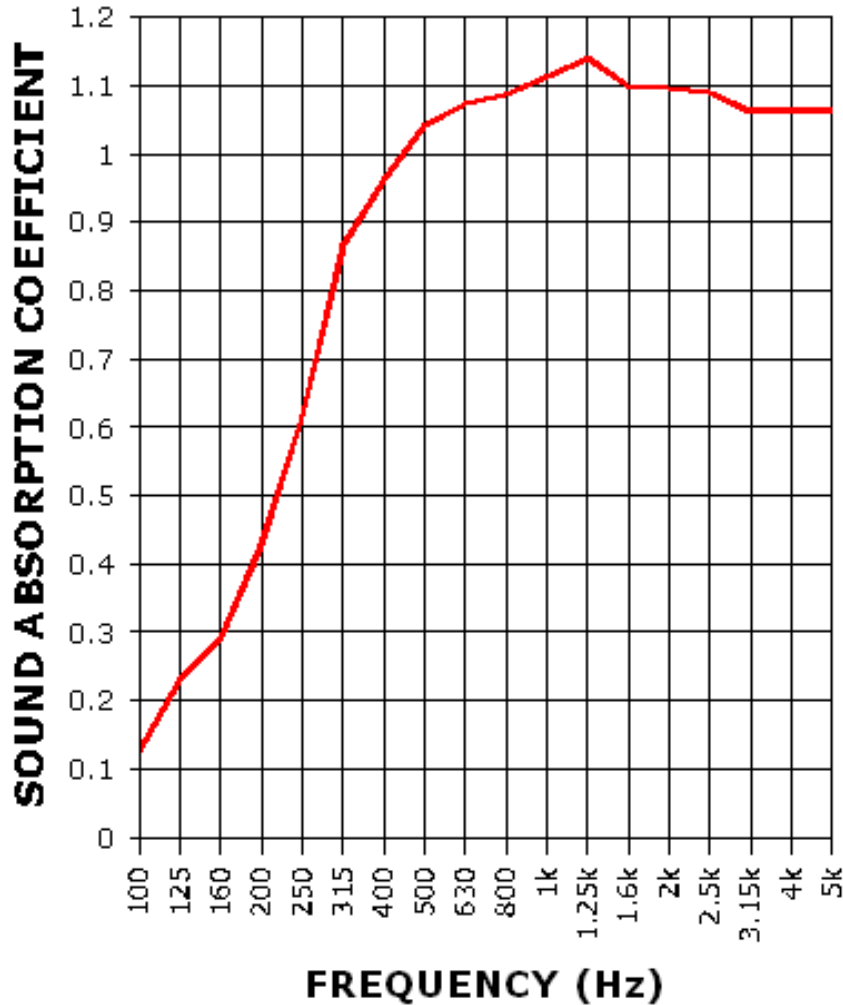
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SOUND ABSORPTION REPORT
1.5" eco-C-tex™



SAA = 0.97
NRC = 0.95



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APPENDIX A: Extended Frequency Range Data

Specimen: 1.5" eco-C-tex™ (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	6.45	0.09
40	10.01	0.14
50	2.07	0.03
63	1.52	0.02
80	9.38	0.13
100	9.05	0.13
125	16.47	0.23
160	20.76	0.29
200	30.66	0.43
250	44.43	0.62
315	62.44	0.87
400	69.30	0.96
500	75.00	1.04
630	77.31	1.07
800	78.26	1.09
1000	80.14	1.11
1250	82.15	1.14
1600	79.19	1.10
2000	78.94	1.10
2500	78.48	1.09
3150	76.57	1.06
4000	76.75	1.07
5000	76.52	1.06
6300	76.16	1.06
8000	71.87	1.00
10000	70.93	0.99
12500	66.06	0.92



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APPENDIX B: Instruments of Traceability

Specimen: 1.5" eco-C-tex™ (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

END



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