

Test Report

FOR: **Signature Craft, LLC**
St. Louis, MO.

Sound Absorption
RAL™-A15-025

CONDUCTED: 2015-02-19

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ON: 1" Truetone Acoustical Wrapped Panels (On 1/8" Spacers)

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" Truetone Acoustical Wrapped Panels (On 1/8" Spacers). A full internal inspection performed on the test specimen by Riverbank personnel verified the manufacturer's description and further disclosed a 31.26 mm (1.23 in.) acoustical panel with fiberglass core. The panel was wrapped with 3.26 mm (0.13 in.) thick fabric. Attached to the back of the panel were 3.18 mm (0.13 in.) thick spacers.

The overall dimensions of the specimen as measured were 2.45 m (96.50 in.) wide by 2.76 m (108.75 in.) long and 30.16 mm (1.19 in.) thick. The specimen consisted of 12 pieces measured as 612.90 mm (24.13 in.) wide by 917.70 mm (36.13 in.) long and 34.54 mm (1.36 in.) thick. The area used in the calculations was 6.77 m² (72.90 ft²). The weight of the entire specimen as measured was 23.59 kg (52.00 lbs.), an average of 3.47 kg/m² (0.71 lbs/ft²).

The specimen was tested in the laboratory's 292.0 m³ (10,311.0 ft³) test chamber. The room temperature at the time of the test was 19.8±0.0°C (67.6±0.0°F) and 63.4±1.0% relative humidity. The atmospheric pressure was 100.0 kPa.



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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 F-3 Mounting: The test specimen was laid directly against the test surface, but included a mounting clip that provided a 3.18 mm (0.13 in.) airspace behind the panel. The perimeter was sealed using metal framing.

TEST RESULTS

1/3 Octave Center Frequency (Hz)	Total Absorption (SI) (m ²)	Total Absorption (IP) (Sabins)	Absorption Coefficient (Sabins / ft ²)
100	0.97	10.45	0.14
** 125	1.10	11.80	0.16
160	1.14	12.27	0.17
200	1.76	18.98	0.26
** 250	2.47	26.54	0.36
315	3.90	42.03	0.58
400	4.78	51.47	0.71
** 500	6.21	66.90	0.92
630	6.79	73.08	1.00
800	7.23	77.79	1.07
** 1000	7.40	79.61	1.09
1250	7.50	80.76	1.11
1600	7.28	78.31	1.07
** 2000	7.26	78.11	1.07
2500	7.29	78.47	1.08
3150	6.93	74.60	1.02
** 4000	7.20	77.46	1.06
5000	7.59	81.70	1.12

SAA = 0.86
NRC = 0.85



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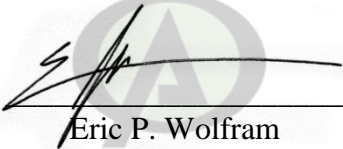
TEST RESULTS (Continued)

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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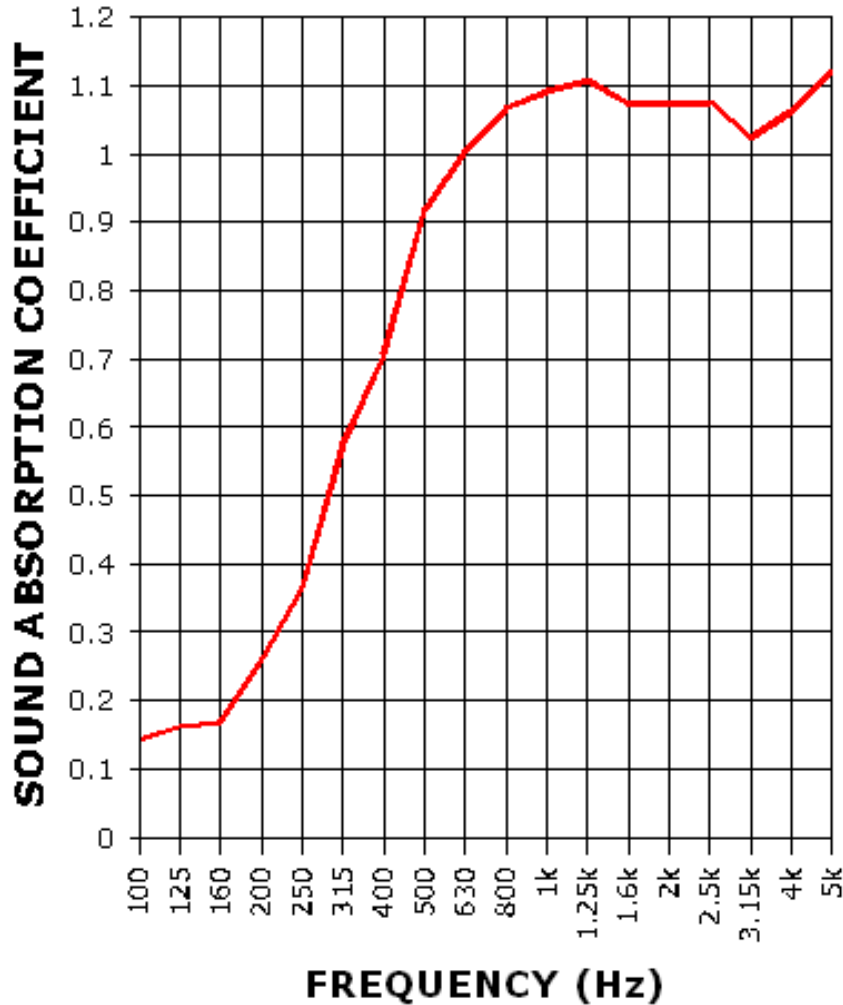
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SOUND ABSORPTION REPORT
1" Truetone Acoustical Wrapped Panels (On 1/8" Spacers)



SAA = 0.86
NRC = 0.85



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APPENDIX A: Extended Frequency Range Data

Specimen: 1" Truetone Acoustical Wrapped Panels (On 1/8" Spacers) (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	3.01	0.04
40	2.16	0.03
50	-3.02	-0.04
63	-6.31	-0.09
80	0.48	0.01
100	10.45	0.14
125	11.80	0.16
160	12.27	0.17
200	18.98	0.26
250	26.54	0.36
315	42.03	0.58
400	51.47	0.71
500	66.90	0.92
630	73.08	1.00
800	77.79	1.07
1000	79.61	1.09
1250	80.76	1.11
1600	78.31	1.07
2000	78.11	1.07
2500	78.47	1.08
3150	74.60	1.02
4000	77.46	1.06
5000	81.70	1.12
6300	81.88	1.12
8000	85.12	1.17
10000	90.98	1.25
12500	97.87	1.34



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APPENDIX B: Instruments of Traceability

Specimen: 1" Truetone Acoustical Wrapped Panels (On 1/8" Spacers) (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	2014-03-28	2015-03-28
Bruel & Kjaer Mic And Preamp	Type 4943-B-001	2311439	2014-03-14	2015-03-14
G.R.A.S Pistonphone	Type42AF-1	80001	2014-08-06	2015-08-06
Omega Digital Temp., Humid. And Pressure Recorder	OM-CP-PRHTemp2000	N11105	2014-09-30	2015-09-30

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