

Test Report

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

Sound Absorption
RAL™-A15-143

CONDUCTED: 2015-05-18

Page 1 of 7

ON: Acoustical Wrapped Panel (AWP) – 2-1/8 Inch Truetone with Polyester Face

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 Acoustical Wrapped Panel (AWP) – 2-1/8 Inch Truetone with Polyester Face. A full internal inspection performed on the test specimen by Riverbank personnel verified the manufacturer's description.

Acoustical Panel

Dimensions: Twelve at 603.25 mm (23.75 in.) wide x 908.05 mm (35.75 in.) long
Overall Thickness: 61.03 mm (2.40 in.)
Material: Fiberglass insulation with polyester fabric face
Fiberglass Thickness: 54.10 mm (2.13 in.)
Fiberglass Density: 96.11 kg/m³ (6.0 lb./ft³)*
Fabric Thickness: 3.05 mm (0.12 in.)

Note: The fabric face was adhered to the fiberglass. The specimen was placed over 3.18 mm (0.13 in.) spacers.

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

Physical Measures

Size: 2.72 m (107.25 in.) wide by 2.41 m (95.00 in.) long
Thickness: 64.21 mm (2.53 in.)
Weight: 46.61 kg (102.75 lbs.)
Mass per Unit Area: 7.08 kg/m² (1.45 lbs/ft²)
Area: 6.58 m² (70.80 ft²)

Test Environment

Volume: 292.0 m³ (10,311.0 ft³)
Temperature: 21.9±0.0°C (71.4±0.1°F)
Humidity: 60.0±0.2%
Barometric Pressure: 98.8 kPa.



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Test Report

Singnature Craft LLC
2015-05-18

RAL™-A15-143
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

Singnature Craft LLC
2015-05-18

RAL™-A15-143
Page 3 of 7

MOUNTING METHOD

Type F-3 Mounting: The test specimen was laid directly against the test surface, but included a spacer 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	3.77	40.62	0.57
** 125	4.05	43.58	0.62
160	4.65	50.07	0.71
200	5.60	60.27	0.85
** 250	6.28	67.61	0.96
315	6.58	70.78	1.00
400	7.42	79.82	1.13
** 500	7.15	76.97	1.09
630	6.82	73.39	1.04
800	6.62	71.27	1.01
** 1000	6.37	68.58	0.97
1250	6.09	65.56	0.93
1600	6.13	65.96	0.93
** 2000	6.02	64.80	0.92
2500	6.23	67.03	0.95
3150	6.27	67.54	0.95
** 4000	6.30	67.87	0.96
5000	6.31	67.88	0.96

SAA = 0.98
NRC = 1.00



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Test Report


Singnature Craft LLC
2015-05-18

RAL™-A15-143
Page 4 of 7

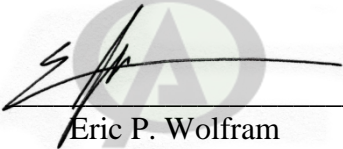
TEST RESULTS (Continued)

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
Experimentalist

Report by 
Chris Nottoli
Acoustician

Approved by 
Eric P. Wolfram
Laboratory Manager



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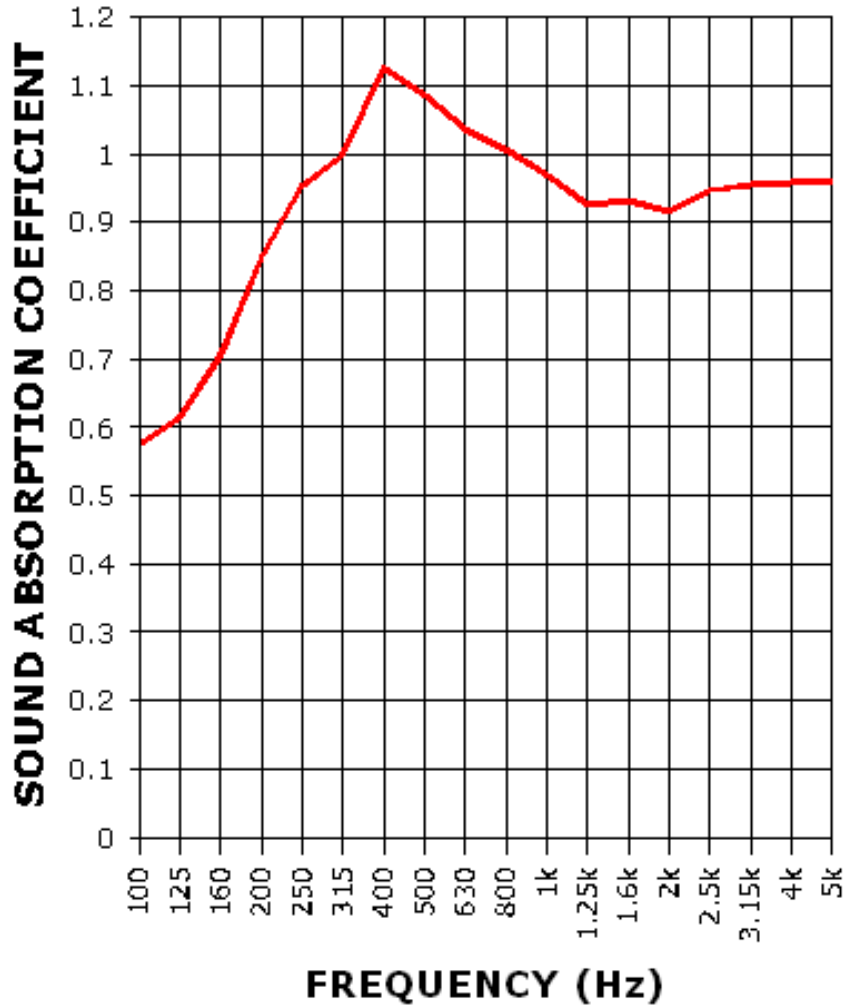
Test Report

Singnature Craft LLC
2015-05-18

RAL™-A15-143
Page 5 of 7

SOUND ABSORPTION REPORT

Acoustical Wrapped Panel (AWP) – 2-1/8 Inch Truetone with Polyester Face



SAA = 0.98
NRC = 1.00



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Test Report

Singnature Craft LLC
 2015-05-18

RAL™-A15-143
 Page 6 of 7

APPENDIX A: Extended Frequency Range Data

Specimen: Acoustical Wrapped Panel (AWP) – 2-1/8 Inch Truetone with Polyester Face (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	1.67	0.02
40	-0.67	-0.01
50	-0.53	-0.01
63	9.05	0.13
80	10.18	0.14
100	40.62	0.57
125	43.58	0.62
160	50.07	0.71
200	60.27	0.85
250	67.61	0.96
315	70.78	1.00
400	79.82	1.13
500	76.97	1.09
630	73.39	1.04
800	71.27	1.01
1000	68.58	0.97
1250	65.56	0.93
1600	65.96	0.93
2000	64.80	0.92
2500	67.03	0.95
3150	67.54	0.95
4000	67.87	0.96
5000	67.88	0.96
6300	69.67	0.98
8000	66.33	0.94
10000	69.61	0.98
12500	68.56	0.97



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RAL™-A15-143
Page 7 of 7

APPENDIX B: Instruments of Traceability

Specimen: Acoustical Wrapped Panel (AWP) – 2-1/8 Inch Truetone with Polyester Face (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	2311440	2014-09-03	2015-09-03
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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