

Test Report

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

Sound Absorption
RAL™-A15-202

CONDUCTED: 2015-08-07

Page 1 of 7

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

Acoustical Panel

Material: Rigid fiberglass with polyester fabric face
Dimensions: Twelve at 603.25 mm (23.75 in.) wide by 908.05 mm (35.75 in.) long
Overall Thickness: 36.15 mm (1.42 in.)
Fiberglass Thickness: 28.15 mm (1.11 in.)
Fiberglass Density: 96.11 kg/m³ (6.0 lb./ft³)*
Fabric Thickness: 4.0 mm (0.16 in.)

Note: The fabric face was adhered to the fiberglass.

Physical Measures

Size: 2.74 m (108.00 in.) wide by 2.43 m (95.50 in.) long
Thickness: 36.15 mm (1.42 in.)
Weight: 27.56 kg (60.75 lbs.)
Mass per Unit Area: 4.15 kg/m² (0.85 lbs./ft²)
Area: 6.65 m² (71.60 ft²)

Test Environment

Volume: 292.0 m³ (10,311.0 ft³)
Temperature: 22.8±0.1°C (73.0±0.1°F)
Humidity: 56.3±0.2%
Barometric Pressure: 98.5 kPa.

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



NVLAP LAB CODE 100227-0

RAL IS ACCREDITED BY THE US DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM TO ISO 17025:2005 LABORATORY QUALITY MANAGEMENT AND SPECIFIC ACOUSTICAL TEST STANDARDS. THIS TEST REPORT IN NO WAY CLAIMS OR IMPLIES PRODUCT CERTIFICATION, APPROVAL OR ENDORSEMENT BY NVLAP, NIST, OR RAL.

THIS REPORT SHALL NOT BE MODIFIED OR PARTIALLY REPRODUCED WITHOUT THE WRITTEN APPROVAL OF RAL.

THE RESULTS REPORTED APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR TESTING; RAL ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY OTHER SPECIMEN.

Test Report

Signature Craft, LLC
2015-08-07

RAL™-A15-202
Page 2 of 7



Figure 1 - Specimen mounted in the test chamber.



Figure 2 - Detail of the test specimen.



NVLAP LAB CODE 100227-0

RAL IS ACCREDITED BY THE US DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM TO ISO 17025:2005 LABORATORY QUALITY MANAGEMENT AND SPECIFIC ACOUSTICAL TEST STANDARDS. THIS TEST REPORT IN NO WAY CLAIMS OR IMPLIES PRODUCT CERTIFICATION, APPROVAL OR ENDORSEMENT BY NVLAP, NIST, OR RAL.

THIS REPORT SHALL NOT BE MODIFIED OR PARTIALLY REPRODUCED WITHOUT THE WRITTEN APPROVAL OF RAL.

THE RESULTS REPORTED APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR TESTING; RAL ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY OTHER SPECIMEN.

Test Report

Signature Craft, LLC
2015-08-07

RAL™-A15-202
Page 3 of 7

MOUNTING METHOD

Type A Mounting: The test specimen was laid directly against the test surface. 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	1.36	14.62	0.20
** 125	1.47	15.87	0.22
160	1.95	20.94	0.29
200	2.63	28.26	0.39
** 250	3.85	41.41	0.58
315	5.08	54.67	0.76
400	5.94	63.95	0.89
** 500	6.71	72.21	1.01
630	7.15	76.97	1.07
800	7.23	77.81	1.09
** 1000	7.32	78.81	1.10
1250	7.04	75.83	1.06
1600	6.79	73.12	1.02
** 2000	6.81	73.30	1.02
2500	6.77	72.92	1.02
3150	6.63	71.35	1.00
** 4000	6.62	71.27	1.00
5000	6.86	73.85	1.03

SAA = 0.92

NRC = 0.95



NVLAP LAB CODE 100227-0

RAL IS ACCREDITED BY THE US DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM TO ISO 17025:2005 LABORATORY QUALITY MANAGEMENT AND SPECIFIC ACOUSTICAL TEST STANDARDS. THIS TEST REPORT IN NO WAY CLAIMS OR IMPLIES PRODUCT CERTIFICATION, APPROVAL OR ENDORSEMENT BY NVLAP, NIST, OR RAL.

THIS REPORT SHALL NOT BE MODIFIED OR PARTIALLY REPRODUCED WITHOUT THE WRITTEN APPROVAL OF RAL.

THE RESULTS REPORTED APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR TESTING; RAL ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY OTHER SPECIMEN.

1512 S BATAVIA AVENUE
GENEVA, IL 60134
630-232-0104

An  ALION Technical Center

RIVERBANK.ALIONSCIENCE.COM

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Test Report


Signature Craft, LLC
2015-08-07

RAL™-A15-202
Page 4 of 7

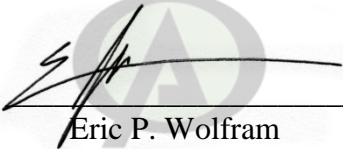
TEST RESULTS (Continued)

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



NVLAP LAB CODE 100227-0

RAL IS ACCREDITED BY THE US DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM TO ISO 17025:2005 LABORATORY QUALITY MANAGEMENT AND SPECIFIC ACOUSTICAL TEST STANDARDS. THIS TEST REPORT IN NO WAY CLAIMS OR IMPLIES PRODUCT CERTIFICATION, APPROVAL OR ENDORSEMENT BY NVLAP, NIST, OR RAL.

THIS REPORT SHALL NOT BE MODIFIED OR PARTIALLY REPRODUCED WITHOUT THE WRITTEN APPROVAL OF RAL.

THE RESULTS REPORTED APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR TESTING; RAL ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY OTHER SPECIMEN.

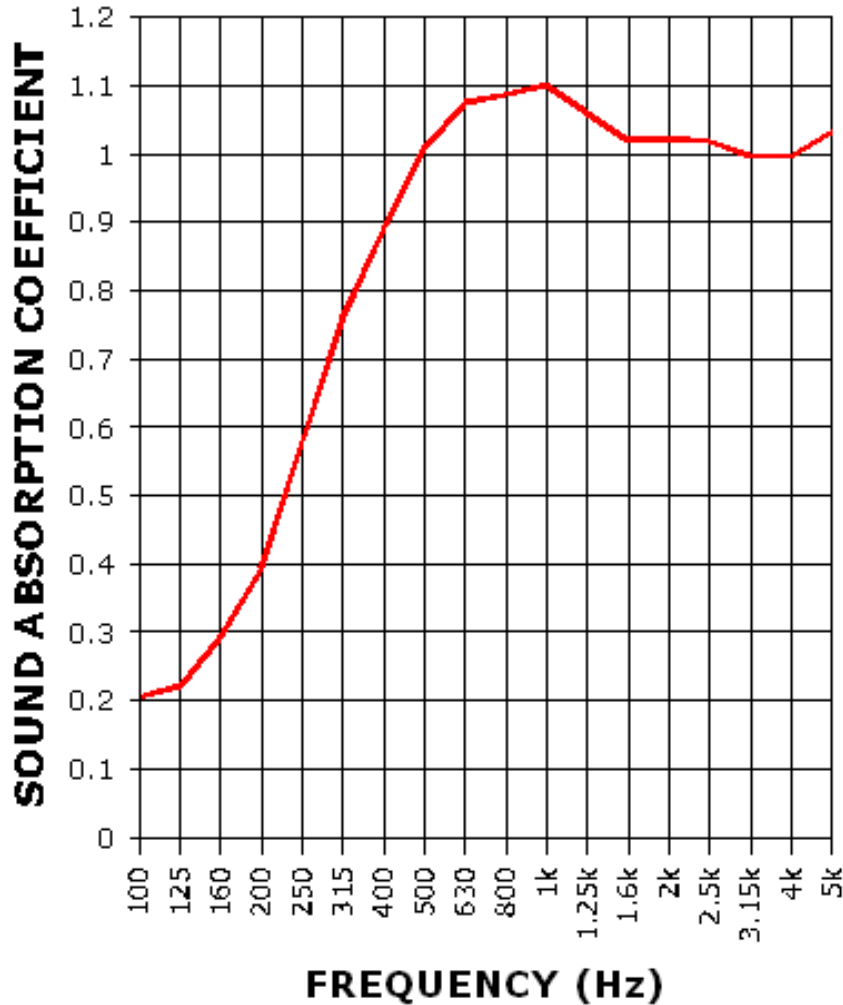
Test Report

Signature Craft, LLC
2015-08-07

RAL™-A15-202
Page 5 of 7

SOUND ABSORPTION REPORT

Acoustical Wrapped Panel (AWP) - 1 1/8" Truetone with Polyester Face



SAA = 0.92
NRC = 0.95



NVLAP LAB CODE 100227-0

RAL IS ACCREDITED BY THE US DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM TO ISO 17025:2005 LABORATORY QUALITY MANAGEMENT AND SPECIFIC ACOUSTICAL TEST STANDARDS. THIS TEST REPORT IN NO WAY CLAIMS OR IMPLIES PRODUCT CERTIFICATION, APPROVAL OR ENDORSEMENT BY NVLAP, NIST, OR RAL.

THIS REPORT SHALL NOT BE MODIFIED OR PARTIALLY REPRODUCED WITHOUT THE WRITTEN APPROVAL OF RAL.

THE RESULTS REPORTED APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR TESTING; RAL ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY OTHER SPECIMEN.

Test Report

Signature Craft, LLC
 2015-08-07

RAL™-A15-202
 Page 6 of 7

APPENDIX A: Extended Frequency Range Data

Specimen: Acoustical Wrapped Panel (AWP) - 1 1/8" 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	0.23	0.00
40	8.63	0.12
50	11.06	0.15
63	-21.77	-0.30
80	-5.29	-0.07
<hr/>		
100	14.62	0.20
125	15.87	0.22
160	20.94	0.29
200	28.26	0.39
250	41.41	0.58
315	54.67	0.76
400	63.95	0.89
500	72.21	1.01
630	76.97	1.07
800	77.81	1.09
1000	78.81	1.10
1250	75.83	1.06
1600	73.12	1.02
2000	73.30	1.02
2500	72.92	1.02
3150	71.35	1.00
4000	71.27	1.00
5000	73.85	1.03
<hr/>		
6300	76.10	1.06
8000	79.60	1.11
10000	77.03	1.08
12500	73.16	1.02



NVLAP LAB CODE 100227-0

RAL IS ACCREDITED BY THE US DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM TO ISO 17025:2005 LABORATORY QUALITY MANAGEMENT AND SPECIFIC ACOUSTICAL TEST STANDARDS. THIS TEST REPORT IN NO WAY CLAIMS OR IMPLIES PRODUCT CERTIFICATION, APPROVAL OR ENDORSEMENT BY NVLAP, NIST, OR RAL.

THIS REPORT SHALL NOT BE MODIFIED OR PARTIALLY REPRODUCED WITHOUT THE WRITTEN APPROVAL OF RAL.

THE RESULTS REPORTED APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR TESTING; RAL ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY OTHER SPECIMEN.

1512 S BATAVIA AVENUE
GENEVA, IL 60134
630-232-0104

An  ALION Technical Center

RIVERBANK.ALIONSCIENCE.COM

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Test Report

Signature Craft, LLC
2015-08-07

RAL™-A15-202
Page 7 of 7

APPENDIX B: Instruments of Traceability

Specimen: Acoustical Wrapped Panel (AWP) - 1 1/8" 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
Bruel & Kjaer Sound Level Calibrator	Type 4230	861609	2015-03-17	2016-03-17
Omega Digital Temp., Humid. And Pressure Recorder	OM-CP-PRHTemp2000	N11105	2014-09-30	2015-09-30

END



NVLAP LAB CODE 100227-0

RAL IS ACCREDITED BY THE US DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM TO ISO 17025:2005 LABORATORY QUALITY MANAGEMENT AND SPECIFIC ACOUSTICAL TEST STANDARDS. THIS TEST REPORT IN NO WAY CLAIMS OR IMPLIES PRODUCT CERTIFICATION, APPROVAL OR ENDORSEMENT BY NVLAP, NIST, OR RAL.

THIS REPORT SHALL NOT BE MODIFIED OR PARTIALLY REPRODUCED WITHOUT THE WRITTEN APPROVAL OF RAL.

THE RESULTS REPORTED APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR TESTING; RAL ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY OTHER SPECIMEN.