627 RIVERBANK DRIVE
GENEVA, IL 60134

630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

SPONSOR: **MSI Surfaces**
Orange, CA

Sound Absorption
RAL™-A24-376

CONDUCTED: 2024-09-20

ON: Acoustic Wood Slat Panel

TEST METHODOLOGY

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 17025:2017 Laboratory (NVLAP Lab Code: 100227-0) and for this test procedure. The test reported in this document conformed explicitly with ASTM C423-23: "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method." The specimen mounting was performed according to ASTM E795-23: "Standard Practices for Mounting Test Specimens During Sound Absorption Tests." A description of the measurement procedure and room specifications are available upon request. The results presented in this report apply to the sample as received from the test sponsor.

INFORMATION PROVIDED BY SPONSOR

The test specimen was designated by the sponsor as Acoustic Wood Slat Panel. The following nominal product information was provided by the sponsor prior to testing. The accuracy of such sponsor-provided information can affect the validity of the test results.

Product Under Test

Product Name:	Acoustic Wood Slat Panel
Manufacturer:	MSI Surfaces

SPECIMEN MEASUREMENTS & TEST CONDITIONS

Through a full external visual inspection performed on the test specimen, Riverbank personnel verified the following information:

Test Specimen

Material:	Panels made of base layer of felt with wood slats over felt
Dimensions:	12 panels @ 243 mm (9.5625 in.)
Thickness:	Base layer @ 9.08 mm (0.3575 in.)
	Wood slats @ 12.19 mm (0.48 in.)
	Total @ 21.27 mm (0.8375 in.)
Wood Slat Width:	27.01 mm (1.0635 in.)
Wood Slat Spacing:	13.13 mm (0.517 in.) apart
Overall Weight:	51.71 kg (114 lbs)

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SPECIMEN MEASUREMENTS & TEST CONDITIONS (continued)

Overall Specimen Properties

Size:	2.88 m (113.25 in) wide by 2.4 m (94.5 in) long
Thickness:	0.02 m (0.8375 in)
Weight:	51.71 kg (114.0 lbs)
Mass per Unit Area:	7.49 kg/m² (1.53 lbs/ft²)
Calculation Area:	6.905 m² (74.32 ft²)

Test Environment

Room Volume:	291.98 m³
Temperature:	22.1 °C ± 0.0 °C (Requirement: ≥ 10 °C and ≤ 5 °C change)
Relative Humidity:	58.45 % ± 0.9 % (Requirement: ≥ 40 % and ≤ 5 % change)
Barometric Pressure:	98.1 kPa (Requirement not defined)

MOUNTING METHOD

Type A Mounting: The test specimen was laid directly against the test surface. Perimeter edges were sealed with tape.

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Figure 1 – Specimen mounted in test chamber



Figure 2 – Individual specimen panel prior to installation

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Figure 3 – Detail of specimen materials

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TEST RESULTS

Specimen total absorption and absorption coefficient are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages.

1/3 Octave Center Frequency (Hz)	Total Absorption (m^2)	Total Absorption (Sabins)	Absorption Coefficient
100	0.94	10.10	0.14
** 125	0.24	2.58	0.03
160	0.21	2.29	0.03
200	0.52	5.56	0.07
** 250	0.55	5.89	0.08
315	0.74	7.94	0.11
400	1.10	11.84	0.16
** 500	1.78	19.12	0.26
630	2.68	28.80	0.39
800	3.55	38.25	0.51
** 1000	4.87	52.40	0.71
1250	5.79	62.27	0.84
1600	7.18	77.25	1.04
** 2000	7.77	83.59	1.12
2500	7.42	79.91	1.08
3150	6.26	67.38	0.91
** 4000	5.39	58.04	0.78
5000	4.67	50.22	0.68

SAA = 0.53
NRC = 0.55

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TEST RESULTS (continued)

The sound absorption average (SAA) is defined in ASTM C423-23 Section 3.1.1 as the arithmetic average of the sound absorption coefficients of a material for the twelve one-third octave bands from 200 Hz through 2500 Hz, inclusive, rounded to the nearest integer multiple of 0.01.

The noise reduction coefficient (NRC) is defined from previous versions of ASTM C423 as the arithmetic average of the sound absorption coefficients at 250 Hz, 500 Hz, 1000 Hz, and 2000 Hz, rounded to the nearest integer multiple of 0.05.

Tested by _____
Marc Sciaky
Senior Experimentalist

Report by _____
Keith Kimberling
Test Engineer

Approved by _____
Eric P. Wolfram
Laboratory Manager

Digitally signed by
Eric P Wolfram
Date: 2024.10.04
10:13:12 -05'00'

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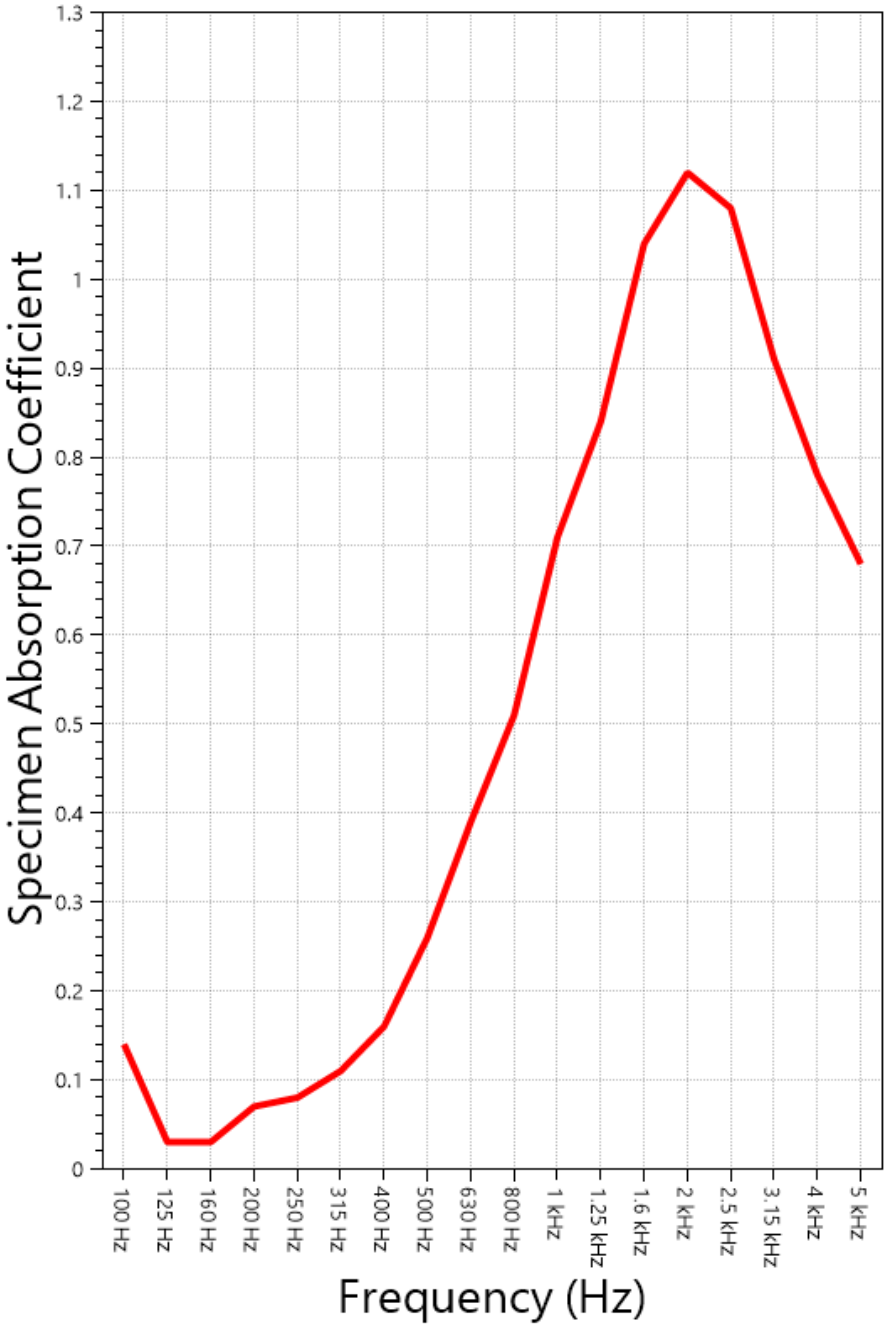
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2024-09-20

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SOUND ABSORPTION REPORT

Acoustic Wood Slat Panel



SAA = 0.53
NRC = 0.55

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APPENDIX A: Extended Frequency Range Data

Specimen: Acoustic Wood Slat Panel (See Full Report)

The following non-accredited data were obtained in accordance with ASTM C423-23, 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**
31.5	-4.90	-0.07
40	0.66	0.01
50	4.78	0.06
63	-14.38	-0.19
80	4.53	0.06
100	10.10	0.14
125	2.58	0.03
160	2.29	0.03
200	5.56	0.07
250	5.89	0.08
315	7.94	0.11
400	11.84	0.16
500	19.12	0.26
630	28.80	0.39
800	38.25	0.51
1000	52.40	0.71
1250	62.27	0.84
1600	77.25	1.04
2000	83.59	1.12
2500	79.91	1.08
3150	67.38	0.91
4000	58.04	0.78
5000	50.22	0.68
6300	48.79	0.66
8000	46.03	0.62
10000	42.59	0.57
12500	34.44	0.46

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APPENDIX B: Instruments of Traceability

Specimen: Acoustic Wood Slat Panel (See Full Report)

Description	Model	Serial Number	Date of Certification	Calibration Due
System 1	Type 3160-A-042	3160-106974	2024-08-15	2025-08-15
Bruel & Kjaer Mic And Preamp G	Type 4943-B-001	2525858	2024-05-07	2025-05-07
Bruel & Kjaer Pistonphone	Type 4228	2781248	2024-07-19	2025-07-19
EXTECH Hygro 959	SD700	A099959	2024-03-29	2025-03-29

APPENDIX C: Revisions to Original Test Report

Specimen: Acoustic Wood Slat Panel (See Full Report)

Date	Revision
2024-10-03	Original report issued

END

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