

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

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

SPONSOR: **Primacoustic, a Division of Radial Engineering Ltd.**
Port Coquitlam, BC, Canada

Sound Absorption
RAL™-A23-088

CONDUCTED: 2023-04-11

Page 1 of 9

ON: ECOScapes Slat Wall (MDF with wood veneers face and PET backing)

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 C423-22: "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 ECOScapes Slat Wall (MDF with wood veneers face and PET backing). 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: ECOScapes Slat Wall
Manufacturer: Primacoustic, a Division of Radial Engineering Ltd.

SPECIMEN MEASUREMENTS & TEST CONDITIONS

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

Test Specimen

Materials: Panels comprised of wood slats over PET felt
Dimensions: 1 panel @ 305 mm (12 in.) by 2438 mm (96 in.)
3 panels @ 806 mm (31.75 in.) by 2438 mm (96 in.)
1 panel @ 38 mm (1.5 in.) by 2438 mm (96 in.)
Thickness: PET felt @ 9.21 mm (0.3625 in.)
Wood slats @ 12.76 mm (0.5025 in.)
Total @ 21.01 mm (0.827 in.)
Overall Weight: 61.23 kg (135 lbs)

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Primacoustic, a Division of Radial Engineering Ltd.
2023-04-11

RAL™-A23-088
Page 2 of 9

Overall Specimen Properties

Size: 2.74 m (108.0 in) wide by 2.44 m (96.0 in) long
Thickness: 0.02 m (0.827 in)
Weight: 61.23 kg (135.0 lbs)
Mass per Unit Area: 9.15 kg/m² (1.88 lbs/ft²)
Calculation Area: 6.689 m² (72. ft²)

Test Environment

Room Volume: 291.98 m³
Temperature: 20.3 °C ± 0.1 °C (Requirement: ≥ 10 °C and ≤ 5 °C change)
Relative Humidity: 60.15 % ± 0.9 % (Requirement: ≥ 40 % and ≤ 5 % change)
Barometric Pressure: 99.6 kPa (Requirement not defined)

MOUNTING METHOD

Type D-20 Mounting: The test specimen was mounted on 19 mm (0.75 in.) thick wood furring strips spaced 305 mm (12 in.) on centers and laid directly against the test surface. The furring strips produced a 19 mm (0.75 in.) thick air space behind the test specimen. Perimeter edges were sealed with metal framing and tape.

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Primacoustic, a Division of Radial Engineering Ltd.
2023-04-11

RAL™-A23-088

Page 3 of 9



Figure 1 – Specimen mounted in test chamber



Figure 2 – Specimen partially installed over wood furring strips

1512 S BATAVIA AVENUE
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Test Report

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Primacoustic, a Division of Radial Engineering Ltd.
2023-04-11

RAL™-A23-088
Page 4 of 9



Figure 3 – Detail of specimen materials

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

Test Report

www.riverbankacoustics.com

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Primacoustic, a Division of Radial Engineering Ltd.
2023-04-11

RAL™-A23-088
Page 5 of 9

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	0.62	6.72	0.09
** 125	0.69	7.48	0.10
160	0.64	6.89	0.10
200	0.95	10.27	0.14
** 250	1.35	14.53	0.20
315	2.30	24.74	0.34
400	2.79	30.03	0.42
** 500	4.04	43.50	0.60
630	5.06	54.48	0.76
800	6.22	66.91	0.93
** 1000	7.21	77.62	1.08
1250	7.48	80.54	1.12
1600	7.00	75.34	1.05
** 2000	6.43	69.25	0.96
2500	5.92	63.73	0.89
3150	5.19	55.82	0.78
** 4000	4.94	53.17	0.74
5000	4.90	52.78	0.73

SAA = 0.71
NRC = 0.70

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Test Report

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Primacoustic, a Division of Radial Engineering Ltd.
2023-04-11

RAL™-A23-088
Page 6 of 9

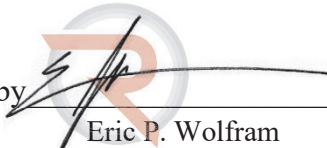
TEST RESULTS (continued)

The sound absorption average (SAA) is defined in ASTM C423-17 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: 2023.04.21
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1512 S BATAVIA AVENUE
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Test Report

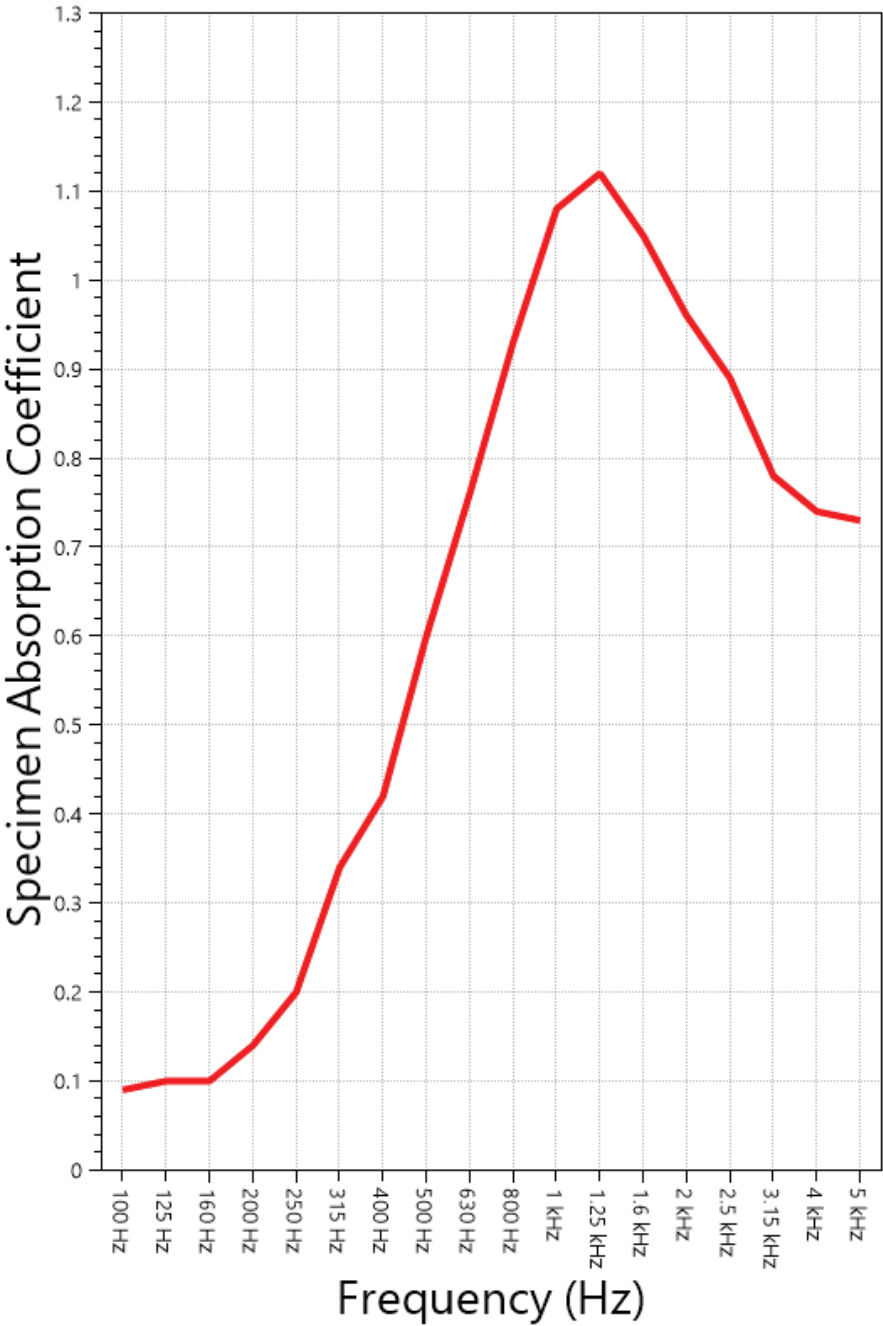
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Primacoustic, a Division of Radial Engineering Ltd.
2023-04-11

RAL™-A23-088
Page 7 of 9

SOUND ABSORPTION REPORT
ECOScapes Slat Wall (MDF with wood veneers face and PET backing)



SAA = 0.71
NRC = 0.70

1512 S BATAVIA AVENUE
GENEVA, IL 60134
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Test Report

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Primacoustic, a Division of Radial Engineering Ltd.
2023-04-11

RAL™-A23-088
Page 8 of 9

APPENDIX A: Extended Frequency Range Data

Specimen: ECOScapes Slat Wall (MDF with wood veneers face and PET backing) (See Full Report)

The following non-accredited data were obtained in accordance with ASTM C423-22, 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	-5.70	-0.08
40	0.19	0.00
50	-2.22	-0.03
63	-1.43	-0.02
80	-1.11	-0.02
100	6.72	0.09
125	7.48	0.10
160	6.89	0.10
200	10.27	0.14
250	14.53	0.20
315	24.74	0.34
400	30.03	0.42
500	43.50	0.60
630	54.48	0.76
800	66.91	0.93
1000	77.62	1.08
1250	80.54	1.12
1600	75.34	1.05
2000	69.25	0.96
2500	63.73	0.89
3150	55.82	0.78
4000	53.17	0.74
5000	52.78	0.73
6300	42.11	0.58
8000	26.83	0.37
10000	17.56	0.24
12500	1.28	0.02

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Primacoustic, a Division of Radial Engineering Ltd.
2023-04-11

RAL™-A23-088
Page 9 of 9

APPENDIX B: Instruments of Traceability

Specimen: ECOScapes Slat Wall (MDF with wood veneers face and PET backing) (See Full Report)

<u>Description</u>	<u>Model</u>	<u>Serial Number</u>	<u>Date of Certification</u>	<u>Calibration Due</u>
System 1	Type 3160-A-042	3160-106968	2022-07-12	2023-07-12
Bruel & Kjaer Mic And Preamp D	Type 4943-B-001	2311440	2022-09-28	2023-09-28
Bruel & Kjaer Pistonphone	Type 4228	2781248	2022-07-22	2023-07-22
EXTECH Hygro 639	SD700	A.103639	2022-12-07	2023-12-07

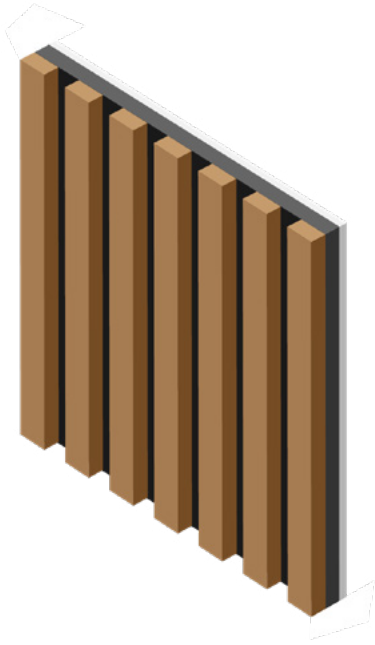
APPENDIX C: Revisions to Original Test Report

Specimen: ECOScapes Slat Wall (MDF with wood veneers face and PET backing) (See Full Report)

<u>Date</u>	<u>Revision</u>
2023-04-18	Original report issued

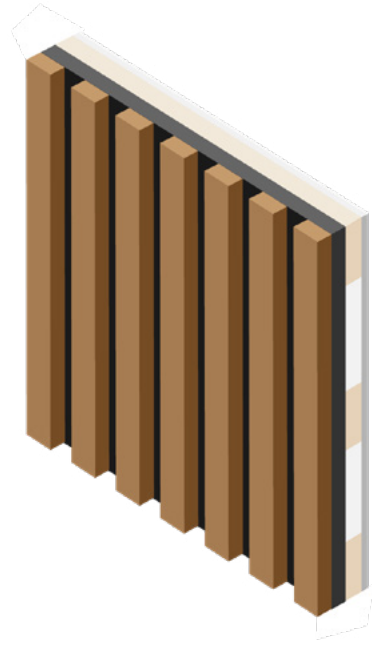
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Mounting Types Explained



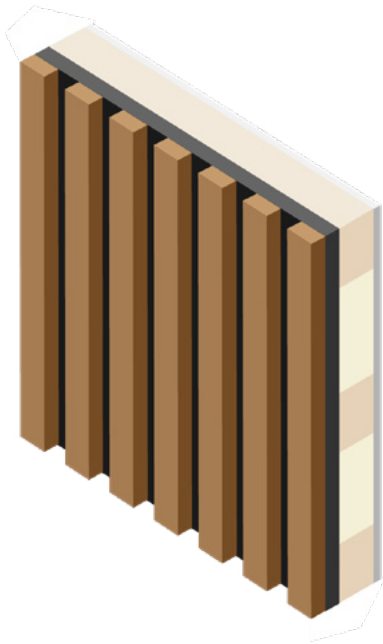
A Mount

Panel is mounted directly to wall.



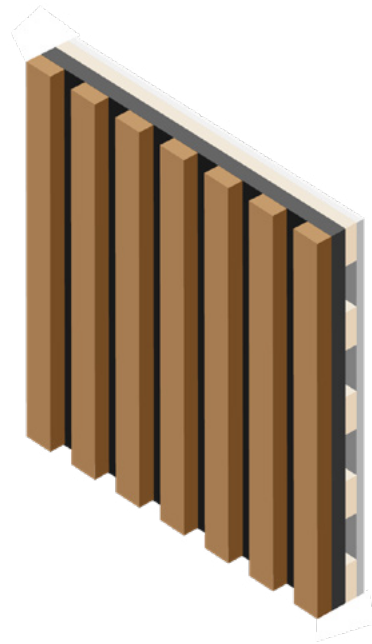
C25 Mount

Panel is mounted on 1" thick furring strips, spaced 24" apart. Cavities are filled with strips of 1" thick Telafill.



C50 Mount

Panel is mounted on 2" thick furring strips, spaced 24" apart. Cavities are filled with strips of 2" thick Broadway Glass Wool.



D20 Mount

Panel is mounted on $\frac{3}{4}$ " thick furring strips, spaced 12" apart. Cavities are left empty.