627 RIVERBANK DRIVE
GENEVA, IL 60134

630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

SPONSOR: **ARCH Design**
Olivette, MO

Sound Absorption
RAL™-A25-148

CONDUCTED: 2025-03-19

ON: 2" ARCH Design Acoustic Art

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 2" ARCH Design Acoustic Art. 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:	ARCH Design Acoustic Art
Face Finish/Fabric:	Acoustically transparent fabric
Frame/Edge Description:	Hard wood internal frame edge
Core Material:	Class A fiberglass
Core Nominal Thickness:	2”
Backing:	Paper seal backing
Air Space Depth:	3/8”
Manufacturer:	ARCH Design
Manufacturer Location:	St. Louis, MO

SPECIMEN MEASUREMENTS & TEST CONDITIONS

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

Test Specimen

Material:	Fabric-wrapped fiberglass panels, two with printed face, two without print.
Dimensions:	4 panels @ 1219 mm (48 in.) by 1372 mm (54 in.)
Thickness:	59.94 mm (2.36 in.)
Overall Weight:	34.93 kg (77 lbs)

Overall Specimen Properties

Size:	2.75 m (108.25 in) wide by 2.44 m (96.25 in) long
Thickness:	0.06 m (2.36 in)
Weight:	34.93 kg (77.0 lbs)
Mass per Unit Area:	5.2 kg/m² (1.06 lbs/ft²)
Calculation Area:	6.722 m² (72.35 ft²)

Test Environment

Room Volume:	291.98 m³
Temperature:	21.4 °C ± 0.0 °C (Requirement: ≥ 10 °C and ≤ 5 °C change)
Relative Humidity:	62.15 % ± 1.1 % (Requirement: ≥ 40 % and ≤ 5 % change)
Barometric Pressure:	97.1 kPa (Requirement not defined)

MOUNTING METHOD

Type A Mounting: The test specimen was laid directly against the test surface. Per sponsor request, the perimeter edges were left exposed, as would be typical of a field installation of the product under test.

Note: Photos withheld from report per sponsor's request.

627 RIVERBANK DRIVE
GENEVA, IL 60134

630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

ARCH Design
2025-03-19

RAL™-A25-148

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	1.57	16.85	0.23
** 125	2.76	29.75	0.41
160	2.99	32.15	0.44
200	4.29	46.13	0.64
** 250	5.45	58.69	0.81
315	7.02	75.56	1.04
400	7.72	83.12	1.15
** 500	7.92	85.24	1.18
630	7.98	85.94	1.19
800	7.61	81.92	1.13
** 1000	7.42	79.89	1.10
1250	7.50	80.69	1.12
1600	7.39	79.56	1.10
** 2000	7.42	79.85	1.10
2500	7.20	77.48	1.07
3150	7.28	78.33	1.08
** 4000	7.37	79.29	1.10
5000	7.53	81.03	1.12

SAA = 1.05
NRC = 1.05

627 RIVERBANK DRIVE
GENEVA, IL 60134

630-232-0104

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

ARCH Design
2025-03-19

RAL™-A25-148

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: 2025.04.17
12:16:16 -05'00'

627 RIVERBANK DRIVE
GENEVA, IL 60134

630-232-0104

Test Report

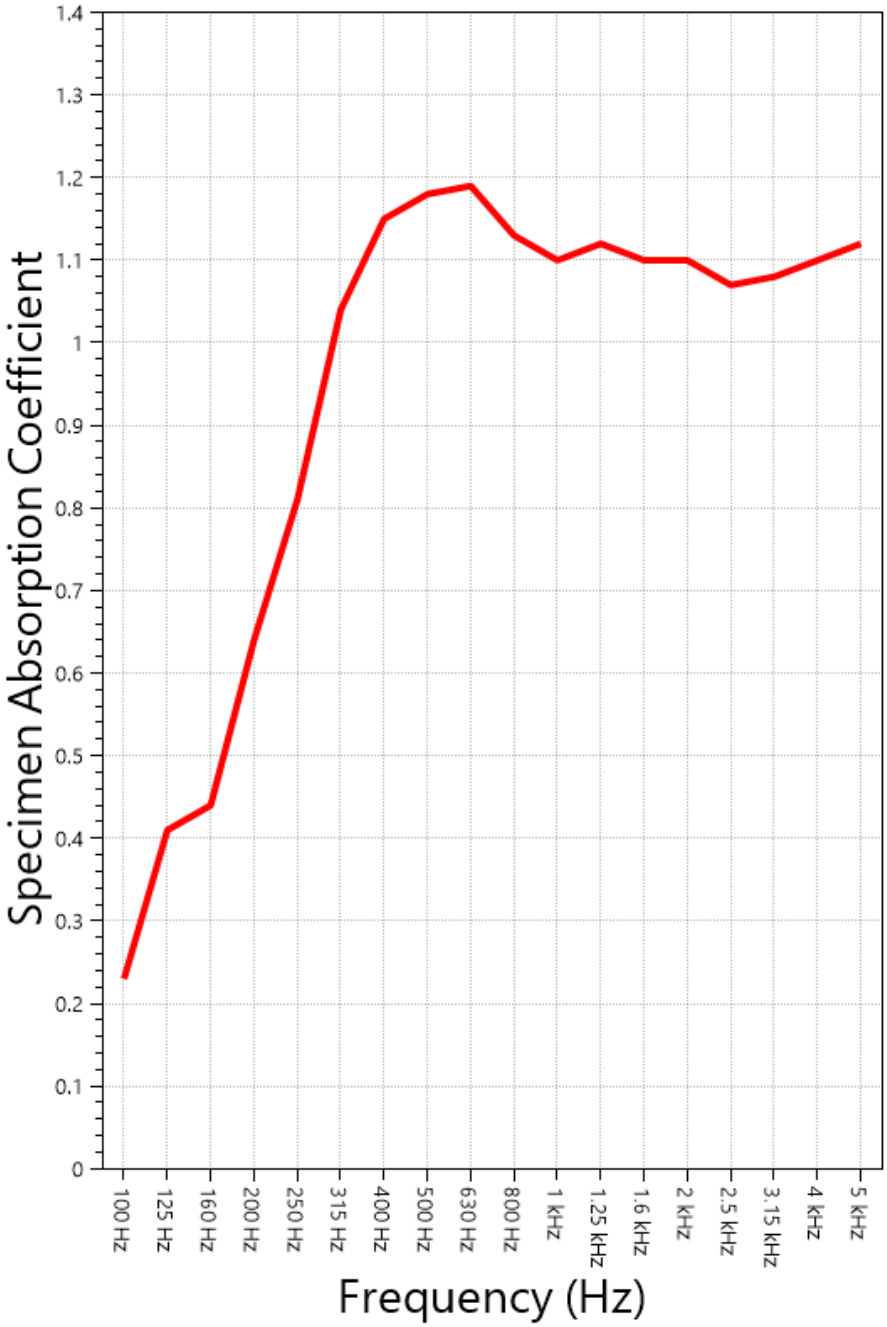
www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

ARCH Design
2025-03-19

SOUND ABSORPTION REPORT

2" ARCH Design Acoustic Art



SAA = 1.05
NRC = 1.05

NVLAP TESTING
NVLAP LAB CODE 100227-0

627 RIVERBANK DRIVE
GENEVA, IL 60134

630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

ARCH Design
2025-03-19

APPENDIX A: Extended Frequency Range Data

Specimen: 2" ARCH Design Acoustic Art (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	8.26	0.11
40	3.91	0.05
50	-11.69	-0.16
63	-0.55	-0.01
80	2.86	0.04
100	16.85	0.23
125	29.75	0.41
160	32.15	0.44
200	46.13	0.64
250	58.69	0.81
315	75.56	1.04
400	83.12	1.15
500	85.24	1.18
630	85.94	1.19
800	81.92	1.13
1000	79.89	1.10
1250	80.69	1.12
1600	79.56	1.10
2000	79.85	1.10
2500	77.48	1.07
3150	78.33	1.08
4000	79.29	1.10
5000	81.03	1.12
6300	85.67	1.18
8000	90.62	1.25
10000	92.39	1.28
12500	101.19	1.40

APPENDIX B: Instruments of Traceability

Specimen: 2" ARCH Design Acoustic Art (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: 2" ARCH Design Acoustic Art (See Full Report)

Date	Revision
2025-03-27	Original report issued
2025-04-17	Page 3-4: Removed photos per sponsor's request -EPW

END