

627 RIVERBANK DRIVE
GENEVA, IL 60134
630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

SPONSOR: **Burch**
Grand Rapids, MI

Sound Absorption
RAL™-A25-465

CONDUCTED: 2025-09-30

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ON: Centennial 100% Polyester with 2" 6 PCF Fiberglass

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 Centennial 100% Polyester with 2" 6 PCF Fiberglass. 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: Centennial 100% Polyester
Manufacturer: Burch

SPECIMEN MEASUREMENTS & TEST CONDITIONS

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

Test Specimen

Material: Rigid fiberglass board
Dimensions: 8 pieces @ 610 mm (24 in.) by 1219 mm (48 in.)
2 pieces @ 305 mm (12 in.) by 1219 mm (48 in.)
Thickness: 51 mm (2 in.)
Overall Weight: 32.89 kg (72.5 lbs)
Mass per Unit Volume: 96.8 kg/m³ (6.04 lbs/ft³)

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SPECIMEN MEASUREMENTS & TEST CONDITIONS (continued)

Test Specimen

Material: Burch Centennial
Dimensions: 1 piece @ 1727 mm (68 in.) by 2743 mm (108 in.)
1 piece @ 711 mm (28 in.) by 2032 mm (80 in.)
1 piece @ 711 mm (28 in.) by 711 mm (28 in.)
Thickness: 0.6 mm (0.024 in.)
Overall Weight: 1.13 kg (2.5 lbs)
Mass per Unit Area: 0.17 kg/m² (0.035 lbs/ft²)

Overall Specimen Properties

Size: 2.74 m (108.0 in) wide by 2.44 m (96.0 in) long
Thickness: 0.05 m (2.024 in)
Weight: 34.02 kg (75.0 lbs)
Mass per Unit Area: 5.09 kg/m² (1.04 lbs/ft²)
Calculation Area: 6.689 m² (72. ft²)

Test Environment

Room Volume: 291.98 m³
Temperature: 21.9 °C ± 0.0 °C (Requirement: ≥ 10 °C and ≤ 5 °C change)
Relative Humidity: 58.5 % ± 0.1 % (Requirement: ≥ 40 % and ≤ 5 % change)
Barometric Pressure: 99.3 kPa (Requirement not defined)

MOUNTING METHOD

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

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Figure 1 – Specimen mounted in test chamber



Figure 2 – Individual roll of specimen fabric and base layer fiberglass

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Figure 3 – Specimen fabric partially installed over base layer fiberglass



Figure 4 – 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	2.14	23.01	0.32
** 125	2.29	24.64	0.34
160	3.30	35.54	0.49
200	4.68	50.33	0.70
** 250	5.85	62.92	0.87
315	7.33	78.90	1.10
400	7.65	82.32	1.14
** 500	8.13	87.52	1.22
630	7.84	84.36	1.17
800	7.57	81.46	1.13
** 1000	7.43	79.96	1.11
1250	7.39	79.53	1.10
1600	7.35	79.11	1.10
** 2000	7.32	78.77	1.09
2500	7.48	80.57	1.12
3150	7.45	80.17	1.11
** 4000	7.38	79.44	1.10
5000	7.46	80.27	1.11

SAA = 1.07
NRC = 1.05

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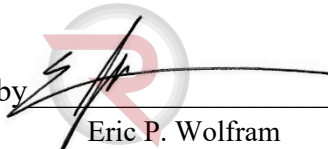
TEST RESULTS (continued)

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

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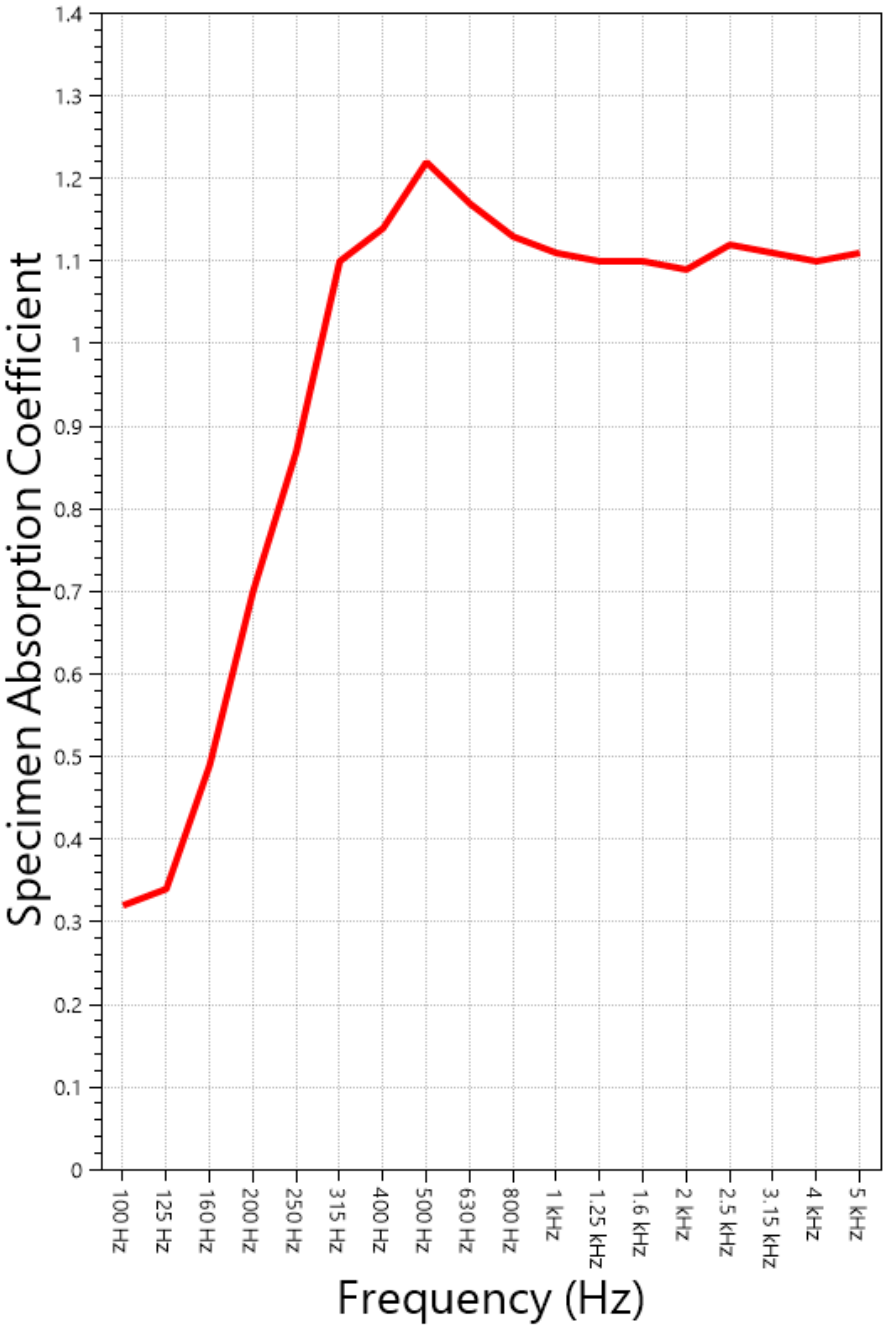
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SOUND ABSORPTION REPORT

Centennial 100% Polyester with 2" 6 PCF Fiberglass



SAA = 1.07
NRC = 1.05

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APPENDIX A: Extended Frequency Range Data

Specimen: Centennial 100% Polyester with 2" 6 PCF Fiberglass (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	2.06	0.03
40	1.10	0.02
50	7.45	0.10
63	11.16	0.16
80	3.34	0.05
100	23.01	0.32
125	24.64	0.34
160	35.54	0.49
200	50.33	0.70
250	62.92	0.87
315	78.90	1.10
400	82.32	1.14
500	87.52	1.22
630	84.36	1.17
800	81.46	1.13
1000	79.96	1.11
1250	79.53	1.10
1600	79.11	1.10
2000	78.77	1.09
2500	80.57	1.12
3150	80.17	1.11
4000	79.44	1.10
5000	80.27	1.11
6300	80.39	1.12
8000	82.50	1.15
10000	83.85	1.16
12500	90.14	1.25

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APPENDIX B: Instruments of Traceability

Specimen: Centennial 100% Polyester with 2" 6 PCF Fiberglass (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	2025-07-21	2026-07-21
Bruel & Kjaer Mic And Preamp E	Type 4943-B-001	2311441	2025-06-09	2026-06-09
Bruel & Kjaer Pistonphone	Type 4228	2781248	2025-07-21	2026-07-21
EXTECH Hygro 662	SD700	A083662	2024-12-30	2025-12-30

APPENDIX C: Revisions to Original Test Report

Specimen: Centennial 100% Polyester with 2" 6 PCF Fiberglass (See Full Report)

<u>Date</u>	<u>Revision</u>
2025-10-09	Original report issued

END