

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

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

SPONSOR: **Carnegie Fabrics, LLC**
Rockville Centre, NY

Sound Absorption
RAL™-A26-225

CONDUCTED: 2026-05-01

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ON: Kirei 12mm PET Panel with 20mm air gap

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 Kirei 12mm PET Panel with 20mm air gap. 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: Kirei 12mm PET Panel with 20mm air gap
Manufacturer: Carnegie Fabrics, LLC

SPECIMEN MEASUREMENTS & TEST CONDITIONS

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

Test Specimen

Dimensions: 2 panels @ 1200 mm (47.25 in.) by 2804 mm (110.375 in.)
Thickness: 11.79 mm (0.464 in.)
Overall Weight: 15.65 kg (34.5 lbs)
Mass per Unit Volume: 197 kg/m³ (12.3 lbs/ft³)

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SPECIMEN MEASUREMENTS & TEST CONDITIONS (continued)

Overall Specimen Properties

Size: 2.4 m (94.5 in) wide by 2.8 m (110.375 in) long
Thickness: 0.01 m (0.464 in)
Weight: 15.65 kg (34.5 lbs)
Mass per Unit Area: 2.33 kg/m² (0.48 lbs/ft²)
Calculation Area: 6.729 m² (72.43 ft²)

Test Environment

Room Volume: 291.98 m³
Temperature: 22.0 °C ± 0.1 °C (Requirement: ≥ 10 °C and ≤ 5 °C change)
Relative Humidity: 60.05 % ± 0.4 % (Requirement: ≥ 40 % and ≤ 5 % change)
Barometric Pressure: 98.9 kPa (Requirement not defined)

MOUNTING METHOD

Type F-20 Mounting: The test specimen was laid over wood spacers placed directly on the horizontal test surface, creating a 20.74 mm (0.8165 in.) thick airspace between the test surface and the panel body. The numeral suffix in the mounting designation is the thickness of the spacers in millimeters, rounded to the nearest integer multiple of 5. Perimeter edges were sealed with metal framing and tape.

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Figure 1 – Specimen mounted in test chamber

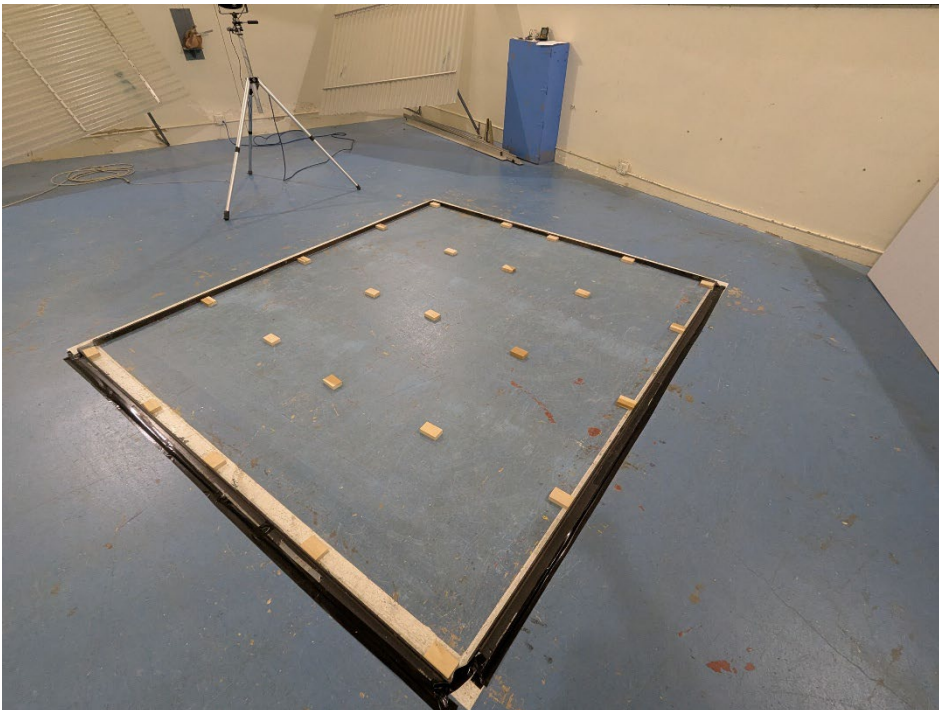


Figure 2 – Spacers in test chamber prior to installation of specimen

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Figure 3 – Specimen partially installed over spacers



Figure 4 – Detail of specimen material

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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	0.99	10.65	0.15
** 125	0.25	2.71	0.04
160	0.10	1.03	0.01
200	0.49	5.24	0.07
** 250	0.94	10.14	0.14
315	1.33	14.29	0.20
400	1.72	18.56	0.26
** 500	2.85	30.69	0.42
630	3.90	41.95	0.58
800	4.97	53.45	0.74
** 1000	5.85	62.93	0.87
1250	6.55	70.54	0.97
1600	6.83	73.54	1.02
** 2000	7.11	76.56	1.06
2500	7.16	77.12	1.06
3150	6.94	74.65	1.03
** 4000	6.88	74.05	1.02
5000	6.86	73.87	1.02

SAA = 0.62

NRC = 0.60

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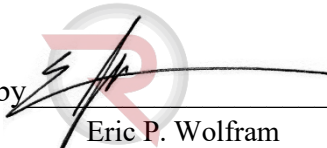
TEST RESULTS (continued)

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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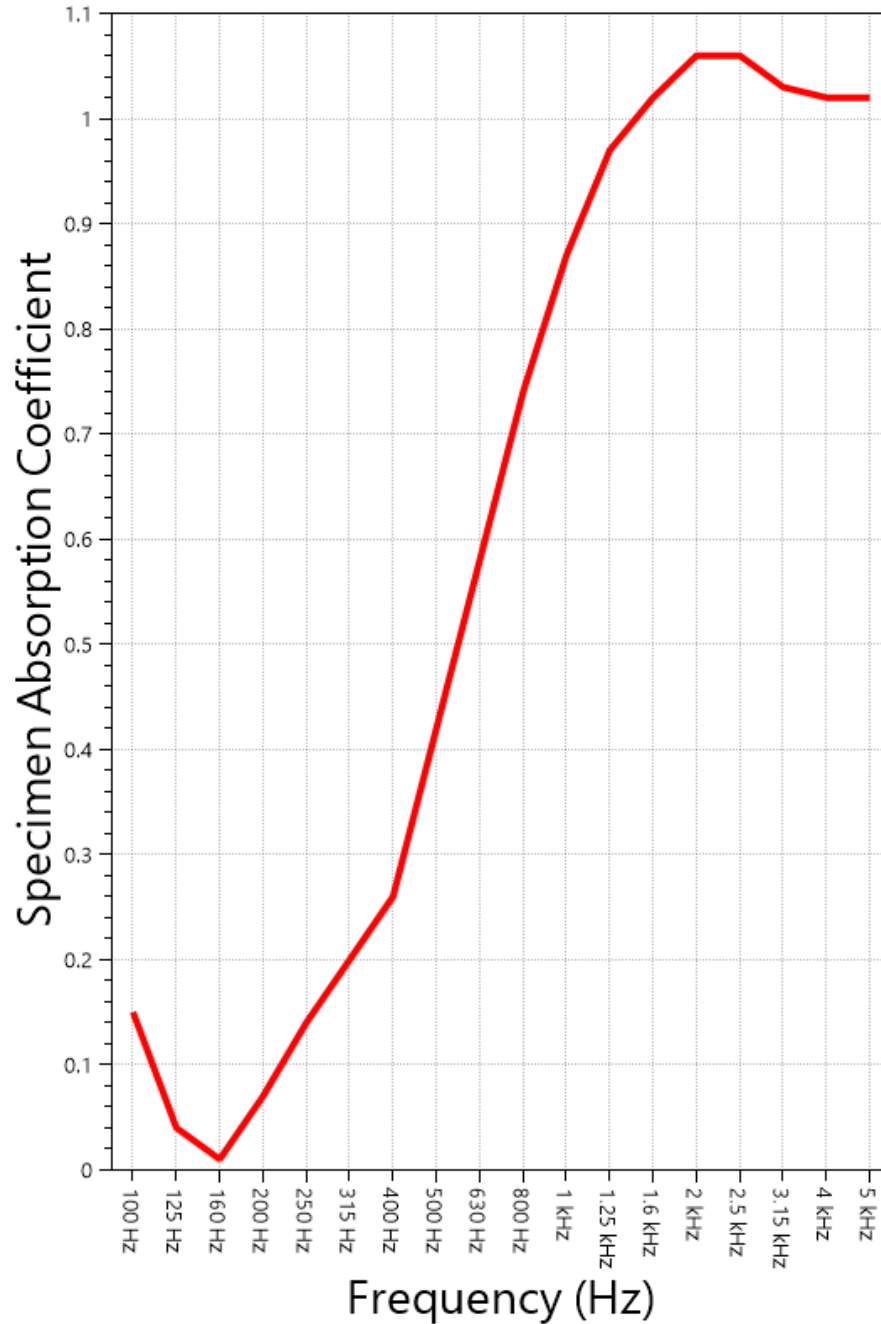
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SOUND ABSORPTION REPORT Kirei 12mm PET Panel with 20mm air gap



SAA = 0.62

NRC = 0.60

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APPENDIX A: Extended Frequency Range Data

Specimen: Kirei 12mm PET Panel with 20mm air gap (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	-9.70	-0.13
40	9.13	0.13
50	0.55	0.01
63	3.83	0.05
80	6.83	0.09
100	10.65	0.15
125	2.71	0.04
160	1.03	0.01
200	5.24	0.07
250	10.14	0.14
315	14.29	0.20
400	18.56	0.26
500	30.69	0.42
630	41.95	0.58
800	53.45	0.74
1000	62.93	0.87
1250	70.54	0.97
1600	73.54	1.02
2000	76.56	1.06
2500	77.12	1.06
3150	74.65	1.03
4000	74.05	1.02
5000	73.87	1.02
6300	77.37	1.07
8000	84.70	1.17
10000	88.52	1.22
12500	92.89	1.28

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APPENDIX B: Instruments of Traceability

Specimen: Kirei 12mm PET Panel with 20mm air gap (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
Bruek & Kjaer Mic and Preamp H	Type 4943-B-001	2525859	2025-11-18	2026-11-18
Bruel & Kjaer Pistonphone	Type 4228	2781248	2025-07-21	2026-07-21
EXTECH Hygro 639	SD700	A.103639	2025-12-29	2026-12-29

APPENDIX C: Revisions to Original Test Report

Specimen: Kirei 12mm PET Panel with 20mm air gap (See Full Report)

<u>Date</u>	<u>Revision</u>
2026-05-20	Original report issued

END