RIVERBANK ACOUSTICAL LABORATORIES

1512 S BATAVIA AVENUE
GENEVA, IL 60134

630-232-0104

An ALION Technical Center

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FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Test Report

SPONSOR: **GIK Acoustics, LLC**
Atlanta, GA

Sound Absorption
RAL™-A20-184

CONDUCTED: 2020-05-19

ON: 1 in. Spot 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 C423-17: "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method." The specimen mounting was performed according to ASTM E795-16: "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 1 in. Spot 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

Trade Name:	Spot Panel
Materials:	Guilford of Maine face fabric, plywood frame, Knauf Ecose core
Core Density:	25.63 kg/m^3 (1.6 lbs/ft^3)
Thickness:	25.4 mm (1 in.)
Manufacturer:	GIK Acoustics, LLC

SPECIMEN MEASUREMENTS & TEST CONDITIONS

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

Test Specimen

Materials:	Semirigid panels, woven fabric facing, backer material on one face
Dimensions:	8 @ 603.25 mm (23.75 in.) x 1212.85 mm (47.75 in.)
Thickness:	27.23 mm (1.072 in.)
Overall Weight:	16.33 kg (36 lbs)
Installation:	Backer material mated to test surface

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Overall Specimen Properties

Size:	2.41 m (95.0 in) wide by 2.43 m (95.5 in) long
Thickness:	0.03 m (1.072 in)
Weight:	16.33 kg (36.0 lbs)
Mass per Unit Area:	2.79 kg/m² (0.57 lbs/ft²)
Calculation Area:	5.853 m² (63 ft²)

Test Environment

Room Volume:	291.98 m³
Temperature:	21.3 °C ± 0.0 °C (Requirement: ≥ 10 °C and ≤ 5 °C change)
Relative Humidity:	62.7 % ± 0.8 % (Requirement: ≥ 40 % and ≤ 5 % change)
Barometric Pressure:	98.5 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.

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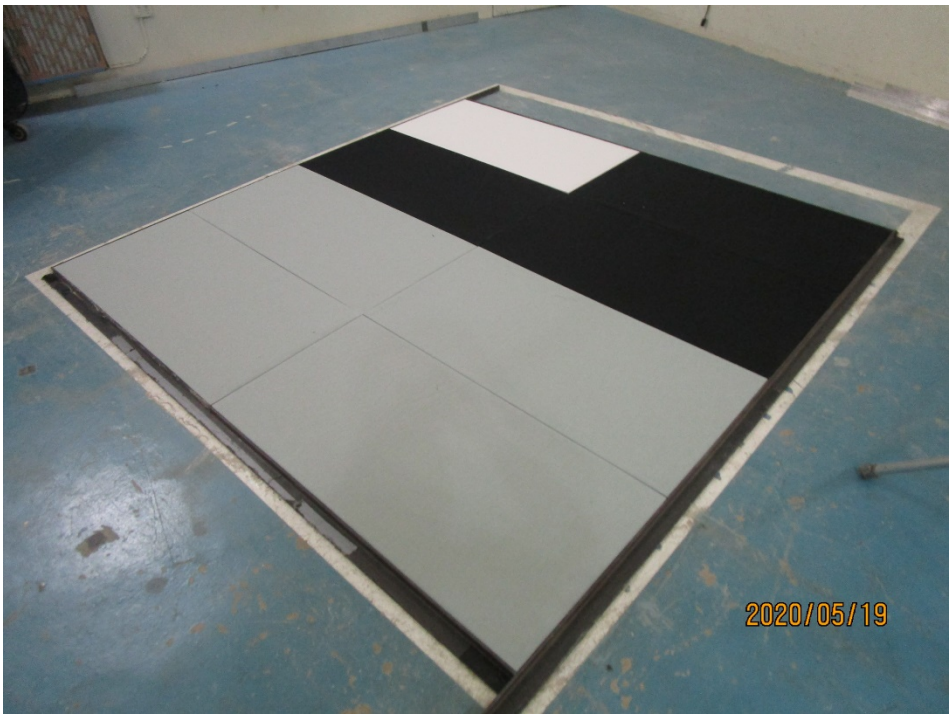

Figure 1 – Specimen mounted in test chamber

Figure 2 – Detail of specimen face material

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Figure 3 – Front (left) and rear (right) faces of individual specimen panel

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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	0.64	6.88	0.11
** 125	0.63	6.76	0.11
160	0.52	5.54	0.09
200	1.05	11.28	0.18
** 250	1.45	15.60	0.25
315	2.56	27.59	0.44
400	3.03	32.64	0.52
** 500	4.24	45.68	0.73
630	4.84	52.14	0.83
800	5.41	58.24	0.92
** 1000	5.77	62.08	0.99
1250	6.09	65.52	1.04
1600	6.16	66.28	1.05
** 2000	6.15	66.16	1.05
2500	6.07	65.29	1.04
3150	6.00	64.54	1.02
** 4000	5.76	61.98	0.98
5000	5.77	62.16	0.99

SAA = 0.75
NRC = 0.75

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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 _____
Malcolm Kelly
Acoustical Test Engineer

Approved by _____
Eric P. Wolfram
Laboratory Manager

Digitally signed by
Eric P Wolfram
Location: Geneva, IL
Date: 2020.06.02
14:28:29 -05'00'

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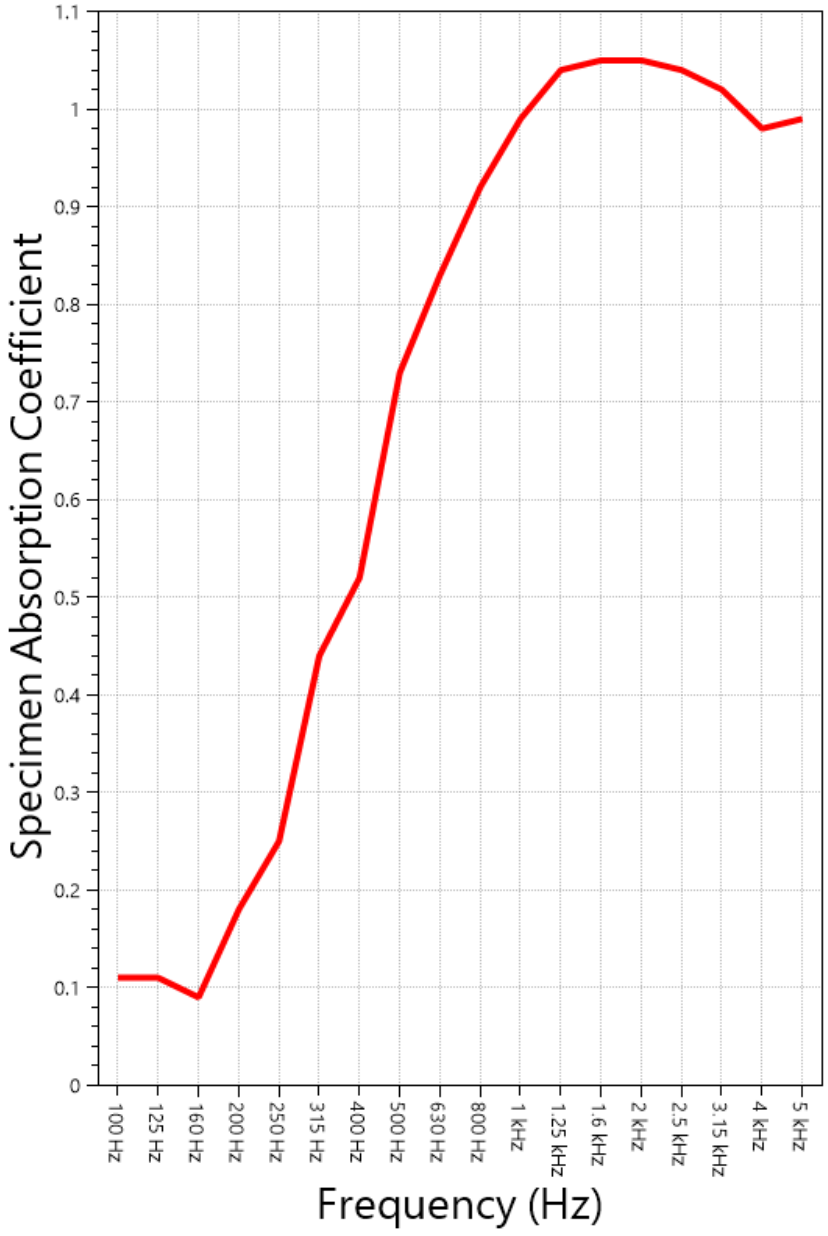
SOUND ABSORPTION REPORT

1 in. Spot Panel



SAA = 0.75
NRC = 0.75

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APPENDIX A: Extended Frequency Range Data

Specimen: 1 in. Spot Panel (See Full Report)

The following non-accredited data were obtained in accordance with ASTM C423-17, 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	0.96	0.02
40	2.09	0.03
50	6.13	0.10
63	0.59	0.01
80	7.71	0.12
100	6.88	0.11
125	6.76	0.11
160	5.54	0.09
200	11.28	0.18
250	15.60	0.25
315	27.59	0.44
400	32.64	0.52
500	45.68	0.73
630	52.14	0.83
800	58.24	0.92
1000	62.08	0.99
1250	65.52	1.04
1600	66.28	1.05
2000	66.16	1.05
2500	65.29	1.04
3150	64.54	1.02
4000	61.98	0.98
5000	62.16	0.99
6300	62.45	0.99
8000	62.77	1.00
10000	63.96	1.02
12500	66.99	1.06

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APPENDIX B: Instruments of Traceability

Specimen: 1 in. Spot Panel (See Full Report)

Description	Model	Serial Number	Date of Certification	Calibration Due
System 1	Type 3160-A-042	3160-106968	2019-06-25	2020-06-25
Bruel & Kjaer Mic And Preamp A	Type 4943-B-001	2311428	2019-09-27	2020-09-27
Bruel & Kjaer Pistonphone	Type 4228	2781248	2019-08-09	2020-08-09
Omega Digital Temp., Humid. And Pressure Recorder	OM-CP-PRHTemp2000	P97844	2020-02-18	2021-02-18

APPENDIX C: Revisions to Original Test Report

Specimen: 1 in. Spot Panel (See Full Report)

Date	Revision
2020-05-26	Original report issued

END

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