

Test Report

SPONSOR: **Sound Seal**
Agawam, MA

Sound Absorption
RAL™-A20-359

CONDUCTED: 2020-08-31

Page 1 of 8

ON: Tetrix™ 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 Tetrix™ 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: Tetrix™ Panel
Material: Polyethylene terephthalate felt
Thickness: 9 mm (0.354 in.)
Manufacturer: Sound Seal

SPECIMEN MEASUREMENTS & TEST CONDITIONS

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

Test Specimen

Material: Semirigid felt paneling
Dimensions: 2 @ 1219.2 mm (48 in.) x 2438.4 mm (96 in.)
1 @ 304.8 mm (12 in.) x 2438.4 mm (96 in.)
Thickness: 9.37 mm (0.369 in.)
Overall Weight: 8.39 kg (18.5 lbs)
Density: 133.85 kg/m³ (8.36 lbs/ft³)
Joints: Edges butted

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

An  ALION Technical Center

RIVERBANK.ALIONSCIENCE.COM

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Test Report

Sound Seal
2020-08-31

RAL™-A20-359
Page 2 of 8

Overall Specimen Properties

Size: 2.74 m (108.0 in) wide by 2.44 m (96.0 in) long
Thickness: 0.01 m (0.369 in)
Weight: 8.39 kg (18.5 lbs)
Mass per Unit Area: 1.25 kg/m² (0.26 lbs/ft²)
Calculation Area: 6.689 m² (72. ft²)

Test Environment

Room Volume: 291.98 m³
Temperature: 22.9 °C ± 0.1 °C (Requirement: ≥ 10 °C and ≤ 5 °C change)
Relative Humidity: 57.45 % ± 0.3 % (Requirement: ≥ 40 % and ≤ 5 % change)
Barometric Pressure: 98.2 kPa (Requirement not defined)

MOUNTING METHOD

Type A Mounting: The test specimen was laid directly against the test surface. Perimeter edges were sealed with a layer of duct tape.

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

An **ALION** Technical Center

RIVERBANK.ALIONSCIENCE.COM

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Test Report

RAL™-A20-359

Page 3 of 8

Sound Seal
2020-08-31

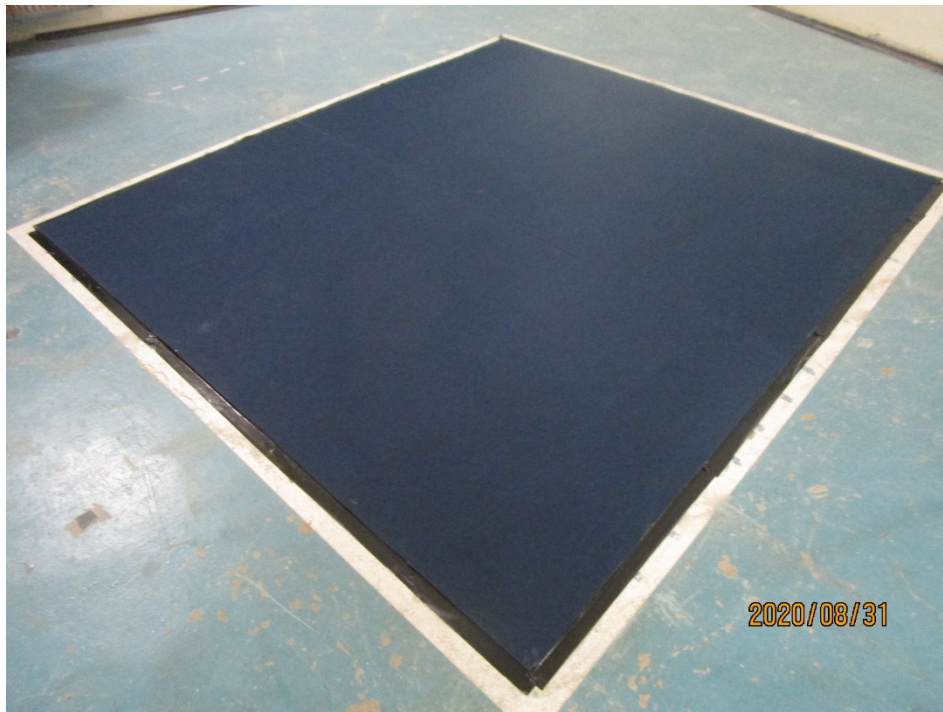


Figure 1 – Specimen mounted in test chamber



Figure 2 – Detail of specimen material prior to application of perimeter seal

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

An  ALION Technical Center

RIVERBANK.ALIONSCIENCE.COM

FOUNDED 1918 BY
 WALLACE CLEMENT SABINE

Test Report

Sound Seal
 2020-08-31

RAL™-A20-359
 Page 4 of 8

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	0.18	1.93	0.03
** 125	0.24	2.62	0.04
160	0.26	2.81	0.04
200	0.51	5.48	0.08
** 250	0.27	2.87	0.04
315	0.60	6.46	0.09
400	0.68	7.31	0.10
** 500	1.07	11.48	0.16
630	1.68	18.13	0.25
800	2.09	22.50	0.31
** 1000	2.71	29.15	0.40
1250	3.40	36.65	0.51
1600	3.82	41.09	0.57
** 2000	4.18	45.01	0.63
2500	4.62	49.71	0.69
3150	5.02	54.00	0.75
** 4000	5.46	58.75	0.82
5000	5.73	61.73	0.86

SAA = 0.32
NRC = 0.30

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

An ALION Technical Center

RIVERBANK.ALIONSCIENCE.COM

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Test Report

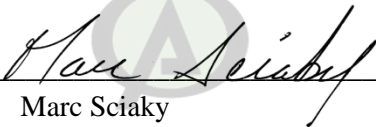
Sound Seal
2020-08-31

RAL™-A20-359
Page 5 of 8

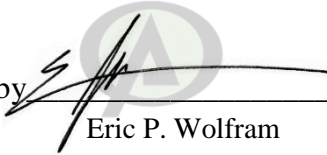
TEST RESULTS (continued)

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

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

An ALION Technical Center

RIVERBANK.ALIONSCIENCE.COM

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Test Report

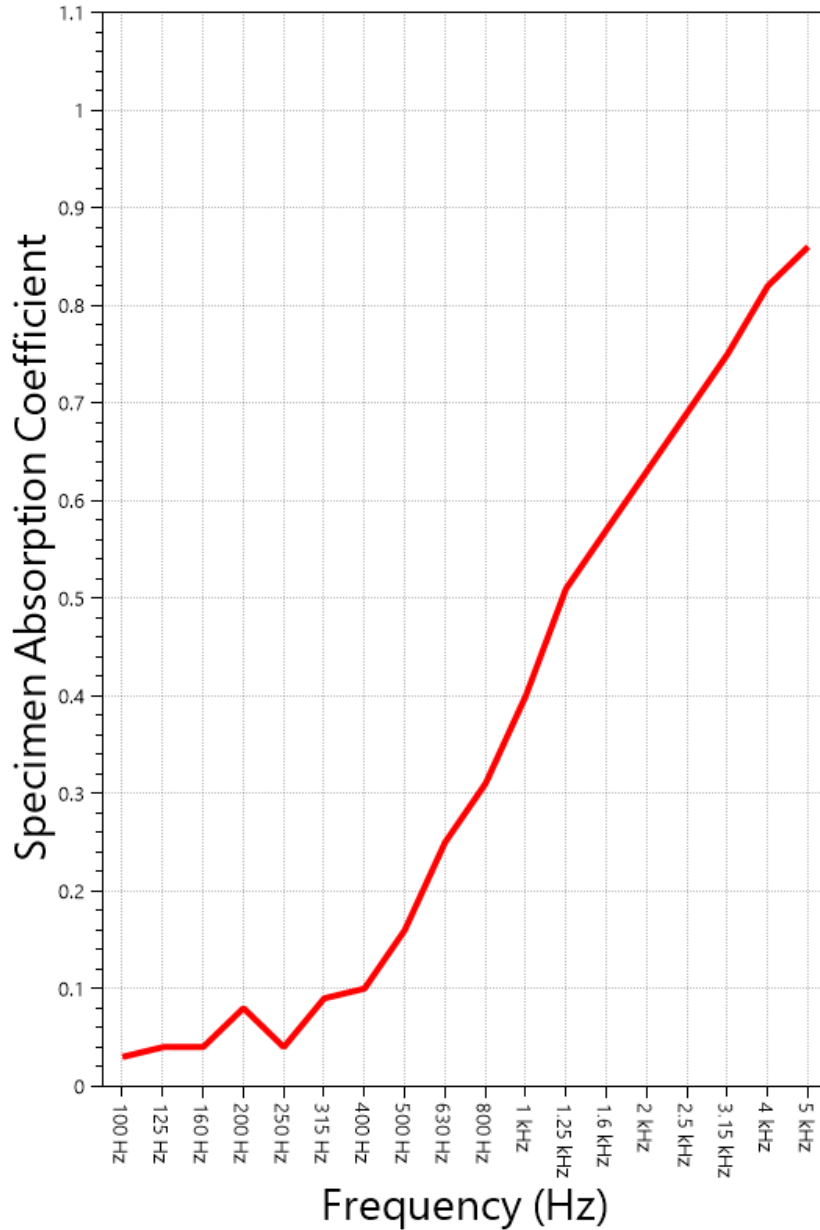
RAL™-A20-359

Page 6 of 8

Sound Seal
2020-08-31

SOUND ABSORPTION REPORT

Tetrix™ Panel



SAA = 0.32
NRC = 0.30



RIVERBANK ACOUSTICAL LABORATORIES IS ACCREDITED BY NVLAP (LAB CODE 100227-0) FOR ACOUSTICAL TESTING SERVICES IN ACCORDANCE WITH ISO/IEC 17025:2017 AND FOR THIS PROCEDURE. THIS REPORT MUST NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY RAL, NVLAP, NIST, OR ANY AGENCY OF THE U.S. GOVERNMENT. THIS REPORT SHALL NOT BE MODIFIED WITHOUT THE WRITTEN APPROVAL OF RAL. THE RESULTS REPORTED APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR TESTING; RAL ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY OTHER SAMPLE.

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

An ALION Technical Center

RIVERBANK.ALIONSCIENCE.COM

FOUNDED 1918 BY
 WALLACE CLEMENT SABINE

Test Report

Sound Seal
 2020-08-31

RAL™-A20-359
 Page 7 of 8

APPENDIX A: Extended Frequency Range Data

Specimen: Tetrax™ 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	-0.89	-0.01
40	0.69	0.01
50	-3.06	-0.04
63	2.77	0.04
80	12.78	0.18
100	1.93	0.03
125	2.62	0.04
160	2.81	0.04
200	5.48	0.08
250	2.87	0.04
315	6.46	0.09
400	7.31	0.10
500	11.48	0.16
630	18.13	0.25
800	22.50	0.31
1000	29.15	0.40
1250	36.65	0.51
1600	41.09	0.57
2000	45.01	0.63
2500	49.71	0.69
3150	54.00	0.75
4000	58.75	0.82
5000	61.73	0.86
6300	66.72	0.93
8000	72.44	1.01
10000	72.85	1.01
12500	69.97	0.97

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

An ALION Technical Center

RIVERBANK.ALIONSCIENCE.COM

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Test Report

Sound Seal
2020-08-31

RAL™-A20-359
Page 8 of 8

APPENDIX B: Instruments of Traceability

Specimen: Tetrix™ Panel (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	2020-06-26	2021-06-26
Bruel & Kjaer Mic And Preamp A	Type 4943-B-001	2311428	2019-09-27	2020-09-27
Bruel & Kjaer Sound Level Calibrator	Type 4230	861609	2019-11-19	2020-11-19
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: Tetrix™ Panel (See Full Report)

<u>Date</u>	<u>Revision</u>
2020-09-03	Original report issued
2020-09-24	Page 1-8: The original manufacturer/requester identification and specimen designation were changed to facilitate a private label sales agreement. The original requester has provided a letter to RAL on their company letterhead certifying that the product identified has not changed in materials, composition, or manufacturing methods since the original test date and the product sold under the private label agreement is exactly identical to the original specimen described in the test report and sourced from the same manufacturing process. –MP, approved by EPW.

END