Ważony współczynnik pochłaniania dźwięku α_w według EN ISO 11654

WNC-B

Koc akustyczny na okno, **podwójna warstwa** · kod produktu 101026

WAŻONY WSPÓŁCZYNNIK POCHŁANIANIA DŹWIĘKU

$\alpha_w = 1{,}00$

Klasa pochłaniania

A

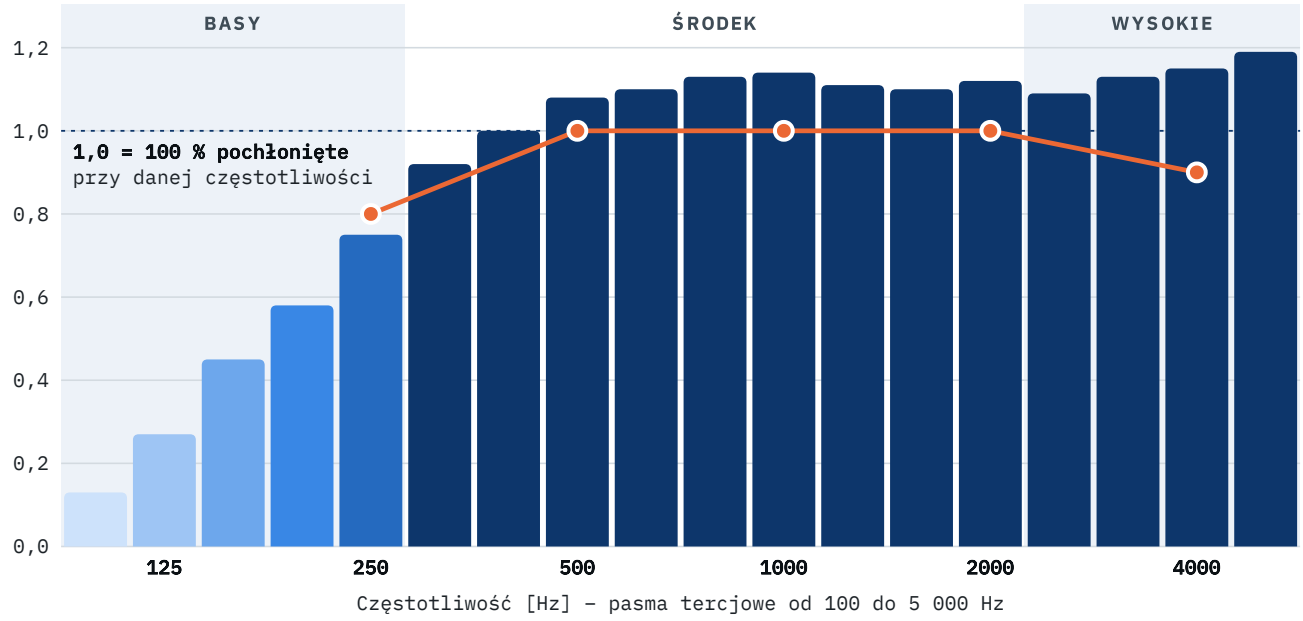
według EN ISO 11654

1. Zmierzone współczynniki pochłaniania w pasmach tercjowych

F [HZ]	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
α_s	0,13	0,27	0,45	0,58	0,75	0,92	1,00	1,08	1,10	1,13	1,14	1,11	1,10	1,12	1,09	1,13	1,15	1,19

Źródło wartości: raport RAL™-A19-502, strona 5 (załącznik do tego dokumentu).

2. Pochłanianie w zależności od częstotliwości



zmierzony współczynnik pochłaniania α_s (im ciemniej, tym więcej pochłania)

krzywa odniesienia ISO 11654 dla $\alpha_w = 1{,}00$

3. Klasa pochłaniania dźwięku

E	D	C	B	A
0,15–0,25	0,30–0,55	0,60–0,75	0,80–0,85	0,90–1,00

▲ WNC-B: $\alpha_w = 1{,}00$ → klasa A

4. Obliczenie według EN ISO 11654

OKTAWA [HZ]	A_S TERCJE	ŚREDNIA	A_P	KRZYWA ODN.	ODCHYLENIE NIEKORZYSTNE
125	0,13 · 0,27 · 0,45	0,283	**0,30**	–	–
250	0,58 · 0,75 · 0,92	0,750	**0,75**	0,80	0,05
500	1,00 · 1,08 · 1,10	1,060	**1,00***	1,00	0,00
1000	1,13 · 1,14 · 1,11	1,127	**1,00***	1,00	0,00
2000	1,10 · 1,12 · 1,09	1,103	**1,00***	1,00	0,00
4000	1,13 · 1,15 · 1,19	1,157	**1,00***	0,90	0,00
Suma odchyleń niekorzystnych (250–4 000 Hz) — limit normy ≤ 0,10					**0,05**

* Średnia zaokrąglona do 0,05 i ograniczona zgodnie z normą do 1,00. Krzywą odniesienia (0,80 / 1,00 / 1,00 / 1,00 / 0,90) przesuwa się co 0,05 w dół, aż suma odchyleń niekorzystnych nie przekroczy 0,10. Przy wartości 1,00 w paśmie 500 Hz suma wynosi 0,05, dlatego α_W = 1,00. Wskaźnika kształtu (L, M, H) się nie podaje – żadne α_p nie przekracza krzywej o 0,25 lub więcej. Według załącznika B normy α_W 0,90–1,00 odpowiada klasie pochłaniania A.

5. Pomiar laboratoryjny będący podstawą

Laboratorium	Riverbank Acoustical Laboratories, 1512 S Batavia Ave, Geneva, IL, USA — akredytacja NVLAP (Lab Code 100227-0), ISO/IEC 17025:2017
Raport	RAL™-A19-502, pomiar 06.12.2019, wydany 08.01.2020
Metoda	ASTM C423-17, komora pogłosowa 291,98 m³, 21,4 °C, 55 % RH
Montaż	typ G-115 wg ASTM E795-16 (zmodyfikowany): dwie warstwy zawieszone z odstępem 76 mm, 76 mm od ściany komory, krawędzie nieuszczelnione
Próbka	Acoustic Blanket, Producer’s Choice (VB-77G), producent Vocal Booth To Go, 2 × 2 032 × 2 692 mm
Odstępstwo od normy	powierzchnia próbki 5,47 m² (ASTM C423 wymaga min. 5,57 m²) — podano w raporcie

6. Uwaga

Dokument wydała firma VocalBoothToGo-EU s.r.o. Nie jest to raport laboratoryjny, a Riverbank Acoustical Laboratories nie jest jego autorem. Wartość α_W obliczono według EN ISO 11654 z tercjowych współczynników pochłaniania zmierzonych przez laboratorium metodą ASTM C423, analogiczną do EN ISO 354 (komora pogłosowa).

Wyniki dotyczą badanej próbki i podanego sposobu montażu. Oryginalny raport laboratorium dołączono bez zmian jako załącznik.

Załącznik: raport Riverbank Acoustical Laboratories RAL™-A19-502 (9 stron, oryginał).

Opracowała: VocalBoothToGo-EU s.r.o.

Data: 07.10.2026

RIVERBANK ACOUSTICAL LABORATORIES

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

SPONSOR: **Vocal Booth To Go**
Frederick, MD

Sound Absorption
RAL™-A19-502

CONDUCTED: 2019-12-06

ON: Acoustic Blanket, Producer's Choice - dual layer (Modified Type G-115 Mounting, specimen undersized)

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," with the single exception that the specimen area of 5.47 m^2 was less than the minimum area of 5.57 m^2 specified in Section 9.1.1 of the standard. Refer to the mounting description on Page 2 for details. The specimen mounting was performed according to the Type G Mounting described in Section 12 of ASTM E795-16: "Standard Practices for Mounting Test Specimens During Sound Absorption Tests," with the single exception that the top edge of the specimen was not closed off. 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 Acoustic Blanket, Producer's Choice - dual layer (Modified Type G-115 Mounting, specimen undersized). 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:	Acoustic Blanket, Producer's Choice
Material ID:	VB-77G
Manufacturer:	Vocal Booth To Go

SPECIMEN MEASUREMENTS & TEST CONDITIONS

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

Test Specimen

Material:	Quilted blanket
Dimensions:	2 @ 2032 mm (80 in.) x 2692.4 mm (106 in.)
Thickness:	7.26 mm (0.286 in.) each
Overall Weight:	12.02 kg (26.5 lbs)

Note: The specimen was cut to the given dimensions from larger samples. The cut edges of the specimen material were sealed with duct tape.

NVLAP® TESTING
NVLAP LAB CODE 100227-0

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.

Overall Specimen Properties

Size:	2.03 m (80.0 in) wide by 2.69 m (106.0 in) long
Thickness:	0.09 m (3.572 in)
Weight:	12.02 kg (26.5 lbs)
Mass per Unit Area:	2.2 kg/m² (0.45 lbs/ft²)
Calculation Area:	5.471 m² (58.89 ft²)

Test Environment

Room Volume:	291.98 m³
Temperature:	21.4 °C ± 0.1 °C (Requirement: ≥ 10 °C and ≤ 5 °C change)
Relative Humidity:	54.95 % ± 1.1 % (Requirement: ≥ 40 % and ≤ 5 % change)
Barometric Pressure:	99.6 kPa (Requirement not defined)

MOUNTING METHOD

Modified Type G-115 Mounting: The test specimen was hung using a stand provided by the test sponsor. The specimen was cut to the dimensions given above to accommodate the limited height of the stand. An array of 76.2 mm (3 in.) wide wooden spacers was used to space the specimen layers approximately 76.2 mm (3 in.) apart. The hung specimen was placed in the test chamber with a 76 mm (3.0 in.) wide gap between the vertical test surface and the nearest layer of sample material. The distance between the vertical test surface and the centerline of the specimen was approximately 114 mm (4.5 in.). The numeral suffix in the mounting designation is the distance in millimeters between the vertical test surface and the centerline of the test specimen, rounded to the nearest integer multiple of 5. Perimeter edges were left unsealed. All modifications to the standard mounting practice were intended to better represent the typical field condition, as described by the test sponsor.

NVLAP TESTING
NVLAP LAB CODE 100227-0

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.



Figure 1 – Specimen mounted in test chamber



Figure 2 – Detail of single layer of specimen material

NVLAP TESTING
NVLAP LAB CODE 100227-0

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.



Figure 3 – Detail of hanging method, spacer

NVLAP TESTING
NVLAP LAB CODE 100227-0

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

Vocal Booth To Go
2019-12-06

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	0.70	7.57	0.13
** 125	1.50	16.13	0.27
160	2.49	26.75	0.45
200	3.16	34.00	0.58
** 250	4.12	44.34	0.75
315	5.05	54.38	0.92
400	5.47	58.84	1.00
** 500	5.91	63.57	1.08
630	6.04	65.02	1.10
800	6.18	66.48	1.13
** 1000	6.26	67.41	1.14
1250	6.08	65.40	1.11
1600	6.03	64.89	1.10
** 2000	6.13	65.96	1.12
2500	5.97	64.24	1.09
3150	6.18	66.47	1.13
** 4000	6.31	67.93	1.15
5000	6.51	70.11	1.19

SAA = 1.01
NRC = 1.00

NVLAP TESTING
NVLAP LAB CODE 100227-0

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

Test Report

RIVERBANK.ALIONSCIENCE.COM
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Vocal Booth To Go
2019-12-06

RAL™-A19-502

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: 2020.01.08
10:08:07 -06'00'

NVLAP TESTING
NVLAP LAB CODE 100227-0

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

Test Report

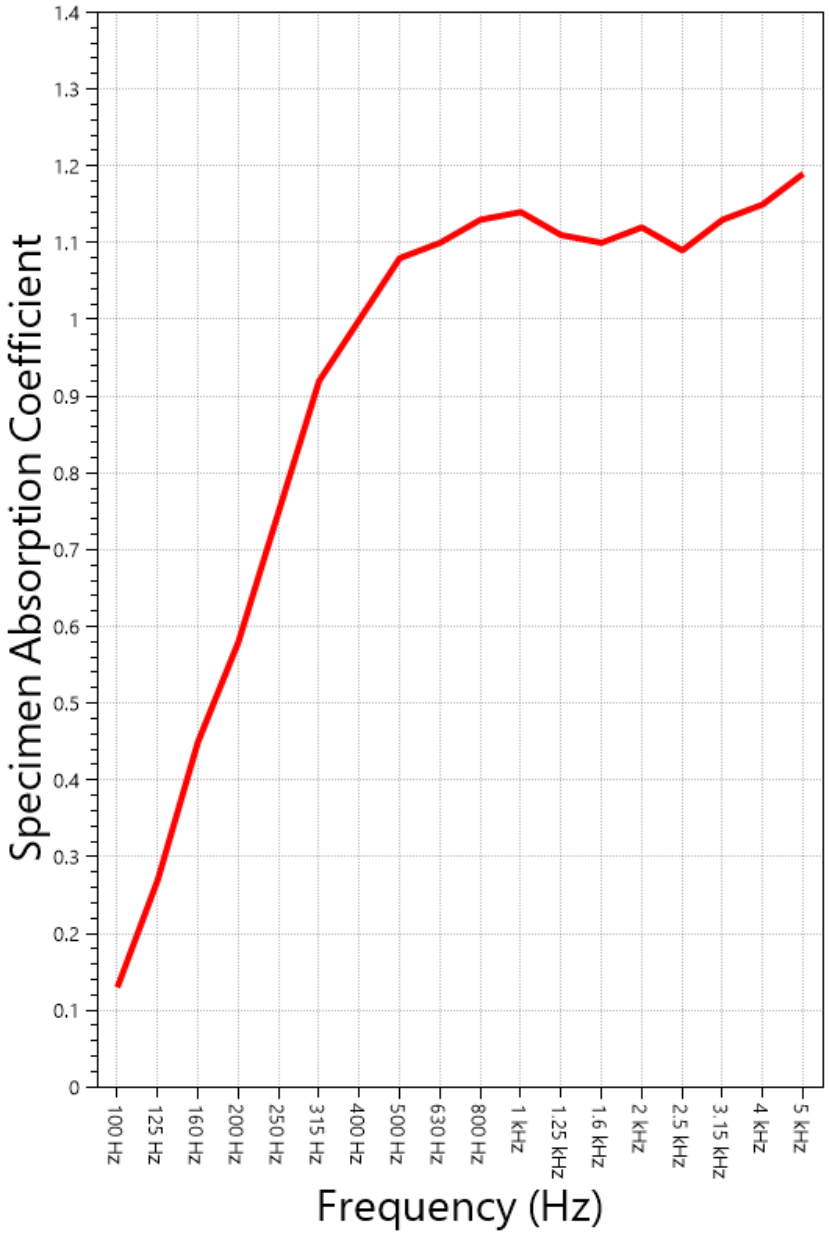
RIVERBANK.ALIONSCIENCE.COM
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Vocal Booth To Go
2019-12-06

RAL™-A19-502

SOUND ABSORPTION REPORT

Acoustic Blanket, Producer's Choice - dual layer
(Modified Type G-115 Mounting, specimen undersized)



SAA = 1.01
NRC = 1.00

NVLAP TESTING
NVLAP LAB CODE 100227-0

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

Test Report

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Vocal Booth To Go
2019-12-06

RAL™-A19-502

APPENDIX A: Extended Frequency Range Data

Specimen: Acoustic Blanket, Producer's Choice - dual layer (Modified Type G-115 Mounting, specimen undersized) (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	2.13	0.04
40	3.38	0.06
50	-4.16	-0.07
63	-8.70	-0.15
80	2.21	0.04
100	7.57	0.13
125	16.13	0.27
160	26.75	0.45
200	34.00	0.58
250	44.34	0.75
315	54.38	0.92
400	58.84	1.00
500	63.57	1.08
630	65.02	1.10
800	66.48	1.13
1000	67.41	1.14
1250	65.40	1.11
1600	64.89	1.10
2000	65.96	1.12
2500	64.24	1.09
3150	66.47	1.13
4000	67.93	1.15
5000	70.11	1.19
6300	68.63	1.17
8000	72.24	1.23
10000	75.45	1.28
12500	74.59	1.27

NVLAP TESTING
NVLAP LAB CODE 100227-0

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.

APPENDIX B: Instruments of Traceability

Specimen: Acoustic Blanket, Producer's Choice - dual layer (Modified Type G-115 Mounting, specimen undersized) (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	2019-02-08	2020-02-08

APPENDIX C: Revisions to Original Test Report

Specimen: Acoustic Blanket, Producer's Choice - dual layer (Modified Type G-115 Mounting, specimen undersized) (See Full Report)

Date	Revision
2020-01-08	Original report issued

END

NVLAP TESTING
NVLAP LAB CODE 100227-0

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.