Bewerteter Schallabsorptionsgrad $\alpha_w$ nach EN ISO 11654

# WNC-B

Akustische Fensterdecke, **doppellagig** · Artikelnummer 101026

BEWERTETER SCHALLABSORPTIONSGRAD

$\alpha_w = 1{,}00$

Absorberklasse

**A**

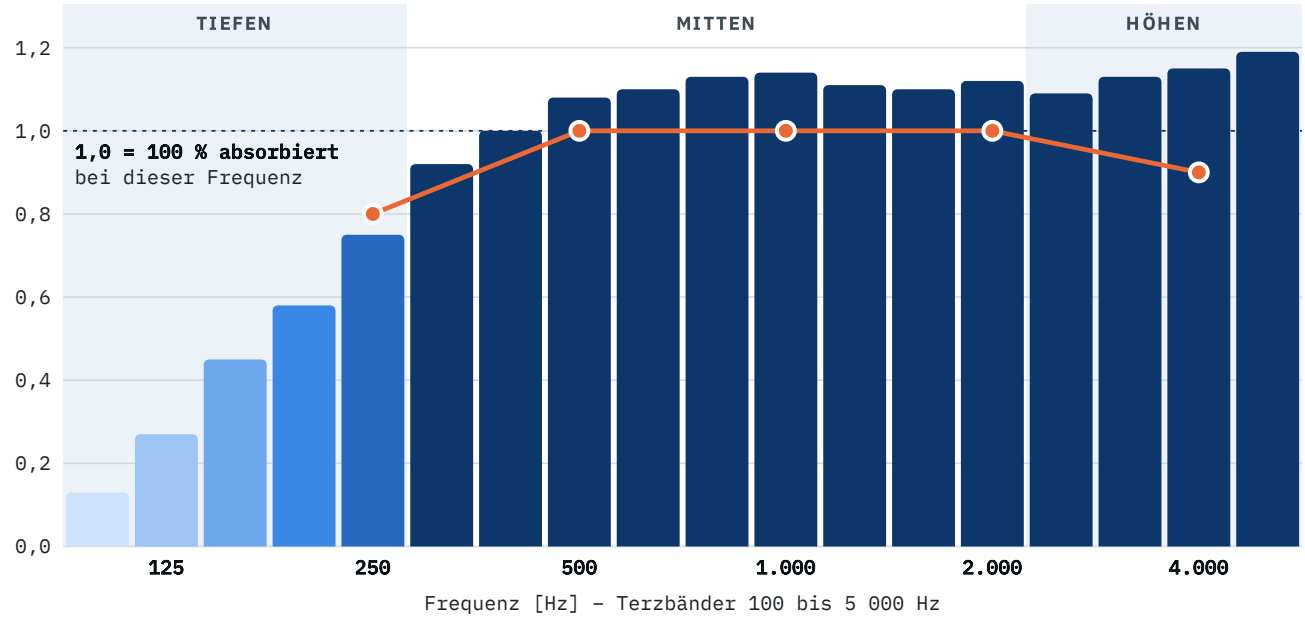
nach EN ISO 11654

## 1. Gemessene Absorptionsgrade in Terzbändern

| F [HZ] | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1.000 | 1.250 | 1.600 | 2.000 | 2.500 | 3.150 | 4.000 | 5.000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\alpha_s$ | 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 |

Quelle der Werte: Prüfbericht RAL™-A19-502, Seite 5 (Anlage zu diesem Dokument).

## 2. Schallabsorption nach Frequenz




gemessener Absorptionsgrad $\alpha_s$ (je dunkler, desto mehr Absorption)

Bezugskurve ISO 11654 für $\alpha_w$ = 1,00

## 3. Schallabsorberklasse

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

▲ **WNC-B: $\alpha_w$ = 1,00 → Klasse A**

## 4. Berechnung nach EN ISO 11654

| OKTAVE [HZ] | $A_S$ TERZEN | MITTEL | $A_P$ | BEZUGSKURVE | UNGÜNSTIGE ABWEICHUNG |
|---|---|---|---|---|---|
| 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 |
| 1.000 | 1,13 · 1,14 · 1,11 | 1,127 | **1,00*** | 1,00 | 0,00 |
| 2.000 | 1,10 · 1,12 · 1,09 | 1,103 | **1,00*** | 1,00 | 0,00 |
| 4.000 | 1,13 · 1,15 · 1,19 | 1,157 | **1,00*** | 0,90 | 0,00 |
| **Summe der ungünstigen Abweichungen (250–4 000 Hz)** — Grenzwert der Norm ≤ 0,10 | | | | | **0,05** |

* Mittelwert auf 0,05 gerundet und nach der Norm auf 1,00 begrenzt. Die Bezugskurve (0,80 / 1,00 / 1,00 / 1,00 / 0,90) wird in Schritten von 0,05 nach unten verschoben, bis die Summe der ungünstigen Abweichungen 0,10 nicht übersteigt. Beim Wert 1,00 im 500-Hz-Band beträgt die Summe 0,05, daher $\alpha_W$ = 1,00. Kein Formindikator (L, M, H) – kein $\alpha_p$ übersteigt die Kurve um 0,25 oder mehr. Nach Anhang B der Norm entspricht $\alpha_W$ 0,90–1,00 der Absorberklasse A.

## 5. Zugrunde liegende Labormessung

| | |
|---|---|
| Labor | Riverbank Acoustical Laboratories, 1512 S Batavia Ave, Geneva, IL, USA — NVLAP-Akkreditierung (Lab Code 100227-0), ISO/IEC 17025:2017 |
| Prüfbericht | RAL™-A19-502, Messung 06.12.2019, ausgestellt 08.01.2020 |
| Methode | ASTM C423-17, Hallraum 291,98 m³, 21,4 °C, 55 % r. F. |
| Montage | Typ G-115 nach ASTM E795-16 (modifiziert): zwei Lagen mit 76 mm Abstand aufgehängt, 76 mm von der Kammerwand, Ränder nicht abgedichtet |
| Probe | Acoustic Blanket, Producer’s Choice (VB-77G), Hersteller Vocal Booth To Go, 2 × 2 032 × 2 692 mm |
| Abweichung von der Norm | Probenfläche 5,47 m² (ASTM C423 verlangt mind. 5,57 m²) — im Prüfbericht angegeben |

## 6. Hinweis

Dieses Dokument wurde von der VocalBoothToGo-EU s.r.o. herausgegeben. Es ist kein Laborprüfbericht und Riverbank Acoustical Laboratories ist nicht sein Verfasser. Der $\alpha_W$-Wert ist nach EN ISO 11654 aus den Terz-Absorptionsgraden berechnet, die das Labor nach der Methode ASTM C423 gemessen hat. Diese ähnelt dem Verfahren nach EN ISO 354 (Hallraum).

Die Ergebnisse gelten für die geprüfte Probe und die angegebene Montage. Der Original-Prüfbericht des Labors ist unverändert als Anlage beigefügt.

**Anlage:** Prüfbericht der Riverbank Acoustical Laboratories RAL™-A19-502 (9 Seiten, Original).

Erstellt von: VocalBoothToGo-EU s.r.o.

Datum: 07.10.2026

RIVERBANK ACOUSTICAL LABORATORIES

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# 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.*

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## 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.

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Figure 1 – Specimen mounted in test chamber




Figure 2 – Detail of single layer of specimen material

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Figure 3 – Detail of hanging method, spacer

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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 | 0.70 | 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**

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

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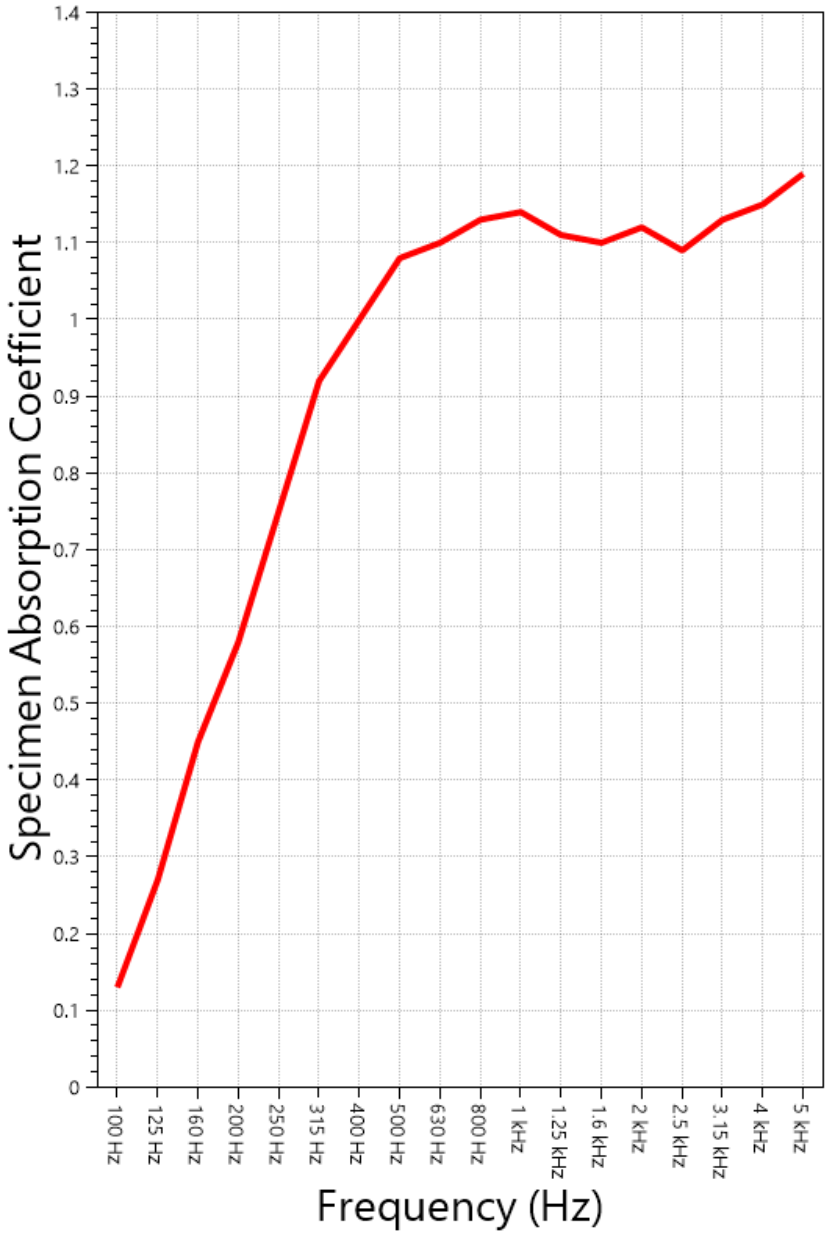
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# SOUND ABSORPTION REPORT

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




**SAA = 1.01**
**NRC = 1.00**

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## 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 |

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## 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

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