Weighted sound absorption coefficient $\alpha_w$ according to EN ISO 11654

# CSB-BS

Ceiling sound baffle, **single layer** · product code 101038

WEIGHTED SOUND ABSORPTION COEFFICIENT

$\alpha_w = 0.75$

Absorption class

**C**

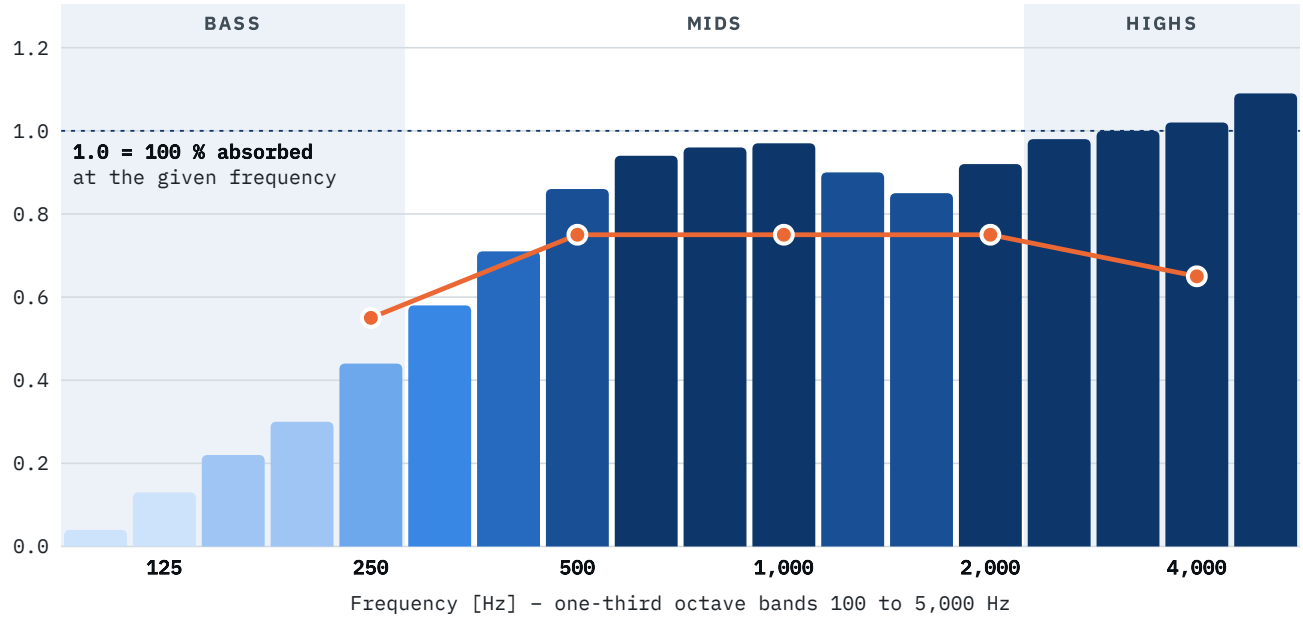
according to EN ISO 11654

## 1. Measured absorption coefficients in one-third octave bands

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\alpha_s$ | 0.04 | 0.13 | 0.22 | 0.30 | 0.44 | 0.58 | 0.71 | 0.86 | 0.94 | 0.96 | 0.97 | 0.90 | 0.85 | 0.92 | 0.98 | 1.00 | 1.02 | 1.09 |

Source of values: report RAL™-A12-119, page 2 (annex to this document).

## 2. Absorption by frequency




measured absorption coefficient $\alpha_s$ (the darker, the more it absorbs)

ISO 11654 reference curve for $\alpha_w$ = 0.75

## 3. Sound absorption class

| 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 |

▲ CSB-BS: $\alpha_w$ = 0.75 → class C

## 4. Calculation according to EN ISO 11654

| OCTAVE [HZ] | $A_S$ 1/3 OCTAVES | MEAN | $A_P$ | REF. CURVE | UNFAVOURABLE DEVIATION |
|---|---|---|---|---|---|
| 125 | 0.04 · 0.13 · 0.22 | 0.130 | **0.15** | – | – |
| 250 | 0.30 · 0.44 · 0.58 | 0.440 | **0.45** | 0.55 | 0.10 |
| 500 | 0.71 · 0.86 · 0.94 | 0.837 | **0.85** | 0.75 | 0.00 |
| 1,000 | 0.96 · 0.97 · 0.90 | 0.943 | **0.95** | 0.75 | 0.00 |
| 2,000 | 0.85 · 0.92 · 0.98 | 0.917 | **0.90** | 0.75 | 0.00 |
| 4,000 | 1.00 · 1.02 · 1.09 | 1.037 | **1.00*** | 0.65 | 0.00 |
| **Sum of unfavourable deviations (250–4,000 Hz)** — limit of the standard ≤ 0.10 | | | | | **0.10** |

* Mean rounded to 0.05 and capped at 1.00 according to the standard. The reference curve (0.80 / 1.00 / 1.00 / 1.00 / 0.90) is shifted in steps of 0.05 towards lower values until the sum of unfavourable deviations does not exceed 0.10. At the value 0.75 in the 500 Hz band the sum is 0.10, therefore $\alpha_w = 0.75$. Shape indicator H: $\alpha_p$ exceeds the curve by 0.25 or more in the band 2 000–4 000 Hz (the material absorbs more there than $\alpha_w$ indicates). According to Annex B of the standard, $\alpha_w$ 0.60–0.75 corresponds to absorption class C.

## 5. Underlying laboratory measurement

| | |
|---|---|
| Laboratory | Riverbank Acoustical Laboratories, 1512 S Batavia Ave, Geneva, IL, USA — NVLAP accreditation (Lab Code 100227-0), ISO/IEC 17025:2017 |
| Report | RAL™-A12-119, measured 13 Apr 2012 |
| Method | ASTM C423-09a and E795-05, reverberation room 292 m³, 22 °C, 63 % RH |
| Mounting | type G-75 per ASTM E795: single layer hung parallel to the chamber wall at a distance of 75 mm |
| Specimen | Producer’s Choice Acoustic Blankets VB-72 (cotton blend, recycled cotton filling), 2.46 × 2.74 m, area 6.8 m² |

## 6. Notice

This document was issued by VocalBoothToGo-EU s.r.o. It is not a laboratory report and Riverbank Acoustical Laboratories is not its author. The $\alpha_w$ value is calculated according to EN ISO 11654 from one-third octave absorption coefficients measured by the laboratory using the ASTM C423 method, which is similar to EN ISO 354 (reverberation room).

The results apply to the tested specimen and the stated mounting. The laboratory’s original report is attached unchanged as an annex.

**Annex:** Riverbank Acoustical Laboratories report RAL™-A12-119 (4 pages, original).

Prepared by: VocalBoothToGo-EU s.r.o.

Date: 28 September 2026

RIVERBANK ACOUSTICAL LABORATORIES

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Alion Science and Technology

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# TEST REPORT

FOR: MoversSupplies.com
Jefferson, MD

Sound Absorption Test
RAL™-A12-119

ON: Producer's Choice Acoustic Blankets VB-72



CONDUCTED: 13 April 2012

## TEST METHOD

The test method conformed explicitly with the requirements of the ASTM Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423-09a and E795-05. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure (NVLAP Lab Code: 100227-0). A description of the measuring procedure and room qualifications is available separately.

## DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as Producer's Choice Acoustic Blankets VB-72. The overall dimensions of the specimen as measured were nominally 2.46 m (97 in.) wide by 2.74 m (108 in.) high and 12.7 mm (0.5 in.) thick. The specimen consisted of two (2) pieces. One (1) piece was nominally 2.46 m (97 in.) wide by 1.93 m (76 in.) high. One (1) piece was nominally 2.46 m (97 in.) wide by 812 mm (32 in.) high. The specimen was tested in the laboratory's 292 $m^3$ (10,311 $ft^3$) test chamber.

The manufacturer's description of the specimen was as follows: Producer's Choice Acoustic Blankets VB-72. Straight 2" stitching. Colors – One side black, the other side white. White thread. Woven black binding. Outer material is cotton mix fabric. Filler is recycled cotton. A visual inspection verified the manufacturer's description of the specimen.

The weight of the entire specimen as measured was 6.6 kg (14.5 lbs), an average of 0.97 $kg/m^2$ (0.2 $lbs/ft^2$). The area used in the calculations was 6.8 $m^2$ (72.8 $ft^2$). The room temperature at the time of the test was 22°C (71°F) and 63±1% relative humidity.

## MOUNTING G-75

Test specimen hung parallel to the test surface. The number designates the distance in mm from the centerline of the hangers to the test surface.

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NVLAP Lab Code 100227-0

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# TEST REPORT

MoversSupplies.com

RAL™-A12-119



13 April 2012

## TEST RESULTS

| | 1/3 Octave Center Frequency (Hz) | Absorption Coefficient | Total Absorption In Sabins |
|---|---|---|---|
| | 100 | 0.04 | 3.14 |
| ** | 125 | 0.13 | 9.80 |
| | 160 | 0.22 | 15.76 |
| | 200 | 0.30 | 21.93 |
| ** | 250 | 0.44 | 32.03 |
| | 315 | 0.58 | 42.39 |
| | 400 | 0.71 | 51.75 |
| ** | 500 | 0.86 | 62.69 |
| | 630 | 0.94 | 68.17 |
| | 800 | 0.96 | 69.59 |
| ** | 1000 | 0.97 | 70.80 |
| | 1250 | 0.90 | 65.42 |
| | 1600 | 0.85 | 61.76 |
| ** | 2000 | 0.92 | 66.77 |
| | 2500 | 0.98 | 71.13 |
| | 3150 | 1.00 | 72.44 |
| ** | 4000 | 1.02 | 74.31 |
| | 5000 | 1.09 | 79.27 |

SAA = 0.78
NRC = 0.80

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# TEST REPORT

MoversSupplies.com

RAL™-A12-119

13 April 2012



TEST RESULTS (Continued)

The sound absorption average (SAA) is defined as a single number rating, the average, rounded to the nearest 0.01, of the sound absorption coefficient of a material for the twelve one-third octave bands from 200 through 2500 Hz, inclusive.

The noise reduction coefficient (NRC) is defined from previous versions of this same test method as the average of the coefficients at 250, 500, 1000, and 2000 Hz, expressed to the nearest integral multiple of 0.05.

Tested by _____
Marc Sciaky
Experimentalist

Approved by _____
Dean Victor
Senior Experimentalist

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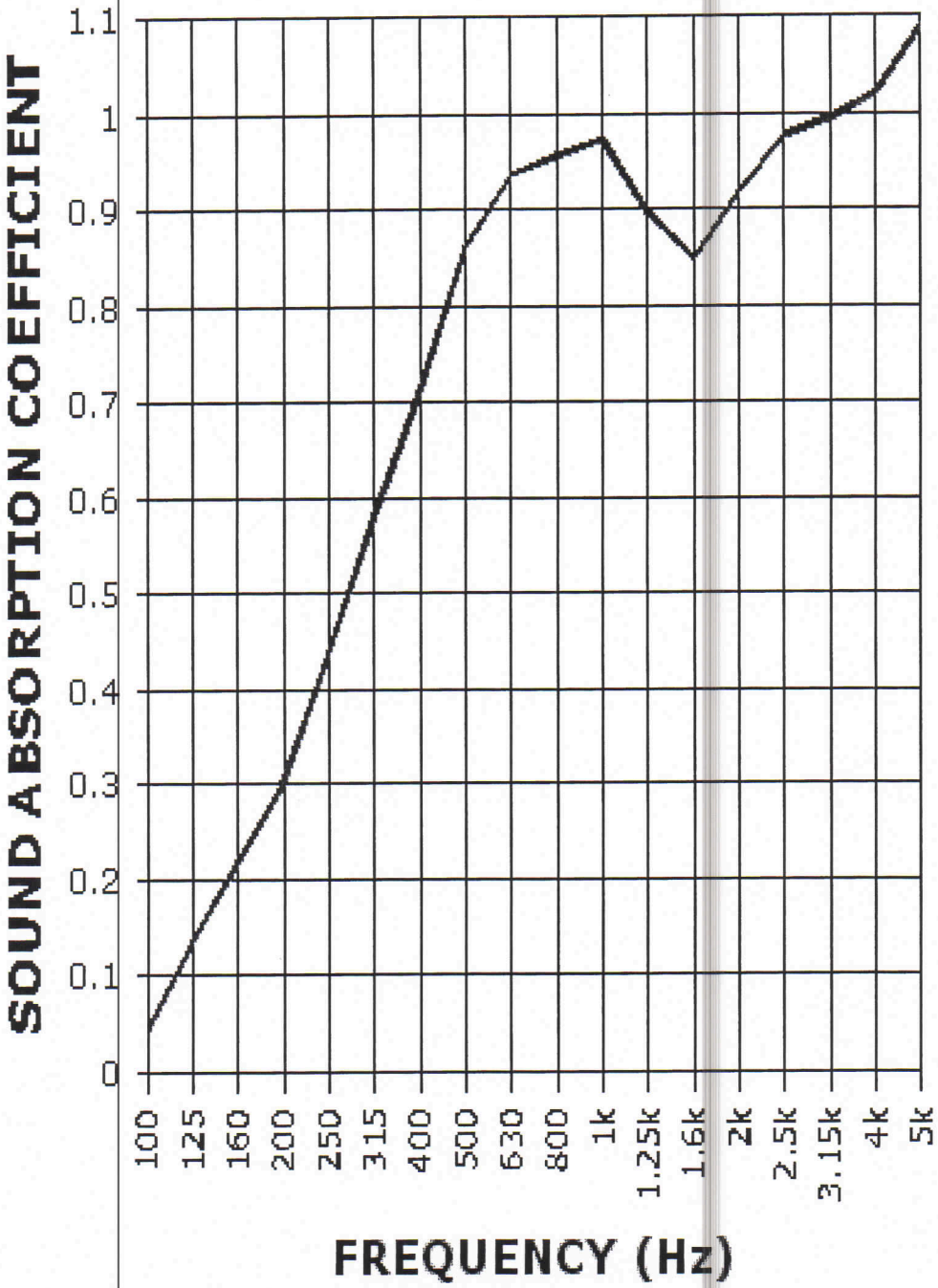
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# TEST REPORT



## SOUND ABSORPTION REPORT
## RAL-A12-119




**SAA=0.78**
**NRC=0.80**

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