Coefficient d'absorption acoustique pondéré α_w selon EN ISO 11654

EchoFree

Cabine acoustique

COEFFICIENT D'ABSORPTION ACOUSTIQUE PONDÉRÉ

$\alpha_w = 0{,}75$

Classe d'absorption

C

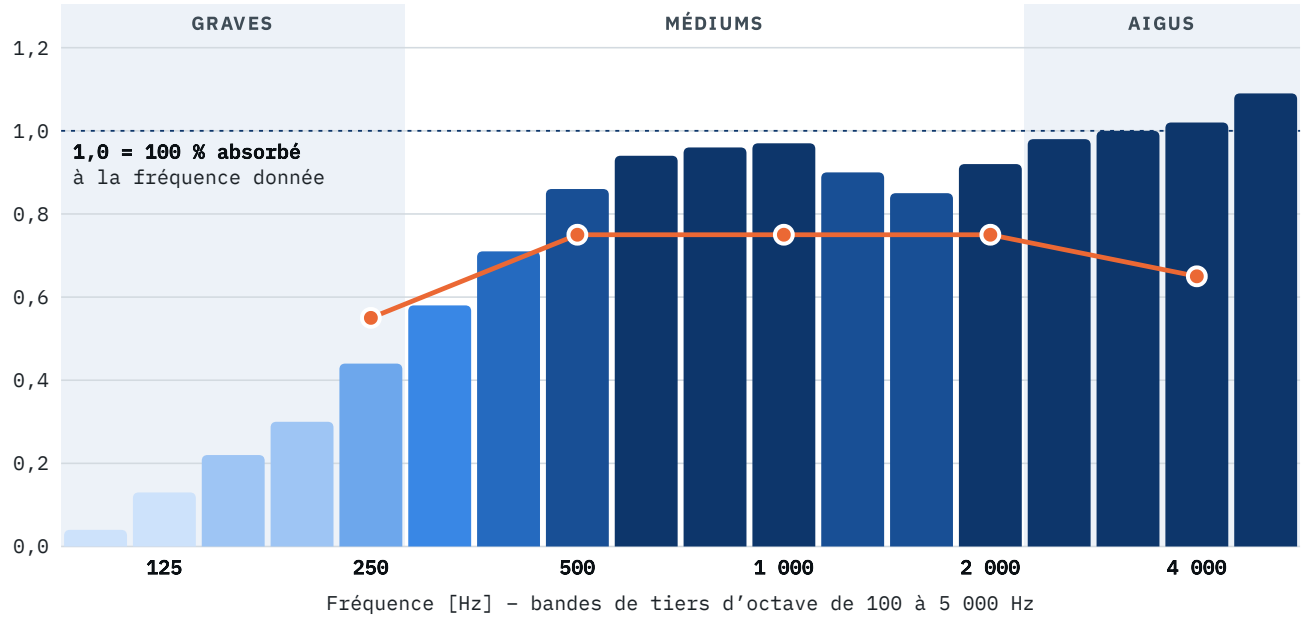
selon EN ISO 11654

1. Coefficients d'absorption mesurés par bandes de tiers d'octave

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
α_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 des valeurs : rapport RAL™-A12-119, page 2 (annexe du présent document).

2. Absorption par fréquence



coefficient d'absorption mesuré α_s (plus c'est foncé, plus il absorbe)

courbe de référence ISO 11654 pour $\alpha_w = 0{,}75$

3. Classe d'absorption acoustique

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

▲ **EchoFree: $\alpha_w = 0{,}75$ → classe C**

4. Calcul selon EN ISO 11654

OCTAVE [HZ]	A_S TIERS D'OCTAVE	MOYENNE	A_P	COURBE RÉF.	ÉCART DÉFAVORABLE
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
Somme des écarts défavorables (250–4 000 Hz) — limite de la norme ≤ 0,10					**0,10**

* Moyenne arrondie à 0,05 et plafonnée à 1,00 selon la norme. La courbe de référence (0,80 / 1,00 / 1,00 / 1,00 / 0,90) est décalée par pas de 0,05 vers le bas jusqu'à ce que la somme des écarts défavorables ne dépasse pas 0,10. À la valeur 0,75 dans la bande de 500 Hz, la somme est de 0,10, donc α_w = 0,75. Indicateur de forme H: α_p dépasse la courbe de 0,25 ou plus dans la bande 2 000–4 000 Hz (le matériau y absorbe davantage que ne l'indique α_w). Selon l'annexe B de la norme, α_w 0,60–0,75 correspond à la classe d'absorption C.

5. Mesure de laboratoire de référence

Laboratoire	Riverbank Acoustical Laboratories, 1512 S Batavia Ave, Geneva, IL, USA — accréditation NVLAP (Lab Code 100227-0), ISO/IEC 17025:2017
Rapport	RAL™-A12-119, mesure du 13/04/2012
Méthode	ASTM C423-09a et E795-05, chambre réverbérante 292 m³, 22 °C, 63 % HR
Montage	type G-75 selon ASTM E795 : une couche suspendue parallèlement au mur de la chambre à 75 mm
Échantillon	Producer's Choice Acoustic Blankets VB-72 (mélange de coton, garnissage en coton recyclé), 2,46 × 2,74 m, surface 6,8 m²

6. Avertissement

Ce document a été émis par VocalBoothToGo-EU s.r.o. Il ne s'agit pas d'un rapport de laboratoire et Riverbank Acoustical Laboratories n'en est pas l'auteur. La valeur α_w est calculée selon EN ISO 11654 à partir des coefficients d'absorption par tiers d'octave mesurés par le laboratoire selon la méthode ASTM C423, analogue à EN ISO 354 (chambre réverbérante).

Les résultats s'appliquent à l'échantillon testé et au montage indiqué. Le rapport original du laboratoire est joint sans modification en annexe.

Annexe : rapport de Riverbank Acoustical Laboratories RAL™-A12-119 (4 pages, original).

Établi par : VocalBoothToGo-EU s.r.o.

Date : 28/09/2026

RIVERBANK ACOUSTICAL LABORATORIES

1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134

Alion Science and Technology

630/232-0104
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WALLACE CLEMENT SABINE

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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THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.

NVLAP
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 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 _____ Approved by _____

Marc Sciaky
Experimentalist

Dean Victor
Senior Experimentalist

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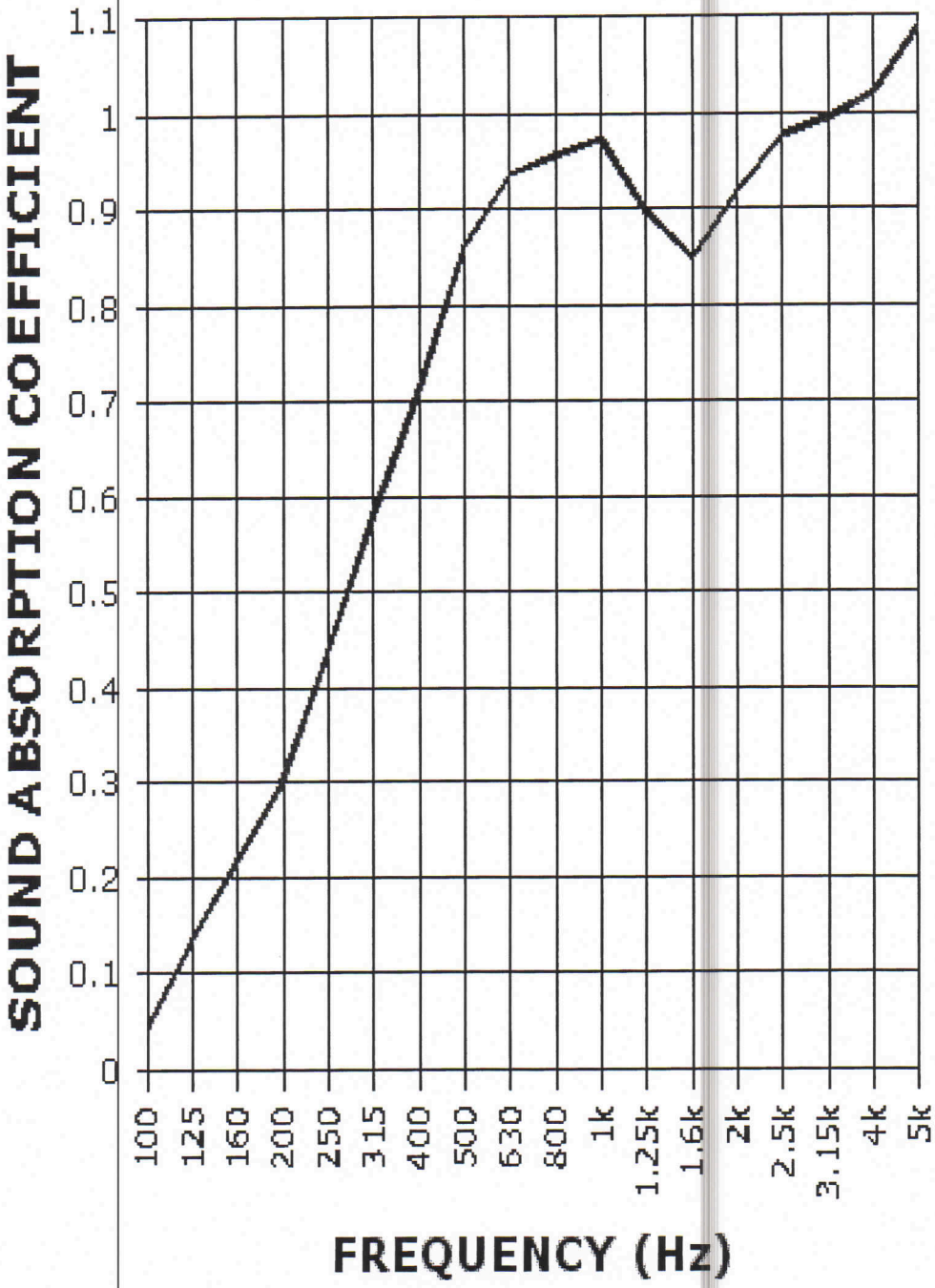
TEST REPORT

SOUND ABSORPTION REPORT
RAL-A12-119



SAA=0.78
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