

Measurement of the sound absorption per object according to DIN EN ISO 354

Measurement protocol



General test specimen description according to the producer:

Mobile wall
Frame construction with all-round steel frame
Melamine resin foam filling in two parts, with steel square tube in between,
Density 7 - 10.5 kg according to manufacturer
Camira Blazer fabric cover (460 g/m²)
Total height incl. adjustable feet: 1600 mm

No. Curve: Kurve (1)
Designation: LinkUp Mobile Stellwand
Producer: VS Vereinigte Spezialmöbelfabriken (GmbH & Co. KG)
Source: reverberation chamber Nbg

Description of test setup:

Quantity: 3 Piece
Length: 1400 (mm)
Wide: 1000 (mm)
Thickness: 35 (mm)
Height slope: 0 (mm)
Distance (test items) > 1000 (mm)

Test standard requirements

sound absorption per object
Corresponds to ISO 354:
Test area for α_{Object} per object:
More information:
-

A_{Obj}
yes
2,97 (m²)

Figure/Photo - Measurement setup



Reverberation chamber and measurement method:

Measuring method: Interrupted noise
Vol. echo chamber: 391,6 (m³)
Temp. reference: 16,2 (°C)
rel. humidity ref: 35,4 (%)
Air pressure ref: 96,9 (kPa)

Room surface echo chamber: 322,2 (m²)
Temp. measurement test specimen: 16,2 (°C)
Rel. humidity measurement test specimen: 41,5 (%)
Air pressure measurement test specimen: 97,0 (kPa)

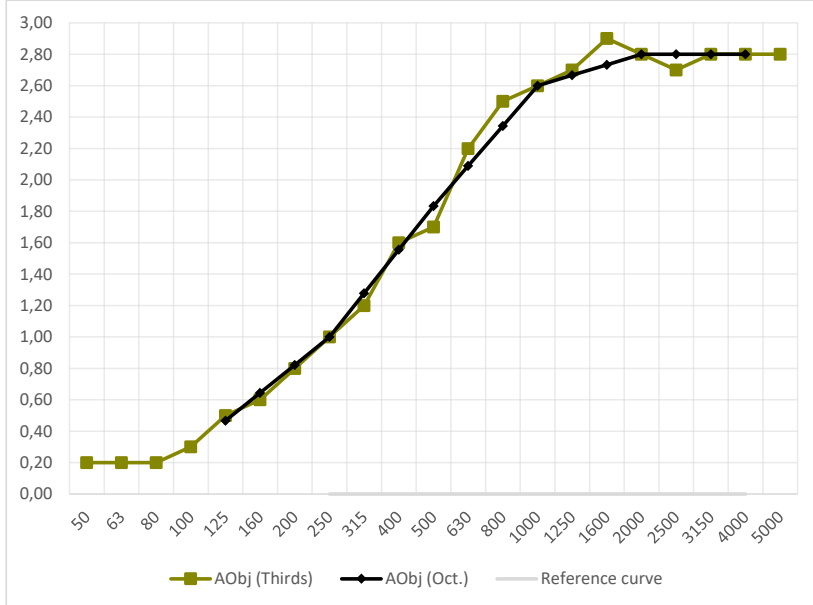
Display:

Curve thirds: yes
Curve octaves: yes
Reference curve: yes

α_{Object}	acc. DIN ISO 20189
f (Hz)	cal.(-) corr.(-)
63	0,05 0,05
125	0,15 0,15
250	0,35 0,35
500	0,60 0,60
1000	0,90 0,90
2000	0,95 0,95
4000	0,95 0,95

Frequency f (Hz)	Thirds A_{Obj} (m ²)	Octaves A_{Obj} (m ²)
50	0,2	0,2
63	0,2	0,2
80	0,2	0,2
100	0,3	0,5
125	0,5	0,5
160	0,6	0,5
200	0,8	1,0
250	1,0	1,0
315	1,2	1,0
400	1,6	1,8
500	1,7	1,8
630	2,2	1,8
800	2,5	2,6
1000	2,6	2,6
1250	2,7	2,6
1600	2,9	2,8
2000	2,8	2,8
2500	2,7	2,8
3150	2,8	2,8
4000	2,8	2,8
5000	2,8	2,8

sound absorption per object A_{Obj} (m²) for each frequency f (Hz)



Test curve or measurement report: Extract from the test series of the acoustic laboratory of TRL

Examiner/Institute: TÜV Rheinland; Tillystraße 2, 90431 Nürnberg

Test date: 05.12.2023

Examiner:

Daniel Richter (TÜV Rheinland)

Creation data sheet:

Andreas Witzgall; B.Eng.

Measurement of sound absorption coefficient based on DIN EN ISO 354

Measurement protocol



Information:

According to the standard, the absorption per object A_{Object} is determined for acoustic furniture in the reverberation chamber. It is not intended to determine the absorption coefficient due to the undefined test area. The determination of an absorption coefficient in this document is for orientation and comparison purposes. The two the main surfaces of a screen (length x wide x 2) were determined as the test area for the evaluation.

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Melamine resin foam filling in two parts, with steel square tube in between,
Density 7 - 10.5 kg according to manufacturer
Camira Blazer fabric cover (460 g/m²)
Total height incl. adjustable feet: 1600 mm

No. Curve: AlphaW(1)
Designation: LinkUp Mobile Stellwand
Producer: VS Vereinigte Spezialmöbelfabriken (GmbH & Co. KG)
Source: reverberation chamber Nbg

Description of test setup:

Quantity: 3 Piece
Length: 1400 (mm)
Wide: 1000 (mm)
Thickness: 35 (mm)
Height slope: 0 (mm)
Distance (test items) > 1000 (mm)

Test standard requirements

Sound Absorption Coefficient
Corresponds to ISO 354:
Total test area: 8,40 (m²)
More information: -

Figure/Photo - Measurement setup



Reverberation chamber and measurement method:

Measuring method: Interrupted noise
Vol. echo chamber: 391,6 (m³)
Temp. reference: 16,2 (°C)
rel. humidity ref: 35,4 (%)
Air pressure ref: 96,9 (kPa)

Room surface echo chamber: 322,2 (m²)
Temp. measurement test specimen: 16,2 (°C)
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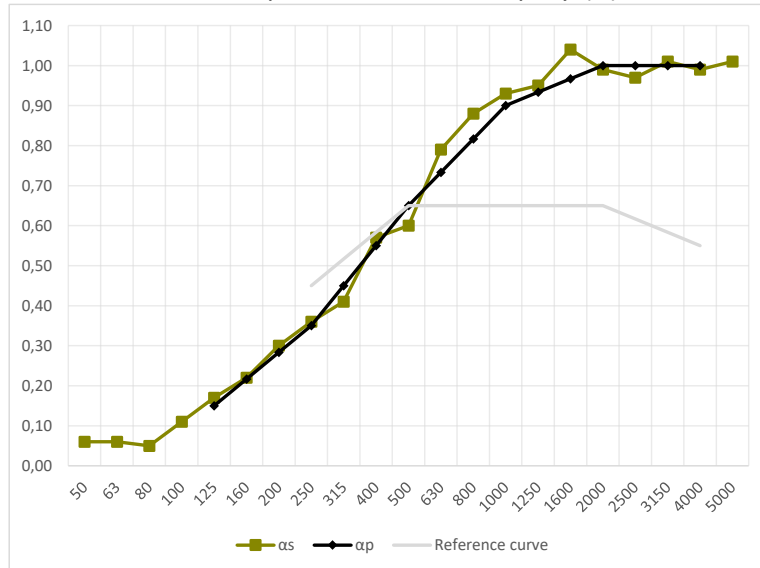
Display:

Curve thirds: yes
Curve octaves: yes
Reference curve: yes



Sound Absorption Coefficient α for each frequency f (Hz)

Frequency f (Hz)	Thirds α_s (-)	Octaves α_p (-)
50	0,06	0,05
63	0,06	
80	0,05	
100	0,11	0,15
125	0,17	
160	0,22	
200	0,30	0,35
250	0,36	
315	0,41	
400	0,57	0,65
500	0,60	
630	0,79	
800	0,88	0,90
1000	0,93	
1250	0,95	
1600	1,04	1,00
2000	0,99	
2500	0,97	
3150	1,01	1,00
4000	0,99	
5000	1,01	



Evaluation based on to DIN EN ISO 11654

α_w	0,65
Absorberklasse	C

Single number rating based on ASTM C423-23

NRC	0,70
SAA	0,73

Test curve/measurement report: Extract from the test series of the acoustic laboratory of TRL

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