

Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Sigel GmbH Businessproducts
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Test specimen: Acoustic room dividers Sound Balance

Two acoustic room dividers Sound Balance were tested at three positions each as individual objects free-standing in the reverberation room.

One room dividing partition consisted of three partial segments of the following dimensions:

height: 1400 mm

partial segment middle: width outside 440 mm, width inside 400 mm, thickness 45 mm

partial segment right side: width outside 400 mm, width inside 350 mm, thickness 45 mm

partial segment left side: width outside 400 mm, width inside 350 mm, thickness 45 mm

Visible face outside = 1.74 m²

visible face inside = 1,54 m²

test surface = 2 objects x 3.28 m² = 6.56 m²

The room dividing partition had the following standard structure:

- 1 mm tissue, mass per unit area 227 g/m², specific airflow resistance 166 Pa s/m

- 3 x 15 mm PET, gross density 160 kg/m³

- 1 mm tissue, mass per unit area 227 g/m², specific airflow resistance 166 Pa s/m

Room: reverberation room

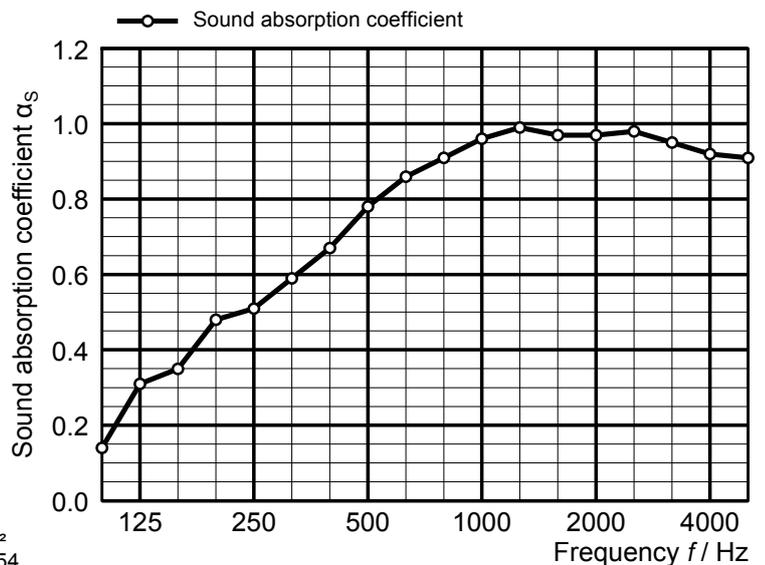
Volume: 199.60 m³

Size: 6.56 m²

Date of test: 2018-08-01

	θ [°C]	<i>r. h.</i> [%]	<i>B</i> [kPa]
without specimen	25.9	53.3	95.2
with specimen	26.1	50.9	95.0

Frequency [Hz]	α_s 1/3 octave	α_p octave
100	0.14	
125	0.31	0.25
160	0.35	
200	0.48	
250	0.51	0.55
315	0.59	
400	0.67	
500	0.78	0.75
630	0.86	
800	0.91	
1000	0.96	0.95
1250	0.99	
1600	0.97	
2000	0.97	0.95
2500	0.98	
3150	0.95	
4000	0.92	0.95
5000	0.91	



o Equivalent sound absorption area less than 1.0 m²
 α_s Sound absorption coefficient according to ISO 354

α_p Practical sound absorption coefficient according to ISO 11654

Rating according to ISO 11654: Weighted sound absorption coefficient $\alpha_w = 0.80$ (H) Sound absorption class: B	Rating according to ASTM C423: Noise Reduction Coefficient NRC = 0.80 Sound Absorption Average SAA = 0.81
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MÜLLER-BBM

Planegg, 2018-11-29

No. of test report M136562/4

Appendix B

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