Sound absorption coefficient ISO 354
Measurement of sound absorption in reverberation rooms

Client: Sigel GmbH Businessproducts
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Test specimen: Acoustic screen Sound Balance

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

Each room dividing partition had the following dimensions:
  height: 1500 mm
  width: 1000 mm
  tickness: 60 mm over a width of 600 mm,
                 narrowing on either side to 30 mm over a width of 200 mm

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
- 15 mm PET, gross density 160 kg/m³
- 9 mm PET, gross density 130 kg/m³
- 20 mm polyester nonwoven, 25 mm nominal thickness compressed to 20 mm,
  at nominal thickness: gross density 18 kg/m³ and specific airflow resistance 67 Pa s/m
- 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

Visible face area per room dividing partition = 2 x 1.50 m²
Test surface = 2 objects x 3.00 m² = 6.00 m²
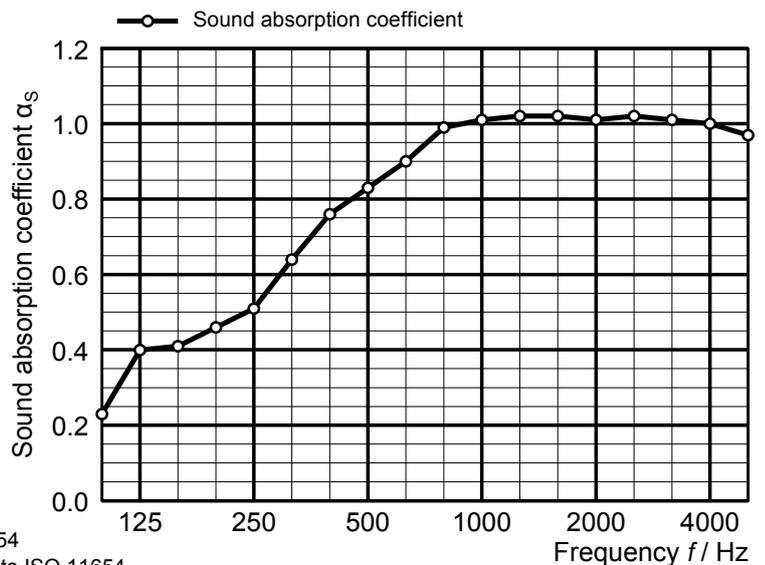
Room: reverberation room
Volume: 199.60 m³
Size: 6.00 m²
Date of test: 2018-09-19

	θ [°C]	r. h. [%]	B [kPa]
without specimen	23.7	58.1	95.8
with specimen	23.7	58.2	95.8

Frequency [Hz]	α_S 1/3 octave	α_p octave
100	0.23	
125	0.40	0.35
160	0.41	
200	0.46	
250	0.51	0.55
315	0.64	
400	0.76	
500	0.83	0.85
630	0.90	
800	0.99	
1000	1.01	1.00
1250	1.02	
1600	1.02	
2000	1.01	1.00
2500	1.02	
3150	1.01	
4000	1.00	1.00
5000	0.97	

α_S Sound absorption coefficient according to ISO 354
α_p Practical sound absorption coefficient according to ISO 11654

Rating according to ISO 11654:	Rating according to ASTM C423:
Weighted sound absorption coefficient **α_w = 0.85 (H)** Sound absorption class: B	**Noise Reduction Coefficient NRC = 0.85** **Sound Absorption Average SAA = 0.85**

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