

Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Gebrüder Munzert GmbH & Co. KG
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Test specimen: Fabric CS Coman
arranged as curtain (folded with 100 % fabric addition and 100 mm distance)

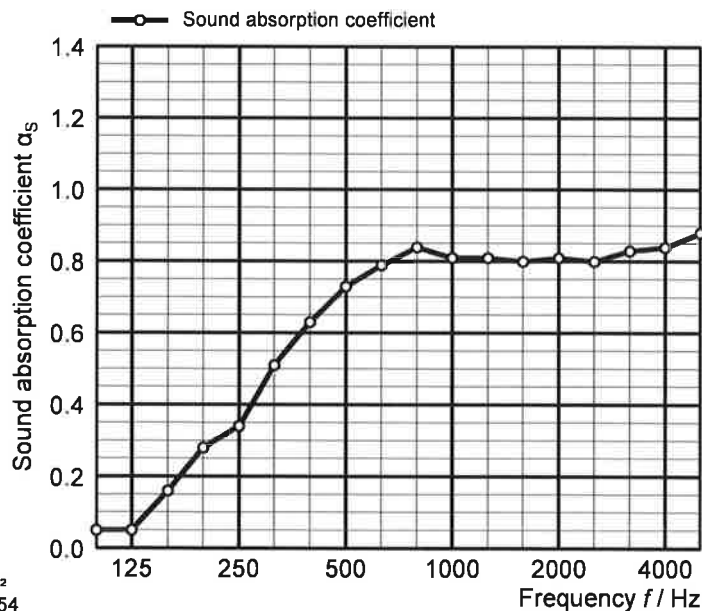
- Material details:**
- curtain fabric CS Coman
 - area specific mass $m'' = 195 \text{ g/m}^2$ (acc. to manufacturer's information)
 - airflow resistance $R_S = 331 \text{ Pa s/m}$
 - thickness $t = 0.55 \text{ mm}$

- Test arrangement:**
- curtain arrangement following type G-100 acc. to EN ISO 354, without enclosing frame
 - folded arrangement (100 % fabric addition)
 - 100 mm clear distance to the reflective wall
 - two webs (one web $W \times H = 4.00 \text{ m} \times 3.00 \text{ m}$, one web $W \times H = 3.98 \text{ m} \times 3.00 \text{ m}$), webs jointed with 20 mm overlap
 - fixed directly underneath the ceiling on a 50 mm high metal rail
 - test surface width x height = 3.98 m x 2.95 m (starting at the lower edge of the metal rail)

Room: Hallraum E
Volume: 199.60 m³
Size: 11.74 m²
Date of test: 2015-07-03

	θ [°C]	r. h. [%]	B [kPa]
without specimen	24.8	65.7	96.1
with specimen	24.9	63.5	96.1

Frequency [Hz]	α_s 1/3 octave	α_p octave
100	0.05	
125	0.05	0.10
160	0.16	
200	0.28	
250	0.34	0.40
315	0.51	
400	0.63	
500	0.73	0.70
630	0.79	
800	0.84	
1000	0.81	0.80
1250	0.81	
1600	0.80	
2000	0.81	0.80
2500	0.80	
3150	0.83	
4000	0.84	0.85
5000	0.88	



◦ 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
 $\alpha_w = 0.70 (H)$
 Sound absorption class: C

Rating according to ASTM C423:
Noise Reduction Coefficient $NRC = 0.65$
Sound Absorption Average $SAA = 0.68$

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Appendix A
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