

Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Gebrüder Munzert GmbH & CO. KG
Ernst-Richard-Funke-Str. 17-19, 95119 Naila-Marlesreuth, Germany

Test specimen: Fabric Type CS Caine 4834 Grasslands
arranged hanging flat, 100 mm wall distance

Fabric:
Information provided by the client

- designation: "CS Caine" 4834 Grasslands
- article: 472930
- color: 16
- material: 97 % Trevira CS, 3 % PES
- area specific mass $m'' = 249 \text{ g/m}^2$

Information provided by testing laboratory
(determined at one sample of the curtain, dimensions 210 mm x 297 mm)

- airflow resistance $R_S = 386 \text{ Pa s/m}$
- thickness $t = 0.73 \text{ mm}$

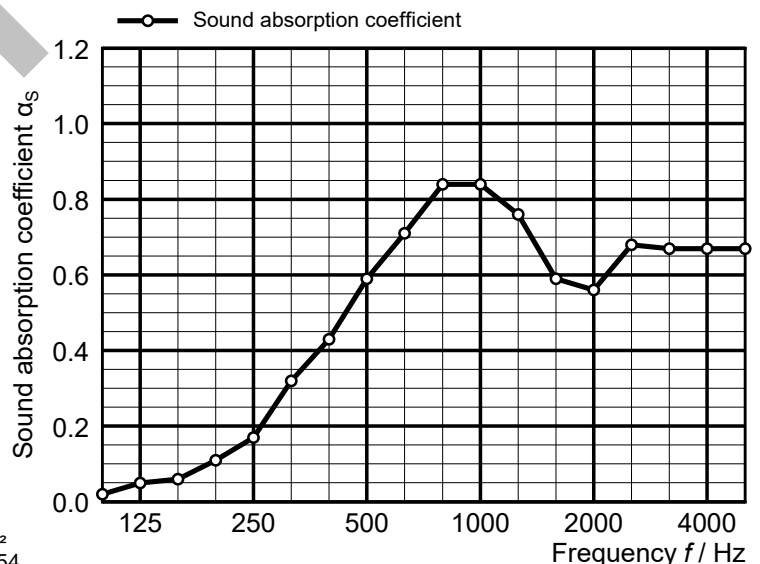
Test arrangement:

- curtain arranged in mounting type G-100 acc. to DIN EN ISO 354, arranged without enclosing frame
- flat arrangement with 100 % fabric addition
- one curtain web, height x width = 3005 mm x 3500 mm, suspended from a metal rail (height 60 mm)
- clear distance to the back wall 100 mm
- test surface width x height = 3.50 m x 2.95 m (starting at lower border of the metal rail)

Room: E
Volume: 199.60 m³
Size: 10.33 m²
Date of test: 2021-03-26

	θ [°C]	$r. h.$ [%]	B [kPa]
without specimen	20.2	30.5	95.6
with specimen	20.1	31.2	95.6

Frequency [Hz]	α_s 1/3 octave	α_p octave
100	0.02	
125	0.05	0.05
160	0.06	
200	0.11	
250	0.17	0.20
315	0.32	
400	0.43	
500	0.59	0.60
630	0.71	
800	0.84	
1000	0.84	0.80
1250	0.76	
1600	0.59	
2000	0.56	0.60
2500	0.68	
3150	0.67	
4000	0.67	0.65
5000	0.67	



◦ 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

Product development only for internal use

<p>Rating according to ISO 11654: Weighted sound absorption coefficient $\alpha_w = 0.50$ (MH) Sound absorption class: D</p>	<p>Rating according to ASTM C423: Noise Reduction Coefficient NRC = 0.55 Sound Absorption Average SAA = 0.55</p>
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Measurement of sound absorption in reverberation rooms

Client: Gebrüder Munzert GmbH & CO. KG
Ernst-Richard-Funke-Str. 17-19, 95119 Naila-Marlesreuth, Germany

Test specimen: Fabric Type CS Caine 4834 Grasslands
arranged as pleated curtain, 100 % fullness, 100 mm wall distance

Fabric:
Information provided by the client

- designation: "CS Caine" 4834 Grasslands
- article: 472930
- color: 16
- material: 97 % Trevira CS, 3 % PES
- area specific mass $m'' = 249 \text{ g/m}^2$

Information provided by testing laboratory
(determined at one sample of the curtain, dimensions 210 mm x 297 mm)

- airflow resistance $R_S = 386 \text{ Pa s/m}$
- thickness $t = 0.73 \text{ mm}$

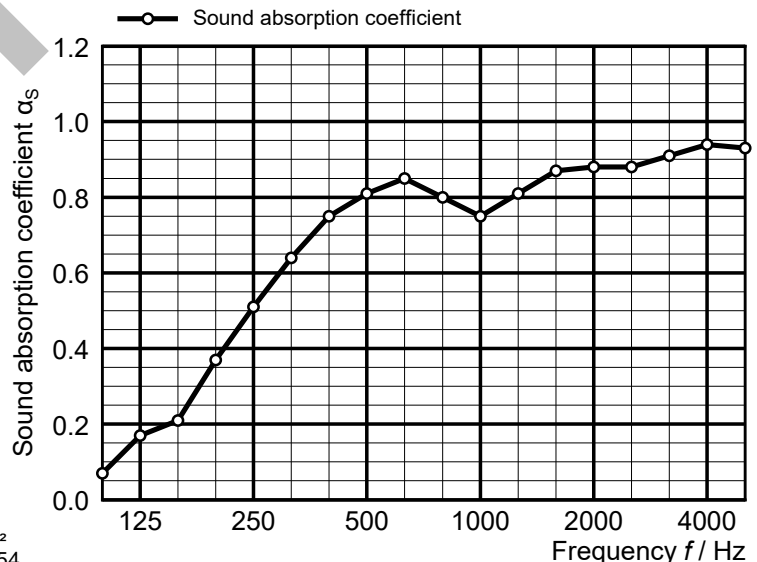
Test arrangement:

- curtain arranged in the style of mounting type G-100 acc. to DIN EN ISO 354, arranged without enclosing frame
- arranged as pleated curtain with 100 % fullness
- one curtain web, height x width = 3005 mm x 7330 mm, suspended from a metal rail (height 60 mm)
- clear distance to the back wall 100 mm
- test surface width x height = 3.67 m x 2.95 m (starting at lower border of the metal rail)

Room: E
Volume: 199.60 m³
Size: 10.83 m²
Date of test: 2021-03-26

	θ [°C]	$r. h.$ [%]	B [kPa]
without specimen	20.2	30.5	95.6
with specimen	20.2	30.7	95.6

Frequency [Hz]	α_s 1/3 octave	α_p octave
100	0.07	
125	0.17	0.15
160	0.21	
200	0.37	
250	0.51	0.50
315	0.64	
400	0.75	
500	0.81	0.80
630	0.85	
800	0.80	
1000	0.75	0.80
1250	0.81	
1600	0.87	
2000	0.88	0.90
2500	0.88	
3150	0.91	
4000	0.94	0.95
5000	0.93	



◦ 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

Product development only for internal use

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 = 0.75 Sound Absorption Average SAA = 0.74
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Gewebe	Herstellerangabe lt. Kennzeichnung	Ergebnis Stichprobenmessung
CS Caine	$m'' = 249 \text{ g/m}^2$	$m'' = 253 \text{ g/m}^2$

INTERIM