Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Annette Douglas Textiles AG
Klosterstrasse 42, 5430 Wettingen, Switzerland

Test specimen: Fabric STREAMER pro
Wall distance 150 mm, folded arrangement

Curtain fabric:

- curtain fabric STREAMER pro
- material 90% Trevira CS, 10% FR
- area specific mass m'' = 150 g/m²
- air flow resistance R_S = 373 Pa s/m
- thickness t = 0.83 mm

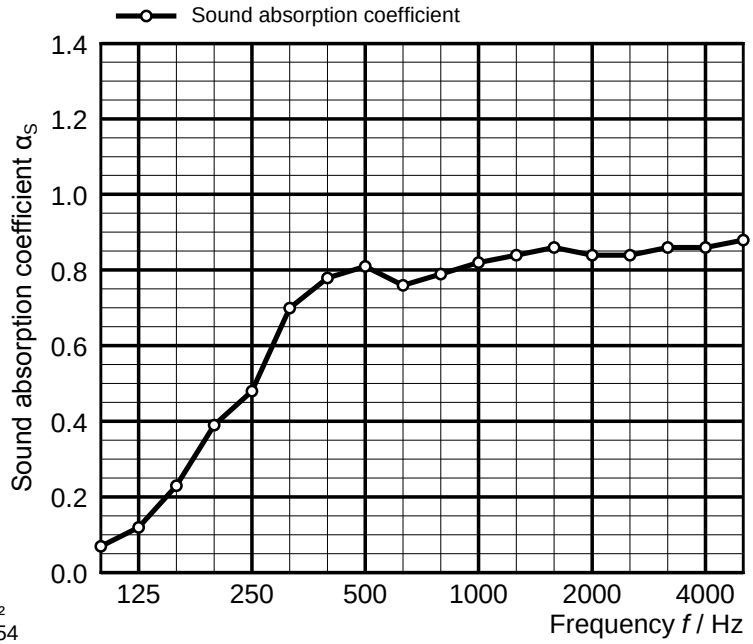
Tested arrangement:

- mounting type following G-150 acc. to EN ISO 354, without enclosing frame
- two curtains with each width x height = 3500 mm x 3000 mm (one curtain with missing corner 0.42 m x 0.28 m)
- fixed directly underneath the ceiling on a 50 mm high metal rail
- wall distance 150 mm
- test surface width x height = 3500 mm x 2950 mm (starting at the lower edge of the metal rail), minus missing corner

Room: E
Volume: 199.60 m³
Size: 10.27 m²
Date of test: 2014-01-07

	θ [°C]	r. h. [%]	B [kPa]
without specimen	17.1	37.7	95.5
with specimen	17.4	38.9	95.5

Frequency [Hz]	α_S 1/3 octave	α_p octave
100	◦ 0.07	
125	0.12	0.15
160	0.23	
200	0.39	
250	0.48	0.50
315	0.70	
400	0.78	
500	0.81	0.80
630	0.76	
800	0.79	
1000	0.82	0.80
1250	0.84	
1600	0.86	
2000	0.84	0.85
2500	0.84	
3150	0.86	
4000	0.86	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:	Rating according to ASTM C423:
Weighted sound absorption coefficient α_w = 0.80	**Noise Reduction Coefficient *NRC* = 0.75**
Sound absorption class: B	**Sound Absorption Average *SAA* = 0.74**

Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Annette Douglas Textiles AG
Klosterstrasse 42, 5430 Wettingen, Switzerland

Test specimen: Fabric STREAMER pro
Mounting type G-150, flat arrangement

Curtain fabric:

- curtain fabric STREAMER pro
- material 90% Trevira CS, 10% FR
- area specific mass m'' = 150 g/m²
- air flow resistance R_S = 373 Pa s/m
- thickness t = 0.83 mm

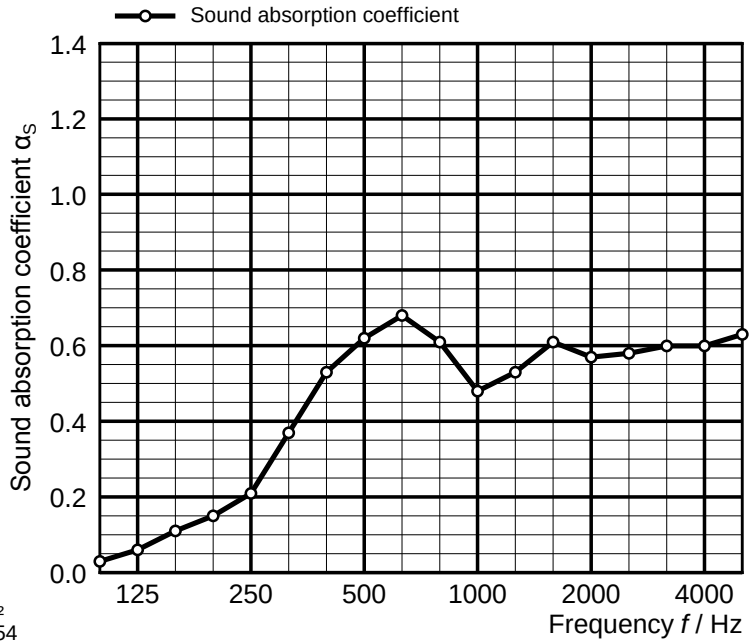
Tested arrangement:

- mounting type G-150 acc. to EN ISO 354, without enclosing frame
- one curtain width x height = 3500 mm x 3000 mm
- fixed directly underneath the ceiling on a 50 mm high metal rail
- wall distance 150 mm
- test surface width x height = 3500 mm x 2950 mm (starting at the lower edge of the metal rail)

Room: E
Volume: 199.60 m³
Size: 10.33 m²
Date of test: 2014-01-07

	θ [°C]	r. h. [%]	B [kPa]
without specimen	17.1	37.7	95.5
with specimen	17.4	37.7	95.5

Frequency [Hz]	α_S 1/3 octave	α_p octave
100	∘ 0.03	
125	∘ 0.06	0.05
160	0.11	
200	0.15	
250	0.21	0.25
315	0.37	
400	0.53	
500	0.62	0.60
630	0.68	
800	0.61	
1000	0.48	0.55
1250	0.53	
1600	0.61	
2000	0.57	0.60
2500	0.58	
3150	0.60	
4000	0.60	0.60
5000	0.63	



∘ 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:	Rating according to ASTM C423:
Weighted sound absorption coefficient α_w = 0.55	**Noise Reduction Coefficient *NRC* = 0.45**
Sound absorption class: D	**Sound Absorption Average *SAA* = 0.50**