

Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Silent Gliss Fabrics & Components GmbH,
Rheinauenstraße 8, D-79415 Bad Bellingen

Test specimen: Curtain Colorama Akustik Multicolour,
curtain track system Wave, wall distance 200 mm

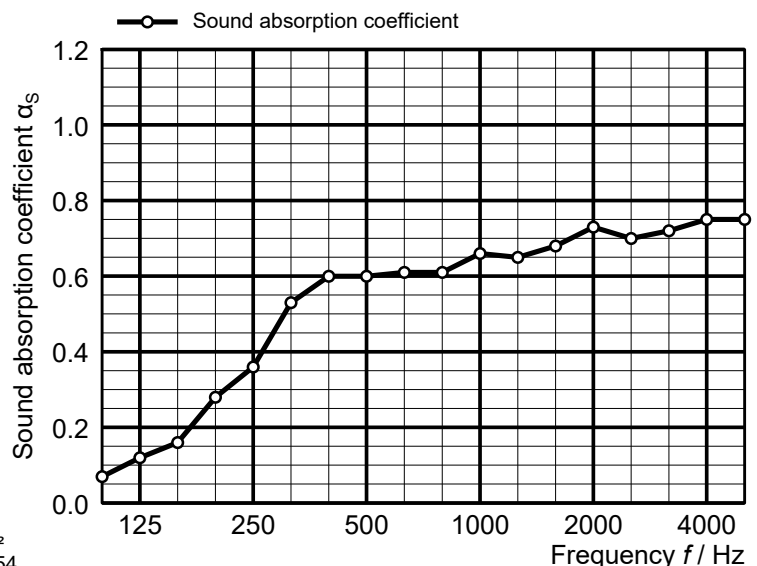
- Fabric:**
- manufacturer Silent Gliss
 - curtain fabric type "Colorama Akustik Multicolour"
 - material 100 % polyester
 - area specific mass app. $m'' = 134 \text{ g/m}^2$
 - specific airflow resistance $R_S = 188 \text{ Pa s/m}$
 - thickness $t = 0.42 \text{ mm}$

- Test arrangement:**
- in style of mounting type G-200 acc. EN ISO 354, test arrangement without enclosing frame
 - curtain fabric with total dimensions of $W \times H = 7000 \text{ mm} \times 2990 \text{ mm}$, top edge with 75 mm curtain tape, lateral edges with 20 mm hems
 - Wave-mounting with 100 % fabric addition, width of curtain $W = 3500 \text{ mm}$
 - Wave-profile: 80 mm distance between fixing points at curtain rail
depth of Wave-profile 120 mm (each 60 mm to both sides of the rail)
 - fixed to a Wave curtain track system rail at the ceiling of the reverberation room
 - 200 mm distance from the wall to the axis of the curtain rail
 - test surface $W \times H = 3500 \text{ mm} \times 3000 \text{ mm}$

Room: E
Volume: 199.60 m³
Size: 10.47 m²
Date of test: 2019-04-29

	θ [°C]	$r. h.$ [%]	B [kPa]
without specimen	19.8	39.2	95.5
with specimen	19.8	39.6	95.5

Frequency [Hz]	α_s 1/3 octave	α_p octave
100	0.07	
125	0.12	0.10
160	0.16	
200	0.28	
250	0.36	0.40
315	0.53	
400	0.60	
500	0.60	0.60
630	0.61	
800	0.61	
1000	0.66	0.65
1250	0.65	
1600	0.68	
2000	0.73	0.70
2500	0.70	
3150	0.72	
4000	0.75	0.75
5000	0.75	



◦ 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

<p>Rating according to ISO 11654: Weighted sound absorption coefficient $\alpha_w = 0.65$ Sound absorption class: C</p>	<p>Rating according to ASTM C423: Noise Reduction Coefficient $NRC = 0.60$ Sound Absorption Average $SAA = 0.58$</p>
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Planegg, 2021-03-05
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Appendix A
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