Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

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

Test specimen: Curtain fabric LEVISIO
folded arrangement with 100 % fabric addition, wall distance 100 mm

Fabric:

- curtain fabric type LEVISIO
- material: polyester FR
- area related mass m'' = 370 g/m² (manufacturer's information)
- airflow resistance R_S = 1678 Pa s/m
- thickness t = 0.77 mm

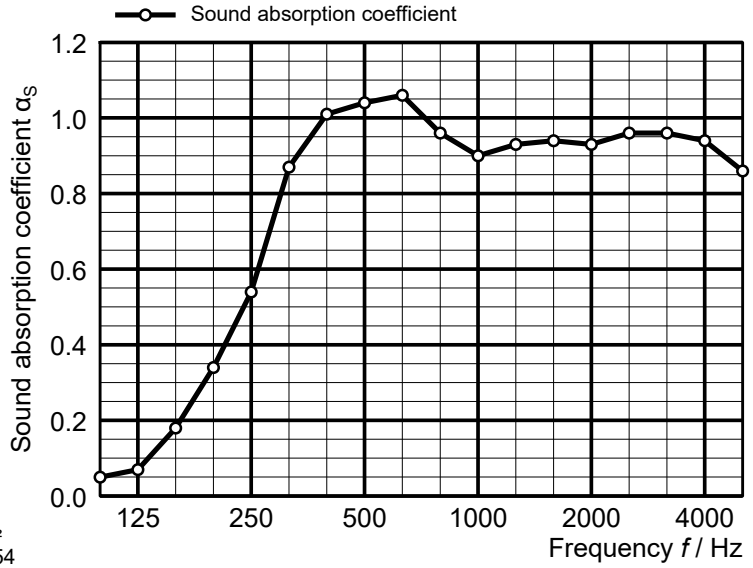
Test arrangement:

- in the style of mounting type G-100 acc. to DIN EN ISO 354, set-up without enclosing frame
- folded arrangement with 100 % fabric addition
- one curtain web: width x height = 7.20 m x 2.98 m, suspended from a 50 mm high ceiling rail on the ceiling of the reverberation room
- 100 mm clear distance to the wall
- test surface width x height = 3.60 m x 2.93 m (starting from the lower border the metal rail)

Room: E
Volume: 199.60 m³
Size: 10.55 m²
Date of test: 2017-12-13

	θ [°C]	*r. h.* [%]	*B* [kPa]
without specimen	19.7	31.7	94.6
with specimen	19.5	32.9	94.5

Frequency [Hz]	α_S 1/3 octave	α_p octave
100	∘ 0.05	
125	∘ 0.07	0.10
160	0.18	
200	0.34	
250	0.54	0.60
315	0.87	
400	1.01	
500	1.04	1.00
630	1.06	
800	0.96	
1000	0.90	0.95
1250	0.93	
1600	0.94	
2000	0.93	0.95
2500	0.96	
3150	0.96	
4000	0.94	0.90
5000	0.86	



∘ 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 = 0.90	**Noise Reduction Coefficient *NRC* = 0.85**
Sound absorption class: A	**Sound Absorption Average *SAA* = 0.87**