Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Artimo Textiles BV
4706 NK Roosendaal, The Netherlands

Test specimen: Fabric Dual
pleated curtain with 100 % fullness, 150 mm wall distance

Curtain fabric:
Information provided by the client
- designation Dual
- material 100 % Trevira CS

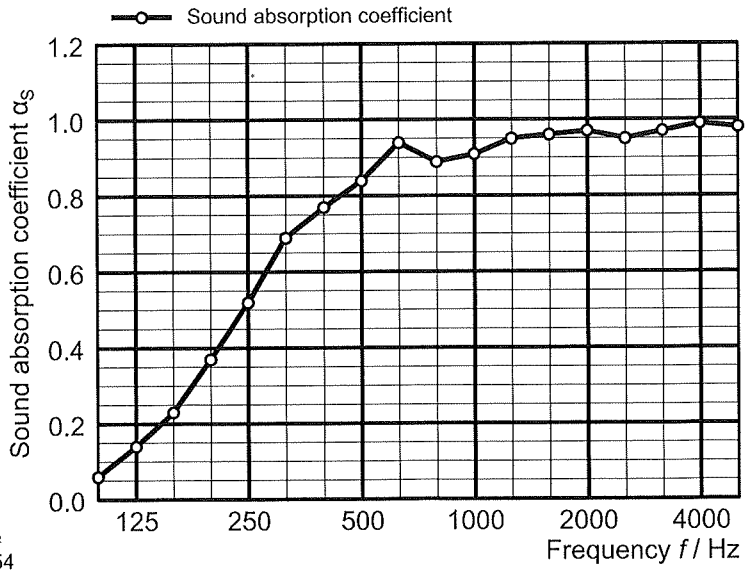
Properties determined by the testing laboratory
(determined at one sample from test material dim. 210 mm x 297 mm)
- area specific mass m'' = 321 g/m²
- airflow resistance R_S = 597 Pa s/m
- thickness t = 0.77 mm

Test arrangement:
- style of type G-150 mounting acc. to DIN EN ISO 354
- arranged as a pleated curtain with 100 % fullness hanging in front of a reflecting wall
- fixed directly underneath the ceiling of the reverberation room, suspended from a metal rail (height 90 mm, overlap 60 mm), distance to the back wall 150 mm
- test arrangement without enclosing frame
- factory-made ready-for-use curtain splice width x height = 6940 mm x 2980 mm, 6 cm curtain tape at the upper edge
- test surface width x height = 3.47 m x 2.92 m (starting at the lower edge of the metal rail)

Room: E
Volume: 199.60 m³
Size: 10.13 m²
Date of test: 2022-02-11

	θ [°C]	*r. h.* [%]	*B* [kPa]
without specimen	19.4	33.1	96.2
with specimen	19.5	32.5	96.2

Frequency [Hz]	α_S 1/3 octave	α_p octave
100	∘ 0.06	
125	0.14	0.15
160	0.23	
200	0.37	
250	0.52	0.55
315	0.69	
400	0.77	
500	0.84	0.85
630	0.94	
800	0.89	
1000	0.91	0.90
1250	0.95	
1600	0.96	
2000	0.97	0.95
2500	0.95	
3150	0.97	
4000	0.99	1.00
5000	0.98	



∘ 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 = 0.85 (*H*)	**Noise Reduction Coefficient *NRC* = 0.80**
Sound absorption class: B	**Sound Absorption Average *SAA* = 0.81**