

Ceiling E-200, 10 m²

SOUND ABSORPTION COEFFICIENT ACCORDING TO SS-EN ISO 354:2003 AND SS-EN ISO 11654:1997

Measurement of sound absorption coefficient in a reverberation room



Report number:
21-708-M2a
Date
2021-04-09

Frequency f [Hz]	Sound absorption coefficient	
	α_s	α_p
50	0.06	
63	0.12	0.10
80	0.16	
100	0.27	
125	0.47	0.40
160	0.44	
200	0.52	
250	0.49	0.50
315	0.56	
400	0.58	
500	0.61	0.65
630	0.69	
800	0.78	
1000	0.76	0.75
1250	0.75	
1600	0.77	
2000	0.82	0.80
2500	0.85	
3150	0.96	
4000	0.94	0.95
5000	1.01	

Client: Nordgröna AB

Manufacturer: Nordgröna AB

Product identification: Ceiling

Description of test specimen: Sound absorbing tiles made of reindeer moss in an aluminium cartridge.
Material thickness 40-70 mm.
The tiles were placed in a grid for suspended ceilings with a total construction height of 200 mm (E-200 mounting).

Reverberation room volume: 200 m³

Temperature: 17.0 °C (empty: 19.0 °C)

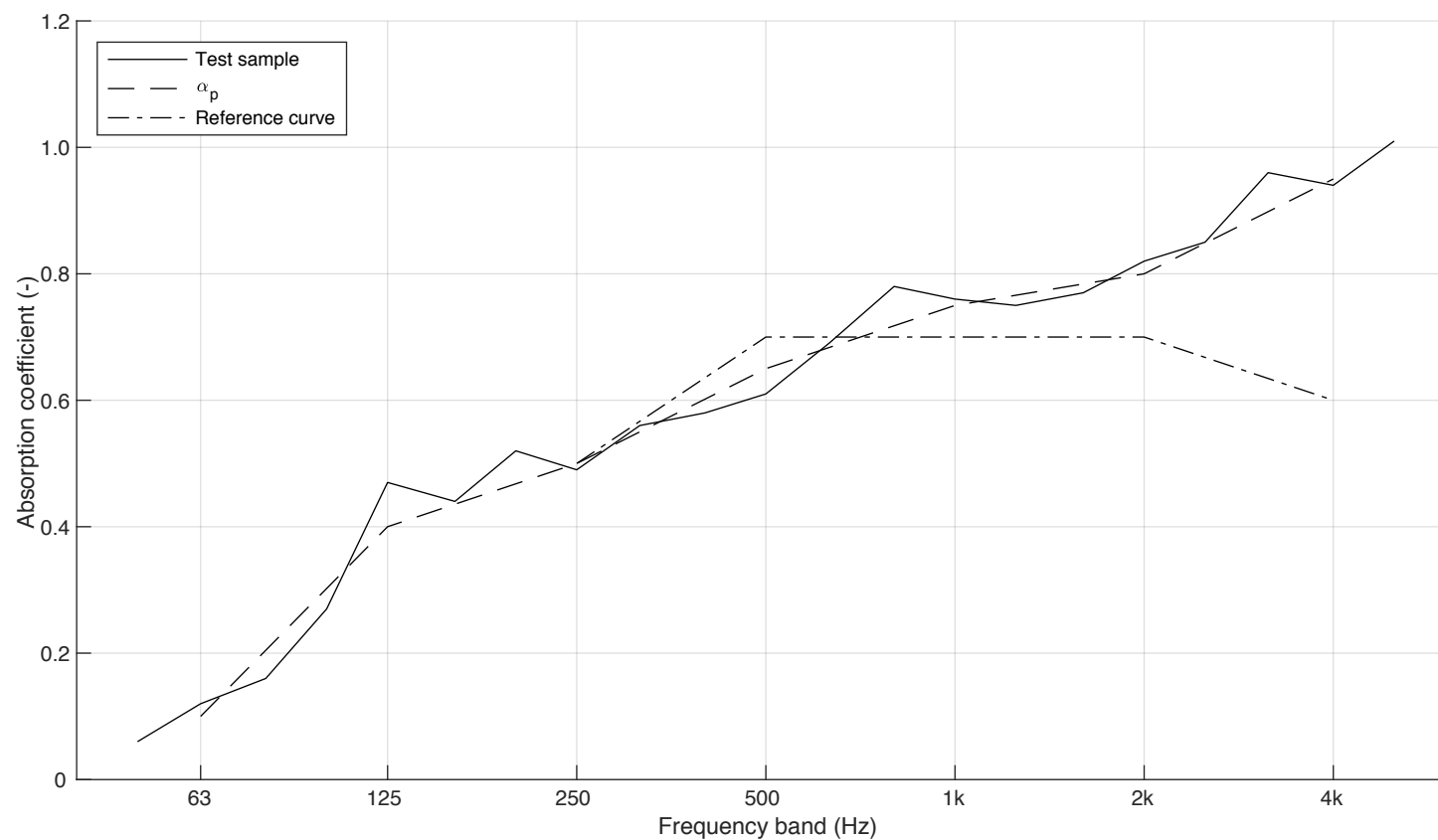
Air humidity: 39 % (empty: 34 %)

Air pressure: 96.8 kPa (empty: 96.8 kPa)

Size of specimen: 10 m²

Measurement date: 2021-03-11

Measured by: Johan Jernstedt



$\alpha_w = 0.70(H)$

Absorption class = C

Ceiling E-400, 10 m²

SOUND ABSORPTION COEFFICIENT ACCORDING TO SS-EN ISO 354:2003 AND SS-EN ISO 11654:1997

Measurement of sound absorption coefficient in a reverberation room



Report number:
21-708-M3a
Date
2021-04-09

Frequency f [Hz]	Sound absorption coefficient	
	α_s	α_p
50	0.10	
63	0.08	0.15
80	0.31	
100	0.25	
125	0.30	0.30
160	0.37	
200	0.39	
250	0.37	0.40
315	0.45	
400	0.53	
500	0.57	0.60
630	0.70	
800	0.78	
1000	0.76	0.75
1250	0.75	
1600	0.77	
2000	0.82	0.80
2500	0.85	
3150	0.96	
4000	0.94	0.95
5000	1.00	

Client: Nordgröna AB

Manufacturer: Nordgröna AB

Product identification: Ceiling

Description of test specimen: Sound absorbing tiles made of reindeer moss in an aluminium cartridge.
Material thickness 40-70 mm.
The tiles were placed in a grid for suspended ceilings with a total construction height of 400 mm (E-400 mounting).

Reverberation room volume: 200 m³

Temperature: 17.0 °C (empty: 19.0 °C)

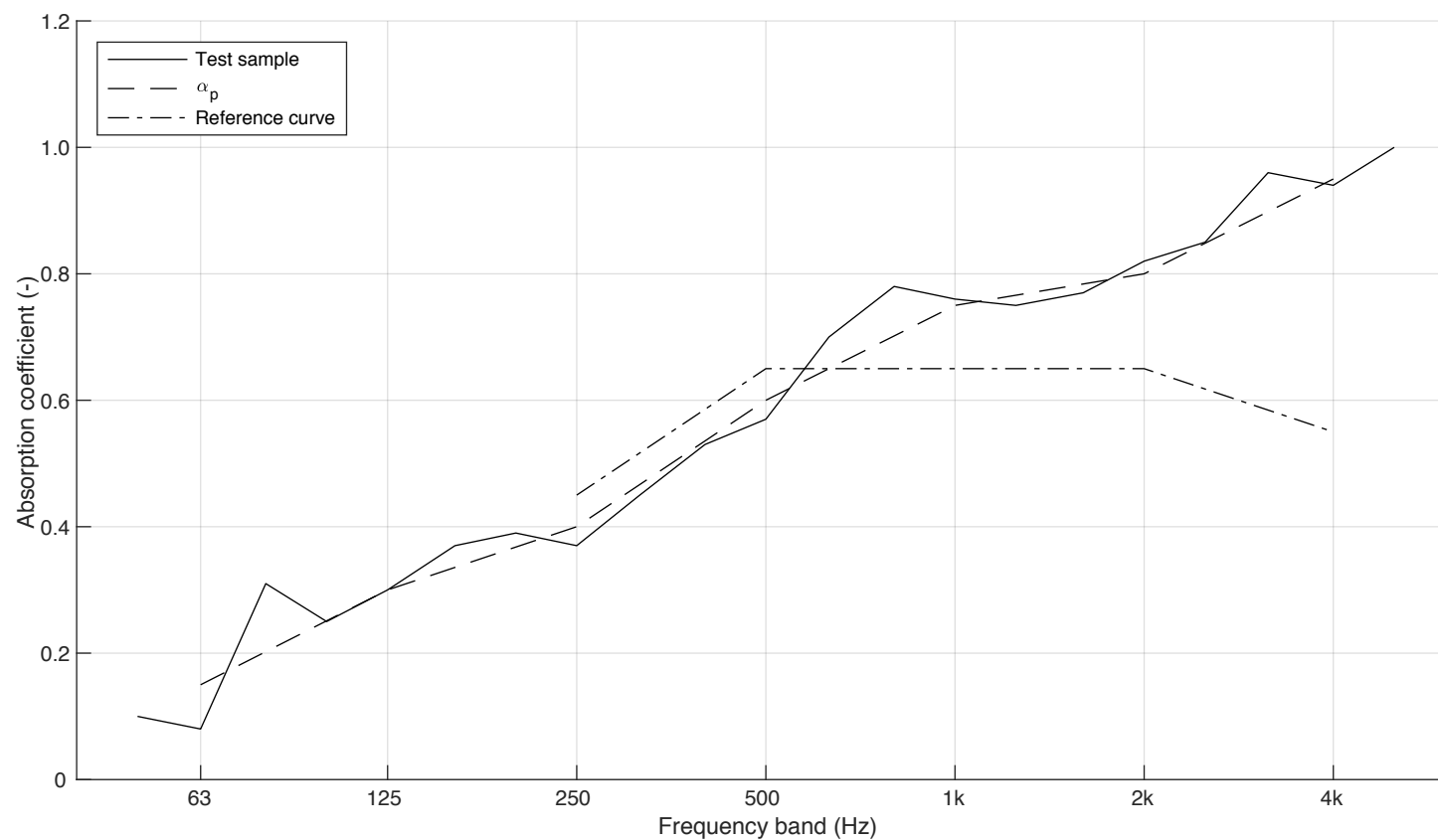
Air humidity: 39 % (empty: 34 %)

Air pressure: 96.8 kPa (empty: 96.8 kPa)

Size of specimen: 10 m²

Measurement date: 2021-03-11

Measured by: Johan Jernstedt



$\alpha_w = 0.65(H)$

Absorption class = C

Ceiling E-700, 10 m²

SOUND ABSORPTION COEFFICIENT ACCORDING TO SS-EN ISO 354:2003 AND SS-EN ISO 11654:1997

Measurement of sound absorption coefficient in a reverberation room



Report number:
21-708-M4a
Date
2021-04-09

Frequency f [Hz]	Sound absorption coefficient	
	α_s	α_p
50	0.10	
63	0.08	0.15
80	0.24	
100	0.16	
125	0.18	0.20
160	0.30	
200	0.29	
250	0.30	0.35
315	0.44	
400	0.56	
500	0.58	0.60
630	0.70	
800	0.79	
1000	0.77	0.75
1250	0.75	
1600	0.77	
2000	0.81	0.80
2500	0.84	
3150	0.96	
4000	0.93	0.95
5000	0.96	

Client: Nordgröna AB

Manufacturer: Nordgröna AB

Product identification: Ceiling

Description of test specimen: Sound absorbing tiles made of reindeer moss in an aluminium cartridge.
Material thickness 40-70 mm.
The tiles were placed in a grid for suspended ceilings with
a total construction height of 700 mm (E-700 mounting).

Reverberation room volume: 200 m³

Temperature: 16.0 °C (empty: 19.0 °C)

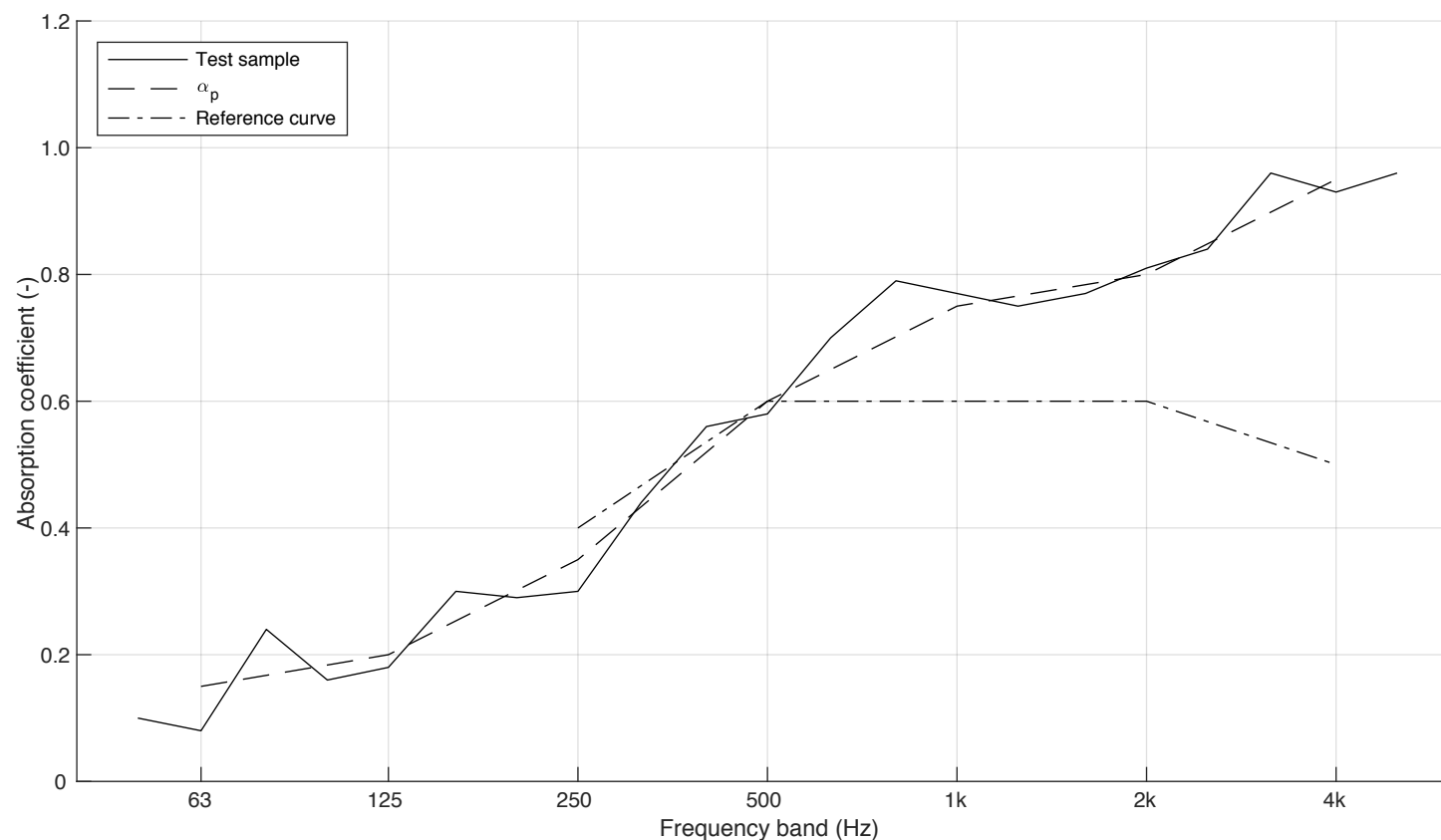
Air humidity: 40 % (empty: 34 %)

Air pressure: 96.8 kPa (empty: 96.8 kPa)

Size of specimen: 10 m²

Measurement date: 2021-03-11

Measured by: Johan Jernstedt



$\alpha_w = 0.60(H)$

Absorption class = C

Ceiling Type A mounting, 10 m²

SOUND ABSORPTION COEFFICIENT ACCORDING TO SS-EN ISO 354:2003 AND SS-EN ISO 11654:1997

Measurement of sound absorption coefficient in a reverberation room



Report number:
21-708-M1a
Date
2021-04-09

Frequency f [Hz]	Sound absorption coefficient	
	α_s	α_p
50	0.02	
63	0.04	0.05
80	0.07	
100	0.07	
125	0.11	0.10
160	0.18	
200	0.24	
250	0.23	0.25
315	0.34	
400	0.45	
500	0.58	0.55
630	0.69	
800	0.78	
1000	0.75	0.75
1250	0.73	
1600	0.78	
2000	0.80	0.80
2500	0.89	
3150	0.99	
4000	1.01	1.00
5000	1.05	

Client: Nordgröna AB

Manufacturer: Nordgröna AB

Product identification: Ceiling

Description of test specimen: Sound absorbing tiles made of reindeer moss in an aluminium cartridge.
Material thickness 40-70 mm.
The tiles were measured directly on the floor (Type A mounting).

Reverberation room volume: 200 m³

Temperature: 18.0 °C (empty: 19.0 °C)

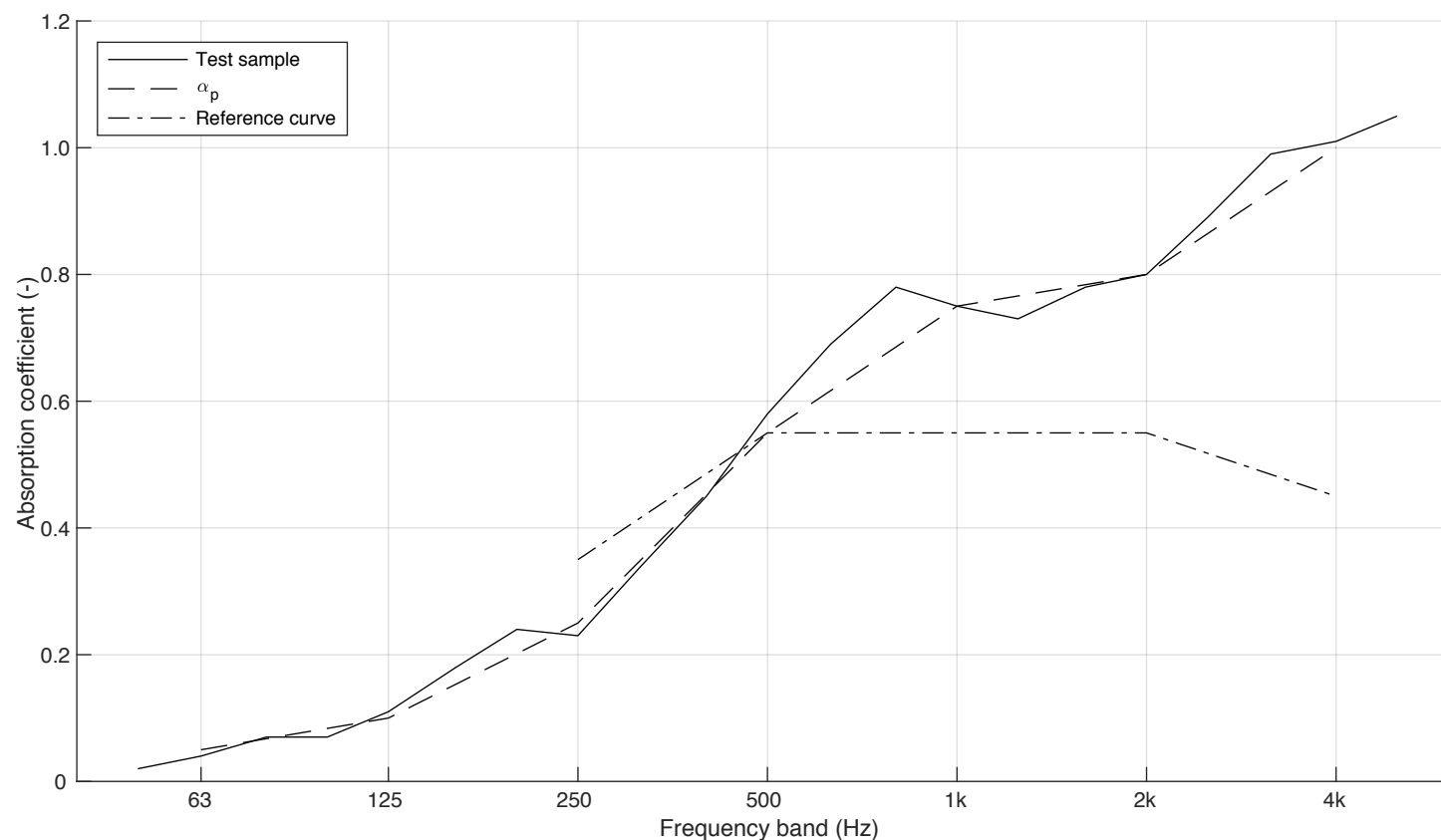
Air humidity: 32 % (empty: 34 %)

Air pressure: 96.8 kPa (empty: 96.8 kPa)

Size of specimen: 10 m²

Measurement date: 2021-03-11

Measured by: Johan Jernstedt



$\alpha_w = 0.55(H)$

Absorption class = D