

Measurement of sound absorption in a reverberation chamber according to PN-EN ISO 354

Determination of the sound absorption coefficient on the basis of PN-EN ISO 11654

08.04.2026

Client:

Producer:

Research laboratory:

Sample no:

Sample description:

Fluffo Sp. z o.o. ul. Poprzeczna 15A, 05-083 Wierzbina

Fluffo Sp. z o.o. ul. Poprzeczna 15A, 05-083 Wierzbina

CTO S.A. Laboratory of Vibro-acoustic Testing, Environmental Laboratories Division

LA2802

10 panels, 1.00 × 1.00 m, placed on cardboard platforms 1.00 m above the floor of the reverberation chamber.
"Fluffo Air Essential" – an acoustic ceiling panel made of 40 mm thick mineral wool board with a density of 62.5 kg/m3, protected by a glass fibre veil. Finished with white latex paint.

Assembly type:

Surface area of the sample:

Reverberation chamber volume:

Custom

10,00 m²

200,00 m³

Environmental conditions:

Reverberation chamber with sample:		Empty reverberation chamber:	
Air temperature:	19,5 °C	Air temperature:	21,3 °C
Relative humidity:	32,1 %	Relative humidity:	35,6 %
Atmospheric pressure:	102,6 kPa	Atmospheric pressure:	102,5 kPa

f [Hz]	T ₁ [s]	T ₂ [s]	A _T [m ²]	α _s	α _p
100	7,2	4,0	3,7	0,37	0,55
125	7,7	3,0	6,4	0,64	
160	5,8	2,6	7,0	0,70	
200	5,5	2,3	8,0	0,80	1,00
250	5,4	1,9	10,7	1,07	
315	5,7	1,8	12,2	1,22	
400	5,2	1,7	13,1	1,31	1,00
500	5,0	1,5	15,9	1,59	
630	4,8	1,4	16,8	1,68	
800	4,7	1,3	18,5	1,85	1,00
1000	4,4	1,3	18,2	1,82	
1250	4,2	1,3	17,2	1,72	
1600	3,8	1,3	16,4	1,64	1,00
2000	3,4	1,2	16,3	1,63	
2500	3,1	1,2	15,7	1,57	
3150	2,5	1,1	15,2	1,52	1,00
4000	2,0	1,0	14,8	1,48	
5000	1,6	0,9	14,8	1,48	

Indications:

f - frequency, in one-third octave band [Hz]

T₁ - reverberation time of reverberation chamber, empty [s]

T₂ - reverberation time of the reverberation chamber, with sample [s]

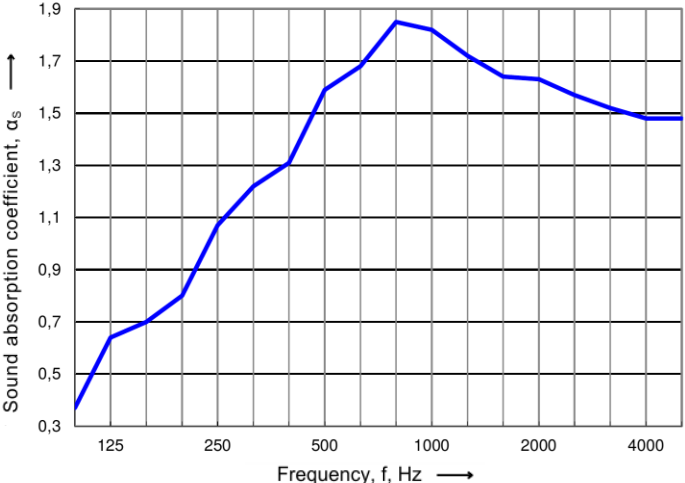
α_s - sound absorption coefficient

α_p - practical sound absorption coefficient

A_T - equivalent sound absorption area of the test sample [m²].

Sound absorption coefficient, α_s

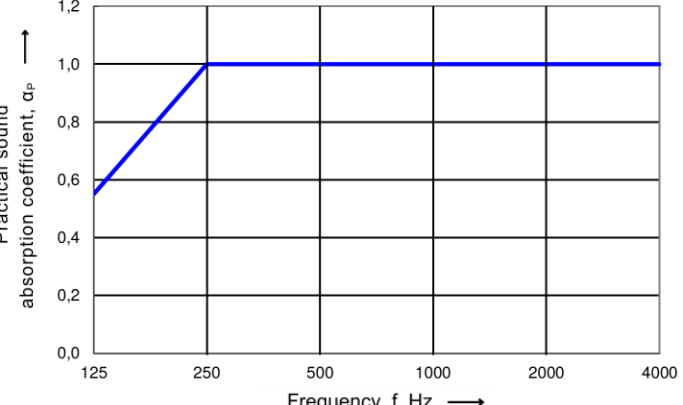
↑



Frequency, f, Hz →

Practical sound absorption coefficient, α_p

↑



Frequency, f, Hz →

Sound absorption index and class according to EN ISO 11654

α_w = 1,00

Sound absorption class: A

Test no: B280201

Test date: 08.04.2026

Signature: Adam Arentowicz