

Measurement of sound absorption in a reverberation chamber according to PN-EN ISO 354:2005

Determination of the weighted sound absorption coefficient on the basis of PN-EN ISO 11654:1999.

Test date: 20.09.2019

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Sample no: LA1264

Description: *Fluffo AIR: suspended acoustic panels.* The panel is made of high-density glass wool board covered with polyamide flock.
Mounting method: panels suspended 100 cm above the sound-reflecting surface.

Measurement conditions

Surface area of the test sample: 12,96 m²
Reverberation chamber volume: 200,0 m³

Empty reverberation chamber:

Air temperature: 20,3 °C
Relative humidity: 48,3 %
Atmospheric pressure: 102,2 kPa

Reverberation chamber with sample:

Air temperature: 20,1 °C
Relative humidity: 42,4 %
Atmospheric pressure: 102,1 kPa

f [Hz]	T ₁ [s]	T ₂ [s]	α _s	α _p	A _T [m ²]
100	6,07	5,43	0,05	0,10	0,6
125	6,55	4,95	0,13		1,6
160	5,74	4,30	0,15		1,9
200	4,76	3,62	0,17	0,30	2,1
250	4,82	3,12	0,30		3,6
315	4,92	2,82	0,40		4,9
400	4,80	2,58	0,47	0,60	5,8
500	4,70	2,23	0,62		7,6
630	4,50	1,95	0,77		9,4
800	4,25	1,87	0,79	0,75	9,7
1000	4,04	1,89	0,74		9,0
1250	3,90	1,94	0,68		8,3
1600	3,67	1,96	0,62	0,60	7,6
2000	3,36	1,90	0,59		7,3
2500	3,04	1,83	0,55		6,8
3150	2,55	1,65	0,52	0,55	6,4
4000	2,15	1,44	0,54		6,7
5000	1,75	1,23	0,53		6,5

Key:

f – frequency, in one-third octave bands [Hz]

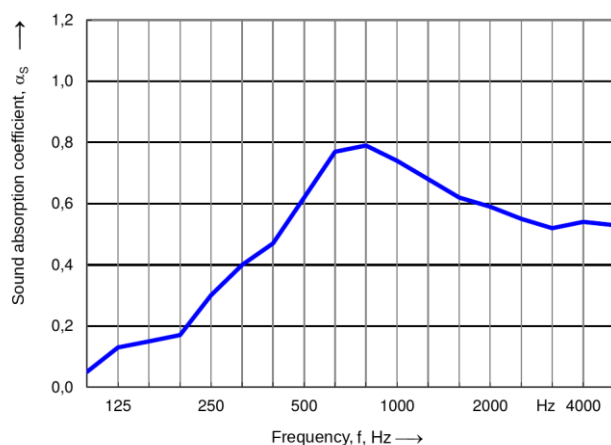
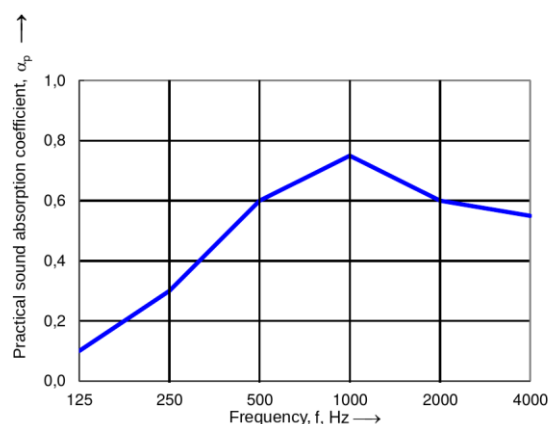
T₁ – reverberation time of the empty reverberation chamber [s]

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]



Weighted sound absorption coefficient according to PN-EN ISO 11654:1999

α_w = 0,60

Sound absorption class: C

Test no: B126403

Date: 20.09.2019

Signature: Adam Arentowicz