

Measurement of sound absorption in a reverberation chamber by *PN-EN ISO 354:2005*

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

2020-06-01

Principal: NoEcho Sp. z o.o., ul. Poprzeczna 15A, 05-083 Wierzbina, Poland
Producer: NoEcho Sp. z o.o., ul. Poprzeczna 15A, 05-083 Wierzbina, Poland
Research Laboratory: CTO S.A. Zespół Laboratoriów Badań Środowiskowych. Laboratorium Badań Wibroakustycznych
Sample determination: LA 1342
Sample description: Acoustic PET boards 9 mm thick. Placed directly on the floor.

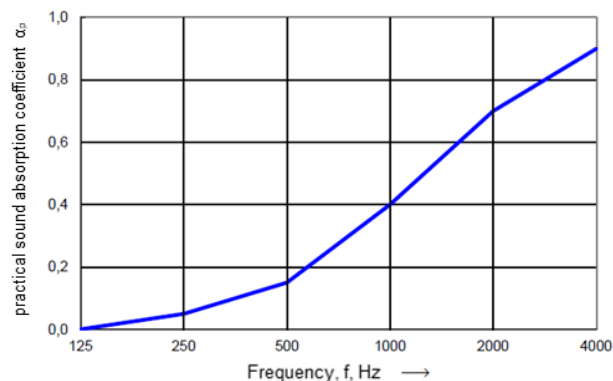
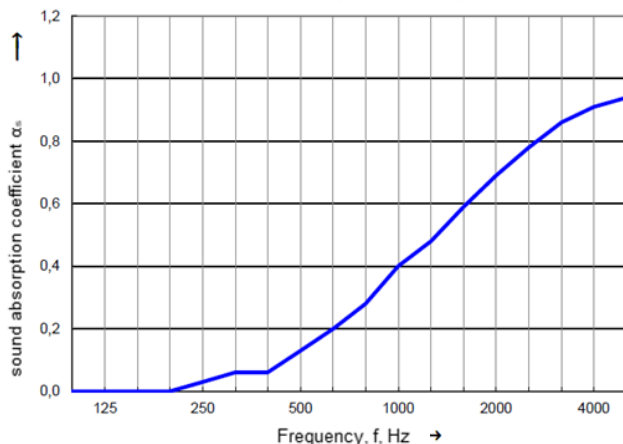
Environmental conditions:

Surface area: 10,21 m²
Reverberation chamber volume: 200,00m³
Reverberation chamber, with sample: Reverberation chamber, empty:
Temperature: 18,9°C Temperature: 18,9°C
Relative humidity: 43,8 % Relative humidity: 47,2 %
Atmospheric pressure: 102,9 kPa Atmospheric pressure: 102,9 kPa

f [Hz]	T_1 [s]	T_2 [s]	A_T [m ²]	α_s	α_p
100	5,7	5,7	0,0	0,00	0,00
125	5,9	5,9	0,0	0,00	
160	4,9	5,0	0,0	0,00	
200	4,6	4,6	0,0	0,00	0,05
250	4,4	4,2	0,3	0,03	
315	4,6	4,3	0,6	0,06	
400	4,5	4,2	0,6	0,06	0,15
500	4,8	4,0	1,4	0,13	
630	4,5	3,5	2,1	0,20	
800	4,2	3,1	2,9	0,28	0,40
1000	4,0	2,7	4,1	0,40	
1250	3,8	2,4	4,9	0,48	
1600	3,6	2,2	6,0	0,59	0,70
2000	3,4	1,9	7,0	0,69	
2500	3,0	1,7	7,9	0,78	
3150	2,5	1,5	8,8	0,86	0,90
4000	2,1	1,3	9,3	0,91	
5000	1,7	1,1	9,6	0,94	

C Labels

f - cz frequency, in tertian bands [Hz].
 T_1 - reverberation time of the reverberation chamber, empty [s]
 T_2 - reverberation time of the reverberation chamber, with sample [s]
 α_s - sound absorption coefficient
 α_p - practical sound absorption coefficient
 A_T - equivalent sound-absorbing surface area of the test sample [m²]



Sound absorption index and class according to *PN-EN ISO 11654:1999*

$\alpha_w = 0,25$ (H)

Sound absorption class: E

Test no: B134201
Date of test: 2020-06-01

Signed by: Adam Arentowicz