

Measurement of sound absorption coefficient according to DIN EN ISO 354

Measurement protocol



General test specimen description according to the manufacturer:

Active Core 20 mm
Alpine Meadow light
40 mm layer of Isolena sheep's wool insulation
Construction with a 140 mm air gap to the sound-reflective substrate
Test surface enclosed by a wood-based material frame

No. Curve: Kurve (1)
Manufacturer: ORGANOID GmbH
Designation: Active Core 20

Description of test setup:

Quantity: 3 pcs
Length: 3050 mm
Width: 1300 mm
Product height: 20 mm
Total height: 200 mm
Total test area: 11,90 m²

Test standard requirements:

Sound absorption coefficient α_w
Corresponds to ISO 354: yes
More information:

Figure/Photo - Measurement setup



Reverberation chamber and measurement method:

Measuring method: Sinus Sweep
Vol. echo chamber: 391,6 m³
Rel. humidity meas. empty: 47 %
Temp. meas. empty: 17,3 °C
Air pressure empty: 98,6 kPa
Room surface echo chamber: 322,2 m²
Rel. humidity meas. with test specimen: 49,6 %
Temp. measurement with test specimen: 18,1 °C
Air pressure with test specimen: 98,5 kPa

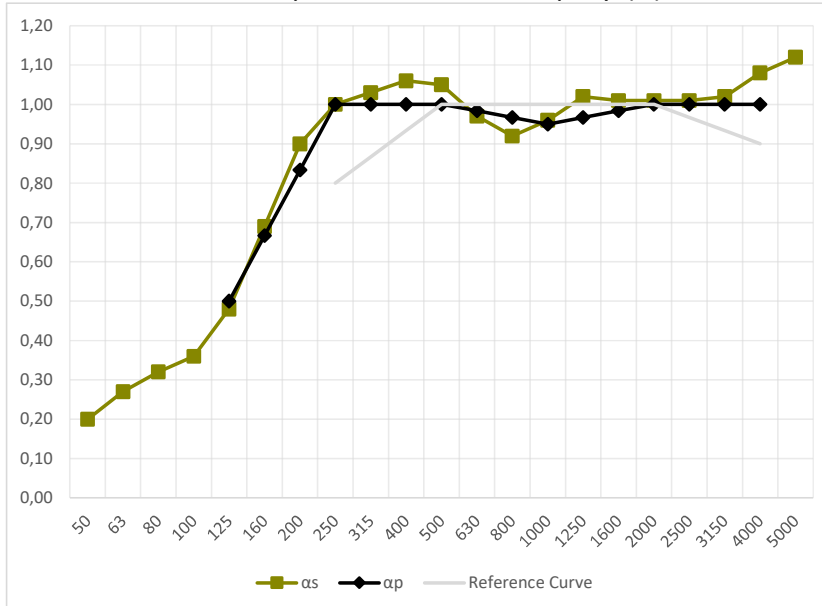
Display:

Curve thirds: yes
Curve octaves: yes
Reference curve: yes



Sound absorption coefficient α for each frequency f (Hz)

Frequency f (Hz)	Thirds α_s (-)	Octaves α_p (-)
50	0,20	
63	0,27	0,25
80	0,32	
100	0,36	
125	0,48	0,50
160	0,69	
200	0,90	
250	1,00	1,00
315	1,03	
400	1,06	
500	1,05	1,00
630	0,97	
800	0,92	
1000	0,96	0,95
1250	1,02	
1600	1,01	
2000	1,01	1,00
2500	1,01	
3150	1,02	
4000	1,08	1,00
5000	1,12	



Evaluation according to DIN EN ISO 11654:

α_w	1,00	()
Class	A	()

Single number rating according to ASTM C423-23:

NRC	1,00
SAA	1,00

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Creation data sheet: Uwe Gottschald