

Measurement of the equivalent sound absorption area according to DIN EN ISO 354

Measurement protocol



General test specimen description according to the manufacturer:

Ceiling sail Fly; 2000 mm x 1000 mm x 70 mm (L x B x H)
Layer sequence: Organoid top layer approx. 1 mm, woodglue 200 g/m², MDF 19 mm, acoustic fleece approx. 0.15 mm, sheep's wool 50 mm (30 kg/m³), flax fleece
Number of slits: 60; slit width: 3 mm; web width: 13 mm; rear hole diameter: 10 mm
Ceiling panels positioned randomly at 200 mm intervals from the sound-reflective ground; total construction height: 270 mm

No. Curve: Kurve (1)
Manufacturer: ORGANOID GmbH

Designation: Ceiling sail Fly

Description of test setup:

Quantity: 3 pcs
Length: 2000 mm
Width: 1000 mm
Product height: 70 mm
Total height: 270 mm
Test area α_{Obj} per object: 4,42 m²

Test standard requirements:

Equivalent sound absorption area

A_{Obj}

Corresponds to ISO 354:

yes

More information:

Figure/Photo - Measurement setup



Reverberation chamber and measurement method:

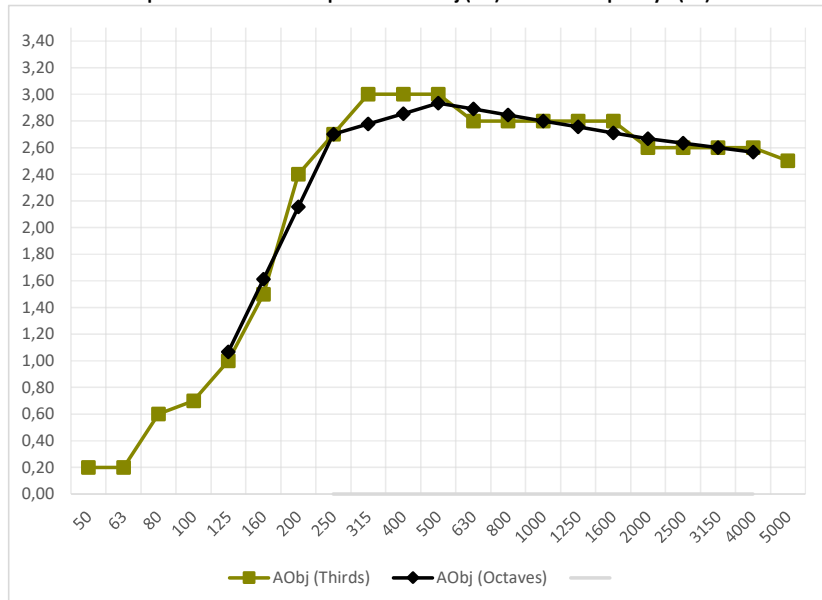
Measuring method: Sinus Sweep
Vol. echo chamber: 391,6 m³ Room surface echo chamber: 322,2 m²
Rel. humidity meas. empty: 56,5 % Rel. humidity meas. with test specimen: 56,1 %
Temp. meas. empty: 20,2 °C Temp. measurement with test specimen: 20,3 °C
Air pressure empty: 98,4 kPa Air pressure with test specimen: 98,4 kPa

Display:

Curve thirds: yes
Curve octaves: yes
Reference curve: no

Equivalent sound absorption area A_{Obj} (m²) for each frequency f (Hz)

Frequency f (Hz)	Thirds A_{Obj} (m ²)	Octaves A_{Obj} (m ²)
50	0,2	
63	0,2	0,3
80	0,6	
100	0,7	
125	1,0	1,1
160	1,5	
200	2,4	
250	2,7	2,7
315	3,0	
400	3,0	2,9
500	3,0	
630	2,8	2,8
800	2,8	
1000	2,8	2,8
1250	2,8	
1600	2,8	2,7
2000	2,6	
2500	2,6	
3150	2,6	2,6
4000	2,6	
5000	2,5	



Test date: 29.09.2025 Examiner: Uwe Gottschald
Creation data sheet: Nele Götzelmann
Laboratory: Laboratory for acoustics; Fuchs Raumingenieure; Tillystraße 2, 90431 Nuremberg; Germany