

# Equivalent sound absorption area ISO 354

## Measurement of sound absorption in reverberation rooms

**Client:** Sigel GmbH Businessproducts  
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**Test specimen:** Acoustic column Sound Balance

The acoustic column Sound Balance was tested as an individual object in the reverberation room free-standing on the floor of the reverberation room. The measurements were performed at five positions for spatial averaging.

The horizontal cross section of the acoustic element had the geometry of an octagon. The eight lateral lengths of the octagon were 300 mm and 105 mm in alternation. The height was 1800 mm. The wall surfaces consisted of 15 mm thick PET-panels (gross density 160 kg/m<sup>2</sup>). The topside of the column was finished with a metal sheet. The entire column was covered by a tissue (mass per unit area 227 g/m<sup>2</sup>, specific airflow resistance 166 Pa s/m). The cavity contained a filling of 50 mm thick polyester fibre (gross density 15 kg/m<sup>3</sup>).

The visible overall face area of the walls (without floor and ceiling) was 2.92 m<sup>2</sup>.

Room: reverberation room  
Volume: 199.60 m<sup>3</sup>  
Date of test: 2018-08-09

Frequency [Hz]	$A_{Obj}$ 1/3 octave [m <sup>2</sup> ]
100	1.1
125	1.8
160	1.8
200	2.1
250	2.3
315	2.2
400	2.1
500	2.4
630	2.6
800	2.7
1000	2.9
1250	3.0
1600	3.0
2000	3.1
2500	3.2
3150	3.2
4000	3.1
5000	3.0

	$\theta$ [°C]	$r. h.$ [%]	$B$ [kPa]
without specimen	25.9	53.3	95.2
with specimen	25.9	53.3	95.2

