

# Sound absorption coefficient according to DIN EN ISO 354

## Measurement of sound absorption in a reverberation room

A 01

### Test object:

Designation: Moos-Moos  
Description: Wall cladding made of natural material



Manufacturer: Bergermann Floristik GmbH & Co. KG  
Mittelweg 6, 02736 Oppach  
Client of the measurement: Manufacturer

### Measurement conditions:

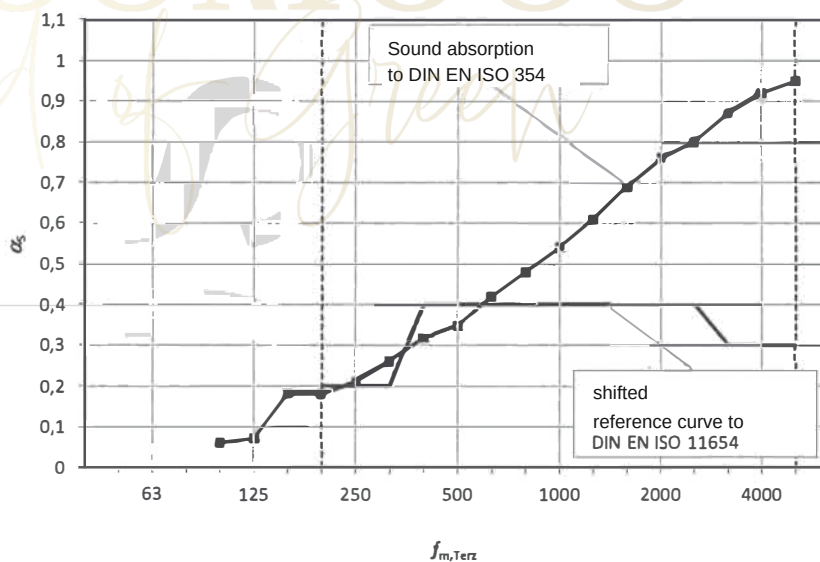
Test standard: DIN EN ISO 354: Measurement of sound absorption in a reverberation room  
Method: Interrupted noise method, measurement of three decay processes at three / four microphone / source positions and averaging of the determined reverberation times  
Reverberation room volume V: 195 m<sup>3</sup> (oblique-sided cuboid room of approx. 7.2 m x 6.0 m x 4.5 m)  
Reverberation room surface S: 205 m<sup>2</sup> (excluding the 10 diffusers of approx. 1.5 m x 1.0 m)  
Temperature: 22 °C  
Relative humidity: 61 - 62 %  
Date of measurement: 24.08.2017

### Test specimen:

Number of individual objects: 1  
Test area S: 10.9 m<sup>2</sup> (= top surface + lateral surface, average material thickness 45 mm)  
Test set-up: positioned lying on the floor of the reverberation room, without surrounding frame

### Test result:

| $f_{m, \text{Terz}} / f_{m, \text{Oktave}}$ | $\alpha_{s, \text{Terz}}$ | $\alpha_{s, \text{Oktave}}$ |
|---------------------------------------------|---------------------------|-----------------------------|
| 50                                          | ---                       | ---                         |
| 63                                          | ---                       | ---                         |
| 80                                          | ---                       | ---                         |
| 100                                         | 0,06                      | 0,10                        |
| 125                                         | 0,07                      |                             |
| 160                                         | 0,18                      |                             |
| 200                                         | 0,18                      | 0,20                        |
| 250                                         | 0,21                      |                             |
| 315                                         | 0,26                      |                             |
| 400                                         | 0,32                      | 0,35                        |
| 500                                         | 0,35                      |                             |
| 630                                         | 0,42                      |                             |
| 800                                         | 0,48                      | 0,55                        |
| 1000                                        | 0,54                      |                             |
| 1250                                        | 0,61                      |                             |
| 1600                                        | 0,69                      | 0,75                        |
| 2000                                        | 0,76                      |                             |
| 2500                                        | 0,80                      |                             |
| 3150                                        | 0,87                      | 0,90                        |
| 4000                                        | 0,92                      |                             |
| 5000                                        | 0,95                      |                             |



Centre frequency third-octave / octave band  
Sound absorption coefficient per third-octave / octave band

Single-number r Weighted sound absorption coefficient  $\alpha_{s,w} = 0,40$  (H)

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