

# 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

WOOL

40 mm layer of Isolena sheep's wool insulation

Construction without 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: 60 mm  
Total test area: 11,90 m<sup>2</sup>

## Test standard requirements:

Sound absorption coefficient

$\alpha_w$

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 m<sup>3</sup>

Room surface echo chamber: 322,2 m<sup>2</sup>

Rel. humidity meas. empty: 46,4 %

Rel. humidity meas. with test specimen: 47 %

Temp. meas. empty: 17,1 °C

Temp. measurement with test specimen: 17,6 °C

Air pressure empty: 98,2 kPa

Air pressure with test specimen: 98,2 kPa

## Display:

Curve thirds: yes

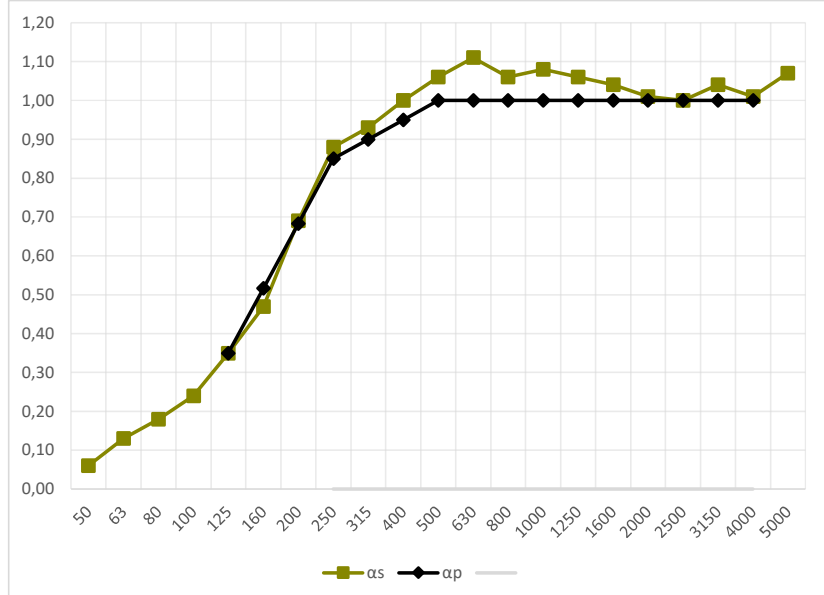
Curve octaves: yes

Reference curve: no



| Frequency<br>f<br>(Hz) | Thirds<br>$\alpha_s$<br>(-) | Octaves<br>$\alpha_p$<br>(-) |
|------------------------|-----------------------------|------------------------------|
| 50                     | 0,06                        |                              |
| 63                     | 0,13                        | 0,10                         |
| 80                     | 0,18                        |                              |
| 100                    | 0,24                        |                              |
| 125                    | 0,35                        | 0,35                         |
| 160                    | 0,47                        |                              |
| 200                    | 0,69                        |                              |
| 250                    | 0,88                        | 0,85                         |
| 315                    | 0,93                        |                              |
| 400                    | 1,00                        |                              |
| 500                    | 1,06                        | 1,00                         |
| 630                    | 1,11                        |                              |
| 800                    | 1,06                        |                              |
| 1000                   | 1,08                        | 1,00                         |
| 1250                   | 1,06                        |                              |
| 1600                   | 1,04                        |                              |
| 2000                   | 1,01                        | 1,00                         |
| 2500                   | 1,00                        |                              |
| 3150                   | 1,04                        |                              |
| 4000                   | 1,01                        | 1,00                         |
| 5000                   | 1,07                        |                              |

Sound absorption coefficient  $\alpha$  for each frequency f (Hz)



Evaluation according to DIN EN ISO 11654:

|            |      |     |
|------------|------|-----|
| $\alpha_w$ | 1,00 | ( ) |
| Class      | A    | ( ) |

Single number rating according to ASTM C423-23:

|     |      |
|-----|------|
| NRC | 1,00 |
| SAA | 0,99 |

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