

Measurement of sound absorption in a reverberation chamber according to PN-EN ISO 354

Determination of the sound absorption coefficient on the basis of PN-EN ISO 11654

2026-04-17

**Client:** Fluffo Sp. z o.o. ul. Poprzeczna 15A, 05-083 Wierzbina  
**Producer:** Fluffo Sp. z o.o. ul. Poprzeczna 15A, 05-083 Wierzbina  
**Research laboratory:** CTO S.A. Laboratory of Vibro-acoustic Testing, Environmental Laboratories Division  
**Sample no:** LA2805  
**Sample description:** 6 panels laid directly on the floor of the reverberation chamber. The side surface was not included in the sample surface.  
Fluffo FabriFrame – a large-format acoustic wall panel in an aluminium frame, covered with decorative fabric with a weight of 210 g/m<sup>2</sup>, filled with mineral wool with a density of 53 kg/m<sup>3</sup>. The whole is enclosed by a PET sheet with a density of 1500 g/m<sup>2</sup>. Panel thickness: 60 mm.

**Assembly type:** A  
**Surface are of the sample:** 11,55 m<sup>2</sup>  
**Objętość komory pogłosowej:** 200,00 m<sup>3</sup>

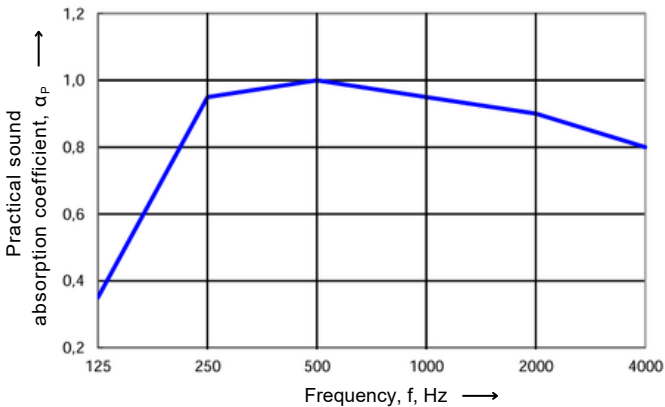
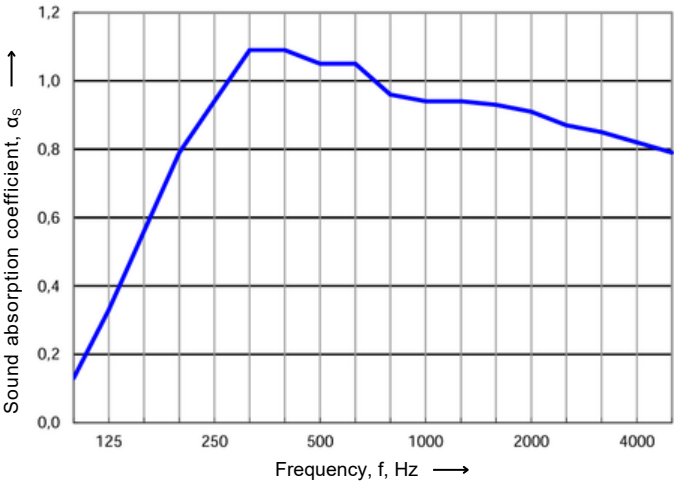
Environmental conditions:

| Reverberation chamber with sample: |           | Empty reverberation chamber: |           |
|------------------------------------|-----------|------------------------------|-----------|
| Air temperature:                   | 20,3°C    | Air temperature:             | 21,3°C    |
| Relative humidity:                 | 33,5%     | Relative humidity:           | 35,6%     |
| Atmospheric pressure:              | 102,1 kPa | Atmospheric pressure:        | 102,5 kPa |

| f [Hz] | T <sub>1</sub> [s] | T <sub>2</sub> [s] | A <sub>T</sub> [m <sup>2</sup> ] | α <sub>s</sub> | α <sub>p</sub> |
|--------|--------------------|--------------------|----------------------------------|----------------|----------------|
| 100    | 7,2                | 5,4                | 1,5                              | 0,13           | 0,35           |
| 125    | 7,7                | 4,0                | 3,8                              | 0,33           |                |
| 160    | 5,8                | 2,7                | 6,4                              | 0,56           |                |
| 200    | 5,5                | 2,2                | 9,2                              | 0,79           | 0,95           |
| 250    | 5,4                | 1,9                | 10,9                             | 0,94           |                |
| 315    | 5,7                | 1,8                | 12,6                             | 1,09           |                |
| 400    | 5,2                | 1,7                | 12,6                             | 1,09           | 1,00           |
| 500    | 5,0                | 1,7                | 12,1                             | 1,05           |                |
| 630    | 4,8                | 1,7                | 12,2                             | 1,05           |                |
| 800    | 4,7                | 1,8                | 11,1                             | 0,96           | 0,95           |
| 1000   | 4,4                | 1,8                | 10,9                             | 0,94           |                |
| 1250   | 4,2                | 1,7                | 10,8                             | 0,94           |                |
| 1600   | 3,8                | 1,7                | 10,7                             | 0,93           | 0,90           |
| 2000   | 3,4                | 1,6                | 10,5                             | 0,91           |                |
| 2500   | 3,1                | 1,5                | 10,0                             | 0,87           |                |
| 3150   | 2,5                | 1,4                | 9,8                              | 0,85           | 0,80           |
| 4000   | 2,0                | 1,2                | 9,5                              | 0,82           |                |
| 5000   | 1,6                | 1,1                | 9,1                              | 0,79           |                |

Indications:

f - frequency, in one-third octave band [Hz]  
T<sub>1</sub> - reverberation time of reverberation chamber, empty [s]  
T<sub>2</sub> - reverberation time of the reverberation chamber, with sample [s]  
α<sub>s</sub> - sound absorption coefficient  
α<sub>p</sub> - practical sound absorption coefficient  
A<sub>T</sub> - equivalent sound absorption area of the test sample [m<sup>2</sup>].



Sound absorption index and class according to EN ISO 11654

α<sub>w</sub> = 0,95

Sound absorption class: A

**Test no:** B280501  
**Test date:** 2026-04-17

**Signature:** Adam Arentowicz