

MEASUREMENT OF SOUND ABSORPTION IN A REVERBERATION ROOM ACCORDING TO ISO 354:2003



principal: Hunter Douglas

Variant 1: HeartFelt® Panel 40HL55 on profile Module 60
 Folded Panel h x w = 40 mm x 55 mm c.t.c. 55 mm,
 thickness felt: 2,5 mm
 Placed directly on the laboratory floor,
 Total mounting height: 80 mm



Absorb, versie 5.9 mode 7, PM: MH, file: a3723 E#:1-36 F#:116-151 A#:152 T₁ = 21,0 °C T₂ = 21,0 °C p₁ = 102,6 kPa p₂ = 102,6 kPa h₁ = 59,5 % h₂ = 60,3 %

volume reverberation room: 214 m³

surface area sample: 10,8 m²

height of the construction: 0,08 m

measured at: Peutz Laboratory for Acoustics

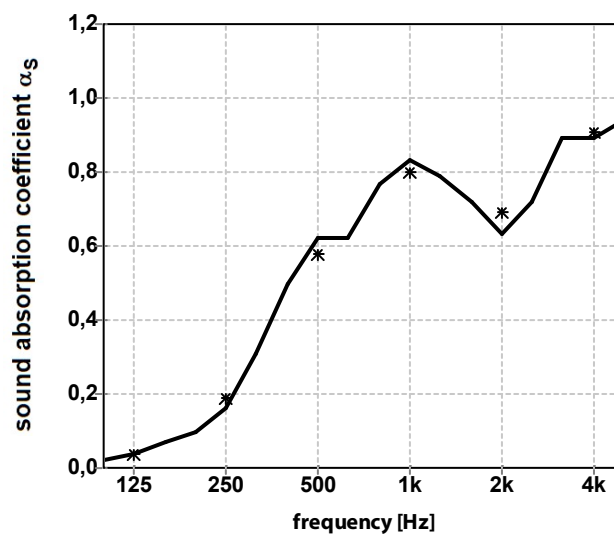
signal: broad-band noise

bandwidth: 1/3 octave

α_w (ISO 11654) = 0,50(MH)

SAA (ASTM - C423) = 0,56

— 1/3 oct.
 * 1/1 oct.



	0,02	0,10	0,50	0,77	0,72	0,89
1/3 oct.	0,04	0,16	0,62	0,83	0,63	0,89
	0,07	0,31	0,62	0,79	0,72	0,94
1/1 oct.	0,04	0,19	0,58	0,80	0,69	0,91

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Mook, measured at 21-08-2019

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figure 3

MEASUREMENT OF SOUND ABSORPTION IN A REVERBERATION ROOM ACCORDING TO ISO 354:2003



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Variant 2: HeartFelt® Panel 40HL55 on profile Module 60 – 25D20 polyesterwool
 Folded Panel h x w = 40 mm x 55 mm c.t.c. 55 mm,
 thickness felt: 2,5 mm
 Built up: HeartFelt® Panel 40HL55 – 25D20 polyesterwool – laboratory floor
 Total mounting height: 85 mm



Absorb, versie 5.9 mode 7, PM:MH, file: a3723 E#:1-36 F#:78-113 A#:115 T₁=21,0 °C T₂=21,1 °C p₁=102,6 kPa p₂=102,6 kPa h₁=59,5 % h₂=60,2 %

volume reverberation room: 214 m³

surface area sample: 10,8 m²

height of the construction: 0,085 m

measured at: Peutz Laboratory for Acoustics

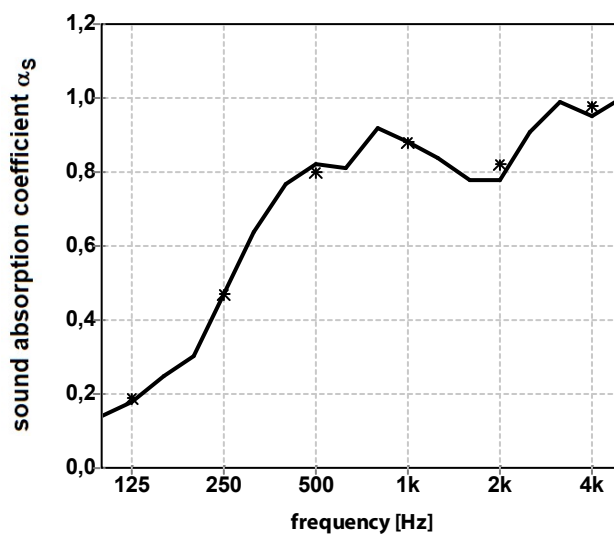
signal: broad-band noise

bandwidth: 1/3 octave

α_w (ISO 11654) = 0,75(H)

SAA (ASTM - C423) = 0,74

— 1/3 oct.
* 1/1 oct.



	0,14	0,30	0,77	0,92	0,78	0,99
1/3 oct.	0,18	0,47	0,82	0,88	0,78	0,95
	0,25	0,64	0,81	0,84	0,91	1,00
1/1 oct.	0,19	0,47	0,80	0,88	0,82	0,98

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figure 4

MEASUREMENT OF SOUND ABSORPTION IN A REVERBERATION ROOM ACCORDING TO ISO 354:2003



principal: Hunter Douglas

Variant 3: HeartFelt® Panel 40HL55 on profile Module 60 – 40D20 polyesterwool
 Folded Panel h x w = 40 mm x 55 mm c.t.c. 55 mm,
 thickness felt: 2,5 mm
 Built up: HeartFelt® Panel 40HL55 – 40D20 polyesterwool – laboratory floor
 Total mounting height: 100 mm



volume reverberation room: 214 m³

surface area sample: 10,8 m²

height of the construction: 0,10 m

measured at: Peutz Laboratory for Acoustics

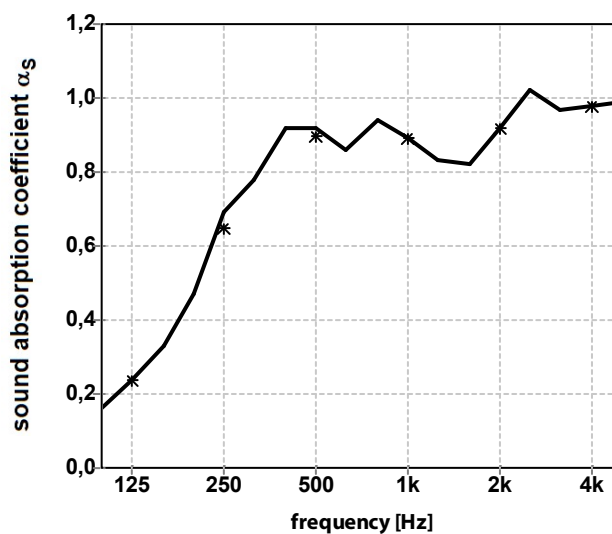
signal: broad-band noise

bandwidth: 1/3 octave

α_w (ISO 11654) = 0,90

SAA (ASTM - C423) = 0,84

— 1/3 oct.
 * 1/1 oct.



	0,16	0,47	0,92	0,94	0,82	0,97
1/3 oct.	0,24	0,69	0,92	0,89	0,92	0,98
	0,33	0,78	0,86	0,83	1,02	0,99
1/1 oct.	0,24	0,65	0,90	0,89	0,92	0,98

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Mook, measured at 21-08-2019

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figure 5

Absorb, versie 5.9 mode 7, PM: MH, file: a3723 E#:1-36 F#:41-76 A#:77 T₁ = 21,0 °C T₂ = 21,0 °C p₁ = 102,6 kPa p₂ = 102,6 kPa h₁ = 59,5 % h₂ = 59,5 %