Sound absorption coefficient

Measurement of sound absorption in a reverberation room

Knauf AMF GmbH & Co. KG
Elsenthal 15
D-94481 Grafenau

Phone: +49 8552 422 - 0
Fax: +49 8552 422 - 32
Email: info@amf-grafenau.de

Test specimen: AMF-THERMATEX Star, 600x600mm

200 mm construction height

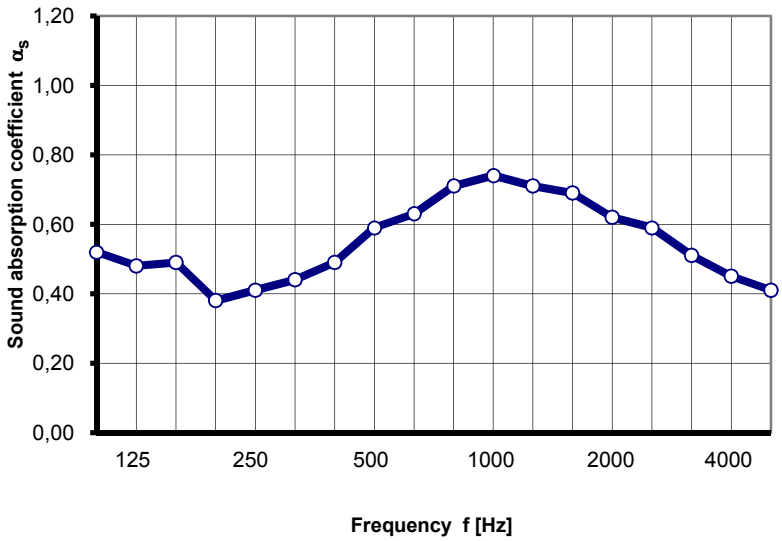
Test construction (from top to bottom):

- 15,0 mm Test specimen with edge detail: SK
- 185 mm cavity, without damping material, with supporting construction floor of the reverberation room
- floor ot the reverberation room

enclosing frame made of coated chipboard

joints between frame and ceiling tiles as well as between frame and floor sealed tightly

Frequency [Hz]	α_s ⅓ octave	α_p octave
100	0,52	
125	**0,48**	0,50
160	0,49	
200	0,38	
250	**0,41**	0,40
315	0,44	
400	0,49	
500	**0,59**	0,55
630	0,63	
800	0,71	
1000	**0,74**	0,70
1250	0,71	
1600	0,69	
2000	**0,62**	0,65
2500	0,59	
3150	0,51	
4000	**0,45**	0,45
5000	0,41	



α_s Sound absorption coefficient

α_p Practical sound absorption coefficient acording to ISO 11654

Rating according to ISO 11654:

Weighted sound absorption coefficient α_w = 0,60

Sound absorption class: C

Rating according to VDI 3755 - 2000: **highly absorbing**

Rating according to ASTM C 423-02a:

sound absorption average: SAA = 0,58

noise reduction coefficient: NRC = 0,60