

Measurement of sound absorption coefficient in a reverberation room

Annex SA – Sound absorption

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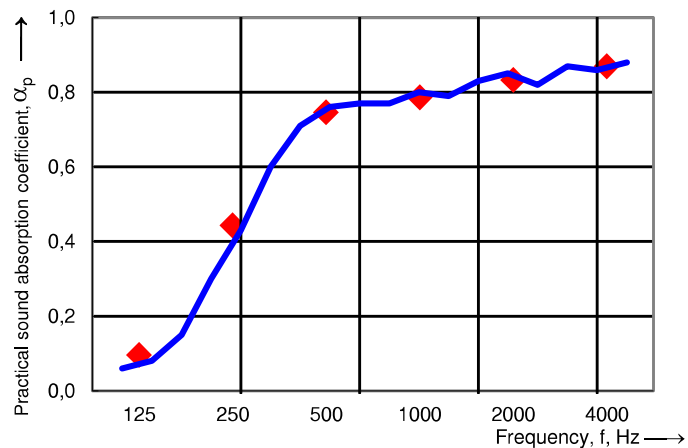
TFI sample number: 2000896 Testing period: 16.06.2020  
 Product designation: Magoma Installation: 16.06.2020  
 Installed by: TFI Aachen GmbH  
 Remarks: Type G-200, tested with 20 cm distance parallel to the room surface.  
 130 % gather

Construction: -  
 (from top to bottom)

Reverberation room without sample:	Reverberation room with sample:
Relative humidity: 68,0 %	Relative humidity: 67,2 %
Temperature: 20,8 °C	Temperature: 20,8 °C
Barometric pressure: 101,3 kPa	Barometric pressure: 101,2 kPa

Surface area: 10,80 m<sup>2</sup>  
 Room volume: 214,00 m<sup>3</sup>  
 Total room area S<sub>i</sub>: 219,00 m<sup>2</sup>

Frequency f [Hz]	$\alpha_p$ Oktave
100	0,10
125	
160	
200	0,44
250	
315	
400	0,75
500	
630	
800	0,79
1000	
1250	
1600	0,83
2000	
2500	
3150	0,87
4000	
5000	



Weighted sound absorption coefficient according to ISO 11654  
 $\alpha_w = 0,75$



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Frequency [Hz]	$\alpha_p$	$\alpha_s$	T1 [s]	T2 [s]
50				
63				
80				
100		0,06	9,41	7,94
125	0,10	0,08	8,21	6,74
160		0,15	7,38	5,44
200		0,30	7,84	4,52
250	0,44	0,43	6,84	3,54
315		0,60	6,24	2,88
400		0,71	6,64	2,67
500	0,75	0,76	6,78	2,59
630		0,77	6,69	2,56
800		0,77	6,48	2,53
1000	0,79	0,80	6,33	2,44
1250		0,79	5,74	2,37
1600		0,83	5,41	2,25
2000	0,83	0,85	4,83	2,11
2500		0,82	4,10	1,99
3150		0,87	3,77	1,86
4000	0,87	0,86	3,29	1,74
5000		0,88	2,71	1,55

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Relative humidity: 67,2 %  
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