Sound absorption according ISO 354 and ISO 11654

SA 5 20-000553-01

Measurement of sound absorption coefficient in a reverberation room

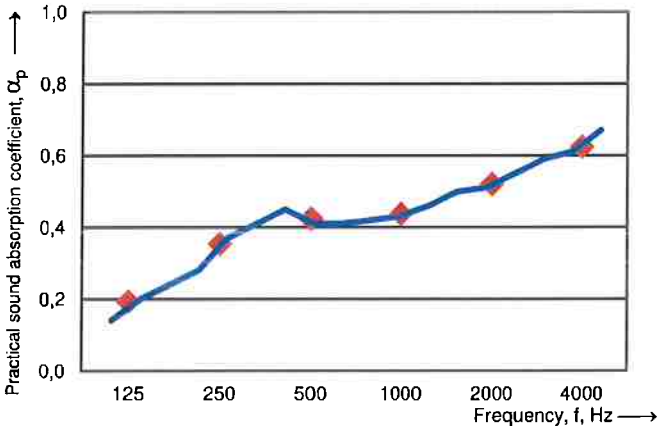
Annex SA – Sound absorption

TFI sample number:	2000898	Testing period:	16.06.2020
Product designation:	Muscat Madras	Installation:	16.06.2020
Installed by:	TFI Aachen GmbH		
Remarks:	Type G-200, tested with 20 cm distance parallel to the room surface. 150 % gather		
Construction: (from top to bottom)	-		

Reverberation room without sample:		Reverberation room with sample:	
Relative humidity:	68,0 %	Relative humidity:	66,5 %
Temperature:	20,8 °C	Temperature:	20,8 °C
Barometric pressure:	101,3 kPa	Barometric pressure:	101,2 kPa

Surface area:	11,40 m²
Room volume:	214,00 m³
Total room area S_t:	219,00 m²

Frequency f [Hz]	α_p Oktave
100 125 160	0,19
200 250 315	0,35
400 500 630	0,42
800 1000 1250	0,44
1600 2000 2500	0,52
3150 4000 5000	0,62



Weighted sound absorption coefficient according to ISO 11654

α_w = 0,45(H)

Sound absorption according ISO 354 and ISO 11654

SA 5 20-000553-01

Measurement of sound absorption coefficient in a reverberation room

Annex SA – Sound absorption

Weighted sound absorption coefficient according to ISO 11654

α_w = 0,45(H)

Surface area: 11,40 m²
Room volume: 214,00 m³
Total room area S_t: 219,00 m²

Frequency [Hz]	α_p	α_s		T1 [s]	T2 [s]
50					
63					
80					
100		0,14		9,41	6,52
125	0,19	0,20		8,21	5,36
160		0,24		7,38	4,62
200		0,28		7,84	4,53
250	0,35	0,37		6,84	3,71
315		0,41		6,24	3,38
400		0,45		6,64	3,35
500	0,42	0,41		6,78	3,52
630		0,41		6,69	3,52
800		0,42		6,48	3,42
1000	0,44	0,43		6,33	3,35
1250		0,46		5,74	3,08
1600		0,50		5,41	2,85
2000	0,52	0,51		4,83	2,65
2500		0,55		4,10	2,34
3150		0,59		3,77	2,16
4000	0,62	0,61		3,29	1,97
5000		0,67		2,71	1,68

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

Reverberation room with sample:
Relative humidity: 66,5 %
Temperature: 20,8 °C
Barometric pressure: 101,2 kPa

TFI sample number: 2000898