

M43 door

Sound insulation of the Merford type M43 door

Laboratory: TNO Technisch Physische Dienst TU Delft

Test element: door type M41

Manufacturer: Merford Special Doors

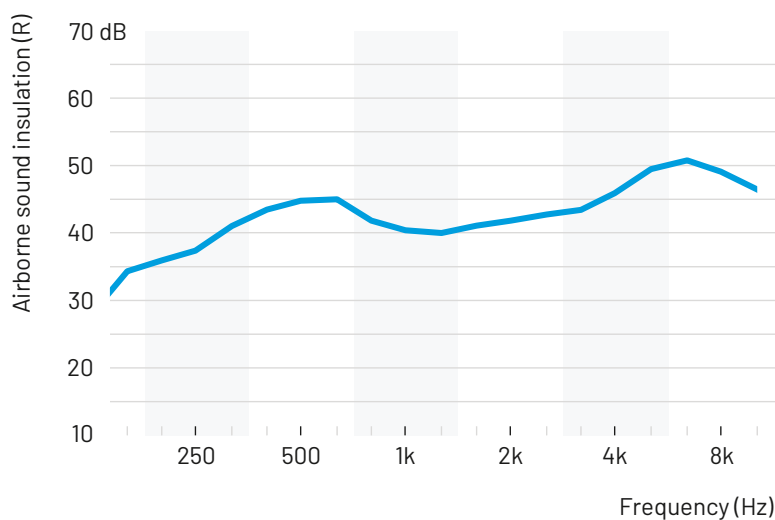
Project nr.: 628041

Area, S, of test element: 2,21 m²

Mass per unit area M41: 25 kg/m²

Mass per unit area M43: 34 kg/m²

Receiving room volume: 100 m³



The sound insulation of the Merford type M43 is calculated and not measured.

The M43 is a M41 with extra mass inside and additional seal. The conservative calculation is based on the laboratory measurement on the M41 at which extra insulation is added on basis of the extra mass.

Sound insulation measurements on M41 door took place in a laboratory. Single leaf, size 950 x 2100 mm, with threshold H=48 mm, 2 pcs compression type latches, no vision panel. Different leaf configuration, threshold, locks, vision panels, etc. will affect sound insulation values.

Rating in accordance with ISO 717-1: $R_w = 43$ dB

C -1 dB

Ctr -6 dB

STC 44

Ra pop	35,7 dB
Ra house	27,9 dB
Ra traffic	36,5 dB
Ra rail traffic	41,9 dB
Ra air traffic	40,4 dB
Ra HES	25,9 dB
Ra metalworking	39,16 dB
Ra woodworking	35,4 dB
Ra voice	41,1 dB
Ra industry	34,4 dB
Ra cinema	29,8 dB

Frequency (Hz)	R 1/3 oct (dB)	R 1/1 oct (dB)
50	30,1	
63	15,1	17,4
80	16,4	
100	20,0	
125	26,7	23,8
160	34,7	
200	35,7	
250	37,3	37,4
315	40,7	
400	43,8	
500	44,9	44,5
630	45	
800	41,9	
1000	41,2	41,3
1250	41	
1600	41,8	
2000	43,7	43,3
2500	45,1	
3150	46,5	
4000	48,6	48,7
5000	53,8	
6300	54,6	
8000	54,1	53,3
10000	51,8	