Simulation of Sound Absorption Coefficient as per ISO 354
Computational model* of absorption measurement in reverberation rooms

Client   Kvadrat
Test Specimen   Curtains
                    Type: Flat

Arrangement: Flat hanging
1 layer of textile, flat arrangement
Distance to the wall: 100 mm

Front textile: Gentle 2 from   Febrik / Kvadrat

Back side textile: -

Simulated module build-up (from top to bottom):
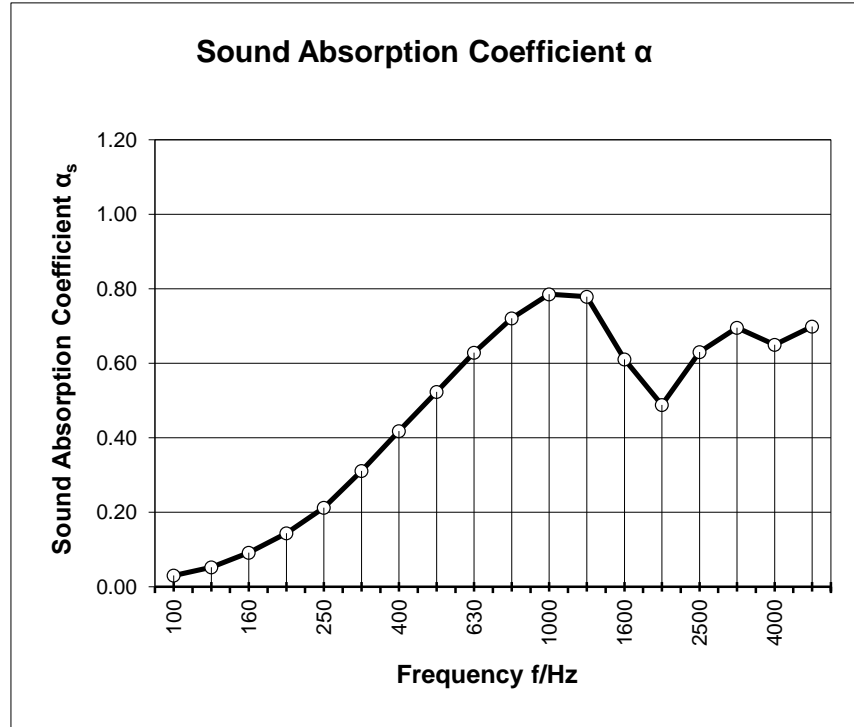3.05 mm   Front textile
100 mm   Air gap
                Concrete surface

Simulation set up:
Flat arrangement, 100mm to the wall

No surrounding, enclosing frame

Simulation reproduces the standard ISO 354/11654
measurement - random incidence environment

Date of simulation: 03-03-20

Sound Absorption Coefficient α

Frequency [Hz]	α_s 1/3 octave	α_p octave
100	0.03	
125	0.05	0.05
160	0.09	
200	0.14	
250	0.21	0.20
315	0.31	
400	0.42	
500	0.52	0.50
630	0.63	
800	0.72	
1000	0.79	0.75
1260	0.78	
1600	0.61	
2000	0.49	0.60
2500	0.63	
3160	0.70	
4000	0.65	0.70
5000	0.70	

*Method reproduces conditions, dimensions, build-up in a way results are comparable with measurements in reverberation chamber

α_s Sound absorption coefficient to ISO 354

α_p Practical sound absorption coefficient to ISO 11654

Rating according to ISO 11654:

NRC:	0.50
SAA:	0.52

Weighted Sound Absorption Coefficient α_w = 0.5   (MH)
Sound absorption class: D

kvadrat soft cells