

VC Expanded

Natural materials for technical solutions

Description

VC EXPANDED insulation cork is a reference of Amorim Cork Insulation, recommended for vibration control. The expanded cork, besides being a 100% natural product, has a higher wear resistance, low Poisson coefficient, higher energy dissipation capacity (in vibrations) and higher energy absorption capacity (impact).

Advantages

- 100% natural and sustainable
- Vibration control
- Resilience
- Mechanical stability
- Durability keeping its properties

Product lines

- VC ICB Standard
- VC ICB Medium Density
- VC ICB High Density
- Other densities: On demand
- Board dimension: 1000x500 (mm)
- Thickness up to 200 (mm)

Compressive strength, σ_{10} (KPa) / Compression elasticity modulus, E (KPa)

- VC ICB +/- 110 kg/m³: 155 / 2964
- VC ICB 140 - 160 Kg/m³: 223 / 3506
- VC ICB 170 - 190 Kg/m³: 332 / 6747



Product Specifications

Compression
(EN 826:1996):

Product line	Thickness (mm)	Load for unit of area (kg/m ²)						
		2000	5000	10000	15000	20000	25000	30000
		Strain (mm)						
VC ICB 110 - 120 kg/m ³	25	0,3	0,5	1,1	2,1	—	—	—
	50	0,5	1,1	2,2	4,3	—	—	—
	75	0,8	1,6	3,3	6,4	—	—	—
	100	1,1	2,2	4,4	8,5	—	—	—
VC ICB 140 - 160 kg/m ³	25	0,3	0,5	0,9	1,4	2,0	—	—
	50	0,5	0,9	1,7	2,7	4,1	—	—
	75	0,8	1,4	2,6	4,1	6,1	—	—
	100	1,0	1,9	3,5	5,4	8,2	—	—
VC ICB 170 - 190 kg/m ³	25	0,2	0,3	0,6	0,8	1,1	1,4	1,9
	50	0,4	0,7	1,1	1,6	2,2	2,9	3,9
	75	0,6	1,0	1,7	2,4	3,3	4,3	5,8
	100	0,8	1,3	2,2	3,2	4,4	5,8	7,8

Table: Strain values (mm) for a material with specific thickness (mm) and for a specific load for unit of area (kg/m²)

Application systems

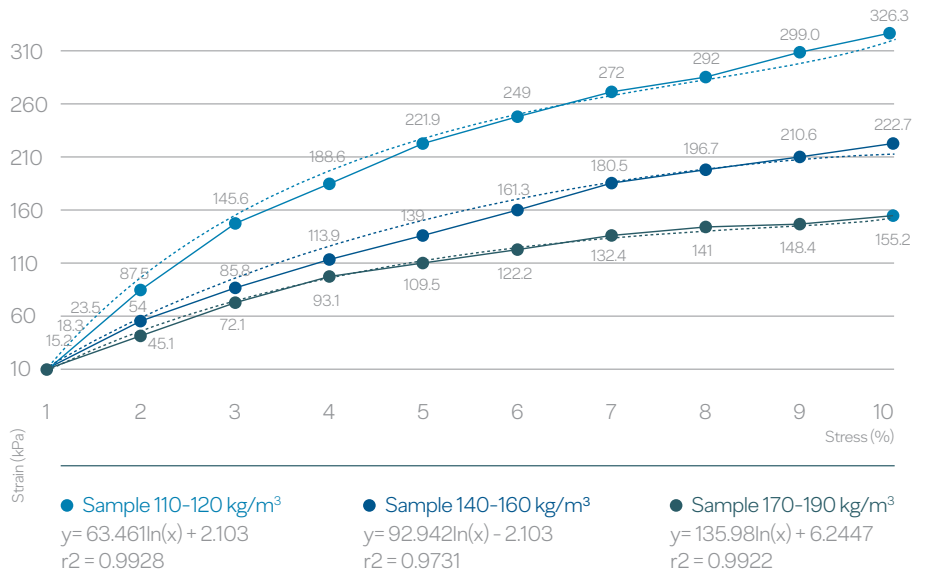
Heavy machinery vibration control



HVAC Vibration control



Compression elasticity modulus (EN 826 : 2003)



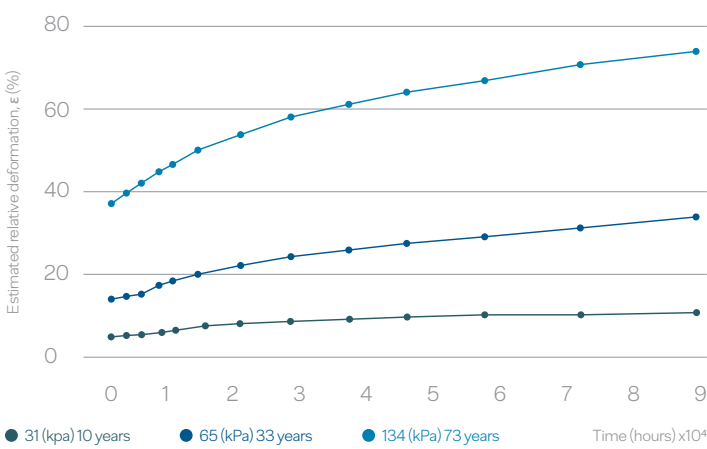
Amorim Cork Insulation

Rua Comendador Américo Amorim, 105 — 4535-186 Mozelos, Portugal
 T. +351 227 419 100 E. info.aci@amorim.com

www.amorimcorkinsulation.com

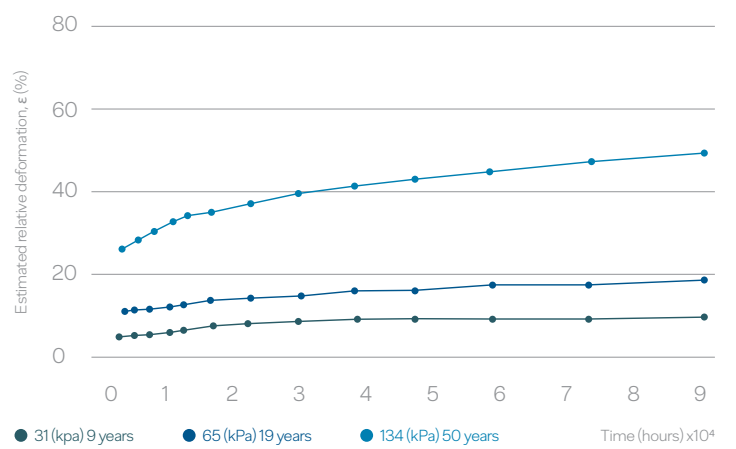
Technical report

Creep Results: VC ICB 140 - 160



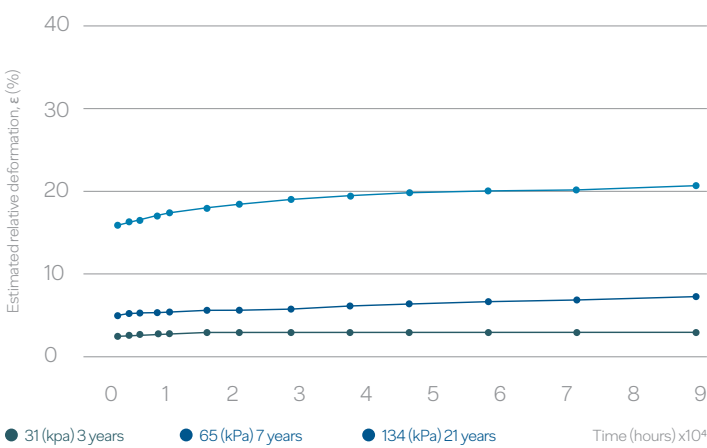
Estimation of the relative deformation (%), ϵ , at 10 years, for samples VC ICB 140-160.

Creep Results: VC ICB 160 - 180



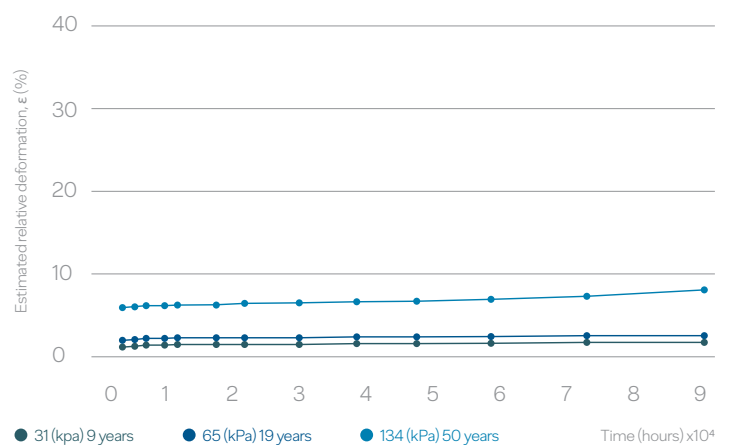
Estimation of the relative deformation (%), ϵ , at 10 years, for samples VC ICB 160-180.

Creep Results: VC ICB 180 - 200



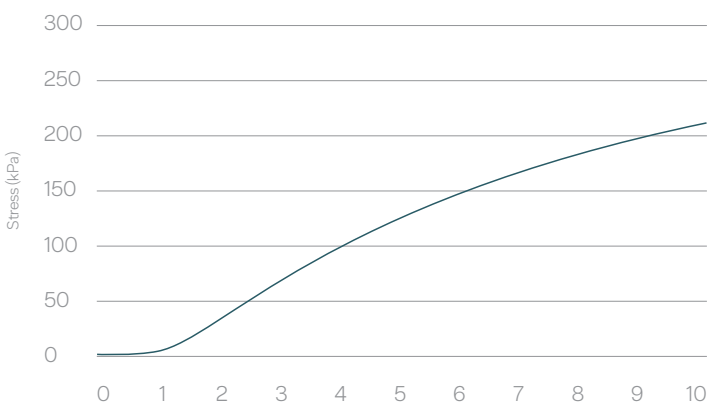
Estimation of the relative deformation (%), ϵ , at 10 years, for samples VC ICB 180-200.

Creep Results: VC ICB >200



Estimation of the relative deformation (%), ϵ , at 10 years, for samples VC ICB >200.

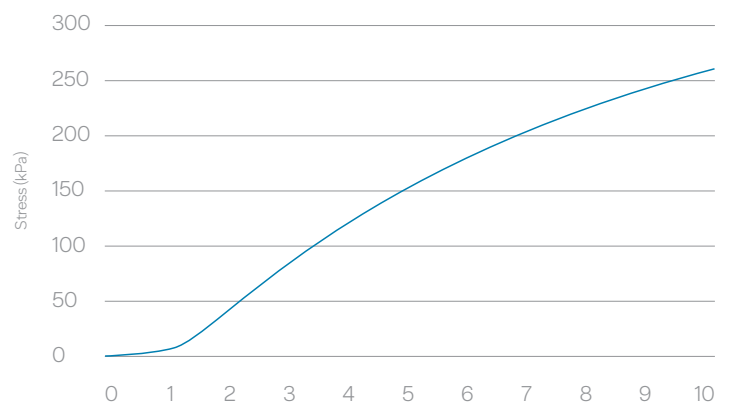
Compression Test: VC ICB 140 - 160



A

Stress/Strain curves: A) VC ICB 140-160; B) VC ICB 160-180.

Compression Test: VC ICB 160 - 180

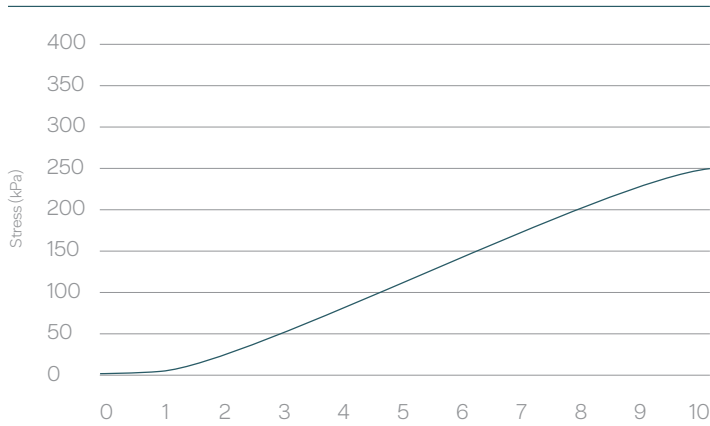


B

Stress/Strain curves: A) VC ICB 140-160; B) VC ICB 160-180.

Technical report

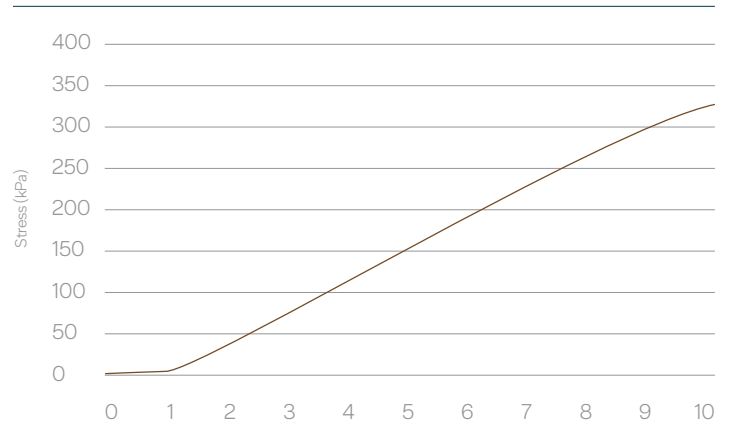
Compression Test: VC ICB 180 - 200



A

Stress/Strain curves: A) VC ICB 180-200; B) VC ICB >200.

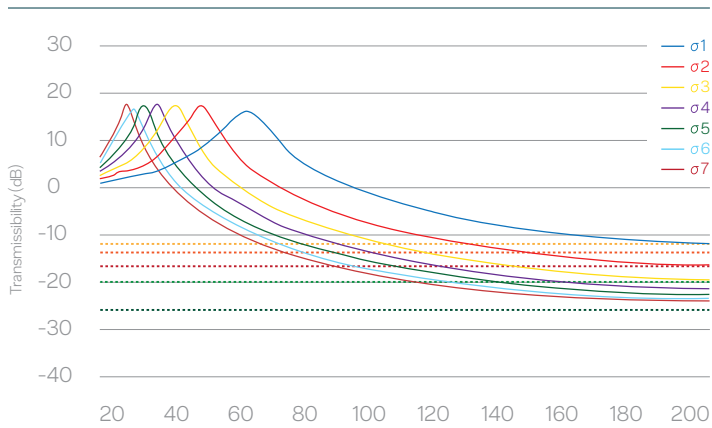
Compression Test: VC ICB >200



B

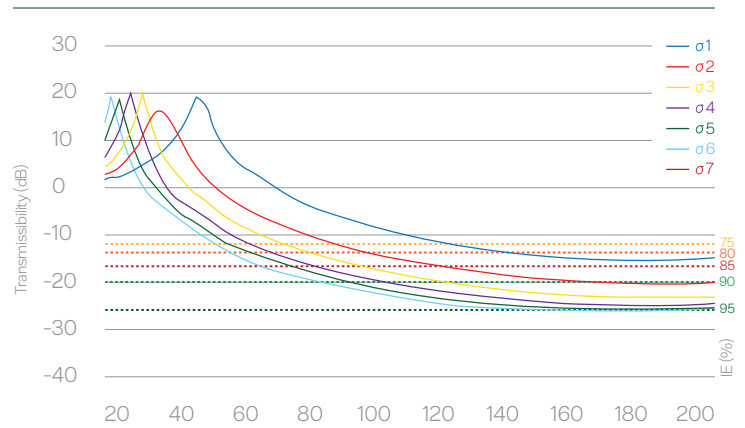
Stress/Strain curves: A) VC ICB 180-200; B) VC ICB >200.

Transmissibility: VC ICB 140 - 160



A

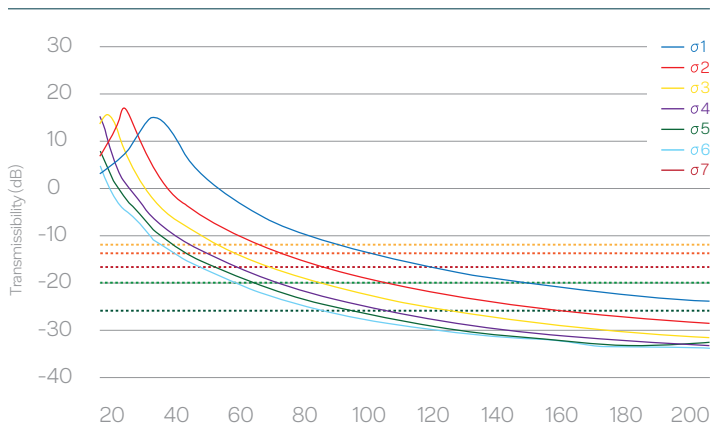
Frequency (Hz)



B

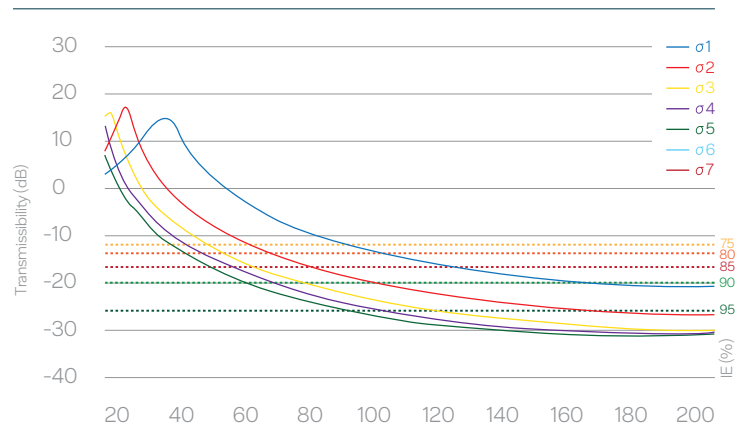
Frequency (Hz)

Transmissibility: VC ICB 140 - 160



C

Frequency (Hz)



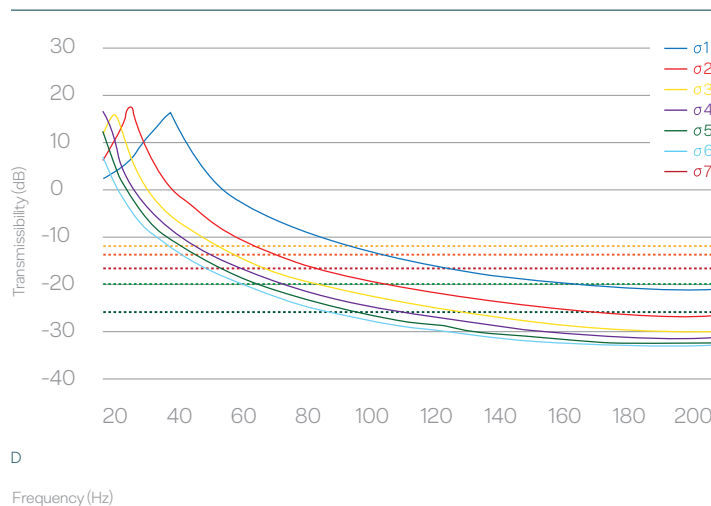
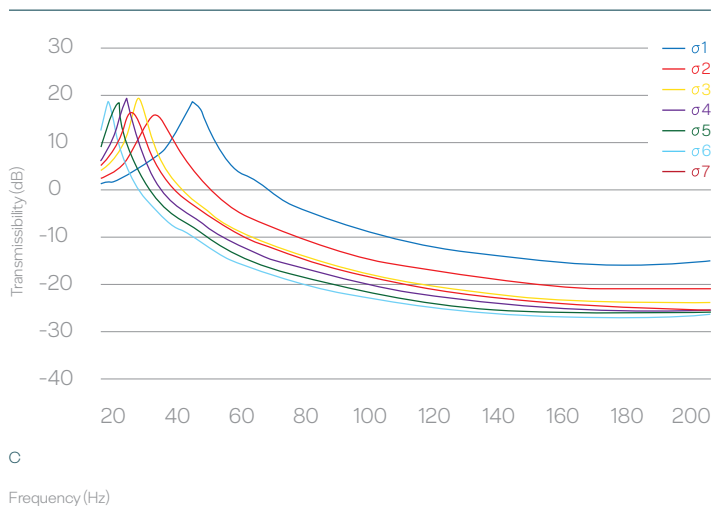
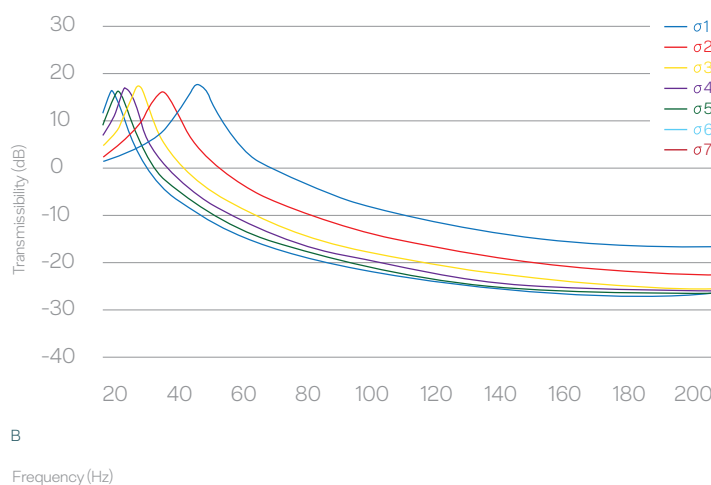
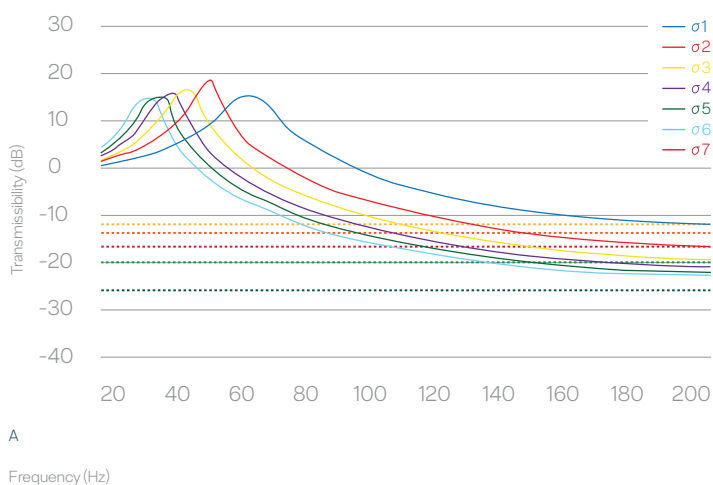
D

Frequency (Hz)

Transmissibility curves for samples VC ICB 140-160: a) 25 mm thick; b) 50 mm thick; c) 75 mm thick; d) 100 mm thick

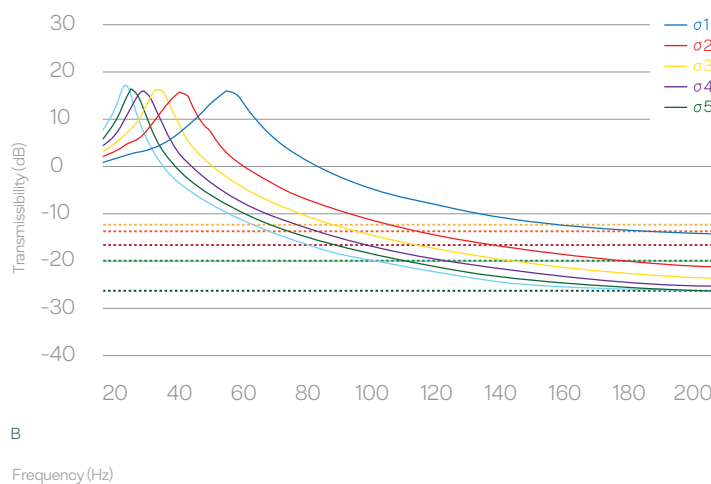
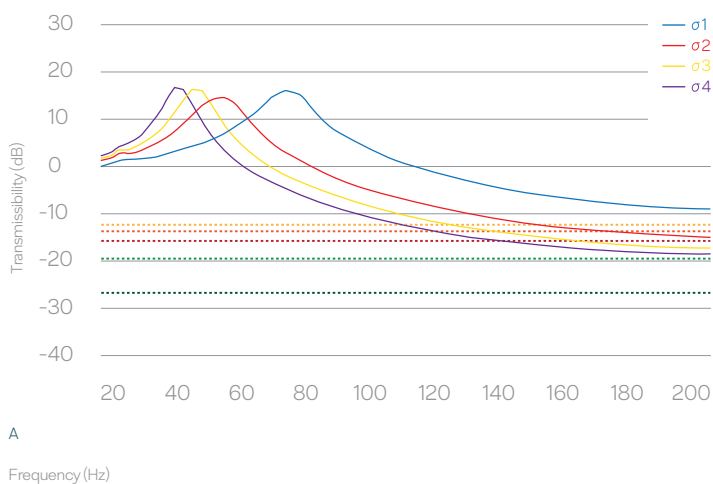
Technical report

Transmissibility: VC ICB 160 - 180



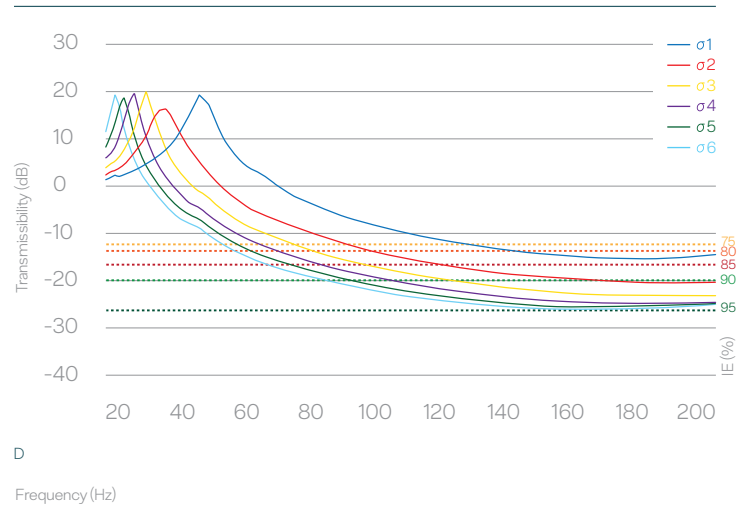
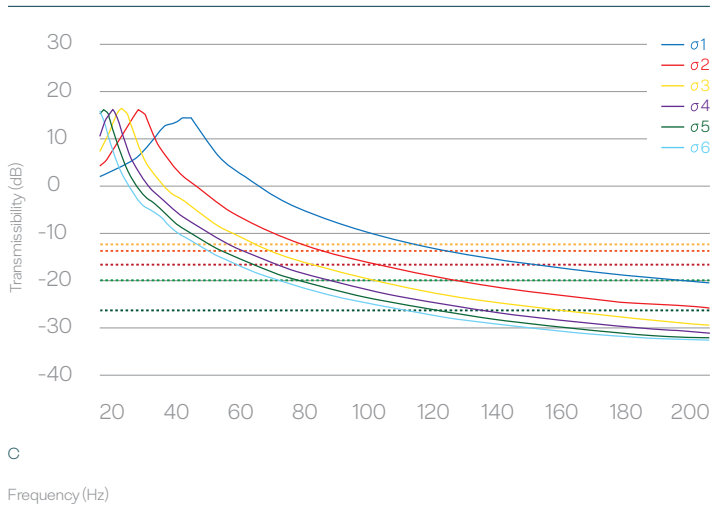
Transmissibility curves for samples VC ICB 160-180: a) 25 mm thick; b) 50 mm thick; c) 75 mm thick; d) 100 mm thick

Transmissibility: VC ICB 180 - 200



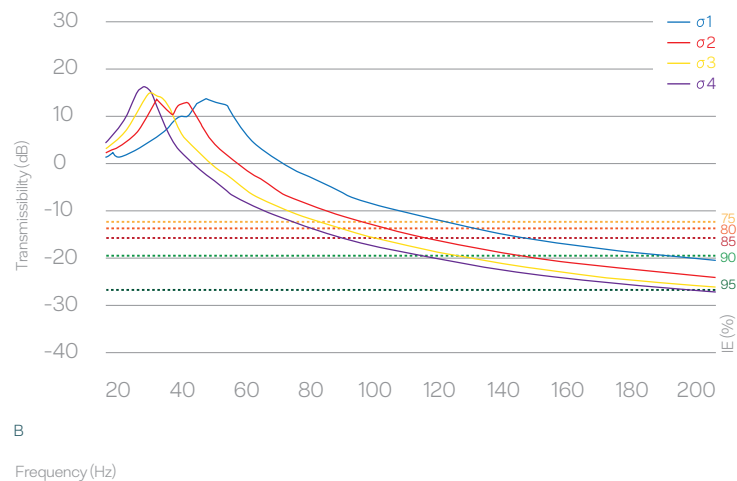
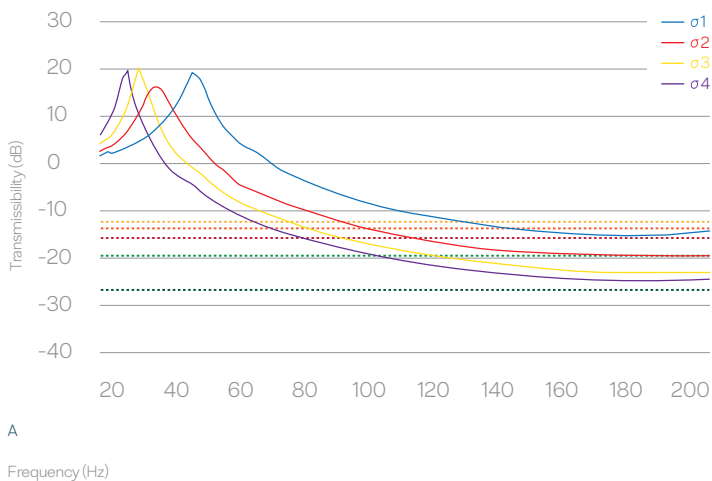
Transmissibility curves for samples VC ICB 180-200: a) 25 mm thick; b) 50 mm thick; c) 75 mm thick; d) 100 mm thick

Technical report

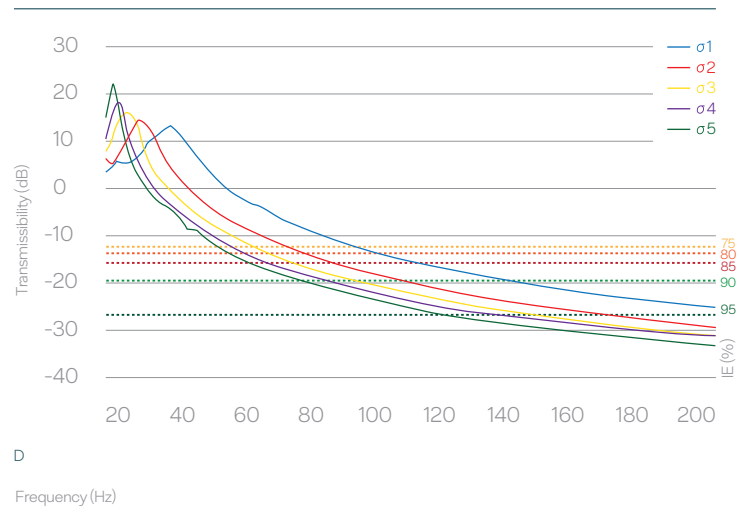
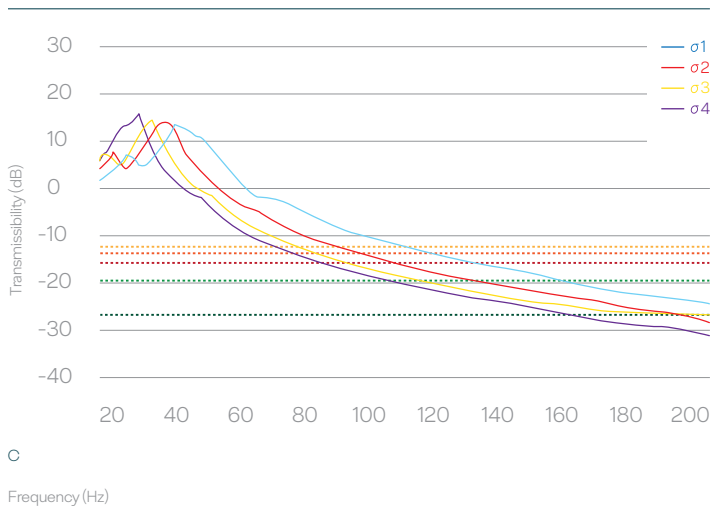


Transmissibility curves for samples VC ICB 180-200: a) 25 mm thick; b) 50 mm thick; c) 75 mm thick; d) 100 mm thick

Transmissibility: VC ICB >200



Transmissibility curves for samples VC ICB 160-180: a) 25 mm thick; b) 50 mm thick; c) 75 mm thick; d) 100 mm thick



Transmissibility curves for samples VC ICB 140-160: a) 25 mm thick; b) 50 mm thick; c) 75 mm thick; d) 100 mm thick