Barnacork

NATURAL MATERIALS FOR TECHNICAL SOLUTIONS

AMORIM ISOLAMENTOS

VIBRATION CONTROL EXPANDED INSULATION CORK BOARD

ANTIVIBRATORIO

DESCRIPTION

VC EXPANDED insulation cork is a reference of Amorim Isolamentos, 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 110-120 Kg/m³
- VC ICB 140-160 Kg/m³
- VC ICB 170-190 Kg/m³
- Other densities (on demand)
- Board dimension: 1000x500 (mm)
- Thickness up to 200 (mm)

Product lines	Compressive strength, σ10 (KPa)	Compression elasticity modulus, E (KPa)
VC ICB 110 - 120 kg/m³	155	2964
VC ICB 110 - 120 kg/m³	223	3506
VC ICB 110 - 120 kg/m³	332	6747

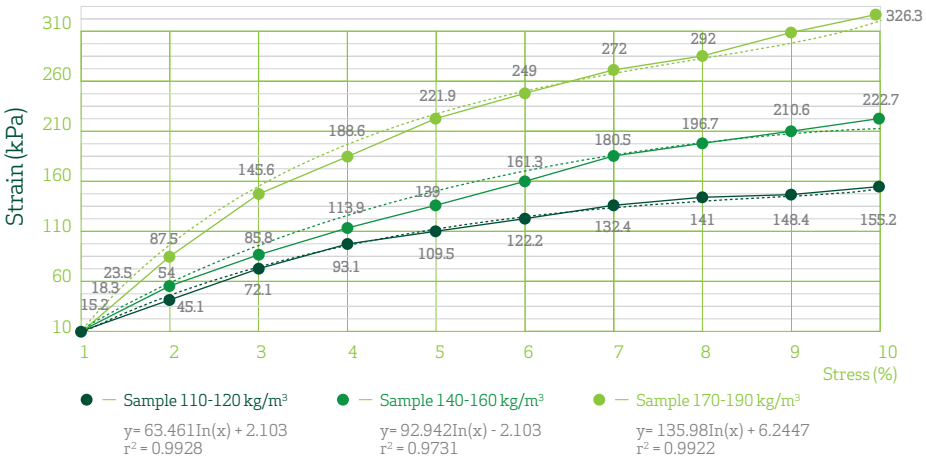
PRODUCT SPECIFICATIONS

Compression (EN 826:1996):

Product line	Thickness (mm)	Load for unit of area (kg/m²)						
		2000	5000	10000	15000	20000	25000	30000
		Strain (mm)						
VC ICB 110 - 120 kg/m³	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/m³	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/m³	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)

Compression elasticity modulus (EN 826:2003):



APPLICATION SYSTEMS

- HEAVY MACHINERY VIBRATION CONTROL

- HVAC VIBRATION CONTROL

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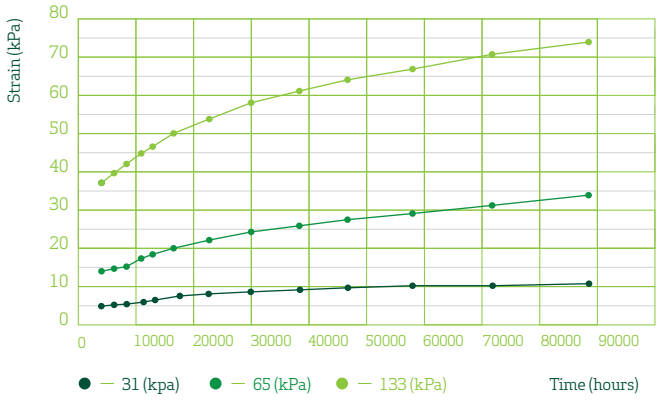
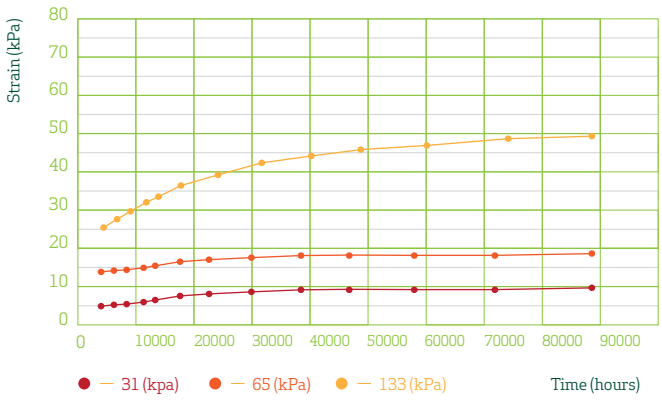
Creep Compression: VC ICB 140 - 160



Creep Compression: VC ICB 160 - 180

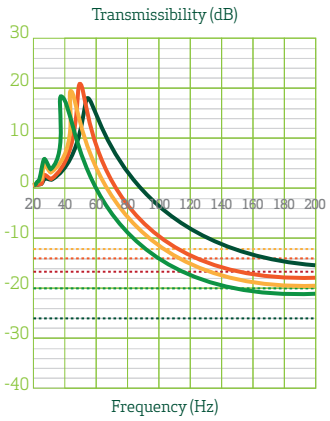


Deformation (%) estimated after a 10 years period

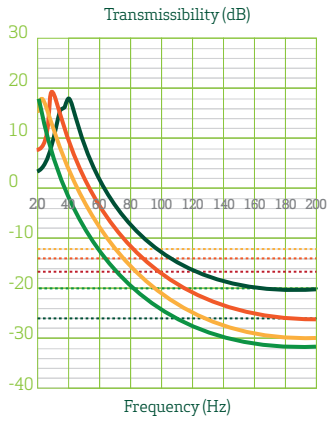
Specimens	Tension level 31.14 ± 0.11 (kPa)	Tension level 65.18 ± 0.17 (kPa)	Tension level 133.55 ± 0.07 (kPa)
A - (140 - 160 kg/m³)	10,38 %	33,41 %	73,21 %
B - (160 - 180 kg/m³)	8,64 %	18,59 %	49,71 %

TRANSMISSIBILITY

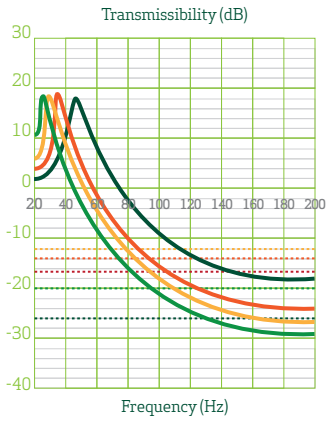
Transmissibility results in function of the thickness:



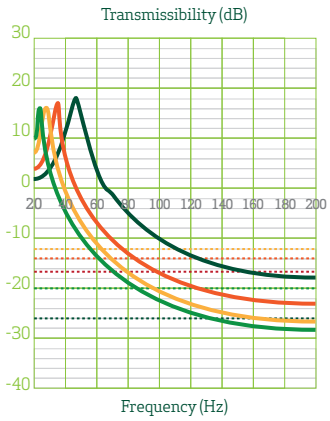
SPECIMENS
Density: 160-180 kg/m³ | Thickness: 25 mm



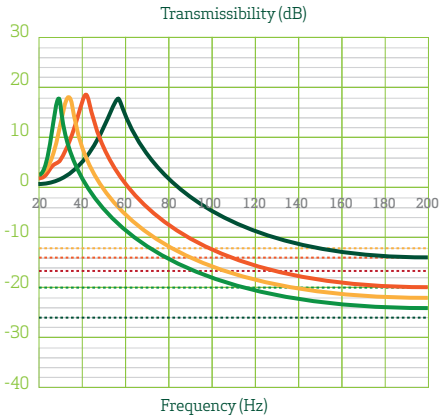
SPECIMENS
Density: 160-180 kg/m³ | Thickness: 50 mm



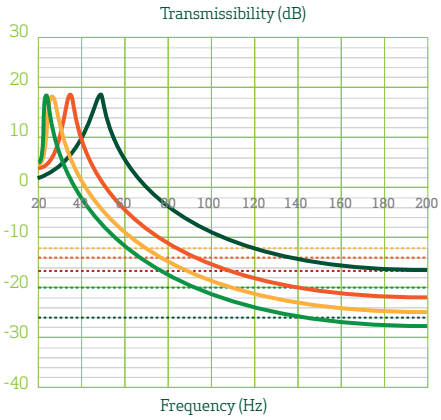
SPECIMENS
Density: 160-180 kg/m³ | Thickness: 75 mm



SPECIMENS
Density: 160-180 kg/m³ | Thickness: 100 mm



SPECIMENS
Density > 200 kg/m³ | Thickness: 50 mm



SPECIMENS
Density: 160-180 kg/m³ | Thickness: 50 mm

Product line / Thickness	Vibration isolation (100Hz)		
	30 mm	40 mm	50 mm
VC ICB 110 - 120 Kg/m³	- 19 dB (90% of vibration insulation)	- 25 dB (> 95% of vibration insulation)	- 27 dB (> 95% of vibration insulation)

› VC ICB 110-120 Kg/m³ and VC ICB 170-190 Kg/m³ with similar behavior (better results with higher thicknesses);
› Better results with less density;

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