**AcoustiCORK®**
by Amorim

VC1004

CORK INSIDE®

Cork & natural rubber

VC1004 Vibration Control material is an engineered compound with Cork and Natural Rubber.

This product is suitable for vibration control applications in need of very high isolation levels, used as discrete isolators (pads/strips) with a low ressonance frequency and medium high load.

WORK LOAD RANGE [MPA]
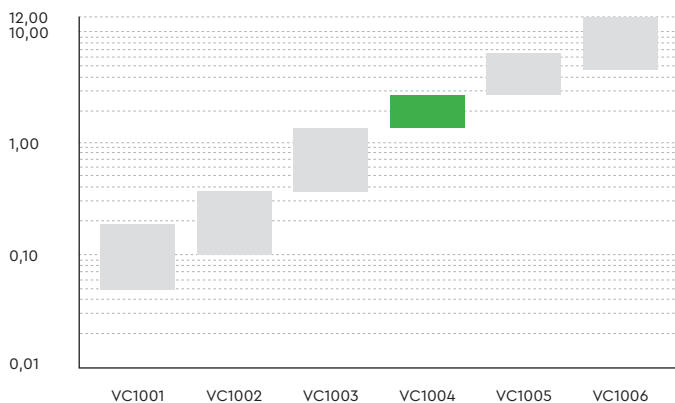
FEATURES

▸ Long term durability
▸ Low natural frequency / High vibration isolation
▸ Low water absorption
▸ Low creep rate

STANDARD DIMENSIONS*

▸ 1100x550x20mm
▸ 550x550x30mm
▸ 550x550x50mm

* Other dimensions (like pads) available under request

FIRE CLASSIFICATION

E/Efl [1]

[1] as per ISO 11925-2:2010; ISO 11925-2:2010

LOAD RANGE

Static	1,5–3,0 MPa (217–435 psi)
Total	4,0 MPa (580 psi)
Occasional	10,0 MPa (1450 psi)

E-MODULE (@ STABLE LOAD)

Static [1]	8,0–20,0 MPa (1160–2900 psi)
Dynamic [2]	16,0–50,0 MPa (2320–7251 psi)

[1] DIN 53513 (adapted) – tangential modulus (depending on pad geometrics)
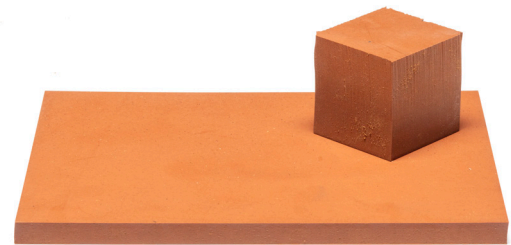[2] DIN 53513 (adapted) – depending on load and frequency

TEMPERATURE

Range	-10 / +100℃ (+14 / 212 ºF)

TECHNICAL FEATURES

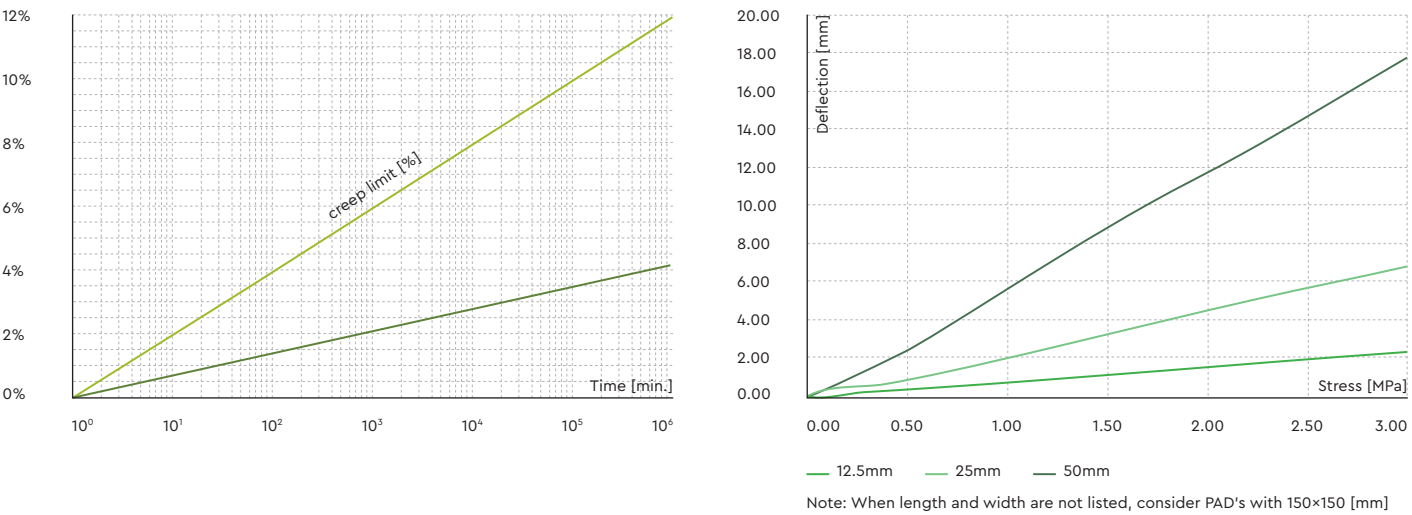| Density (kg/m³) [1]	1125 (70 lb/ft³)
Shore hardness (Shore A) [2]	60–80
Elongation at break (%) [3]	> 100
Tensile strength (MPa) [3]	> 6,0 (<870 psi)
Compression set 50%/23°C/70h (%) [4]	< 15
Loss Factor [5]	0,16

[1] ASTM D297 [2] ASTM D2240 [3] ASTM F152 [4] DIN EN ISO 1856
[5] DIN 53513 (Temperature, frequency and load dependent)

VIBRATION ISOLATION LEVEL

Note: When length and width are not listed, consider PAD's with 150×150 [mm]
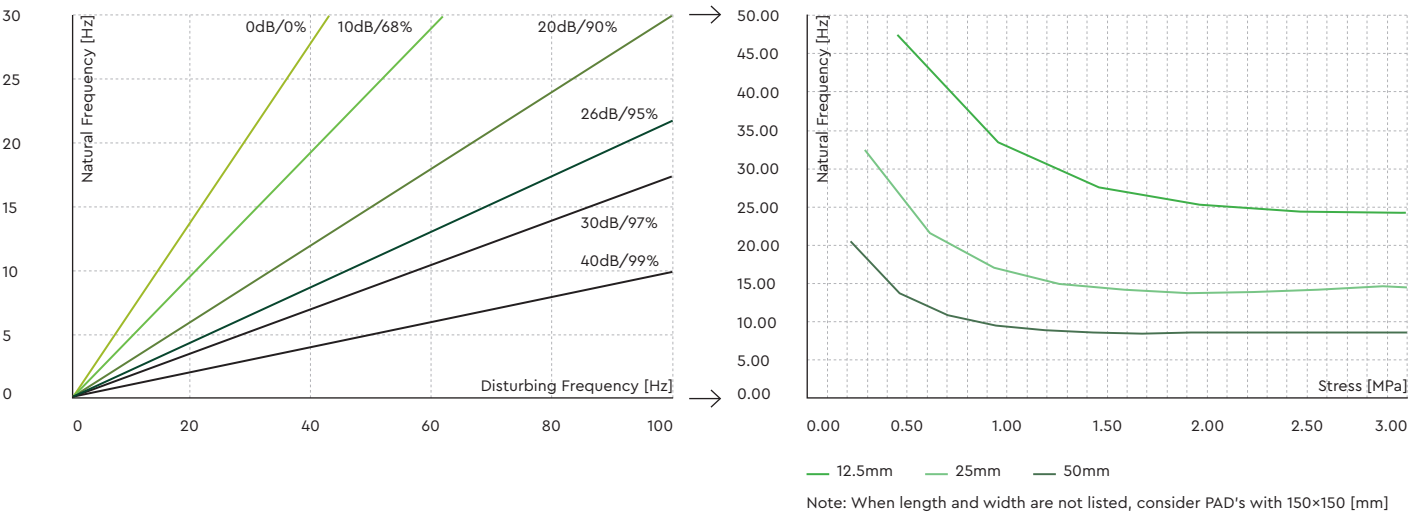
CREEP DEFLECTION @ 3 MPA [%OF START HEIGHT]

Note: When length and width are not listed, consider PAD's with 150×150 [mm]

SELECTION GUIDELINE

Material selection can be made using the Static/Dynamic
E-Module in the respective load range or using the Vibration
Isolation Level Abacus below:

▸ Based on the machine/system disturbing frequency select
the desired isolation level based on the material thickness and
respective natural frequency for the specific load/ stress.

▸ Determine the material compression from the deflection curve
at the specific load/ stress.

▸ Creep effect can be added to the above deflection via the
Creep deflection graph calculating the additional deflection
and adding.

MATERIAL DATA SHEET VC1004