AcoustiCORK® by Amorim

MATERIAL DATA SHEET

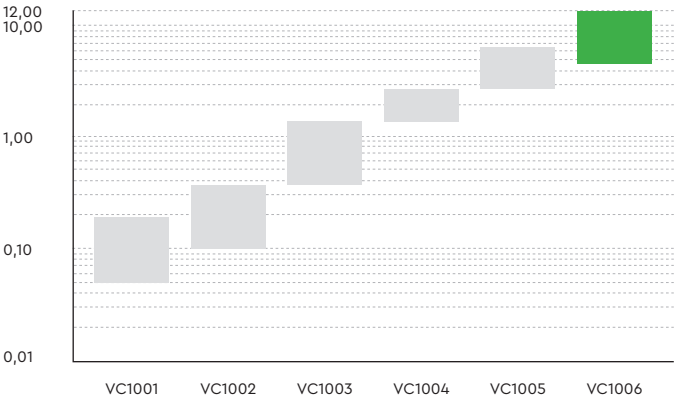
VC1006

Cork & natural rubber

VC1006 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 high load, such as: building bearings, separation of individual building parts, two-tier construction or crane runway bearings.

WORK LOAD RANGE [MPA]



FEATURES

- Long term durability
- High dynamic effectiveness
- Simple handling and processing
- Excellent long-term creep behaviour
- High mechanical resistance
- High load decoupling with bearings in minimal space

STANDARD DIMENSIONS*

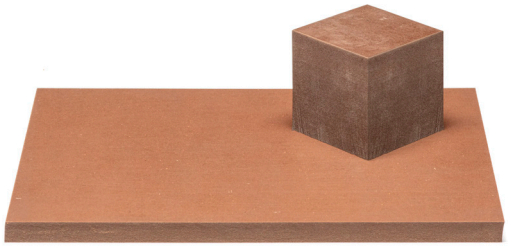
- 1100x550x10mm
- 1100x550x20mm
- 550x545x25mm
- 550x545x30mm
- 550x545x50mm

* 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	4,0–12,0 MPa (580–1740 psi)
Total	15,0 MPa (2176 psi)
Occasional	20,0 MPa (2900 psi)

E-MODULE (@ STABLE LOAD)

Static ①	60,0–100,0 MPa (8702–14504 psi)
Dynamic ②	130,0–440,0 MPa (18855–63817 psi)

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

TEMPERATURE

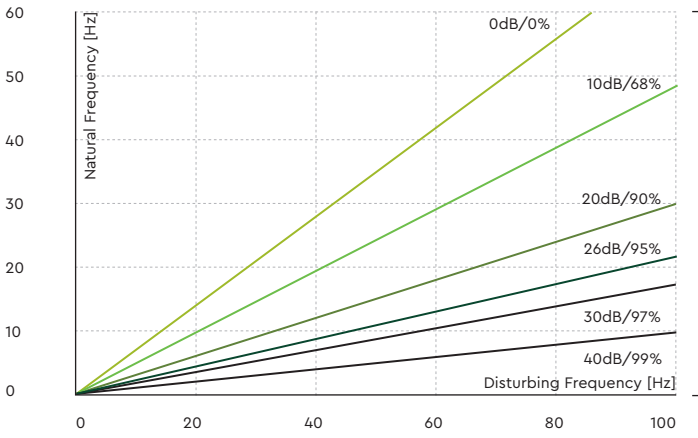
Range	-10 / +100°C (+14 / 212 °F)

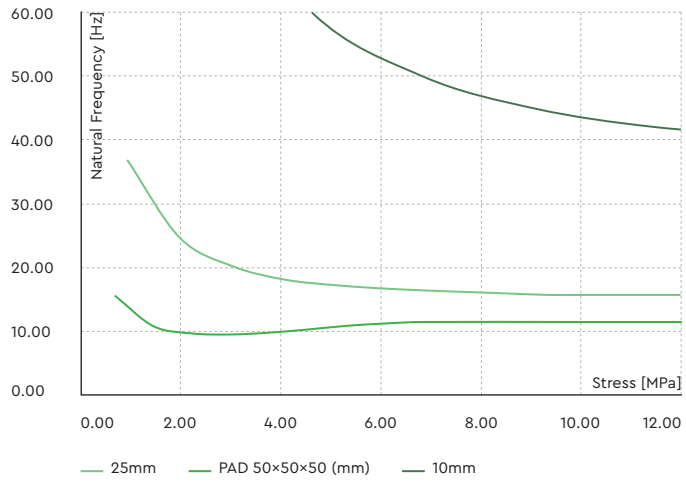
TECHNICAL FEATURES

Density (kg/m³) ①	1125 (70 lb/ft³)
Shore hardness (Shore A) ②	80–95
Elongation at break (%) ③	> 40
Tensile strength (MPa) ③	> 8,0 (> 1160 psi)
Compression set 50%/23°C/70h (%) ④	< 15
Loss Factor ⑤	0,14

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

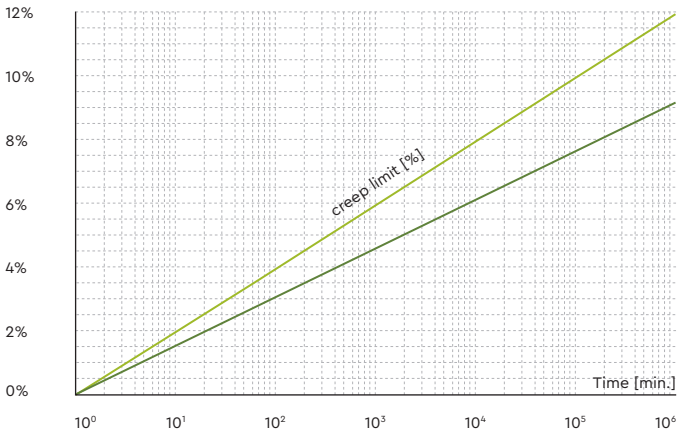
VIBRATION ISOLATION LEVEL

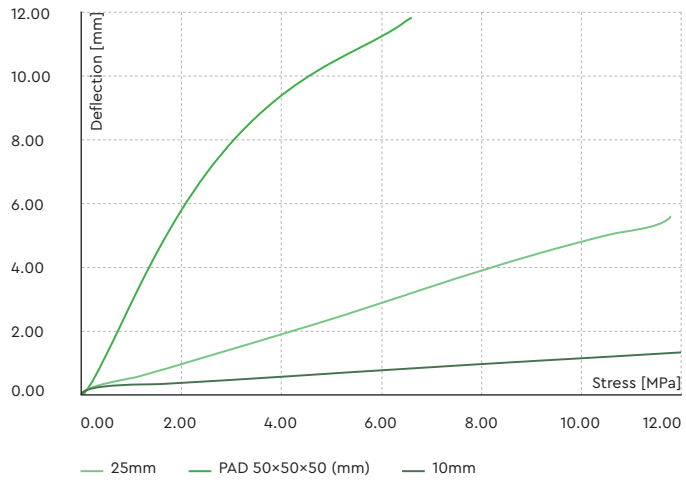




Note: When length and width are not listed, consider PAD's with 150×150 [mm]

CREEP DEFLECTION @ 6,0 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 VC1006