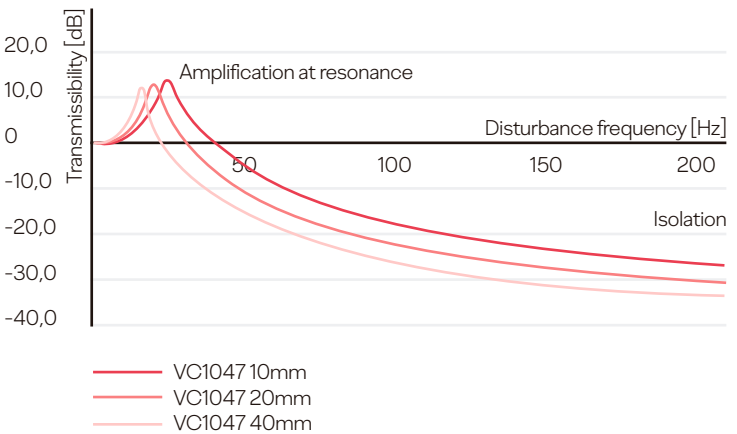
AMORIM T&D

VC1047

Technical Datasheet

Material Description & Properties

Transmissibility



Transmissibility Analysis, for a 150 x 150 pad

Read the Transmissibility by projecting a vertical line from the disturbance frequency to intercept the curve.

Features

- Reduce vibration, absorb shock and structure borne noise
- Chemical resistance
- Wide range of sheet thicknesses up to 150 mm
- One layer material avoiding de-lamination issues
- Easy to fabricate into pads
- Retains original length and width under compression due to cork's low Poisson's ratio
- Rapid installation

VC1047 Vibration Control material is a compound engineered with Cork and Nitrile rubber. This product is a general purpose industrial vibration control pad material, specifically formulated to guarantee excellent long-term performance in industrial environments when subjected to application conditions such as the presence of oils, greases and cleansing agents.

Maximum load	1.5MPa (217psi)
Work load range	0.25 to 1.0MPa (36 to 145 psi)
Temperature range	-25 °C to 120 °C (-13 °F to 248 °F)

Specially designed to isolate the transmission of vibrations to be used as external pads:

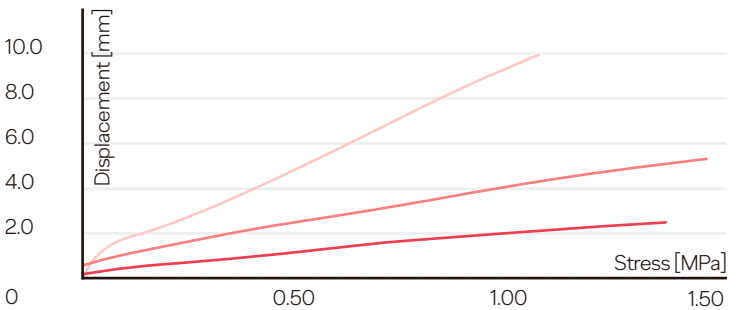
- HVAC equipment - AHU; CHRV; Chillers
- Industrial Machinery - Saws; lathers; drills; guillotines and presses etc.
- Power generator systems (gen sets)
- Pumps and compressors
- Textile manufacturing equipment

Density (kg /m^3)[1]	700-850
Hardness (shore A)[2]	65-75
Tensile strength (MPa)[3]	>1.96
Creep rate (%)[4]	1.7

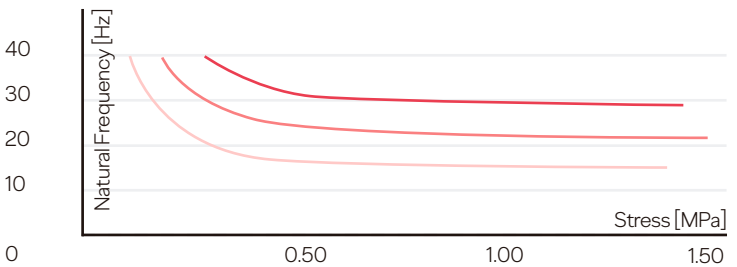
([1]) ASTM F1315
([2]) ASTM D2240
([3]) ASTM F152
([4]) ISO 8013

VC1047 is free of

- Polycyclic Aromatic Hydrocarbons (PAH)
- Heavy Metals (Pb, Cd, Hg and Cr (VI))
- Asbestos



Load Deflection Analysis.
for a 150 x 150 mm Pad



Natural Frequency for a 150 x 150 mm Pad.
obtained in a dynamic test

Design Guidelines

In order to have the best design aproach, there are key factors to consider:

- Equipment (type and size), dimensional constraints and total weight
- Centre of gravity (CG) to calculate the weight distribution between the mounting points
- Disturbance/ Excitation frequency and required isolation efficiency
- Operating temperature
- Environmental conditions (Medium)

Pad Stress

Calculate Pad Stress in MPa (or N/mm^2):

$$\text{Stress in MPa} = \frac{\text{Weight of machine in kg x 9.8}}{\text{Total Pad area in mm}^2}$$

- Project vertical line from calculated stress to intercept the curve
- Read deflection (mm) of vertical axis of graph
- Total Pad area = number of Pads x Pad area

Pad natural frequency

Natural frequency of Pad:

- Calculate stress on Pad in MPa (see above)
- Project vertical line from calculated stress to intercept the curve
- Read natural frequency (fn) on vertical axis

"Check out the "NVD-Tool" software on our website for a quick and comprehensive calculation of VC pads solutions or contact us for additional help to define our best solution for your requirements".

The data provided in this Material Data Sheet represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper sealing product may result in either product damage or personal injury. Please contact Amorim Cork Solutions regarding recommendations for specific applications. Amorim Cork Solutions expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Solutions is not liable for any indirect, special, incidental, consequential, or punitive damages as a result of using the information listed in this material data sheet, any of its brochures, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDA).