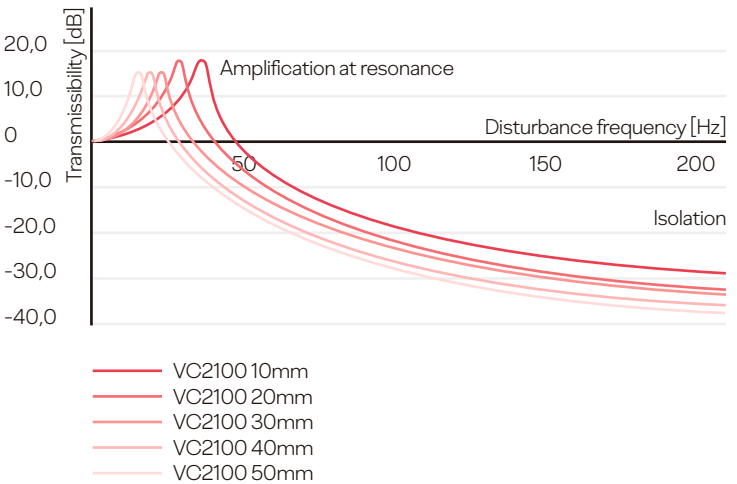
AMORIM T&D

VC2100

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 struture borne noise
- Good resistance to oils (compatible with mineral, silicone and natural ester insulation oils)
- Available in thicknesses up to 50 mm
- One layer material avoiding de-lamination issues
- Easy to fabricate into pads
- Retains original length and width under compression due to cork's Poisson's ratio

VC2100 Vibration Control material is a compound engineered with Cork and Synthetic rubber. This product is recommended for vibration control applications immersed in oil, such as internal vibration control pads in extreme industrial environments where the presence of oils or other chemicals are present.

Maximum load	2.0 MPa (290psi)
Work load range	0.5 to 1.5 MPa (72 to 217 psi)
Temperature range	-40 °C to 125 °C (-40 °F to 257 °F)

Specially designed to isolate the transformer core and clampings as well as walls, minimizing structure borne noise:

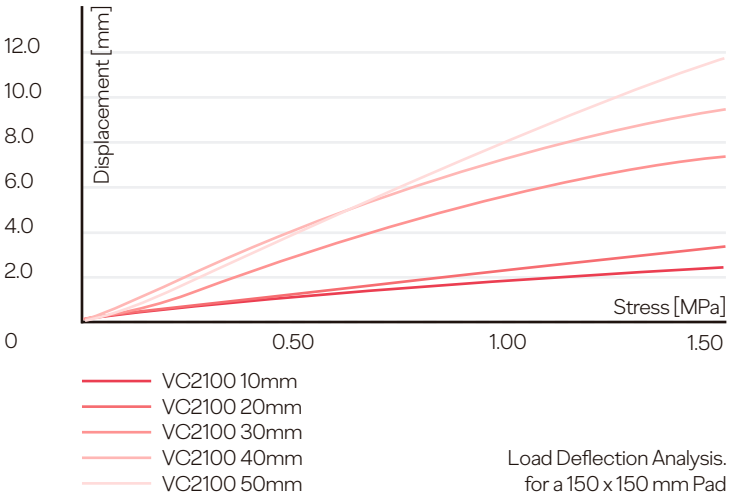
- Oil type Transformers and Reactors
- HVAC equipment
- Industrial Machinery

Density (kg /m^3)[1]	> 700
Hardness (shore A)[2]	60-80
Tensile strength (MPa)[3]	>1.72
Creep rate (%)[4]	< 2.0

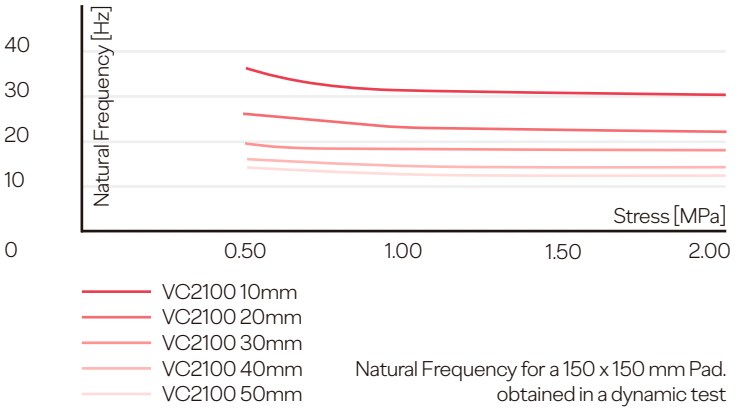
([1]) ASTM F1315
([2]) ASTM D2240
([3]) ASTM F152
([4]) ISO 8013

VC2100 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 of desired thickness
- 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)
- Read from horizontal axis across to desired Pad thickness
- 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).

www.amorimcorksolutions.com