

MATERIAL DESCRIPTION & PROPERTIES

VC2100 Vibration control material is an Engineered compound with Cork and Synthetic rubber.

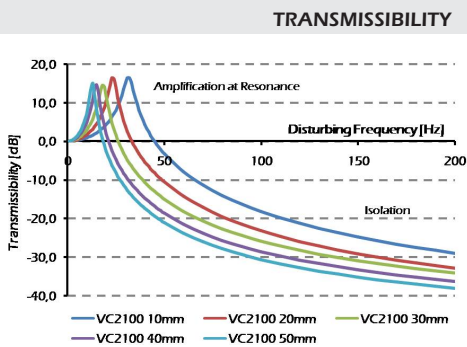
This product is suitable for vibration control applications in contact with oil, such as internal vibration control pads in extreme industrial environments where the presence of oils or other chemicals are present.

- **Maximum load** 2.0 MPa
(290 psi)
- **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 the structure borne noise.

Other Applications include:

- HVAC equipment
- Industrial Machinery



Transmissibility Analysis, for a 150 x 150 pad

Read the Transmissibility by projecting a vertical line from the disturbing frequency to intercept desired thickness curve.

FEATURES

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

Density (kg/m ³) ¹	850
Hardness (Shore A) ²	65
Tensile Strength (MPa) ³	2,0
Creep rate (%) ⁴	2,0

- (1) ASTM D297
 (2) ASTM D2240
 (3) ASTM D412, Die C
 (4) ISO 8013

VC2100 is free of:

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

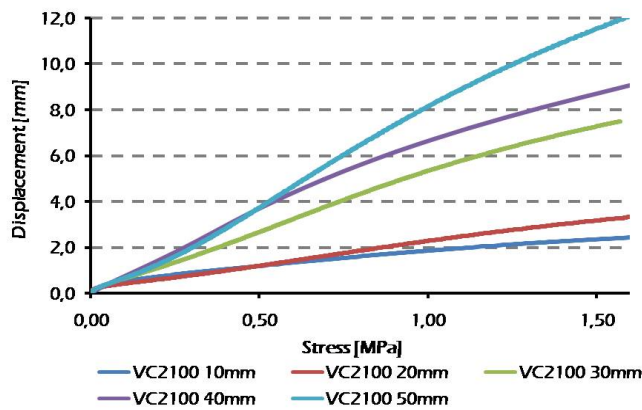
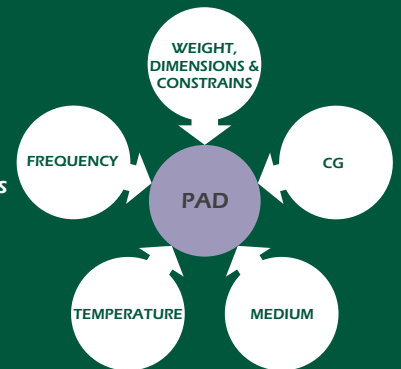
Complies with RoHS and ELV 2000/53/EC
European Directives

RoHS Compliant

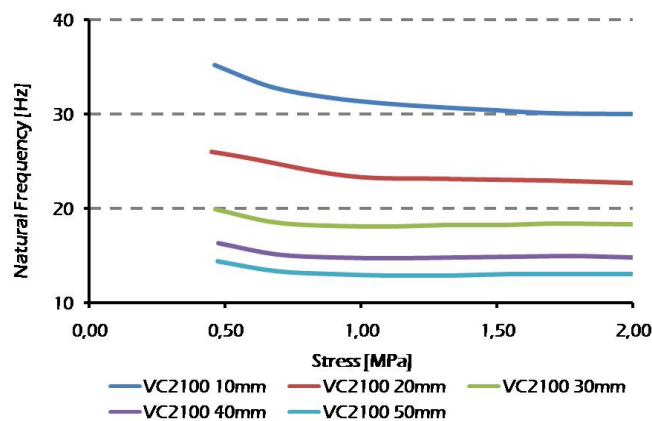
Pad Design Guidelines

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

- Equipment (type and size), dimensional constraints and total weight
- Center of gravity (CG) to calculate the weight distribution between the mounting points
- Disturbing frequency and/or required isolation efficiency
- Operating temperature
- Insulation oil



Load Deflection Analysis, for a 150 x 150 mm Pad



Natural frequency for a 150 x 150 mm Pad, obtained in a dynamic test

Pad Stress

Calculate Pad Stress in MPa (or N/mm²):

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

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

Pad Natural Frequency

Natural frequency of Pad:

- Calculate stress on Pad in N/mm² (see above)
- Read from horizontal axis across to desired Pad thickness
- Read natural frequency (fn) on vertical axis