



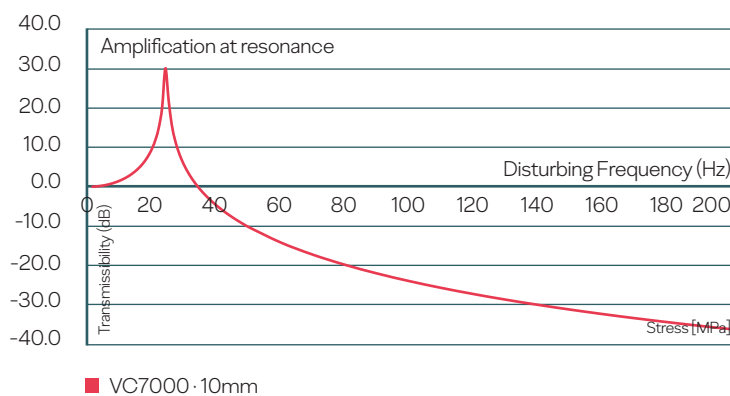
## VC7000

Technical Datasheet

### Material Description & Properties

**VC7000** Vibration Control material is an Engineered compound with Cork and Silicone rubber. This product is designed to isolate at extreme temperatures and medium/high loads.

#### Transmissibility



#### Transmissibility Analysis, for a 150 x 150 pad

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

#### Features

- Reduce vibration, absorb shock and structure borne noise
- High temperature resistance
- Ozone resistance
- 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 low Poisson ratio

Maximum load	8,0 MPa (1160psi)
Workload range	2 to 6 MPa (290 to 870 psi)
Temperature range	-60°C to 175°C (-76°F to 347°F)

Specially designed to isolate the transmission of vibrations in very high and low temperature applications; to be used as pads.

Density (kg/m <sup>3</sup> ) <sup>(1)</sup>	1100
Hardness (Shore A) <sup>(2)</sup>	70
Tensile Strength (MPa) <sup>(3)</sup>	3
Creep rate (%) <sup>(4)</sup>	<1

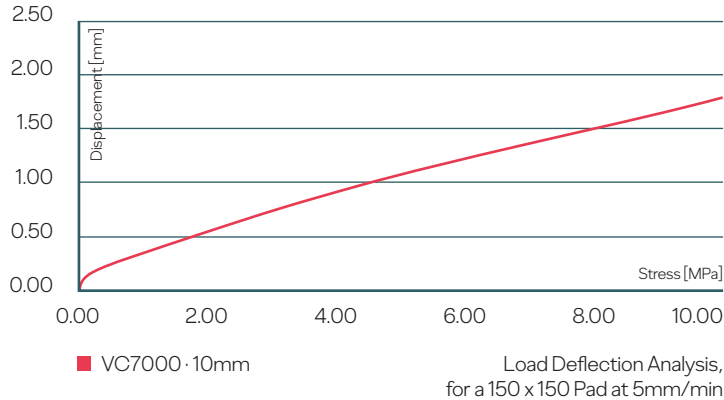
- (1) ASTM D297  
 (2) ASTM D2240  
 (3) ASTM D412, Die C  
 (4) ISO 8013

## VC7000 is free of

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

## 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/ Excitation frequency a required isolation efficiency
  - Operating temperature
  - Environmental conditions

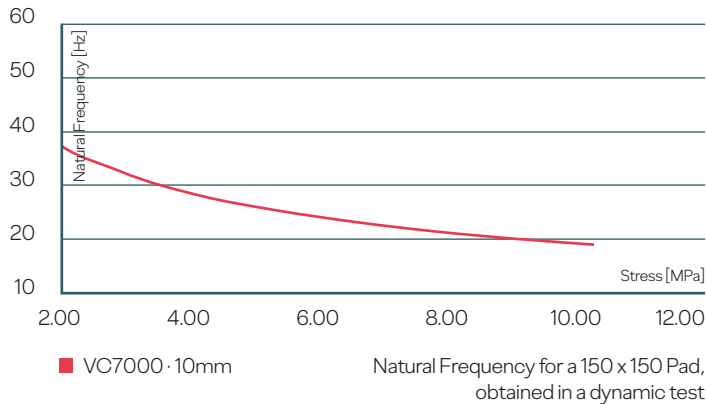


## Pad stress

Calculate Pad Stress in MPa (or N/mm<sup>2</sup>):

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

- 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 N/mm<sup>2</sup> (see above)
- Project vertical line from calculating 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).

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