

VC7000

Material Data Sheet

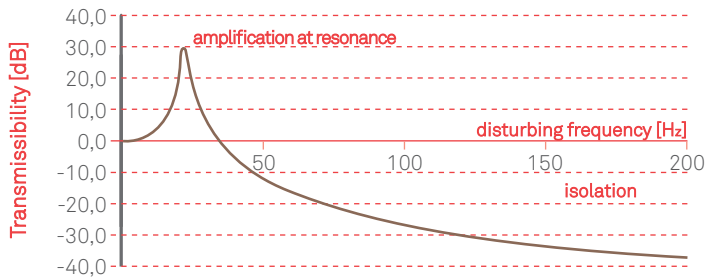
Material Description & Properties

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

• MAXIMUM LOAD	_____	8.0 MPa (1160psi)
• WORK LOAD 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.

TRANSMISSIBILITY



— VC7000 10 mm

Transmissibility Analysis, for a 150 x 150 pad

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

DENSITY (kg/m ³) ¹	1100
HARDNESS (SHORE A) ²	70
TENSILE STRENGTH (MPa) ³	2.5
CREEP RATE (%) ⁴	<1

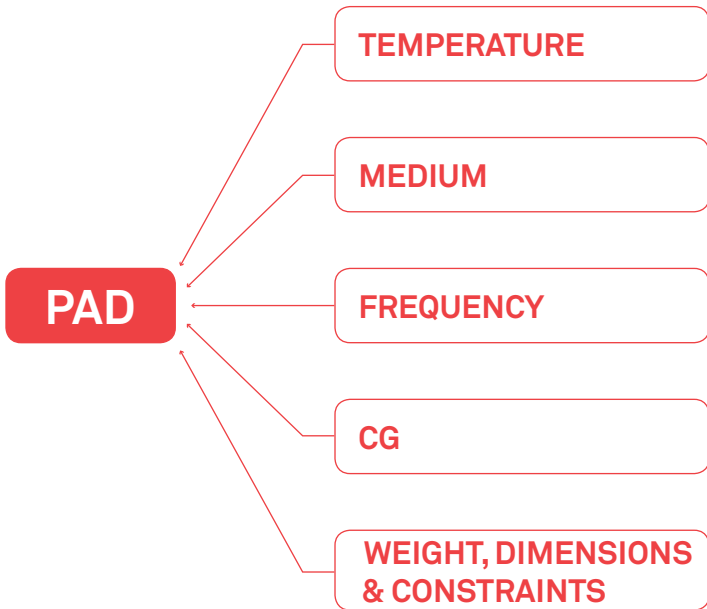
(1) ASTM D297
(2) ASTM D2240
(3) ASTM D412, D1E C
(4) ISO 8013

FEATURES

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

VC7000 IS FREE OF

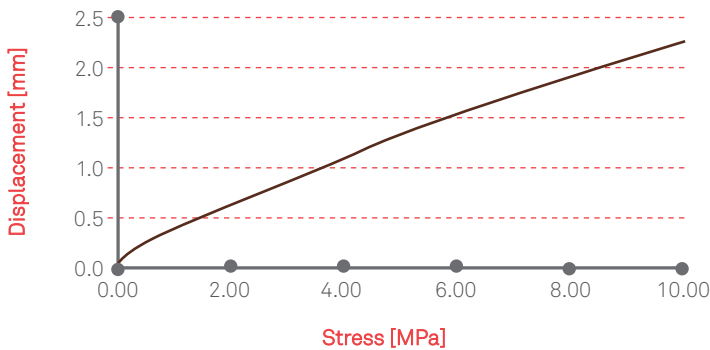
- Polycyclic Aromatic Hydrocarbons (PAH)
- Heavy Metals (Pb, Cd, Hg and Cr (VI))
- Asbestos



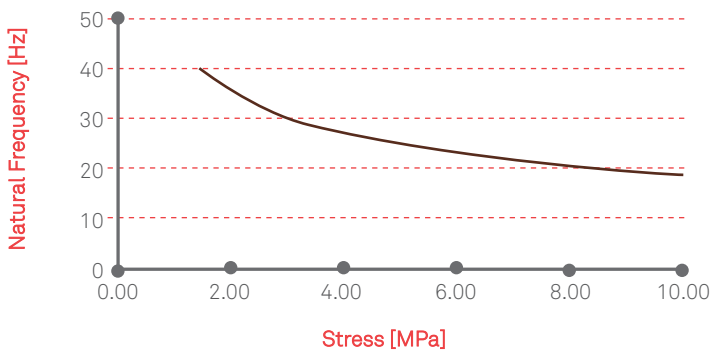
PAD DESIGN GUIDELINES

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/ Excitation frequency and required isolation efficiency
- Operating temperature
- Environmental conditions (Medium)



— VC7000 10 mm Load Deflection Analysis. for a 150 x 150 Pad at 5mm/min



— VC7000 10 mm Natural Frequency for a 150 x 150 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 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/mm² (see above)
- Project vertical line from calculated stress to intercept the curve
- Read natural frequency (fn) on vertical axis