VIBRATION**CONTROL** VC5200

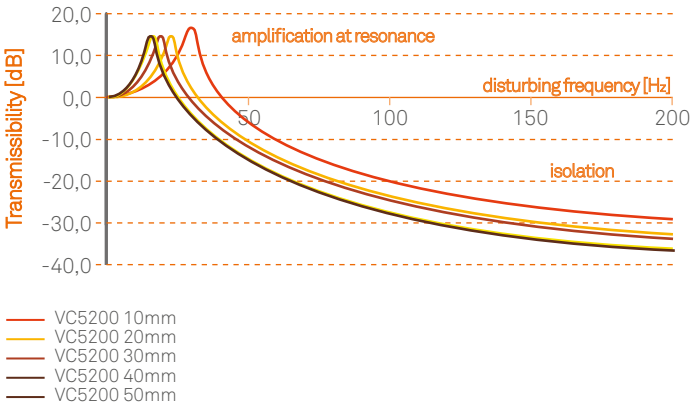
MATERIAL DATA SHEET

MATERIAL DESCRIPTION & PROPERTIES

VC5200 Vibration Control material is an Engineered compound with Cork and Polychloroprene (neoprene) / Acrylonitrile rubber. This product is designed to dampen and isolate vibrations from the assembly struture or equipment for medium load industrial applications.

- **MAXIMUM LOAD** — 0,6 MPa (87psi)
- **WORK LOAD RANGE** — 0.2 to 0,5 MPa (29 to 72 psi)
- **TEMPERATURE RANGE** — -40ºC to 110ºC (-40ºF to 230ºF)

TRANSMISSIBILITY



Transmissibility Analysis, for a 150 x 150 pad

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

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

- Medium Power Transformers
- Hvac ventilation equipment - AHU; CHRV; Chillers
- Light Industrial Machinery - Saws; lathes; drills and presses etc.
- Equipment in Food, Drink, Chemical and Pharmaceutical Industries.

DENSITY (kg /m^3) [1]	700
HARDNESS (SHORE A)[2]	60
TENSILE STRENGTH (MPa)[3]	1,2
CREEP RATE (%)[4]	<2

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

FEATURES

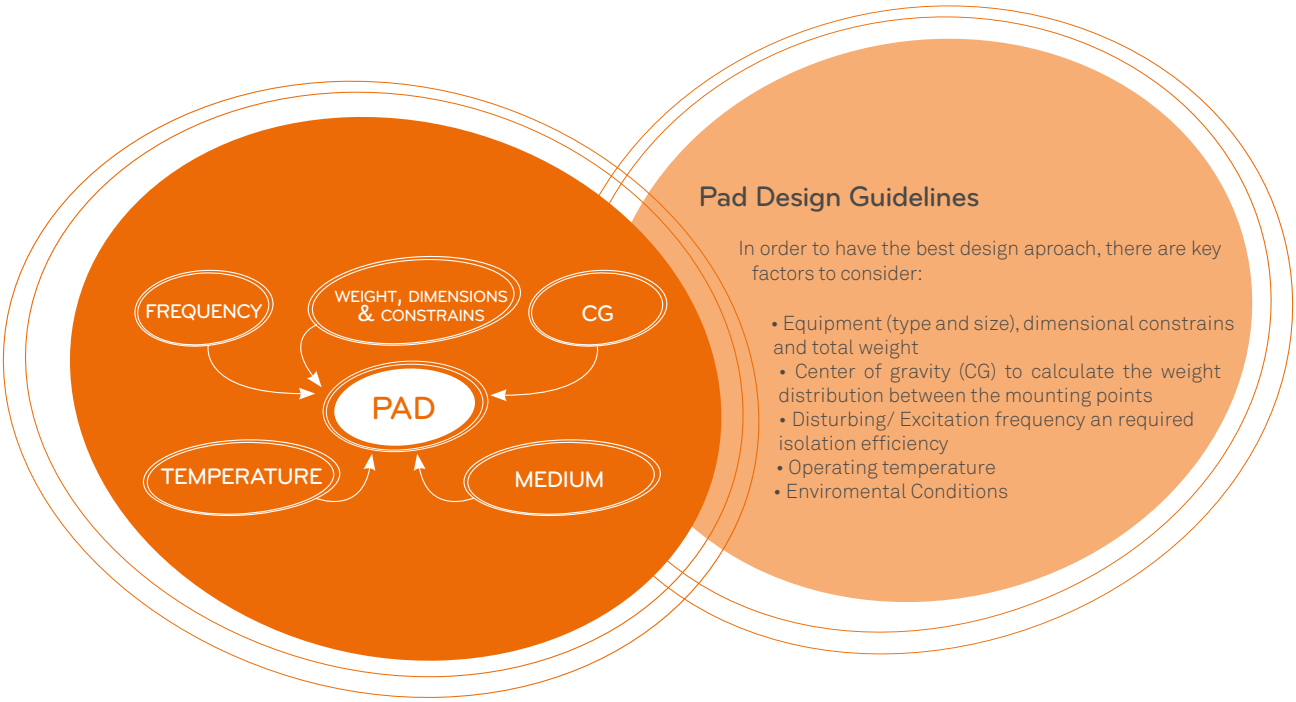
- Reduce vibration, absorb shock and struture borne noise
- Good resistance to oil
- Retains porperties throughout long maintenance free life
- Available in thicknesses up to 50mm
- One layer material avoiding de-lamination issues
- Easy to fabricate into pads
- Retains original length and width under compression due to cork poisson ratio
- Rapid installation

VC5200 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

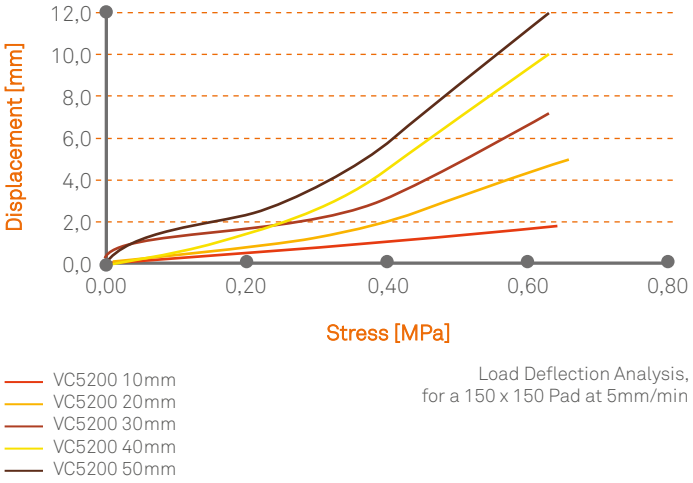
RoHS Compliant
AMORIM CORK COMPOSITES



Pad Design Guidelines

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

- Equipment (type and size), dimensional constrains and total weight
- Center of gravity (CG) to calculate the weight distribution between the mounting points
- Disturbing/ Excitation frequency an required isolation efficiency
- Operating temperature
- Enviromental Conditions



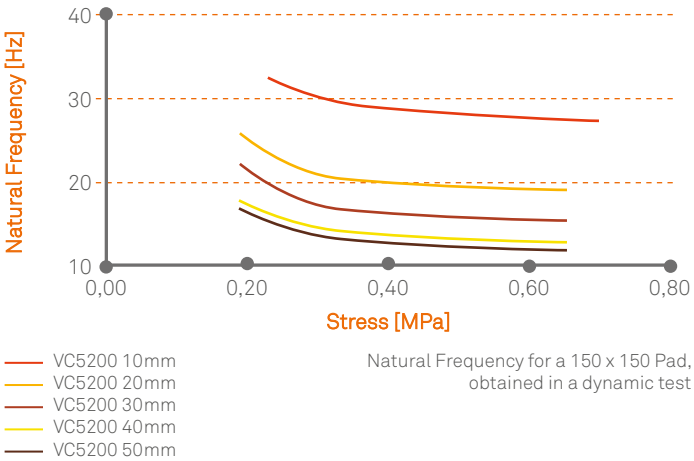
Load Deflection Analysis, for a 150 x 150 Pad at 5mm/min

Pad Stress

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

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

- 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



Natural Frequency for a 150 x 150 Pad, obtained in a dynamic test

Pad Natural Frequency

Natural frequency of Pad:

- Calculate stress on Pad in N/mm² (see above)
- Project vertical line from calculate stress to intercept the curve
- Read natural frequency (fn) on vertical axis