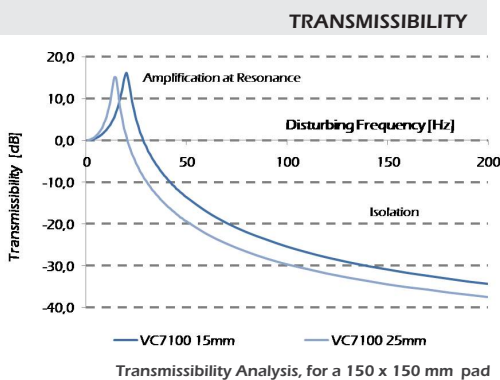# MATERIAL DESCRIPTION & PROPERTIES

VC7100 Vibration control material is an Engineered polyurethane bound crumb rubber material.

This product is a cost effective industrial vibration control material, developed for the machinery mounting industry and to be used as mats where high loads are present.

- **Work load range** .... 100kPa to 500 kPa

- **Temperature range** ... -40°C to 100°C
  (-40°F to 212°F)

Specially designed to isolate the transmission of vibrations and noise; to be used as mats:

- Heavy plat machinery
- Inertia pits
- Flat skid/base heavy machinery

Density (kg/m³)[1]	**710**
Tensile strength (MPa)[2]	0,35
Creep rate (%)[4]	< **2**

[1] **ASTM D297**
[2] **ASTM D412, Die C**
[3] **ISO 8013**

TRANSMISSIBILITY

Transmissibility Analysis, for a 150 x 150 mm pad

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

FEATURES

- Reduce vibration, absorb shock and structure borne noise
- Flexibility of floor layout
- Standard thickness 15mm other thicknesses available
- Easy to install
- Supplied in rolls
- Completely recyclable material

- Also available in 17mm dimpled version for loads beginning at 30kPa to 100kPa

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 and required isolaton efficiency

- Operating temperature

- Enviromental Conditions

WEIGHT, DIMENSIONS & CONSTRAINS

FREQUENCY

CG

PAD

TEMPERATURE

MEDIUM
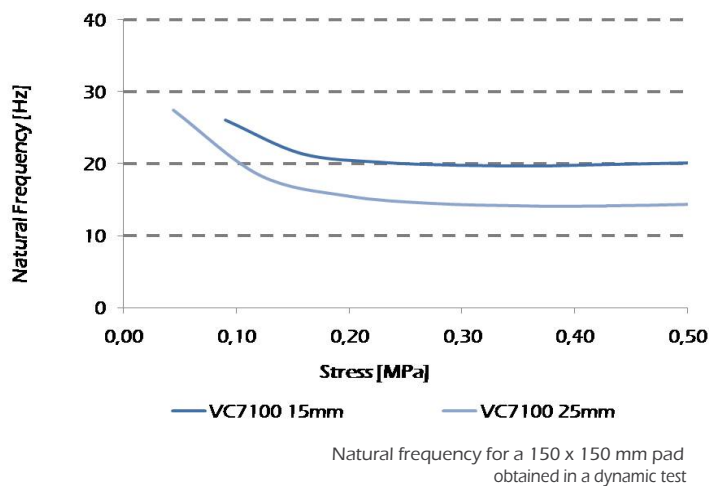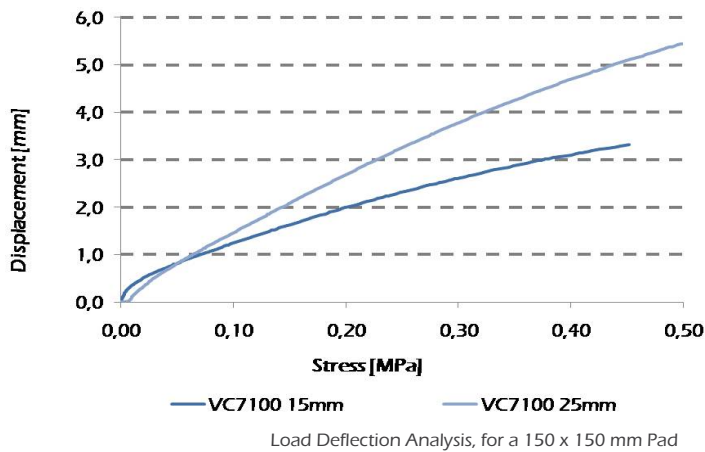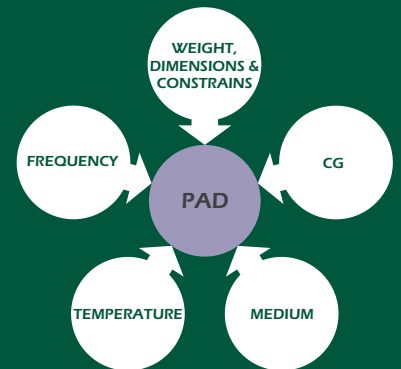
Pad Stress

Calculate Pad Stress in MPa (or N/mm^2):

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

- 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

Load Deflection Analysis, for a 150 x 150 mm Pad

— VC7100 15mm — VC7100 25mm

Pad Natural Frequency

Natural frequency of Pad:

- Calculate stress on Pad in MPa (see above)
- Project vertical line from calculated stress to intercept the curve
- Read natural frequency (fn) on vertical axis

Natural frequency for a 150 x 150 mm pad obtained in a dynamic test

— VC7100 15mm — VC7100 25mm