

Technical details

Max. static load

0,45 N/mm²

Max. dynamic load

0,8 N/mm²

Load peaks

0,8 N/mm²

(Short term load peaks)

Values depending on shape factor and apply to shape factor $q = 2$

Material Mixed-cell PU elastomer

Colour Grey

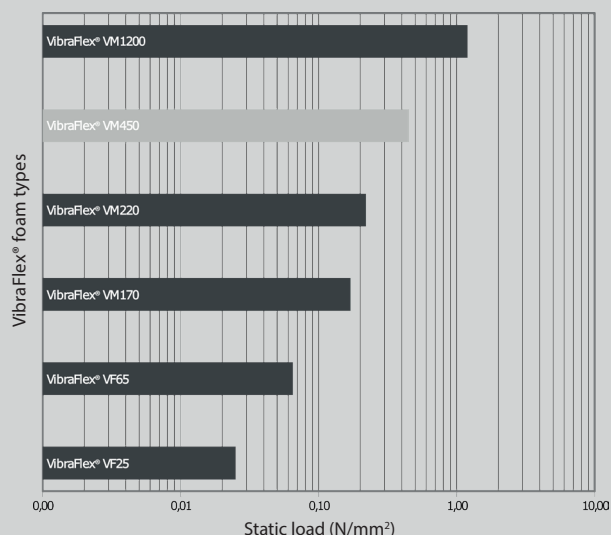
Length 1000 mm

Width 500 mm

Thickness 12.5 mm or 25 mm

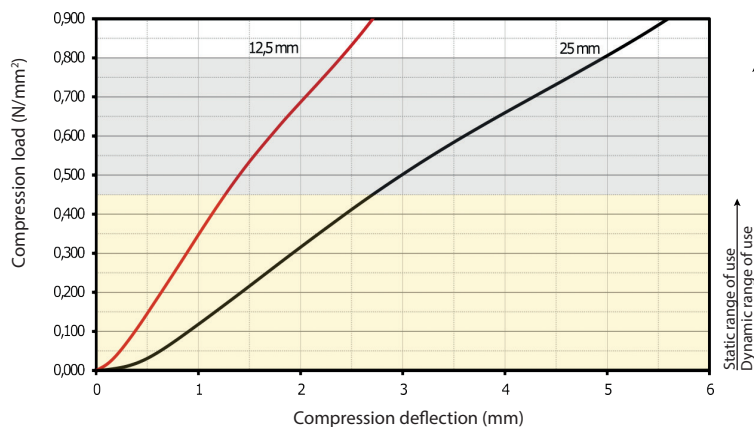
Converting options Cut to size, moulding 3D or other upon request

Range of use



Material properties	Value	Test method	Comment
Mechanical loss factor	0,09	DIN 53513	At specific load of 0,45 N/mm ² , 10 Hz, 25 mm. For more see figure "loss factor"
Compression hardness	0,6 N/mm ²	ISO 3386-2	At 25% linear compression, 3 rd load cycle.
Compression set	< 10 %	ISO 1856	50% / 23 °C / 70h
Static modulus of elasticity	4,75 N/mm ²	DIN 53513	Tangential modulus at specific load of 0,45 N/mm ² , 25mm see figure "Modulus of elasticity"
Dynamic modulus of elasticity	7,25 N/mm ²	DIN 53513	At specific load of 0,45 N/mm ² , 10 Hz, 25mm
Static stiffness	0,19 N/mm ³	DIN 53513	
Dynamic stiffness	0,29 N/mm ³	DIN 53513	
Tensile strength	4,4 N/mm ²	ISO 1798	
Elongation of break	> 300 %	ISO 1798	
Hardness	65-70	Asker C	
Angle tear	> 14 N/mm ³	DIN 53515	
Pendulum rebound	> 65 %	Internal	
Electrical conductivity	> 1000 Mohm·cm	Internal	
Thermal conductivity	0,07 - 0,10 W m·K)	Internal	
Water absorption	< 10 %	Internal	Volume swell 7 days
Fire properties	Class B2 Class E	DIN 4102 ISO 13501-1	
Temperature	-30 to +60 °C	Internal	Operating temperature. For more see figure "DMTA"

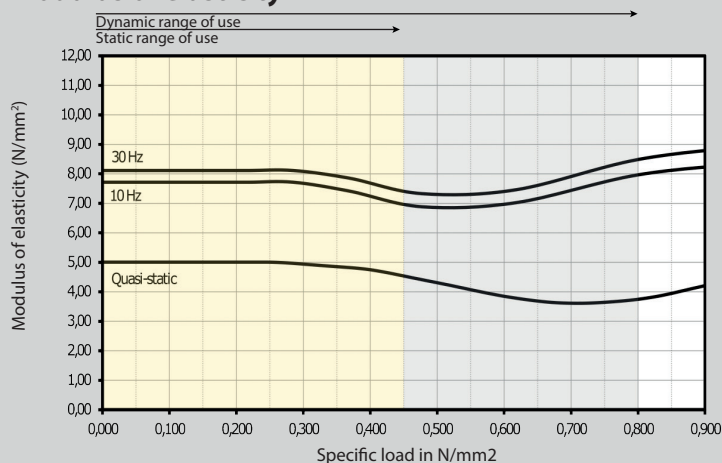
Compression load deflection



Static compression load deflection of 3rd load occurrence. Testing between flat and plane-parallel steel plates.

Shape factor $q = 2$

Modulus of elasticity



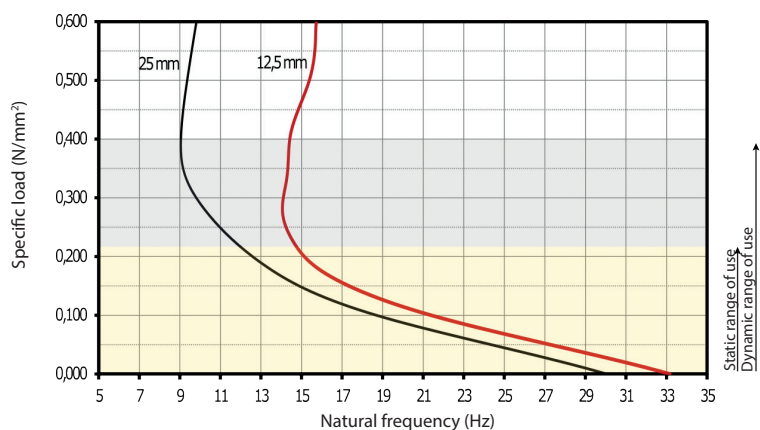
Dynamic modulus of elasticity for a sinusoidal excitation at a constant mean load and an amplitude of $\pm 0,25$ mm.

Quasi-static modulus of elasticity as a result of tangent modulus of the spring characteristic.

Tested according to DIN 53513.

Shape factor $q = 2$

Natural frequencies

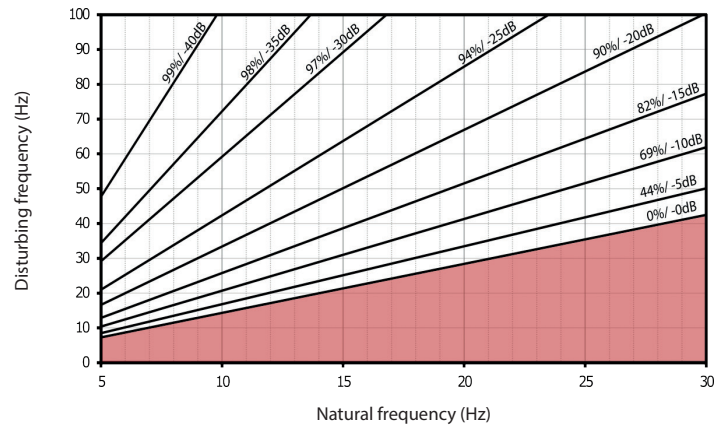


Natural frequency of a single degree-of-freedom system (SDOF System) consisting of a mass and an elastic bearing made of VibraFlex® VM400 on a rigid base.

Tested according to DIN 53513.

Shape factor $q = 2$

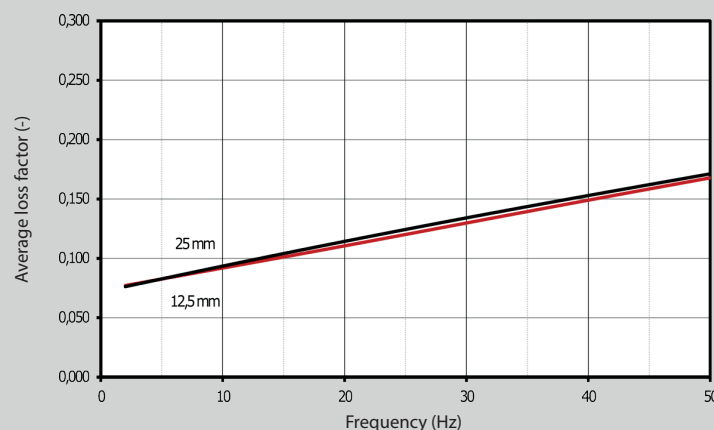
Vibration isolation efficiency



Vibration isolation efficiency by implementation of an elastic bearing made of VibraFlex® VM400 on a rigid base.

Parameter: Isolation factor in %, factor of transmission in dB.

Mechanical loss factor



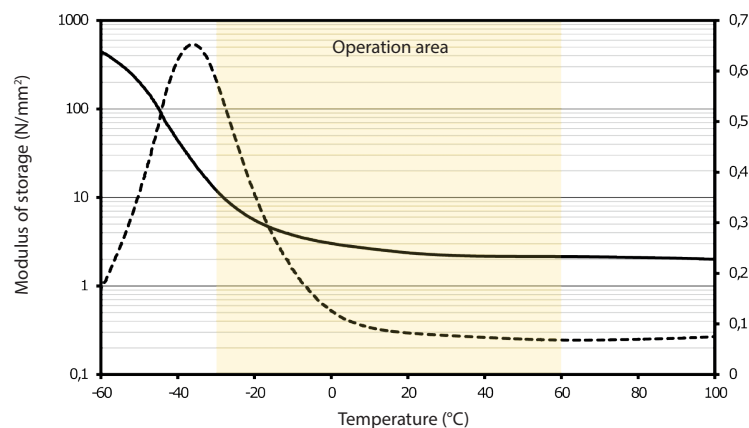
Mechanical loss factor is measure for energy loss per cycle in an oscillating system.

The values shown in the diagram are valid for an excitation with a vibration velocity of 1 mm/s.

Tested according to DIN 53513.

Shape factor $q = 2$

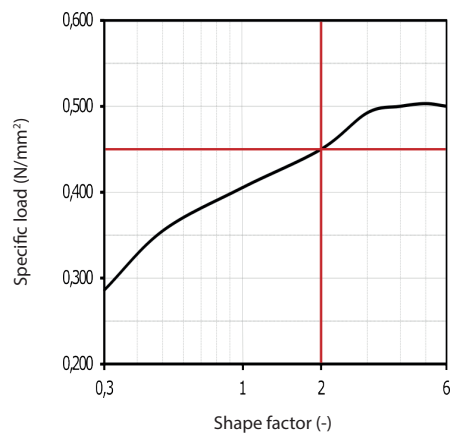
DMTA



DMTA graph shows the relation between storage modulus and tan delta over temperature.

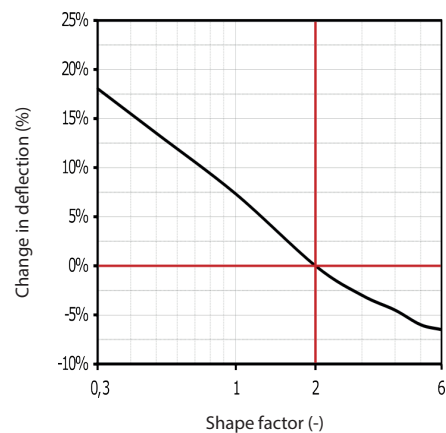
Storage modulus describes the elastic response of the material.

Shape factor influence



Relation between static range and shape factor.

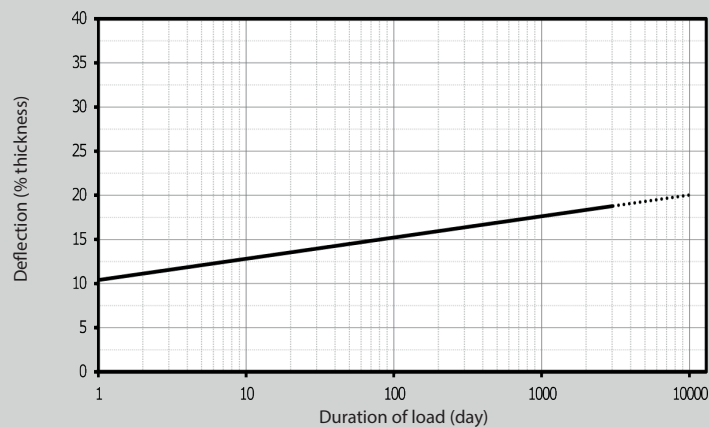
Reference values: specific load 0,45 N/mm²,
shape factor q = 2.



Relation between static deflection and shape factor.

Reference values: specific load 0,45 N/mm², shape
factor q = 2.

Long-term creep



Long term creep effects occurring under
long time load under room temperature.

The graph shows the typical behaviour of
the elastomer under maximum static load,
relative to the unstressed specimen.

Subject to alterations

BPI reserves the right to update product data information without prior notice. The information submitted in this datasheet is based on our current knowledge and experience. It does not imply any legally binding assurance.

Whenever used, the special conditions of the particular application must be taken into consideration, particularly those regarding physical, technical and legal aspects concerning construction.