

Sylomer® SR 42 Product datasheet



Influence of the shape factor

In the figures below one can find correction varying shape factors.

Figure 5: static load range

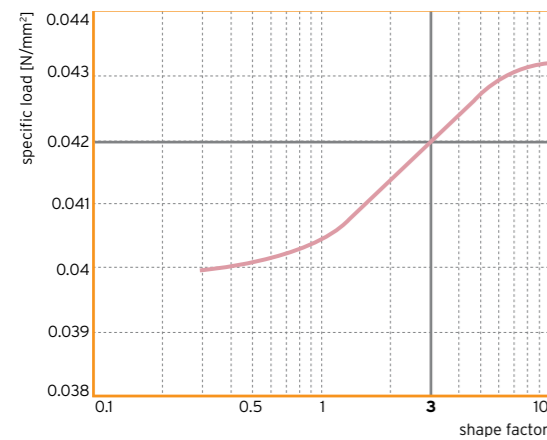


Figure 6: deflection*

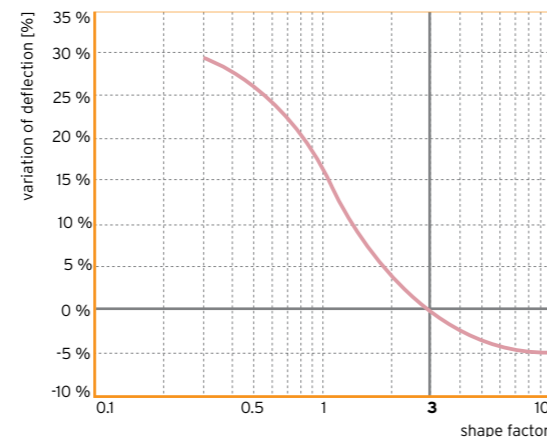


Figure 7: dynamic modulus of elasticity at 10 Hz*

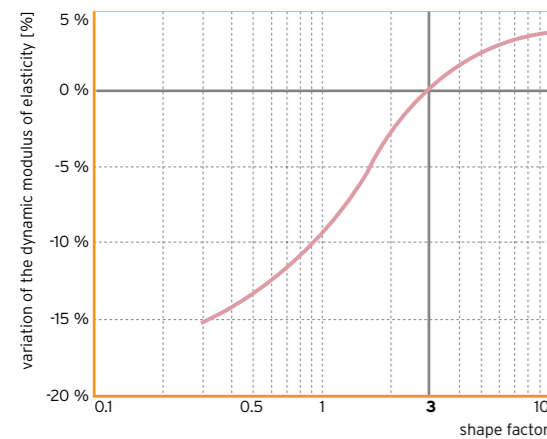
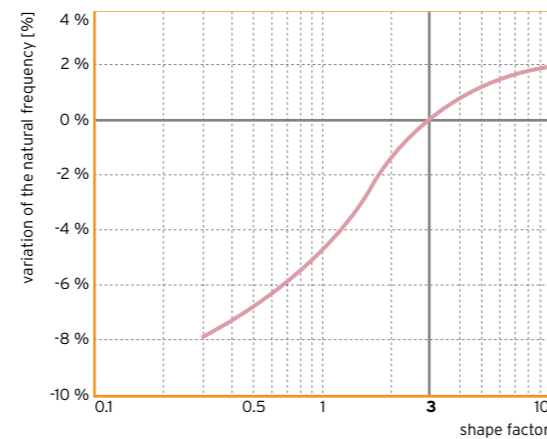


Figure 8: natural frequency*



*reference value: specific load 0.042 N/mm², shape factor 3

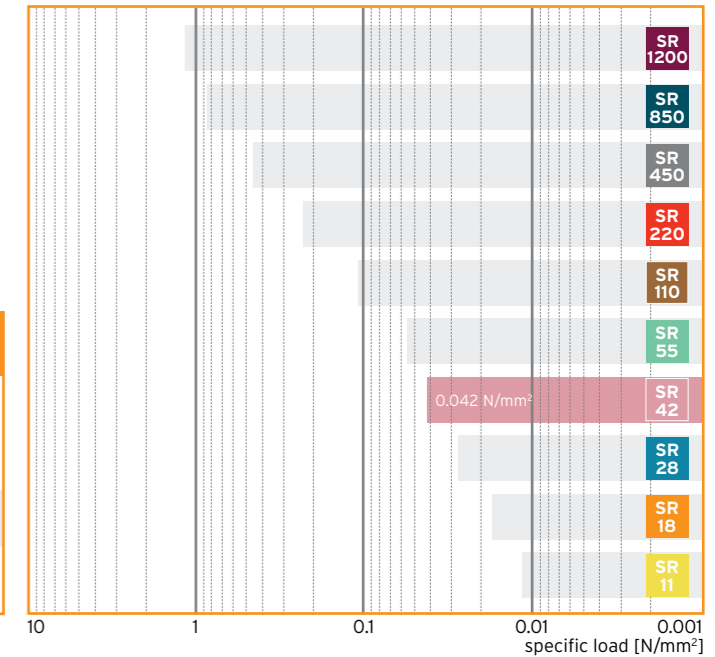
Material mixed cellular polyurethane
Colour pink

Standard Sylomer® range
Static range of use

Standard dimensions on stock

Thickness: 12.5 mm with Sylomer® SR 42 - 12
25 mm with Sylomer® SR 42 - 25
Rolls: 1.5 m wide, 5.0 m long
Stripes: max. 1.5 m wide, up to 5.0 m long

other dimensions (also thickness), as well as stamped and molded parts on request



| Area of application | Compression load | Deflection |
|--|---|-------------|
| | depending on shape factor, values apply to shape factor 3 | |
| static range of use (static loads) | up to 0.042 N/mm² | approx 7 % |
| operating load range (static plus dynamic loads) | up to 0.065 N/mm² | approx 25 % |
| load peaks (short term, infrequent loads) | up to 2 N/mm² | approx 80 % |

| Material properties | Test methods | Comment |
|------------------------------------|-------------------------|--------------------------|
| mechanical loss factor | $\eta = 0,16$ | DIN 53513* |
| rebound elasticity | 55 % | DIN 53573 |
| compression set | < 5 % | EN ISO 1856 |
| static shear modulus | 0.08 N/mm² | DIN ISO 1827* |
| dynamic shear modulus | 0.17 N/mm² | DIN ISO 1827* |
| coefficient of friction (steel) | $\mu_s = 0.5$ | Getzner Werkstoffe |
| coefficient of friction (concrete) | $\mu_s = 0.7$ | Getzner Werkstoffe |
| abrasion | 1200 mm³ | DIN 53516 |
| operating temperature | -30 bis 70 °C | |
| specific volume resistance | > 10 ¹¹ Ω·cm | DIN IEC 93 |
| thermal conductivity | 0.07 W/(mK) | DIN 52612/1 |
| flammability | B2, B, C und D | DIN 4102, EN ISO 11925-2 |

* Tests according to respective standards

All information and data is based on our current knowledge. The data can be applied for calculations and as guidelines, are subject to typical manufacturing tolerances and are not guaranteed. We reserve the right to amend the data.

Further information can be found in VDI-Guideline 2062
Further characteristic values on request.

climate neutral printing

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Load deflection curve

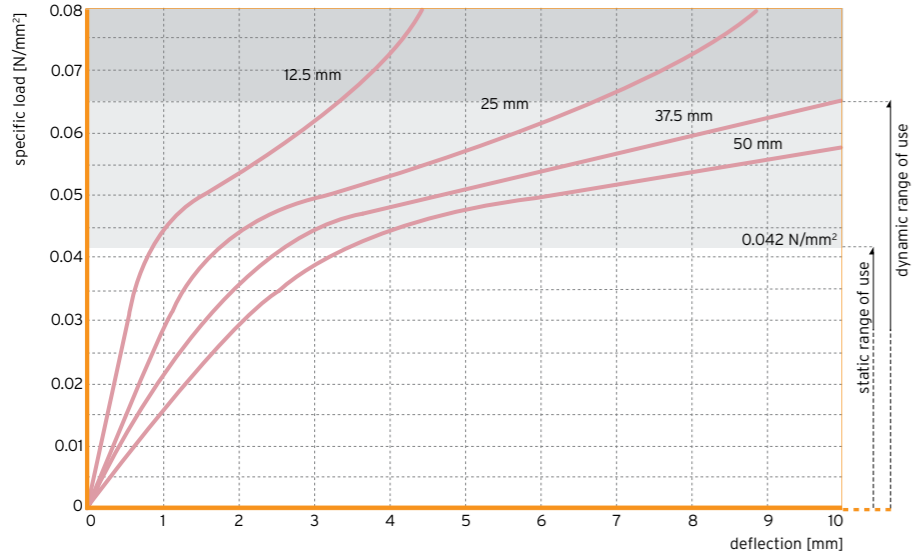


Figure 1: Quasistatic load deflection curve measured with a loading rate of 0.0042 N/mm²/s

Testing between flat steel-plates; recording of the 3rd loading; testing at room temperature

shape factor 3

Modulus of elasticity

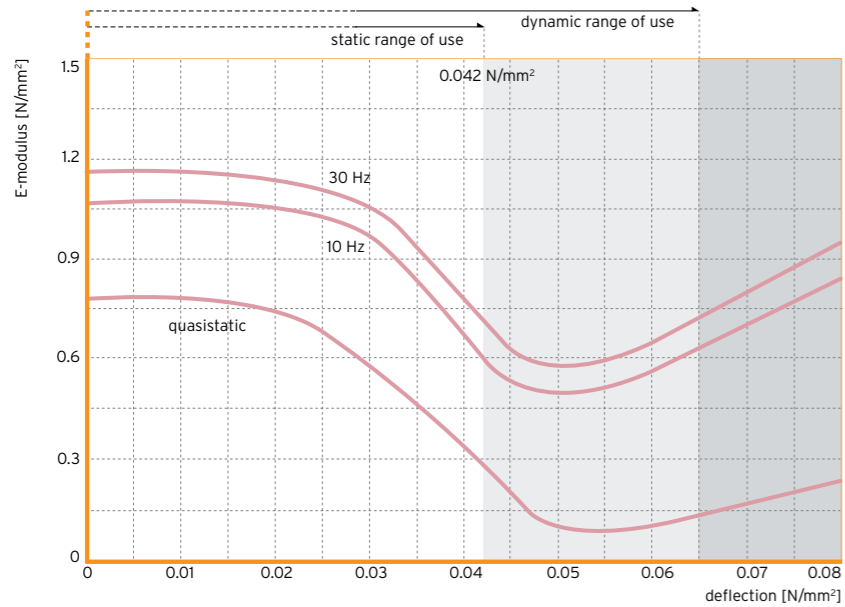


Figure 2: load dependency of the static and dynamic E-modulus

Quasistatic E-modulus as a tangent modulus taken from the load deflection curve; dynamic modulus of elasticity due to sinusoidal excitation with a velocity level of 100 dBv re. $5 \cdot 10^{-8}$ m/s (equal to an oscillating range of 0.22 mm at 10 Hz and 0.08 mm at 30 Hz, see also in the glossary)

test according to DIN 53513

shape factor 3

Natural frequency

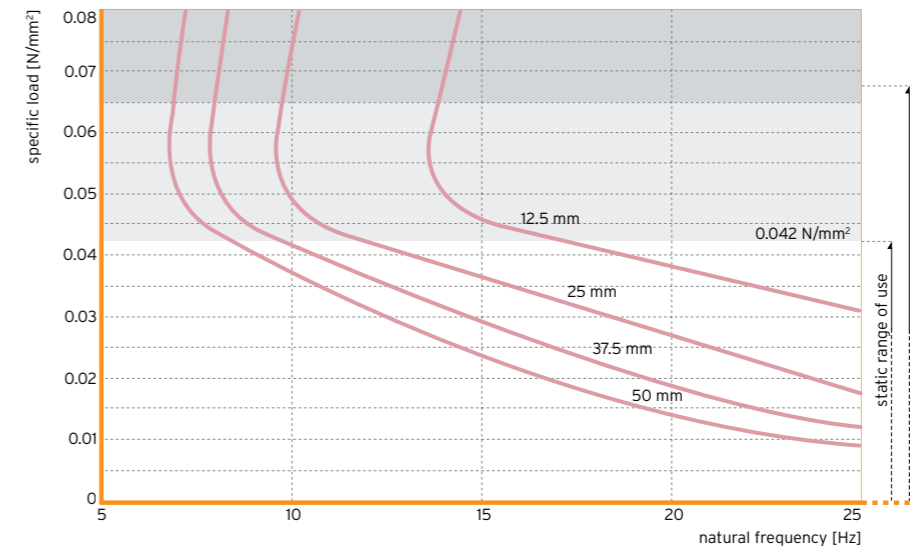


Figure 3: natural frequency of a single-degree-of-freedom system (SDOF system) consisting of a fixed mass and an elastic bearing consisting of Sylomer SR 42 based on a stiff subgrade;

parameter: thickness of elastomeric bearing

shape factor 3

Vibration isolation efficiency

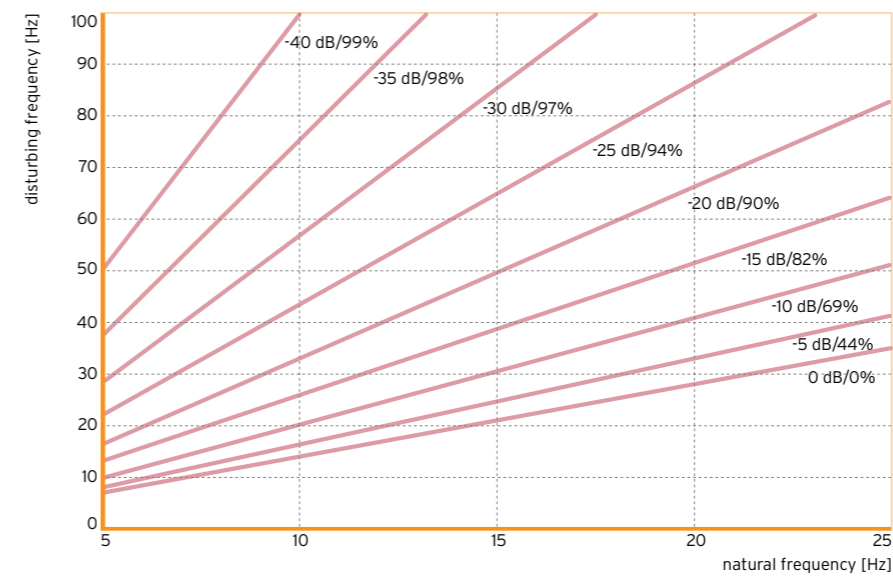


Figure 4: reduction of the transmitted mechanical vibrations by implementation of an elastic bearing consisting of Sylomer SR 42

parameter: factor of transmission in dB, isolation rate in %