Sylomer® SR 42
Product datasheet

by getzner sylomer®

Influence of the shape factor

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

Figure 5: static load range

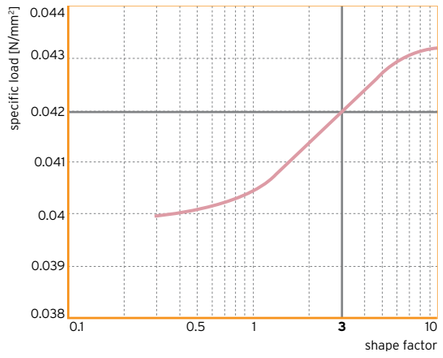


Figure 6: deflection*

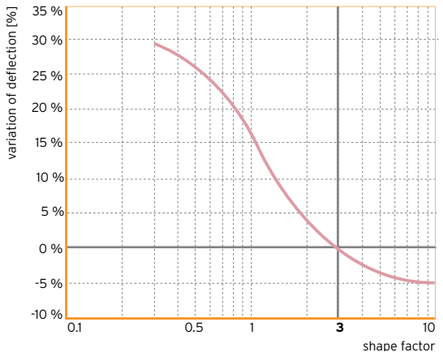


Figure 7: dynamic modulus of elasticity at 10 Hz*

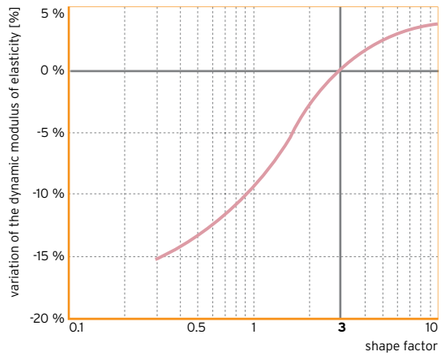
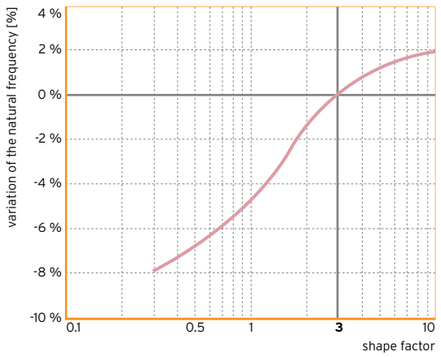


Figure 8: natural frequency*



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

Material mixed cellular polyurethane
Colour pink

Standard dimensions on stock

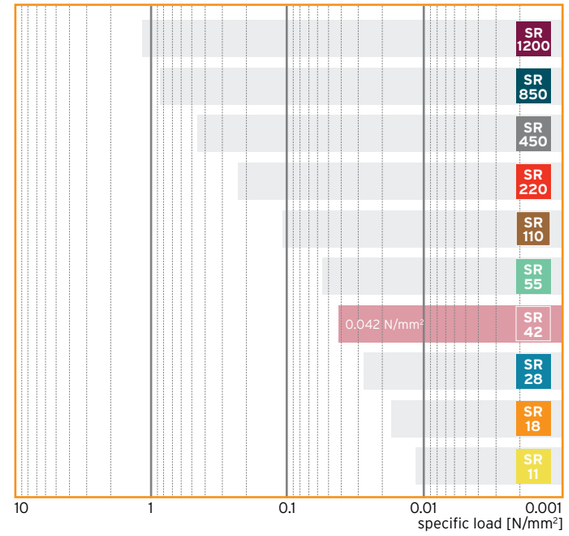
Thickness: 12.5 mm with Sylomer® SR 42 - 12
25 mm with Sylomer® SR 42 - 25
Rolls: 1.5 m wide, 5.0 m long
Stripes: max. 1.5 m wide, up to 5.0 m long

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 %

Standard Sylomer® range

Static range of use



Material properties		Test methods	Comment
mechanical loss factor	η = 0,16	DIN 53513*	depending on frequency, load and amplitude
rebound elasticity	55 %	DIN 53573	tolerance +/- 10 %
compression set	< 5 %	EN ISO 1856	50 %, 23 °C, 70 h, 30 min after unloading
static shear modulus	0.08 N/mm²	DIN ISO 1827*	at specific load of 0.042 N/mm²
dynamic shear modulus	0.17 N/mm²	DIN ISO 1827*	at specific load of 0.042 N/mm², 10 Hz
coefficient of friction (steel)	μ_S = 0.5	Getzner Werkstoffe	dry
coefficient of friction (concrete)	μ_B = 0.7	Getzner Werkstoffe	dry
abrasion	1200 mm³	DIN 53516	load 7.5 N, bottom surface
operating temperature	-30 bis 70 °C		short term higher temperatures possible
specific volume resistance	> 10^{11} Ω·cm	DIN IEC 93	dry
thermal conductivity	0.07 W/(mK)	DIN 52612/1	
flammability	B2 B, C und D	DIN 4102 EN ISO 11925-2	normal flammable passed

* 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-Guidline 2062
Further characteristic values on request.

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Load deflection curve

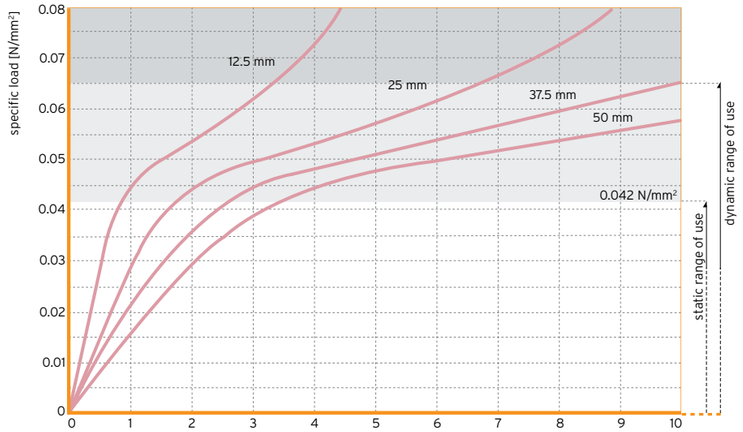

Figure 1: Quasistatic load deflection curve measured with a loading rate of 0.0042 N/mm²/s

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

shape factor 3

Modulus of elasticity

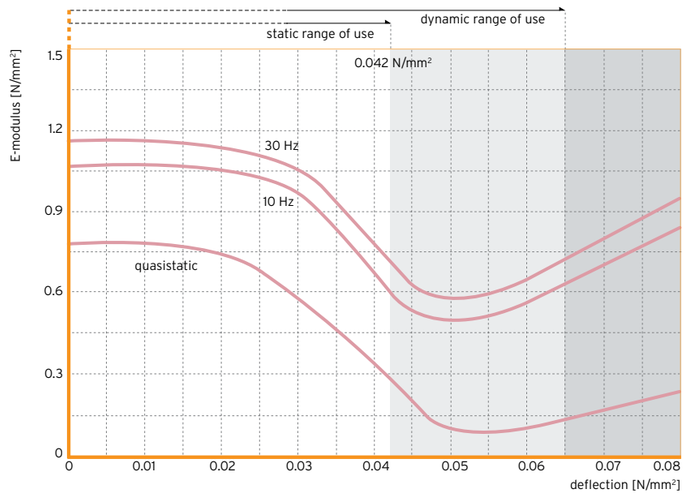

Figure 2: load dependency of the static and dynamic E-modulus

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 o 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

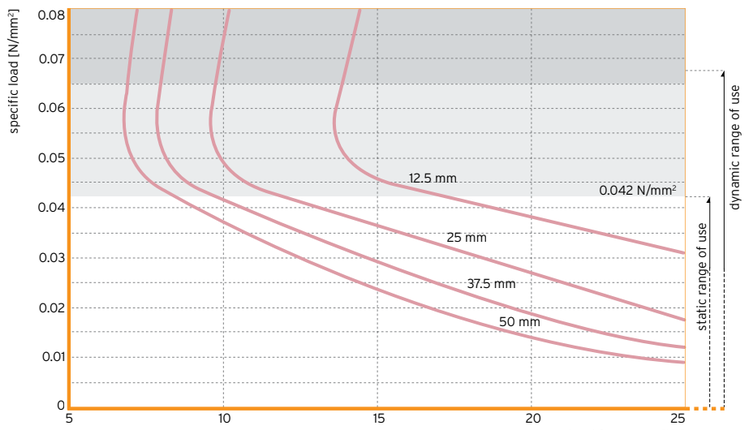

Figure 3: natural frequency of a single-degree-of-freedom system (SDOF system) consisting of a fixed mass and an elastic bearing consisting of Sylomer SR 42 based on a stiff subgrade;

parameter: thickness of elastomeric bearing

shape factor 3

Vibration isolation efficiency

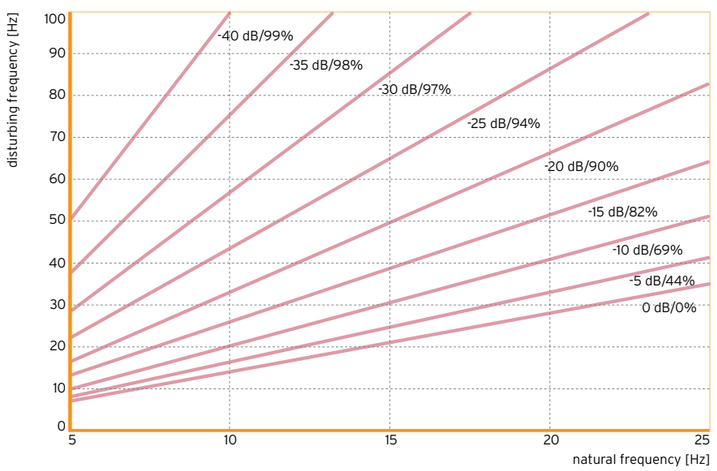

Figure 4: reduction of the transmitted mechanical vibrations by implementation of an elastic bearing consisting of Sylomer SR 42

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