Sylomer® FR 3110 FR 3110 Data Sheet

by getzner sylomer® FR

Material mixed-cell flame retardant PU elastomer (polyurethane)
Colour mottled brown

Standard delivery dimension

Thickness: 25 mm / 50 mm
Mat: 0.5 m wide, 1.5 m long
Strip: max. 1.5 m long

Other dimensions and self-adhesive equipment on request.

Material properties		Test methods	Comment
Static range of use [2] (static loads)	up to 0.11 N/mm²		
Dynamic range of use [2] (static and dynamic loads)	up to 0.16 N/mm²		
Load peaks [2] (occasional, brief loads)	up to 3.0 N/mm²		approx. 60 % deformation
Mechanical loss factor	$\eta = 0.25$	DIN 53513 [1]	temperature-, frequency-, specific load- and amplitude-dependent
Compression set	< 5 %	EN ISO 1856 [1]	50 %, 70 °C, 22 h, 30 min after removal of load
Min. tensile stress at rupture	0.48 N/mm²	EN ISO 527-3/5/100	
Min. tensile elongation at rupture	110 %	EN ISO 527-3/5/100	
Temperature range	-30 to 70 °C		short term higher temperatures possible
Flammability	S4/SR2/ST2	DIN 54837	evaluation with DIN 5510-2
	HL3 HL3 E	DIN EN 45545-2 DIN EN 45545-2 DIN EN ISO 11925-2	requirements for R10 requirements for R22 classification compliant with DIN EN 13501-1

[1] Measurement/evaluation in accordance with the relevant standard
[2] Values apply to shape factor q = 3

Load deflection curve

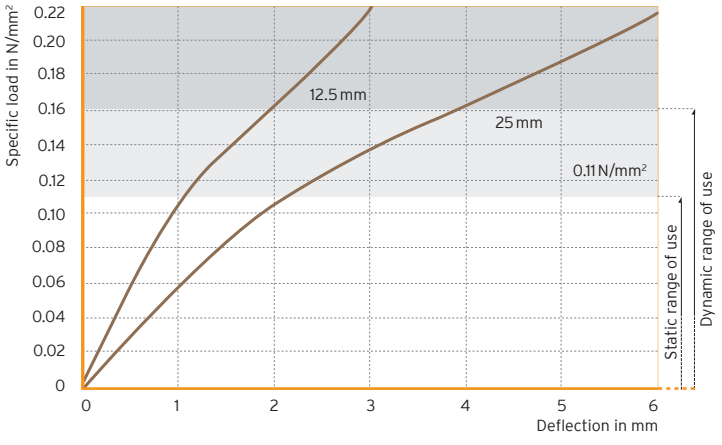

Fig. 1: Quasi-static load deflection curve for different bearing thicknesses

Quasi-static load deflection curve measured with a loading rate of 0.011 N/mm²/s.

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

Form factor q = 3

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. Material properties as well as their tolerances can vary depending on type of application or use and are available from Getzner on request.

Further information can be found in VDI Guideline 2062 (Association of German Engineers) as well as in glossary. Further characteristic values on request.

Modulus of elasticity

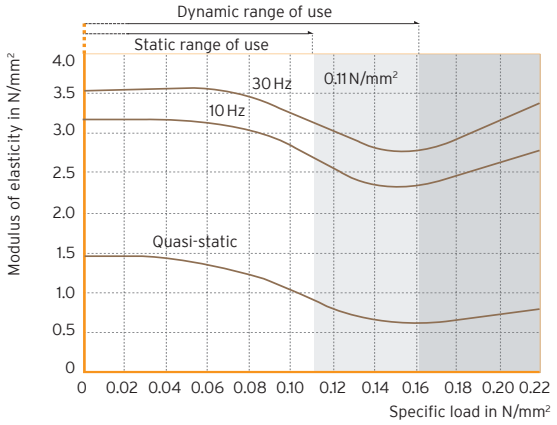

Fig. 2: Load dependency of the static and dynamic modulus of elasticity

Quasi-static modulus of elasticity as tangential modulus from the load deflection curve. Dynamic modulus of elasticity from sinusoidal excitation with a velocity level of 100 dBv re. $5 \cdot 10^{-8}$ m/s corresponding to a vibration amplitude of 0.22 mm at 10 Hz and 0.08 mm at 30 Hz.

Measurement in accordance with DIN 53513

Shape factor q = 3

Natural frequencies

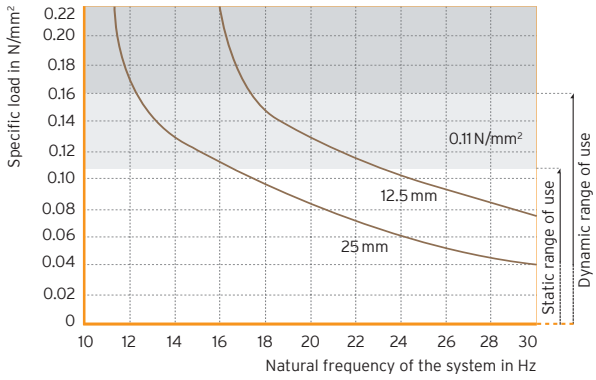

Fig. 3: Natural frequencies for different bearing thicknesses

Natural frequencies of a vibratory system with a single degree of freedome, consisting of a mass and an elastic bearing made of Sylomer® FR 3110 on a rigid surface.

Parameter: thickness of the Sylomer® bearing

Shape factor q = 3

Static creep behaviour

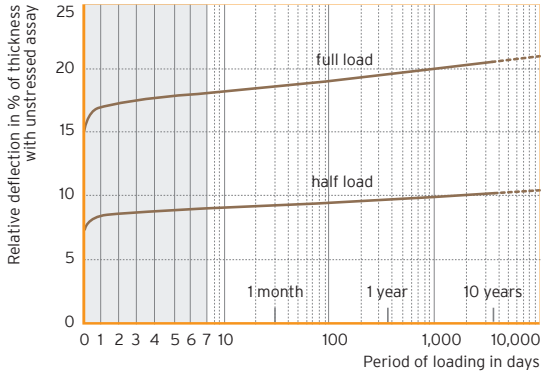

Fig. 4: Deformation under static load depending on time

Deformation under consistent loading.

Parameter: permanent static load

Shape factor q = 3

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