

# Sylomer® FR 3110

## Material Data Sheet

by getzner  
**sylomer**® FR

**Material** mixed cellular flame retardant polyurethane  
**Colour** mottled brown

### Standard dimensions

Thickness: 25 mm and 50 mm  
 Panels: 0.5 m width, 1.5 m length  
 Stripes: max. strip length 1.5 m

Other dimensions (also thickness) and self-adhesive equipment on request.

Material properties		Test methods	Comments
Static range of use (static loads)	up to 0.11 N/mm <sup>2</sup>		
Operating load range (static plus dynamic loads)	up to 0.16 N/mm <sup>2</sup>		
Load peaks (short term, infrequent loads)	up to 3.0 N/mm <sup>2</sup>		approx. 60% deformation
Mechanical loss factor	$\eta = 0.25$	DIN 53513*	depending on frequency, load and amplitude
Compression set	< 5%	EN ISO 1856*	50%, 23°C, 72h, 30 min after unloading
Tensile stress at break	0.48 N/mm <sup>2</sup>	DIN 53504	min. value
Elongation at break	110%	DIN 53504	min. value
Operating temperature	-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

### Load deflection curve

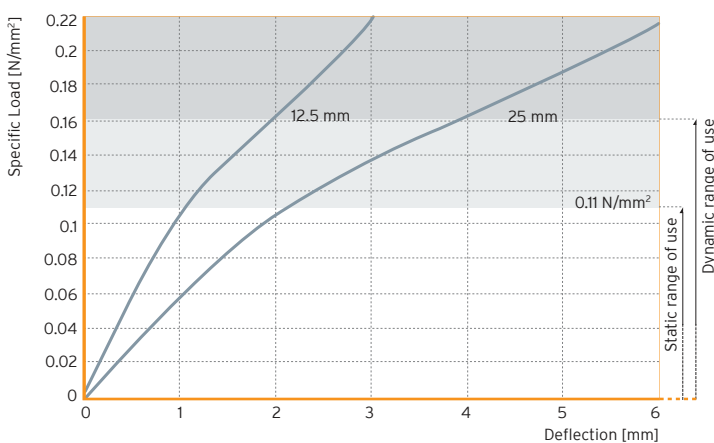


Figure 1:  
 Quasistatic load deflection curve  
 measured with a loading rate of  
 0.011 N/mm<sup>2</sup>/s

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

Form factor  $q=3$

\* 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.

### Modulus of elasticity

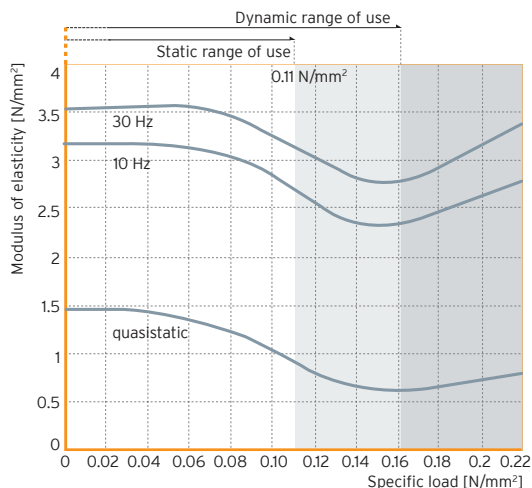


Figure 2: Load dependency of the static and dynamic modulus of elasticity

Quasistatic modulus of elasticity 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)

Test according to DIN 53513

Form factor  $q=3$

### Natural frequency

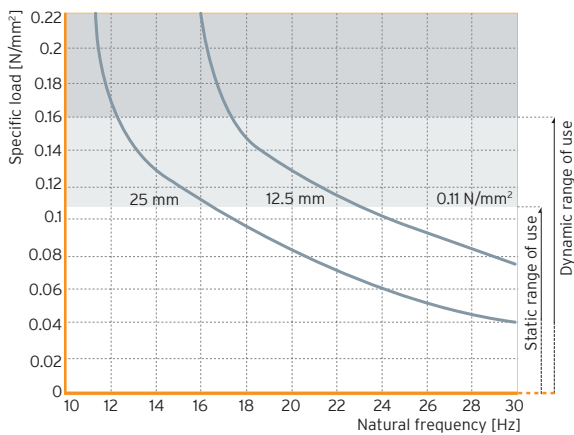


Figure 3: Natural frequency of a single-degree-of-freedom system (SDOF system) consisting of a fixed mass and an elastic bearing consisting of Sylomer® FR 3110 based on a stiff subgrade

Parameter:  
Thickness of elastomeric bearing

Form factor  $q=3$

### Static creep behaviour

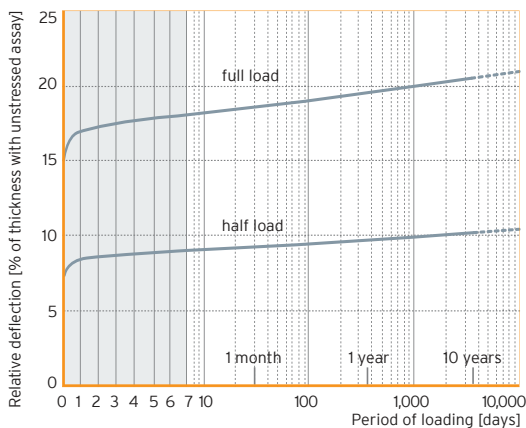


Figure 4: increase in deformation under consistent loading

Applied load: 0.11N/mm<sup>2</sup>  
(full static loading)

Form factor  $q=3$