

# Sylomer® FR 355

## Material Data Sheet

by getzner  
**sylomer**® FR

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

### Standard dimensions

Thickness: 10 mm to 50 mm  
 Stripes: max. strip length 1500 mm  
 Width: stripes in 25 mm, 40 mm and 50 mm  
 Tolerances: dimensions conform ISO 3302-1, stripe width -2/+4mm

Panels with a maximum size of 1500 mm by 1000 mm (length x width) and a thicknesses of 25 mm, 40 mm or 50 mm are available on request. Other dimensions on request according to minimum quantity and special delivery time.

Material properties		Test methods	Comments
Static range of use (static loads)	up to 0.055 N/mm <sup>2</sup>		
Operating load range (static plus dynamic loads)	up to 0.076 N/mm <sup>2</sup>		
Load peaks (short term, infrequent loads)	up to 1.2 N/mm <sup>2</sup>		approx 70 % deformation
Mechanical loss factor	$\eta = 0.28$	DIN 53513*	depending on frequency, load and amplitude
Compression set	< 5 %	EN ISO 1856*	50 %, 23 °C, 72 h, 30 min. after unloading
Tensile stress at break	0.35 N/mm <sup>2</sup>	DIN 53504	min. value
Elongation at break	130 %	DIN 53504	min. value
Operating temperature	-30 bis 70 °C		short term higher temperatures possible
Flammability	S4/SR2/ST2	DIN 54837	evaluation with DIN 5510-2
	HL3 HL3	DIN EN 45545-2 DIN EN 45545-2	requirements for R10 requirements for R22

### Load deflection curve

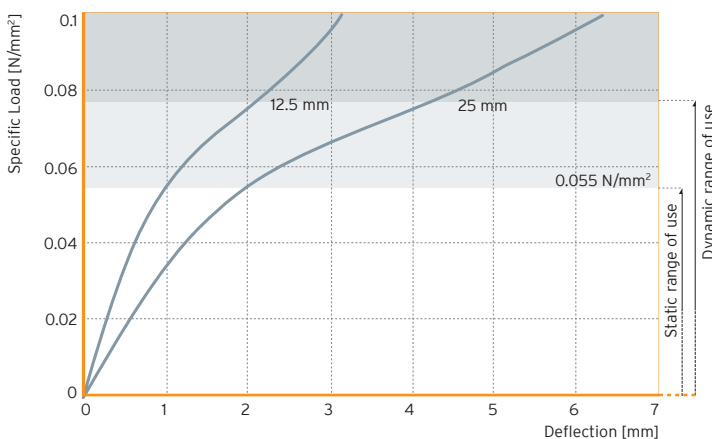


Figure 1:  
 Quasistatic load deflection curve  
 measured with a loading rate of  
 0.0055 N/mm<sup>2</sup>/s

Testing between flat steel-plates;  
 recording of the 3rd 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

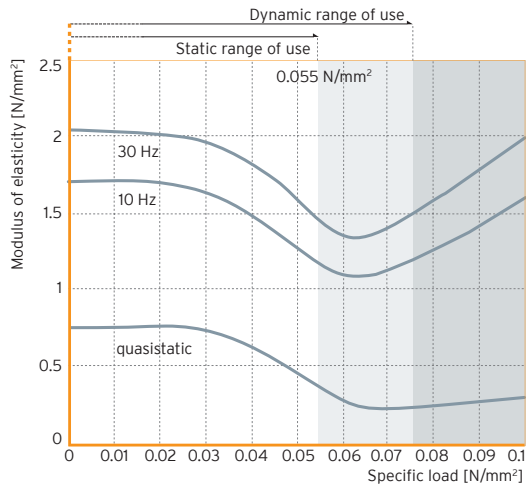


Figure 2: Load dependency of the static and dynamic modulus of elasticity

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

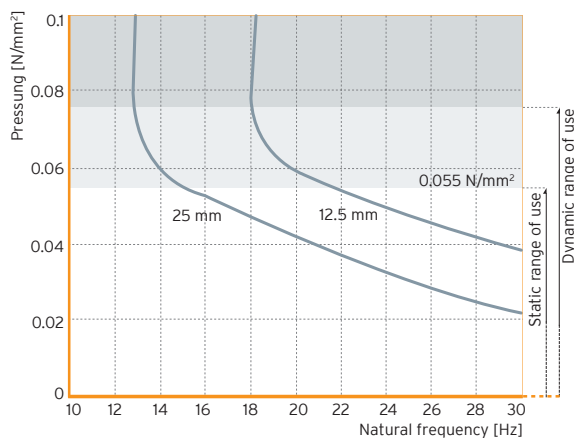


Figure 3: Natural frequency of a single-degree-of-freedom system (SDOF system) consisting of a fixed mass and an elastic bearing consisting of Sylomer® FR 355 based on a stiff subgrade

**Parameter:**

Thickness of elastomeric bearing

Form factor  $q=3$

### Static creep behaviour

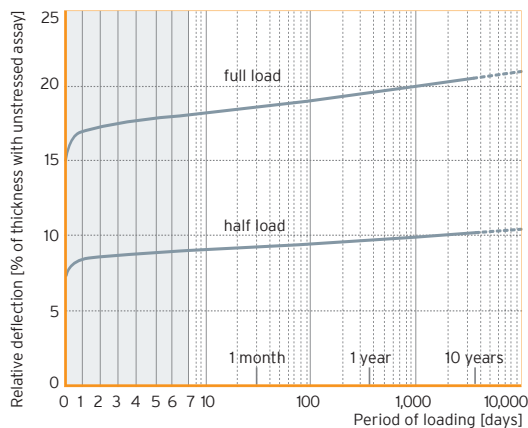


Figure 4: increase in deformation under consistent loading

Applied load: 0.055 N/mm<sup>2</sup> (full static loading)

Form factor  $q=3$