Material: closed-cell PU elastomer (polyurethane)
Colour: dark green

Standard delivery dimension
Thickness: 12.5 mm / 25 mm
Mat: 1.2 m wide, 1.5 m long
Other dimensions as well as punched parts on request.

<table>
<thead>
<tr>
<th>Range of use</th>
<th>Compressive load</th>
<th>Deformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static range of use (static loads)</td>
<td>up to 3.0 N/mm²</td>
<td>approx. 12%</td>
</tr>
<tr>
<td>Dynamic range of use (static and dynamic loads)</td>
<td>up to 4.5 N/mm²</td>
<td>approx. 16%</td>
</tr>
<tr>
<td>Load peaks (occasional, brief loads)</td>
<td>up to 12.0 N/mm²</td>
<td>approx. 30%</td>
</tr>
</tbody>
</table>

Material properties

<table>
<thead>
<tr>
<th>Material properties</th>
<th>Test methods</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical loss factor</td>
<td>0.06</td>
<td>DIN 53513¹</td>
</tr>
<tr>
<td>Compression set ²</td>
<td>&lt; 5 %</td>
<td>EN ISO 1856</td>
</tr>
<tr>
<td>Static shear modulus ³</td>
<td>2.4 N/mm²</td>
<td>DIN ISO 1827 ¹</td>
</tr>
<tr>
<td>Dynamic shear modulus ³</td>
<td>2.8 N/mm²</td>
<td>DIN ISO 1827 ¹</td>
</tr>
<tr>
<td>Coefficient of friction (steel)</td>
<td>≥ 0.6</td>
<td>Getzner Werkstoffe</td>
</tr>
<tr>
<td>Coefficient of friction (concrete)</td>
<td>≥ 0.7</td>
<td>Getzner Werkstoffe</td>
</tr>
<tr>
<td>Thermal conductivity</td>
<td>0.16 W/(mK)</td>
<td>DIN EN 12664</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-30°C to 70°C</td>
<td>EN ISO 11925-2</td>
</tr>
<tr>
<td>Flammability</td>
<td>class E</td>
<td>EN ISO 11925-2</td>
</tr>
</tbody>
</table>

¹ Measurement/evaluation in accordance with the relevant standard
² The measurement is performed on a density-dependent basis with differing test parameters
³ Values apply to shape 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.
Load deflection curve

Quasi-static load deflection curve measured with a loading rate of 0.3 N/mm²/s.

Testing between sandblasted, flat steel-plates; recording of the 1st load, with filtered starting range in accordance with ISO 844, testing at room temperature.

Shape factor: q = 3

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

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 · 10⁻⁶ 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

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

Natural frequencies

Natural frequencies of a vibratory system with a single degree of freedom, consisting of a mass and an elastic bearing made of Sylodyn® HRB HS 3000 on a rigid surface.

Parameter: thickness of the Sylodyn® bearing

Shape factor: q = 3

Fig. 3: Natural frequencies for different bearing thicknesses
Static creep behaviour

Deformation under consistent loading.
Parameter: permanent static load
Shape factor: \( q = 3 \)

![Static creep behaviour diagram](image)

**Fig. 4: Deformation under static load depending on time**

Dependency on amplitude

Typical dependency of the dynamic modulus of elasticity on the amplitude of vibration.

Sylodyn® HRB HS 3000 materials exhibit a negligible dependency of amplitude.

![Dependency on amplitude diagram](image)

**Fig. 5: Dynamic modulus of elasticity depending on the vibration amplitude**
Influence of the shape factor
The graphs show the material properties at different shape factors.

Fig. 6: Static range of use in relation to the shape factor
Fig. 7: Deflection in relation to the shape factor
Fig. 8: Dynamic modulus of elasticity at 10 Hz in relation to the shape factor
Fig. 9: Natural frequency in relation to the shape factor

³ Reference value: specific load 3.0 N/mm², shape factor q = 3