Sylodyn® HRB HS 6000 Data Sheet

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

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.

Material properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Test methods</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical loss factor</td>
<td>0.07</td>
<td>DIN 53513&lt;sup&gt;1&lt;/sup&gt; temperature-, frequency-, specific load- and amplitude-dependent</td>
</tr>
<tr>
<td>Compression set&lt;sup&gt;2&lt;/sup&gt;</td>
<td>&lt; 5 %</td>
<td>EN ISO 1856 25 % deformation, 23°C, 72 h, 30 min after removal of load</td>
</tr>
<tr>
<td>Static shear modulus&lt;sup&gt;3&lt;/sup&gt;</td>
<td>3.5 N/mm²</td>
<td>DIN ISO 1827&lt;sup&gt;1&lt;/sup&gt; at a pretension of 6.0 N/mm²</td>
</tr>
<tr>
<td>Dynamic shear modulus&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4.2 N/mm²</td>
<td>DIN ISO 1827&lt;sup&gt;1&lt;/sup&gt; at a pretension of 6.0 N/mm², 10 Hz</td>
</tr>
<tr>
<td>Coefficient of friction (steel)</td>
<td>≥ 0.6</td>
<td>Getzner Werkstoffe dry, static friction</td>
</tr>
<tr>
<td>Coefficient of friction (concrete)</td>
<td>≥ 0.7</td>
<td>Getzner Werkstoffe dry, static friction</td>
</tr>
<tr>
<td>Thermal conductivity</td>
<td>0.17 W/(mK)</td>
<td>DIN EN 12664</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-30°C to 50°C</td>
<td>short term higher temperatures possible</td>
</tr>
<tr>
<td>Flammability</td>
<td>class E</td>
<td>EN ISO 1925-2 normal combustible, EN 13501-1</td>
</tr>
</tbody>
</table>

<sup>1</sup> Measurement/evaluation in accordance with the relevant standard
<sup>2</sup> The measurement is performed on a density-dependent basis with differing test parameters
<sup>3</sup> 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.
Quasi-static load deflection curve measured with a loading rate of 0.6 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

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 · 10⁻⁸ 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 of a vibratory system with a single degree of freedom, consisting of a mass and an elastic bearing made of Sylodyn® HRB HS 6000 on a rigid surface.

Parameter: thickness of the Sylodyn® bearing

Shape factor: q = 3
Static creep behaviour

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

![Graph: Deformation under static load depending on time](image)

Dependency on amplitude

Typical dependency of the dynamic modulus of elasticity on the amplitude of vibration.
Sylodyn® HRB HS 6000 materials exhibit a negligible dependency of amplitude.

![Graph: Dynamic modulus of elasticity depending on the vibration amplitude](image)
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

Reference value: specific load 6.0 N/mm², shape factor q = 3