Regupol®
Vibration 450
Standard forms of delivery, ex warehouse

Plates
Thickness: 50 mm, special thickness available
Length: 1,000 mm
Width: 500 mm

Continuous static load
0.12 N/mm²

Peak loads (rare, short-term loads)
0.18 N/mm²

<table>
<thead>
<tr>
<th>Static modulus of elasticity</th>
<th>Based on EN 826</th>
<th>0.2 - 0.4</th>
<th>N/mm²</th>
<th>Tangential modulus, see figure “Modulus of elasticity”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic modulus of elasticity</td>
<td>Based on DIN 53513</td>
<td>0.45 - 2.7</td>
<td>N/mm²</td>
<td>Depending on frequency, load and thickness, see figure “dynamic stiffness”</td>
</tr>
<tr>
<td>Mechanical loss factor</td>
<td>DIN 53513</td>
<td>0.17</td>
<td>[-]</td>
<td>Load-, amplitude- and frequency-dependent</td>
</tr>
<tr>
<td>Compression set</td>
<td>Based on DIN EN ISO 1856</td>
<td>4.1</td>
<td>%</td>
<td>Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>Based on DIN EN ISO 1798</td>
<td>0.15</td>
<td>N/mm²</td>
<td></td>
</tr>
<tr>
<td>Elongation at break</td>
<td>Based on DIN EN ISO 1798</td>
<td>40</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Tear resistance</td>
<td>Based on DIN ISO 34-1</td>
<td>1.9</td>
<td>N/mm</td>
<td></td>
</tr>
<tr>
<td>Fire behaviour</td>
<td>DIN 4102, DIN EN 13501</td>
<td>B2</td>
<td>[-]</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>E</td>
<td>[-]</td>
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<td>DIN 4102, DIN EN 13501</td>
<td>[Normal flammability]</td>
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<td>[Normal flammability]</td>
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<td></td>
</tr>
<tr>
<td>Sliding friction</td>
<td>BSW-laboratory, BSW-laboratory</td>
<td>0.5</td>
<td>[Steel (dry)]</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>0.6</td>
<td>[Concrete (dry)]</td>
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</tr>
<tr>
<td>Compressive stress at 25 % deformation</td>
<td>Based on DIN EN ISO 3386-2</td>
<td>83</td>
<td>kPa</td>
<td>Compressive stress at 25 % deformation, test specimen h = 50 mm</td>
</tr>
<tr>
<td>Rebound elasticity</td>
<td>Based on DIN EN ISO 8307</td>
<td>42.7</td>
<td>%</td>
<td>dependent on thickness, test specimen h = 50 mm</td>
</tr>
<tr>
<td>Force reduction</td>
<td>DIN EN 14904</td>
<td>74</td>
<td>%</td>
<td>dependent on thickness, test specimen h = 50 mm</td>
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<tr>
<td>Ozone resistance</td>
<td>DIN EN ISO 17025</td>
<td>Cracking stage 0</td>
<td>[-]</td>
<td></td>
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</tbody>
</table>
Load Ranges

Examination of deflection in accordance to DIN EN 826 between two stiff panels. Illustration based on the third loading. 

Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.
Vibration Isolation

Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with Regupol® vibration 450. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency

Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of Regupol® vibration 450 on a rigid base. Dimensions of test specimens 300 mm x 300 mm.
Influence of Amplitude

Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.10 N/mm², dimensions of the specimens 300 mm x 300 mm x 50 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.

Change of the mechanical loss factor due to changes in amplitudes. Sinusoidal excitation at a constant mean load of 0.10 N/mm², dimensions of the specimens 300 mm x 300 mm x 50 mm.
Modulus of Elasticity

Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 50 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 50 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.
Long-Term Creep Test

![Creep Test Graph]

Dimensions of specimens 300 mm x 300 mm x 50 mm

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We are continuously developing and improving our products and therefore design and specifications in our datasheets may be changed without prior notice.