Highly Effective Damping of Impact Loads

- Finely graded Sylodamp® material range for optimum damping
- Effective impact insulation protects people, materials and machines
Effective Impact Insulation Protects People, Materials and Machines

Sylodamp®: the ideal elastic material for high material damping

Challenge
When impacts with high force peaks are exerted on people, materials or machines, loads occur that can cause irreversible damage. These negative effects are exhibited in a variety of areas, such as when operating machines or electronic devices and when transporting heavy and sensitive goods.

Getzner’s solution for effective impact insulation
The PU material Sylodamp® has been specially developed to effectively reduce impact loads. Unique damping characteristics minimise the shock pulse much more quickly.

Application areas
Sylodamp® bearings are primarily used where there are continuous impact loads to prevent increased wear on mechanical components and quick material fatigue. People also benefit from effective damping, which can protect the musculoskeletal system from impacts when playing sport for example.
Advantages of a solution using Sylodamp®

- Absorbs impact loads
- Reduces impact-induced structure-borne noise
- High degree of energy absorption
- Outstanding impact resilience
- Customer-specific solutions
- Long service life

Proven material combinations

Thanks to the six optimally coordinated types of Sylodamp® and the new calculation possibilities, solutions can be precisely tailored to specific requirements. Combinations of Sylodamp® with Isotop® elements or Sylomer® SR materials offer an ideal solution in a wide variety of applications for minimising vibrations and effectively absorbing other shocks and impacts.

What is more, thanks to the high degree of energy absorption and an impressive impact resilience, a continuous and reproducible damping effect is guaranteed.

Durable and environmentally friendly

Sylodamp® is not only highly effective, it is also extremely durable. As it is free from softeners, the material will remain effective over time. In addition, Sylodamp® is UV and ozone resistant, and is produced without using any greenhouse gases.

1 Isotop® DSD bearing: ideal solutions thanks to material combinations in heating, air-conditioning and ventilation applications
2+6 Sensitive electronic devices are protected using Sylodamp® bearings
3 Damping of sports floors: Sylodamp® bearings protect the musculoskeletal system
4 Shoe insoles provide increased damping and enhance comfort
5 Vibration decoupling of a die cutter for uninterrupted operation
Solutions that pay off

The Sylodamp® range is available in six graded levels of stiffness to cover a wide variety of load ranges.

**Sylodamp® range**
Static continuous load

<table>
<thead>
<tr>
<th>Specific load in N/mm²</th>
<th>SP 1000</th>
<th>SP 500</th>
<th>SP 300</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.005 N/mm²</td>
<td>0.01</td>
<td>0.1</td>
<td>1</td>
</tr>
<tr>
<td>0.02 N/mm²</td>
<td>0.15</td>
<td>0.25</td>
<td>0.5</td>
</tr>
<tr>
<td>0.05 N/mm²</td>
<td>0.1</td>
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<tr>
<td>0.1 N/mm²</td>
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<td>0.5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>0.5 N/mm²</td>
<td>1</td>
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</tbody>
</table>

So that Sylodamp® can realise its full potential, a calculation needs to be performed for complex requirements based on the finite element method (FEM) to ensure a suitable material design. The Getzner specialists will work with you to develop the perfect solution for your requirements.

Applications in which Sylodamp® has already proven itself:

- Mechanical engineering (e.g.: impact protection, machine mountings, loom bearings, electromagnetic couplings)
- Heating, ventilation, air conditioning (e.g.: compressor bearings, fan seals, cogeneration plant bearings)
- Transportation and conveyor technology (e.g.: bump stops, transport protection, hopper lining, carriage limit stops, baggage carousels and conveyor belts)
- Vehicle construction (e.g.: battery bearings, damping elements on seats, door stoppers, shock absorbers, headrests)
- Electronics industry (e.g.: display bearings, housings for measuring and test equipment, shock absorbers in CCTV cameras, laser bearings)
- Sports industry (e.g.: protectors for sports fabrics, elastic bearing of sports floors, fall protection mats, shoe insoles)