VIBRATION INSULATION
MADE OF RECYCLED RUBBER GRANULES AND POLYURETHANE FOAM
DAMTEC® vibra / DAMTEC® vibrafoam

Engineered solutions against noise.
DAMTEC®
Detailed text description:

**A Strip layer bedding:** DAMTEC® vibra and DAMTEC® vibrafoam can be cut into bedding strips at the factory or at the construction site. For smaller loads, this increases the compressive stress in the required work area of the elastomer bedding. Typical applications are strip foundations, ceiling/wall supports or steel frame constructions. The interspaces may have to be filled with a non-supporting, non-permanent mould material (mineral fibre, PE foam, bulk elastomer, etc.; not polystyrene). As in the full-surface bedding, for cast-in-situ concrete work, a PE foil is laid over the entire surface before installing a superstructure.

**B Full-surface bedding:** DAMTEC® vibra and DAMTEC® vibrafoam can be installed in different thicknesses. Installing the product with full-surface bedding is easy. Large loads are distributed on large surfaces and therefore limit the compressive stress. Vertical forces from structural components are transmitted evenly into the subsoil over the full surface. Bedding joints have to be sealed with a suitable adhesive tape. For cast-in-situ concrete work, a PE foil is laid over the full surface before installing a superstructure. This prevents the penetration of wet mortar and also prevents acoustical bridges. Also, it keeps the surfaces from being corroded by alkalinity.

**E DAMTEC® product series** for impact sound insulation (e.g. under screed)
Point load bedding: DAMTEC® vibra and DAMTEC® vibrafoam can be cut into point load bedding at the factory or at the construction site. The load transmission of the vertical forces is pinpointed. The compressive stress can therefore be adapted exactly in the recommended working areas. Applications for this include vibration-supported steel / steel-reinforced concrete beams on pillars, pile foundations and pillar foundations. As in full-surface bedding, a PE foil has to be used for cast-in-situ concrete work. Reverberating contacts outside of the bedding surfaces should be avoided (e.g. by soft, non-supporting filter materials around the core).

General information: DAMTEC® vibra and DAMTEC® vibrafoam in full-surface, strip and point load bedding can be also be installed in 2 layers (vibra / vibrafoam) and 3 layers (vibra). For small dimensions up to 100 x 100 mm, the bedding sections should be fastened with double-sided tape, for example. DAMTEC® vibra and DAMTEC® vibrafoam are not designed to transmit lateral forces to the support plane. If securing of the bedding is necessary, sound insulation must be used with the securing means.

For vertical installation of DAMTEC® vibra and DAMTEC® vibrafoam the bedding can be fastened using mechanical aids. Alternatively, the bedding can be provided with an adhesive on one side at the factory.
**DAMTEC® vibrafoam**

**INSULATING MATERIALS MADE OF POLYURETHANE**

**DAMTEC® vibrafoam** is the series of vibration insulation mats made of cell elastomer, which consists of a special polyurethane. The basic types presented here fulfil the requirements of most applications. Special types in other densities, thicknesses and geometries are available on request.

At low compression the material has an almost linear characteristic. At higher loads or compressions of the bedding, the spring characteristic takes a degressive course. **DAMTEC® vibrafoam** reacts to additional static and dynamic forces very softly. This enables optimal vibration insulation over a wide load range. At higher compressions the characteristic is progressive. The special properties of the material make it resistant to temporary peak loads. The product is selected based on the expected compressive stress in the material. The choice of different product thicknesses and / or the option of two-layer installation guarantees optimal vibration insulation and structure-borne sound attenuation.

**DAMTEC® vibrafoam** can be processed horizontally and vertically for vibration insulation.

If it needs to be cut to size, this can be done with a carpet knife. The insulating mats are butt-jointed during installation and sealed with a suitable adhesive tape. To increase the effectiveness, strip or point load bedding can be inserted. This is desirable if the optimal working range cannot be achieved full-surface bedding due to the existing low loads (increasing the compressive stress).
**PRODUCT PORTFOLIO AT A GLANCE**

<table>
<thead>
<tr>
<th>Compression [N/mm²]</th>
<th>DAMTEC® vibra</th>
<th>DAMTEC® vibrafoam</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>43 - 10 Hz</td>
<td>15 - 7 Hz</td>
</tr>
<tr>
<td>0.005</td>
<td>31 - 12 Hz</td>
<td>13 - 6 Hz</td>
</tr>
<tr>
<td>0.010</td>
<td>30 - 12 Hz</td>
<td>13 - 6 Hz</td>
</tr>
<tr>
<td>0.015</td>
<td>32 - 10 Hz</td>
<td>14 - 7 Hz</td>
</tr>
<tr>
<td>0.020</td>
<td>30 - 10 Hz</td>
<td>13 - 7 Hz</td>
</tr>
<tr>
<td>0.025</td>
<td>30 - 10 Hz</td>
<td>16 - 7 Hz</td>
</tr>
</tbody>
</table>

Natural frequency dependent on compression, based on example of DAMTEC® vibra soft and DAMTEC® vibrafoam 15.

Products for higher loads available on request.