MS-R2

Cork & recycle polyurethane

MS-R2 - a Wall Bearing material - is part of the Amorim Cork Composites range and it represents an excellent solution for acoustical and vibration issues.

MS-R2 is manufactured from cork and recycled polyurethane granulate and it has been developed to effectively interrupt the transmission of footstep noise vertically through the masonry. If wall bearings are used consistently throughout a building, and other sound transmission vectors are eliminated, this can significantly improve the quality of living conditions. The product is suitable for acoustic insulation in non-load-bearing walls.

LOAD RANGE

<table>
<thead>
<tr>
<th>Workload (MPa)</th>
<th>0.1–0.43 (14.5–62.43 psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum load (MPa)</td>
<td>1.25 (181.3 psi)</td>
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</tbody>
</table>

① at 25% deflection ② at <50% deflection

TECHNICAL FEATURES

<table>
<thead>
<tr>
<th>Compression Set (%)</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength (MPa)</td>
<td>&gt;0.1 (&gt;14.5psi)</td>
</tr>
<tr>
<td>Elongation at break (%)</td>
<td>46</td>
</tr>
<tr>
<td>Density (kg/m³)</td>
<td>250 (15.6lb/ft³)</td>
</tr>
<tr>
<td>Shore Hardness (Shore A)</td>
<td>30–40</td>
</tr>
<tr>
<td>Natural Frequency (Hz) for 10mm thickness</td>
<td>25</td>
</tr>
<tr>
<td>Natural Frequency (Hz) for 5mm thickness</td>
<td>31</td>
</tr>
</tbody>
</table>

① DIN 53572 – Measured 30min after decompression with 50% deformation / 23ºC after 72h ② DIN 53571 ③ ASTM D297 ④ ASTMD2240 ⑤ at 0.43MPa Stress

ADVANTAGES

- High resistance to compression
- Low dynamic stiffness
- Resistance to contact with liquids
- Sustainable and recyclable

BENEFITS

- High load bearing capacity
- Low thermal conductivity
- Lasting elasticity
- Easy to cut
- Stable creep behavior
- Block flanking

E-MODULE

<table>
<thead>
<tr>
<th>Static (MPa)</th>
</tr>
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<tbody>
<tr>
<td>1.38–2.30 (200.15–333.59 psi)</td>
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</table>

<table>
<thead>
<tr>
<th>Dynamic (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.8–13.0 (551.14–1885.49 psi)</td>
</tr>
</tbody>
</table>

① DIN 53513 (adapted) – tangential modulus ② DIN 53513 (adapted) – depending on load and frequency
**ELASTIC MODULUS [MPA]**

![Graph showing Elastic Modulus vs Stress]

- E(Dyn) 10mm 40Hz
- E(Dyn) 10mm 10Hz
- E(Dyn) 5mm 4Hz
- E(Dyn) 5mm 5Hz
- E(Static) 5mm

**DYNAMIC STIFFNESS [N/MM²]**

![Graph showing Dynamic Stiffness vs Stress]

- K(Dyn) 5mm 5Hz
- K(Dyn) 10mm 5Hz
- K(Dyn) 5mm 10Hz
- K(Dyn) 10mm 10Hz
- K(Stat) 5mm

**PHYSICAL AND MECHANICAL PROPERTIES**

**LOAD DEFLECTION**

![Graph showing Load Deflection vs Stress]

**STANDARD DIMENSIONS**

- 10mx5cmx10mm or 5mm
- 10mx10cmx10mm or 5mm
- 10mx15cmx10mm or 5mm
- 10mx20cmx10mm or 5mm

*Other dimensions available*

**INSTALLATION**

Before the MS-R2 wall bearing is installed, check the floor for surface irregularities. If it is uneven (with projections, surface roughness or similar), apply a smooth mortar layer;

After the surface layer has been allowed to dry, lay the wall bearing. Make sure that it projects by approx. 15mm on the side on which the wall is to be plastered;

Sections of wall bearing are butt-jointed together, and the joint secured with adhesive tape for concrete.

**MATERIAL DATA SHEET MS-R2**

The data provided in this Material Data Sheet represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper product may result in either equipments damage or personal injury. Please contact Amorim Cork Composites regarding specific application recommendations. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Composites is not liable for any indirect special, incidental, consequential, or punitive damages as a result of using the information listed in this MDS. Any of its material specification sheets, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDA).

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