Impact Ball
Nor279

To be used as the “Rubber Ball“ lower-frequency alternative to the Tapping Machine Excitation method in accordance with the ISO 16283-2 Appendix A.2 and the ISO 10140-5 Appendix F.2
Nor279 Impact Ball

Flexibility

The Impact Ball Nor279 is a product developed for use as an impact source for measurements of impact sound insulation performance - for example of floors in collective housing.

It is compliant with the requirements in

- ISO 10140-3 Measurement of impact sound insulation (ISO 10140-5 Annex F.2 Heavy/soft impact source)

Method

The rubber ball generates an impact force in the octave bands from 31.5 Hz to 500 Hz. Hence, it is primarily useful for checking out the low frequency performance of the floor under test.

It shall be dropped in a vertical free fall from a height of 100 cm (+/- 1 cm) measured from the bottom of the rubber ball to the surface of the floor. After the drop, the ball shall be captured in order to avoid multiple impacts on the floor.

Minimum four rubber ball positions shall be used for the test measurement. For lightweight floors with joints, one of the positions should be above the joints and one position should be at the centre points of the floor.

Impact force exposure level

<table>
<thead>
<tr>
<th>Octave band centre frequency (Hz)</th>
<th>31.5</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact force exposure level (dB)</td>
<td>39.0±1.0</td>
<td>31.0±1.5</td>
<td>23.0±1.5</td>
<td>17.0±2.0</td>
<td>12.5±2.0</td>
</tr>
</tbody>
</table>

Impact force exposure level, measured values (dB) (representative)

<table>
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<th>Octave band centre frequency (Hz)</th>
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<th>125</th>
<th>250</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Impact force exposure level (dB)</td>
<td>39.0</td>
<td>31.1</td>
<td>22.8</td>
<td>18.0</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Specifications

Rubber raw material: Silicon rubber
Shape: Hollow sphere, diameter 178 ±1 mm, wall thickness 32 mm
Equivalent mass: 2.5 ±0.1 kg
Restitution coefficient: 0.8 ±0.1
Rubber hardness: 40º ±5º
Impact force characteristics:
Impact force waveform (Example)