NOISE BARRIERS
AND SCREENING
Version 2007-1

EU-adapted. Tested over a long period.
High degree of sound insulation.
High sound absorption. Minimal maintenance.
Road traffic noise - what is it?

The predominant noise source in road traffic is tyre noise. Tyre noise increases with speed. For rail traffic the predominant noise is from wheels and rails. For aviation traffic take-off is normally the culprit in the vicinity of airports. Isolamin can now offer a new type of noise barrier with a high degree of sound insulation and absorption to satisfy market needs for noise abatement and to improve the environment as regards sound.

Isolamin noise barriers

- These conform to Swedish norms and regulations; they are EU-adapted and fulfil the highest sound classes pursuant to requirements posed by the EU;
- They have a completely sealed construction which allows a considerable reduction in noise passing the barrier;
- They can be supplied with a perforated surface, which allows excellent absorption properties;
- They require minimal maintenance.

Isolamin
Isolamin supplies noise barriers and screening

- A completely flexible system with simple erection and fixing;
- All necessary properties built into the panel, such as strength, and a high degree of sound reduction and absorption;
- Barriers for screening, sound-damping and sound absorption.
A complete system for rational installation

Simple and adaptable fixing with all necessary properties built into the panel, such as strength, and a high degree of sound reduction and absorption. Tried and tested long-life for use outdoors.

Details of horizontal joints

Details of seal to ground

Panel

Thickness:

Weight:

Plate/Outer layer/Module width:

Fire class:

Sound reduction:

Distance between positions, without reinforcement: maximum 2 m. With reinforcement: maximum 3 m.
### PA33P-50 mm

- Thickness: 50 mm
- Weight: 17.3 kg/m²
- Painted/565, 1180 mm
- Incombustible
- Rw = 35 dB

### PA33P-80 mm

- Thickness: 80 mm
- Weight: 24.2 kg/m²
- Painted/565, 1180 mm
- Fire class: EI60
- Sound reduction: Rw = 33 dB

### Details of posts/panels on change of direction

### Details of fitting between posts and panels

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**The following standard colours with NCS coding are available:**

<table>
<thead>
<tr>
<th>Colour</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>010 NCS 0562-G</td>
</tr>
<tr>
<td>Grey</td>
<td>022 NCS 2005-650Y</td>
</tr>
<tr>
<td>Red</td>
<td>742 NCS 5040-Y70R</td>
</tr>
<tr>
<td>Blue</td>
<td>502 NCS 1030-B10G</td>
</tr>
<tr>
<td>Brown</td>
<td>384 NCS 8005-Y80R</td>
</tr>
</tbody>
</table>

*We can quote for other colours on request*
Choice of panel

If the distance between the posts is up to 2 m, use Isolamin noise barrier 55P-50 mm and up to 3 m the same panel reinforced (R2) inside the panel or panel 33P-80 mm.

If the distance between the posts is between 3 and 4 m, use Isolamin noise barrier 55P-80 mm with reinforcement inside the panel.

On station platforms, where absorbent noise barriers are erected from the ground up to the top of the platform to damp rail noise of trains entering the station.

Traffic in tunnels normally generates increased sound level for passengers. The areas nearest tunnel entrances need special attention paid to noise. The extra sound radiation deriving from tunnel entrances can be reduced considerably if the tunnel is fitted with Isolamin absorbent noise barriers from the entrance and going at least 50 metres into the tunnel.

Fireproof barriers

Isolamin noise barriers are completely incombustible and can achieve up to Fire class E1-60 in their non-perforated version. The design has been used on oil rig platforms and ships for decades, fulfilling their strict fire requirements.

Proven working life

Isolamin noise barriers have been tested for use outdoors. Results of tests show that after 15 years the panels are completely intact with a reduction in strength of only around 15%.
Sound damping in Isolamin noise barriers

Isolamin noise barriers are EU adapted

Isolamin noise barriers are EU adapted and conform to prEN-1793 as regards wind loading and static forces, own weight, flying stones, safety on collision and snow clearance. Isolamin noise barriers are also classed pursuant to prEN-1793 according to absorption and sound insulation capabilities (see Tables 1 and 2 below).

**Table 1: Absorption classes**

<table>
<thead>
<tr>
<th>Category</th>
<th>DLox (dB)</th>
<th>Calculated sound absorption DLox for Isolamin 50 mm noise barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0</td>
<td>Not tested</td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>&lt; 4</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>4 ≤ x ≤ 8</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>8 ≤ x ≤ 11</td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td>&gt; 11</td>
<td>DL0x = 12 dB - High-speed rail traffic</td>
</tr>
</tbody>
</table>

**Table 2: Sound insulation classes**

<table>
<thead>
<tr>
<th>Category</th>
<th>DLR (dB)</th>
<th>Calculated sound reduction DLR for Isolamin 50 mm noise barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>B0</td>
<td>Not tested</td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>&lt; 15</td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>15 ≤ x ≤ 24</td>
<td></td>
</tr>
<tr>
<td>B5</td>
<td>&gt; 24</td>
<td>DLR &gt; 31 dB - Road traffic</td>
</tr>
</tbody>
</table>

Sound reduction curve of Isolamin 50 mm noise barriers.

- **Isolamin noise barriers achieve the highest sound reduction class, B3, in their basic version**
- **Isolamin noise barriers achieve the highest sound absorption class A4 for high-speed rail traffic**
- **Isolamin absorbent noise barriers reduce sound reflection to the other side of the road**
Isolamin barrier systems against noise

- Isolamin noise barriers are EU adapted.
- Isolamin noise barriers are a complete system with few parts.
- Isolamin absorbent noise barriers reduce sound reflection
- Isolamin noise barriers provide very good sound reduction.
- Isolamin noise barriers offer a very wide variety of design.
- Isolamin noise barriers are uncombustible.
- Isolamin noise barriers require minimal maintenance

For projecting, specification and installation, see
ISOLAMIN MANUAL FOR NOISE BARRIERS AND SCREENING
and our website
www.isolamin.com

HEAD OFFICE
Norra Tallvik, SE-956 32 Överkalix, Sweden
Phone +46 926-756 00 • Fax +46 926-756 40

SALES OFFICE / EXPORT
Midgårdsvägen 24, SE-973 34 Luleå, Sweden
Phone +46 920 68 808 • Fax +46 920 94 993