Overlay insulation

Lamella Mat is particularly suitable for the insulation of heating and ventilation pipework and ductwork and as an overlay to upgrade existing insulation.
Lamella Mat

ROCKWOOL Lamella Mat is formed from strips of ROCKWOOL stone wool bonded on edge to a flexible outer facing. The method of construction provides a strong and resilient mat which will resist flattening at bends and corners. Lamella Mat is particularly suitable for the insulation of heating and ventilation pipework and ductwork and as an overlay to upgrade existing insulation. It is recommended for service at temperatures up to 250°C.

Advantages
- Compression resistant
- Maintains thickness on bends
- Flexible
- Excellent thermal and acoustic insulation
- Easy to handle

Standards and approvals
ROCKWOOL Lamella Mats are CE marked in accordance with BS EN 14303. For more information please visit www.rockwool.co.uk/DOP

The slabs from which Lamella Mat is cut satisfy the requirements of BS 3958: Part 5, ‘Bonded stone wool slabs’. Lamella Mat can be used to satisfy BS5422: ‘Method for specifying thermal insulating materials......’.

Description
Lamella Mat is formed from strips of ROCKWOOL stone wool bonded on edge to a flexible outer facing.

Dimensions

<table>
<thead>
<tr>
<th>Nominal Thickness (mm)</th>
<th>Length (metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>10.0</td>
</tr>
<tr>
<td>30</td>
<td>8.0</td>
</tr>
<tr>
<td>40</td>
<td>6.0</td>
</tr>
<tr>
<td>50</td>
<td>5.0</td>
</tr>
<tr>
<td>60</td>
<td>4.0</td>
</tr>
<tr>
<td>70</td>
<td>3.0</td>
</tr>
<tr>
<td>80</td>
<td>3.0</td>
</tr>
<tr>
<td>100</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Performance

Fire
The product achieves an A2-s1, d0 classification in accordance with BS EN 13501-1. It is deemed as “Limited Combustible” by Building Regulations in England, Wales and Ireland. Under the Scottish Building Regulations it is deemed “Non -Combustible”.

Thermal conductivity

<table>
<thead>
<tr>
<th>Mean temperature (°C)</th>
<th>Thermal conductivity (W/mK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0.040</td>
</tr>
<tr>
<td>50</td>
<td>0.047</td>
</tr>
<tr>
<td>100</td>
<td>0.059</td>
</tr>
<tr>
<td>150</td>
<td>0.077</td>
</tr>
</tbody>
</table>

Service Temperature and Limiting Surface Temperature
Lamella Mat can be used for service temperatures of up to 250°C. The limiting outer foil face temperature is 80°C to maintain facing bond strength.

Acoustics
For environmental reasons it is sometimes desirable to improve the acoustic insulation on pipes and ducts, especially those pipes and ducts in which gases, fluids or particle solids are transported at high velocities. The use of Lamella Mat can considerably improve the level of environmental sound. For the highest standards of acoustic attenuation to pipes, ducts and enclosures, ROCKWOOL Techwrap2 and Techtube can be used. Full details are given in the Techwrap2 and Techtube data sheet.

pH Neutrality
ROCKWOOL insulation is chemically compatible with all types of pipes, ducts, equipment and fittings. [Guidance is given in BS 5970 regarding the treatment of austenitic stainless steel pipework and fittings]. Stone wool insulation is chemically inert. A typical aqueous extract of ROCKWOOL insulation is neutral or slightly alkaline (pH 7 to 9.5).

Durability
ROCKWOOL stone wool insulation products have been proven in service for over 60 years, in a wide range of climates and degrees of exposure. ROCKWOOL insulation will generally perform effectively for the lifetime of the building, plant or structure.
Lamella Mat

Application

Because the lamella strips are bonded on edge to a flexible outer facing, the insulation mattress is able to maintain its original thickness when fitted to square ducting and tight corners. This increases the contact with the insulated surface and thus the efficiency of the system (See figure 1).

Calculation of length

The calculation to determine the length of Lamella Mat required to insulate the pipe or duct is made using the formula shown in figure 2.

Typical specifications

1. Lamella Mat to be secured to heating pipe with lacing wire tied at 200 mm centres. Joints to be securely taped with 75 mm wide self adhesive foil tape.

2. Lamella Mat to be securely fixed to duct with self adhesive ‘stick pins’ applied in accordance with manufacturer’s instructions. The maximum surface temperature of the ductwork should not exceed the recommended maximum service temperature of the self-adhesive stick pins.

Where pins protrude through facings, the pins are to be cropped flush with the facing washers and covered with 75 mm foil tape.

Figure 1

The construction of Lamella Mat maintains thickness on bends

Figure 2

Calculation of length of Lamella Mat

Figure 3

Lamella Mat wired onto a heating pipe

Figure 4

Lamella Mat fixed with pins and washers to rectangular ducting
Lamella Mat

Sustainability
As an environmentally conscious company, ROCKWOOL promotes the sustainable production and use of insulation and is committed to a continuous process of environmental improvement.

4 in 1

All ROCKWOOL products provide outstanding thermal protection as well as four added benefits:

- Fire resistance
- Acoustic comfort
- Sustainable materials
- Durability

Environment
Made from a renewable and plentiful naturally occurring resource, ROCKWOOL insulation saves fuel costs and energy in use and relies on trapped air for its thermal properties.

ROCKWOOL insulation does not contain (and has never contained) gases that have ozone depletion potential (ODP) or global warming potential (GWP).

ROCKWOOL stone wool insulation is approximately 97% recyclable. For waste ROCKWOOL material that may be generated during installation or at end of life, we are happy to discuss the individual requirements of contractors and users considering returning these materials to our factory for recycling.

Interested?
For further information and technical advice please visit www.rockwool.co.uk or contact our Technical Solutions team on 01656 862 621 or info@rockwool.co.uk.

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