



Lamella Mat

Insulation and upgrading of pipe and ductwork installations

Rockwool Lamella Mat is formed from strips of Rockwool mineral 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 230°C.

Advantages

- compression resistant
- maintains thickness on bends
- flexible
- excellent thermal and acoustic insulation
- easy to handle

Standards and approvals

The slabs from which Lamella Mat is cut satisfy the requirements of BS 3958: Part 5, 'Bonded mineral wool slabs'. Lamella Mat can be used to satisfy BS 5422: 'Method for specifying thermal insulating materials'.

Environment

Rockwool insulation products are, and always have been, free from gases that are harmful to the environment, such as CFCs, HCFCs, HFCs, pentane or any gases that have Ozone Depletion Potential (ODP) or Global Warming Potential (GWP).



Lamella Mat used to insulate ducting - thickness of insulation maintained under cladding load

Description

Dimensions: width, 1000 mm

| Nominal thickness (mm) | Length (metres) |
|------------------------|-----------------|
| 20 | 10 |
| 25 | 10 |
| 30 | 5 |
| 40 | 5 |
| 50 | 5 |
| 60 | 4 |
| 80 | 3 |

Facing

Lamella Mat is faced with a reinforced aluminium foil.

Performance

Fire

The Rockwool slab from which the lamella strips are cut is rated non-combustible in accordance with BS 476: Part 4.

Lamella Mat is rated Class O as defined within Building Regulations, Approved Document B.

Thermal conductivity

| Mean temperature (°C) | Thermal conductivity (W/mK) |
|-----------------------|-----------------------------|
| 10 | 0.039 |
| 50 | 0.045 |
| 100 | 0.059 |
| 150 | 0.076 |

Service and limiting temperatures

Service temperature range: up to 230 °C

Limiting temperature of outer facing: 80 °C (to maintain facing bond strength).

Acoustics

For environmental reasons it is sometimes desirable to improve the acoustic insulation on pipes, especially those pipes 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 ducts and enclosures, Rockwool Techwrap can be used to provide both thermal and acoustic insulation to equipment operating at temperatures in the range 0 °C to 230 °C. Full details are given in the Techwrap2 and Techtube data sheet.

Further information on acoustics is available on request.

Applications, design suitability

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

- 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.
- Lamella Mat to be securely fixed to duct with self adhesive 'stick pins' applied in accordance with manufacturer's instructions.

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

Technical services

Technical advice on matters related to the use of Lamella Mat is available from the Rockwool Industrial Department.

Design details

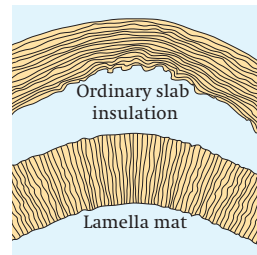


Figure 1 The construction of Lamella Mat maintains thickness on bends

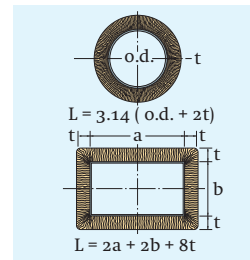


Figure 2 Calculation of length of Lamella Mat

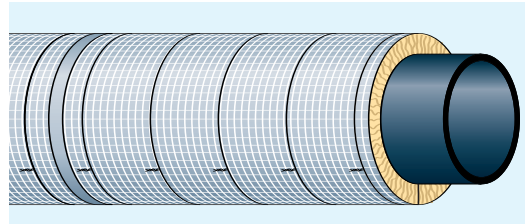


Figure 3 Lamella Mat wired onto a heating pipe

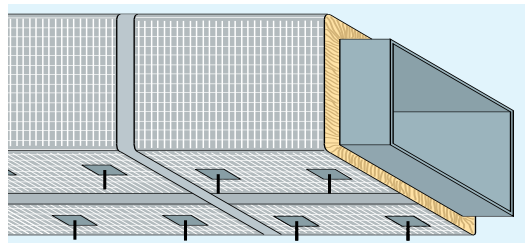


Figure 4 Lamella Mat fixed with pins and washers to rectangular ducting

Health and safety

Current HSE 'CHIP' Regulations and EU directive 97/69/EC confirm the safety of Rockwool mineral wool; Rockwool fibres are not classified as a possible human carcinogen.

The maximum exposure limit for mineral wool is 5mg/m³, 8 hour time-weighted average.

A Material Safety Data Sheet is available from the Rockwool Marketing Services Department to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

Technical Information



For further details visit our website at www.rockwool.co.uk or phone the Technical Hotline on 0871 222 1780

Rockwool Limited reserves the right to alter or amend the specification of products without notice as our policy is one of constant improvement.

The information contained in this data sheet is believed to be correct at the date of publication. Whilst Rockwool will endeavour to keep its publications up to date, readers will appreciate that between publications there may be pertinent changes in the law, or other developments affecting the accuracy of the information contained in this data sheet.

The above applications do not necessarily represent an exhaustive list of applications for Lamella Mat. Rockwool Limited does not accept responsibility for the consequences of using Lamella Mat in applications different from those described above. Expert advice should be sought where such different applications are contemplated, or where the extent of any listed application is in doubt.

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