

Pipe Section Mat

Thermal and acoustic insulation for large diameter applications

Rockwool Pipe Section Mat (PSM) consists of Rockwool Rigid Slab having grooves factory machined in one face to specifically suit large pipe diameters. The distances between the grooves are calculated to ensure that PSM closely fits the pipe or vessel.

PSM is designed for thermal and acoustic insulation of large diameter pipes, ducts, chimneys and small vessels and is ideal for use where space is limited.

Pipe Section Mat is supplied with a factory bonded glass fibre reinforcing mesh on the outer face.

Conlit Ductwork PSM is available to special order for fire protection of circular ductwork (see 'Conlit Ductwork Manual').

Advantages

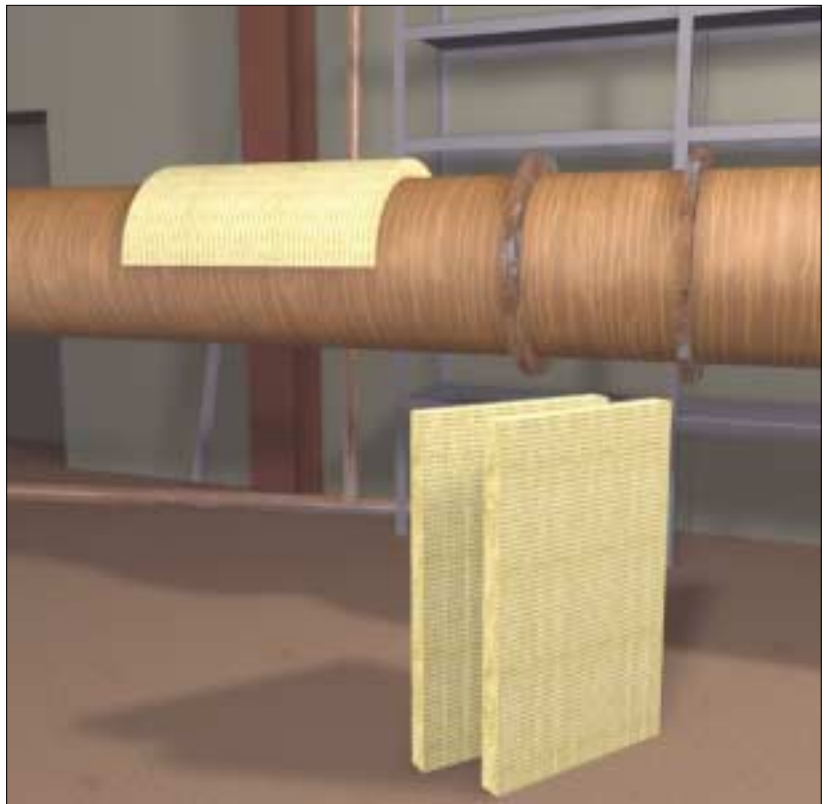
- Excellent thermal and acoustic insulation for very large diameter pipes
- Easy to handle and install due to flat-pack supply
- High temperature use
- High compressive strength

Standards and approvals

Rockwool PSM can be used to satisfy the requirements of BS 5422, 'Method for specifying thermal insulating materials' and conforms to BS 3958-4 'Bonded preformed mineral wool pipe section'.

Environment

No CFCs or HCFCs are used in the manufacture of Rockwool materials.



1016 mm pipe insulated with Rockwool PSM

Description

Pipe Section Mat is supplied with a glass fibre reinforcing mesh bonded to the outer face. Other facings are available to special order.

Sizes

PSM is available to suit all medium and large diameter pipework and equipment.

The number of pieces of PSM delivered to complete each pipe circumference varies with product thickness and diameter.

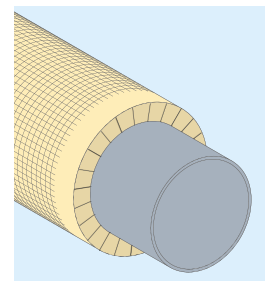
Width: 900 mm (along pipe axis)

Thicknesses: 40, 50, 60, 75 and 100 mm

Other dimensions may be manufactured to special order.

Density

Nominal density: 140 kg/m³. Other densities of PSM may be manufactured to special order.



Pipe Section Mat on a large diameter steel pipe

Performance and properties

General

For the composition, manufacture and physical properties of Rockwool mineral wool, please refer to Data Sheet 001 'Performance and Properties'.

Thermal Conductivity

Mean temperature (°C)	λ values (W/mK)
50	0.037
100	0.044
150	0.051
200	0.060
250	0.070
300	0.081
350	0.093

Specific heat

0.84 kJ/kgK.

Limiting temperature

The limiting temperature of 140 kg/m³ PSM is approximately 675°C. To maintain the facing bond, the temperature of the outer mesh surface should not exceed 230°C.

Fire

PSM is non-combustible and is rated Class 0 in accordance with the Building Regulations.

Acoustic

The use of PSM can considerably improve the level of environmental sound, which can be particularly important where pipes convey gases, liquid or particle solids at high velocities.

For higher standards of acoustic insulation, refer to Rockwool Techwrap2 and Techtube data sheet. Further information on acoustics is available on request.

Compatibility

Rockwool PSM is chemically inert and is compatible with most materials with which it is likely to come into contact in normal building and industrial applications.

Precautions should be taken when insulating austenitic stainless steel, regardless of insulation type. Contact Rockwool for further details.

Water resistance

Rockwool PSM is highly water repellent.

Where it is required to maintain water repellency subsequent to heating at elevated temperatures, the use of WRG grade PSM is recommended.

When used in the open, Rockwool PSM should be protected with a waterproof covering.

Work on site

Rockwool PSM is light and easily cut to shape with a sharp knife or saw.

For long-term protection PSM should be stored indoors or under a waterproof covering.

Fixing

The method of fixing depends on the precise application and whether single or double layer PSM is used. Single layer PSM is typically secured with 3 steel or aluminium bands/wires per mat width.

PSM may then be clad with steel, aluminium sheet, high performance membrane, etc. Full guidance in this matter can be found in BS 5970 Code of Practice for 'Thermal Insulation of Pipework and Equipment'.

Maintenance

Once correctly installed, Rockwool PSM should need no maintenance.

Health and safety

A COSHH Data sheet is available from Rockwool's Marketing Services Department.

Current HSE 'CHIP' Regulations and EU Directive 97/69/EC confirm that Rockwool fibres are not classified as a possible carcinogen.

Technical Helpline

Technical advice is available from the Rockwool Industrial Helpline on 01656 868130.

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 Pipe Section Mat. Rockwool Limited does not accept responsibility for the consequences of using Pipe Section 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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