

Fibermesh-450 Rockwool Data Sheet

Product Description

Fibermesh-450 is an economical robust mineral fibre for thermal insulation.

It consists of a mat of long, fine fibres, spun from molten natural rock. The mattress is resin-bonded and stitched to a 25mm galvanised hexagonal wire mesh.

A suitable finish such as metal cladding is necessary to protect the insulation from weather or mechanical damage.



Fibermesh-450 Rockwool

Applications

Fibermesh-450 is recommended for thermal insulation of large Pipes, Flanges, Valves, Vessels, Boilers, Heat exchangers, Reactors, Precipitators for process temperature control, condensation control and personal protection of plant and equipment. It is also ideal for wrapping large curved surface and specially suitable where high temperatures combine with strong vibrations.

Fibermesh-450 is easily installed using welding pins, with the mesh facing outwards and securing with speed clips. The mesh joins may be laced together for extra strength.

Standard Sizes & Packaging

Thickness (mm)	Blanket Size (mm x mm)	Pieces /pack
25	5000 x 600	1
30	5000 x 600	1
40	5000 x 600	1
50	5000 x 600	1
60	4000 x 600	1
70	3000 x 600	1
80	3000 x 600	1
90	3000 x 600	1
100	2000 x 600	1

Note: Not all standard sizes are held in stock. Some are subject to minimum order quantities. Standard packaging is shrink-wrapped polythene.

Nominal Density

80 kg/m³ (5 lb/ft³)

Maximum Service Temperature

Recommended operating temperature up to 450 °C (842 °F)
Capability of handling intermittent temperature up to 1000 °C (1832 °F)

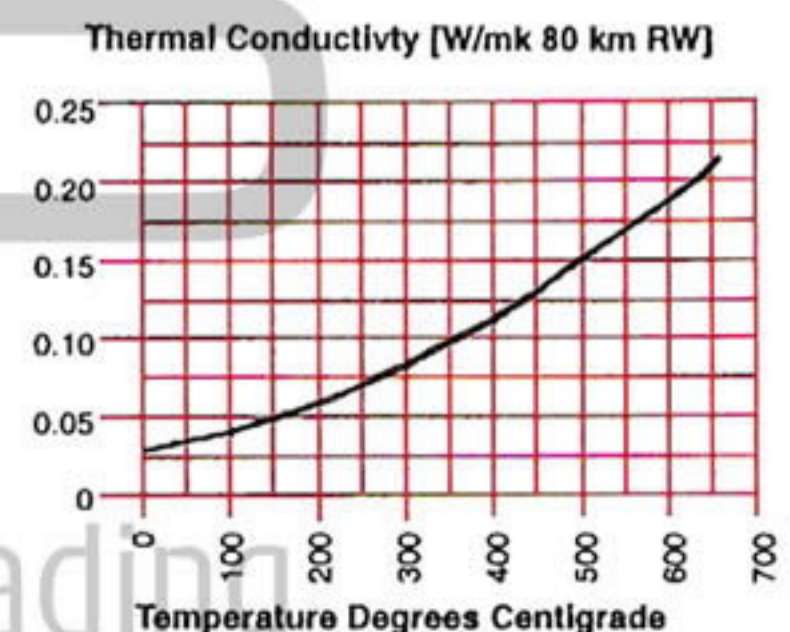
Fusion Temperature

Fusion temperature or Melting point of rockwool at 1200 °C (2192 °F)

Thermal Conductivity

0.034 W/mK at 20 °C mean temperature
(0.235 BTU in/ft²h °F at 68 °F)

Thermal conductivity of Fibermesh-450 varies with the mean temperature as shown in graph according to BS 874-1973.



Fire Performance

Fibermesh-450 achieves four zero Early Fire Hazard Indices when tested in accordance with AS 1530:Part 3-1976 (same as BS 476 : Part 5, 6, 7-1967) for non-combustible material.

Ignitability (0-20)	0
Spread of Flame (0-10)	0
Heat Evolved (0-10)	0
Smoke Developed (0-10)	0

Moisture Resistance

Exposure to an atmosphere of 50°C and 95% relative humidity for 96 hours; results in moisture absorption of less than 0.2% by volume. Should insulation become wet, full thermal efficiency will be restored on drying out.

Water repellent grade according to BS 2792 section 12 is available to order.

Corrosion Resistance

Fibermesh-450 is faintly alkaline and is incapable of corroding steel, copper, or aluminium. To maintain this condition, protection must be provided against contamination from external sources. When tested in accordance with BS 3958: Part 5-1969, results in range of pH 7.5 - 8.0. Fibermesh-450 contains less than 15ppm soluble chlorides which minimise the risk of external stress corrosion cracking in austenitic stainless steel. Stainless mesh may be specially ordered for applications where galvanised mesh is not suitable.

Flexibility

Fibermesh-450 blanket is designed for maximum flexibility. It will essentially retain its thickness, while conforming to virtually any irregular shape.

Retention of the fibres by the wire mesh prevents any cracking or breaking.

Vibration Resistance

Because the fibres in Fibermesh-450 are stitched to the wire mesh, the blanket is especially resistant to fall out under conditions where vibration is present.

Fibermesh-450 is particularly useful in situations involving both vibration and high temperatures where standard bonded insulation materials are less resistant to the effects of vibration.

Compression Resistance

Fibermesh-450 is designed particularly for flexibility. It does however have reasonable resistance to compression when subjected to normal compressive load.

The graph shows the reduction in thickness (%) under compressive load (kPa), measured in accordance with BS 2972-1975.

