

Stonewool Insulation for Thermal, Acoustic and Fire Safety Applications in Industries



ROCKINSUL LRB Mattresses

MANUFACTURED
UNDER LICENSE TO
ISOVER
SAINT-GOBAIN

www.rockwoolindia.com

1987 - 2017 **30** years **ROCKWOOL INDIA**
Excellence Through Insulation Pvt Ltd

ROCKINSUL LRB Mattresses

- ROCKINSUL LRB Mattresses are flexible rock fibre mattresses, stitched with wire mesh and manufactured from stable rock fibres bonded with a minimum quality of thermosetting resin binder.
- ROCKINSUL LRB Mattresses are light weight, strong, resilient, easy to handle and cut to suit intricate shapes.
- Compliance with IS 8183

Standard Dimension

Thickness (mm)	Width (mm)	Length (m)
25 to 110	1,220	1.52 to 4.00*

* Available length will depend on thickness of the mattress required.

Standard Density & Thickness

Density (kg/m ³)	Thickness (mm)
70	50 - 100
80	40 - 110
100	25 - 100
120	25 - 100
128	30 - 100
144	25 - 100
150	25 - 100

Non-standard sizes may be available on request

Facing Types

ROCKINSUL LRB Mattresses are available with facing of galvanized steel (GI) or Stainless steel (SS) hexagonal wire netting (mesh) on one or both sides.



PERFORMANCE

Working Temperature

Up to 750 °c

Thermal performance (KValue)

The thermal conductivity of ROCKINSUL LRB Mattresses as per ASTM C177, 518, IS 3346 is displayed below:

Mean Temperature °C	Thermal Conductivity in W/m.k for the following densities in kg/m ³						
	80	96	100	120	128	144	150
50	0.038	0.037	0.037	0.038	0.039	0.039	0.039
100	0.044	0.043	0.043	0.045	0.046	0.046	0.046
150	0.053	0.050	0.051	0.051	0.052	0.051	0.052
200	0.062	0.059	0.060	0.060	0.060	0.059	0.059
250	0.070	0.068	0.069	0.070	0.070	0.069	0.069
300	0.086	0.081	0.082	0.083	0.082	0.081	0.081
350	0.102	0.095	0.095	0.091	0.091	0.091	0.091

Mean Temperature °F	Thermal Conductivity in BTU.in/ft ² .h. For the following densities in Lbs/ft ³						
	5.000	6.000	6.250	7.500	8.000	9.000	9.375
122	0.263	0.257	0.257	0.263	0.270	0.270	0.270
212	0.305	0.298	0.298	0.312	0.319	0.319	0.319
302	0.367	0.347	0.354	0.354	0.361	0.354	0.361
392	0.430	0.409	0.416	0.416	0.416	0.409	0.409
482	0.485	0.471	0.478	0.485	0.485	0.478	0.478
572	0.596	0.562	0.569	0.575	0.569	0.562	0.562
662	0.707	0.659	0.659	0.631	0.631	0.631	0.631

These are typical values subject to normal manufacturing & testing variances

Fire Safety Performance

ROCKINSUL LRB Mattresses are non-combustible when tested in accordance with IS 3144, BS 476 (part 4), ISO 1182 and ASTM E136 and have the following fire safety rating achievements:

1. Class I surface spread of flame in accordance to BS 476 (part 7)
2. Class O in accordance to the BS 476 (part 6 & 7) and to British Building Regulations

3. Class A1 in accordance with European norms
4. Show loss total mass less than 5% when tested in accordance to IS 3144
5. Surface burning characteristics in accordance to ASTM E84
 - a. Fire Spread Index : Less than 25
 - b. Smoke Developed Index : Less than 50

Moisture Absorption Performance

ROCKINSUL LRB Mattresses absorb less than 1% by volume when tested in accordance with BS 2972, ASTM C 1104 and do not absorb moisture from ambient air or from water by capillary attraction. Only water under pressure can enter the stonewool insulation products; however it quickly dries out due to the open cell structure of ROCKINSUL LRB Mattresses.



Applications

ROCKINSUL LRB Mattresses are used for thermal insulation and fire safety for high temperature industrial applications such as boilers, turbines, furnaces, large diameter pipes, flues, industrial ducts, and for irregular shaped pieces of equipment such as valves and flanges. It is also used for thermal and acoustic insulations of diesel engine exhaust systems, silencers and large diameter pipelines that transport high velocity fluids or gases.



Installation Procedures

ROCKINSUL LRB Mattresses are pre-cut in required dimensions and wrapped around the surface to be insulated. The joints are laced with galvanized wire by passing it through the eyes of the wire mesh. Care should be taken to ensure that the joints fit properly and no gaps are left at the joints. During the application on large surfaces, the mattresses should be impaled over 5-6 welded pins per square metre. The mattresses are held in position by placing retaining washers over the pins. These pins also work as spacers for the insulation between the sheet metal cover and the insulated surface.

Handling and Storage

Products are to be stored in dry and protected area. They are to be kept in the original packaging, at elevated positions above the ground or on a slab, and away from the walls, in order to avoid any penetration of moisture and dust or foreign contamination. If stored outside and in an open area, packages should be protected with a polyethylene film, canvas or other similar type of covering.



UL : R9703

ROCKINSUL

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