

Rockwool for Thermal and Acoustic Insulation and Fire Safety for Industrial Applications



www.kimmcoinsulation.com

KIMMCO

means insulation!

MANUFACTURED
UNDER LICENSE OF
ISOVER
SAINT-GOBAIN

KIMMCO Rockwool LRB Mattresses



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

Standard Dimensions

Thickness (mm)	Width (mm)	Length (mm)
25 to 140	1,220	1,520 to 4,000

Standard Density

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

* Non-standard sizes may be available on request.

Facing Types

KIMMCO Rockwool LRB Mattresses are available with a galvanized steel or stainless steel hexagonal wire netting (mesh) on one or two sides.



PERFORMANCE

Working Temperature

Up to 750°C

Thermal Performance (K Value)

The thermal conductivity of LRB Mattresses as per ASTM, C 177, 518, IS 3346 is displayed in the tables below:

Mean Temperature	Thermal Conductivity in W/m.K for the following densities in kg/m ³						
°C	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	Thermal Conductivity in BTU.in/ft ² .h.F for the following densities in lbs/ft ³						
°F	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

Acoustic Performance

KIMMCO Rockwool LRB Mattresses achieve the following sound absorption coefficients when tested in accordance to ASTM C 423.

Product Type	Absorption Coefficient at the octave frequencies HZ	Thickness (mm)						
		125	250	500	1,000	2,000	4,000	NRC
85	25	0.06	0.30	0.53	0.75	0.76	0.91	0.6
100	50	0.28	0.89	1.0	1.0	1.0	0.85	0.95
144	50	0.21	0.84	1.0	1.0	1.0	0.78	0.95

* These are typical values subject to normal manufacturing and testing variances.

Fire Safety Performance

KIMMCO Rockwool LRB Mattresses are non-combustible when tested in accordance with IS 3144, BS476 (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 0 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 in total mass less than 5% when tested in accordance to IS 3144
5. Surface burning characteristics in accordance to ASTM E 84
 - a. Fire Spread Index : Less than 25
 - b. Smoke Developed Index : Less than 50

Moisture Absorption Performance

KIMMCO Rockwool 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 rockwool insulation products; however it quickly dries out due to the open cell structure of KIMMCO Rockwool LRB Mattresses.



Applications

KIMMCO Rockwool 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. KIMMCO Rockwool LRB Mattresses are also used for thermal and acoustic insulation for industrial applications such as diesel engine exhaust systems and silencers, large diameter pipelines that transport high velocity fluids or gases.



Installation Procedures

KIMMCO Rockwool 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

Rockwool being light in weight is easy to handle. Products are to be stored in a well-lit, 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.


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Commitment to Quality

Properties of KIMMCO Glasswool and Rockwool Products

- Excellent thermal performance
- Superior acoustic performance
- Excellent fire safety
- Environmentally friendly - made from abundantly available non-strategic materials like sand and up to 80% recycled glass
- Suitable for a wide variety of applications (flexible, semi-rigid and rigid)
- Address a variety of performance requirements (wide range of facing materials)
- Easy to cut and install, minimum wastage on site
- Light weight
- Flexible rolls, semi-rigid and rigid boards
- Dimensionally stable
- No sagging or settling
- Complies with international standards

Our Commitment to Quality

Our Glasswool and rockwool products are manufactured under license of Saint - Gobain ISOVER, a world leading insulation provider headquartered in France.

Further, we have a strong commitment to quality, as recognized by our accreditation by international standards bodies such as ISO.

Our Commitment to the Environment

KIMMCO was selected as the sole insulation supplier and official collaborator with MASDAR city, the world's first zero-carbon, zero-waste city, in Abu Dhabi. We have a strong commitment to the environment, health and safety of our people, and surrounding communities, and actively collaborate with local and international environmental agencies.

Further, KIMMCO Glasswool and Rockwool products help developers achieve green building rating certifications such as LEED, Estidama and QSAS.

Our Glasswool products conform to:

- CE
- UL
- DCL (Dubai Central Laboratory)
- ABS

Our Rockwool products conform to:

- UL
- FM
- Warrington Fire Certification

Further, we are members of the following industry associations:

- Emirates Green Building Council (EGBC)
- Qatar Green Building Council (QGBC)
- MASDAR (Future Build initiative)
- Middle East Mineralwool Insulation Manufacturers Association (MEMIMA)
- India Green Building Council



Masdar CITY



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