

ROCKWOOL LRB MATTRESSES

APPLICATIONS

For wide range of thermal covers with fire safety in industrial sector.

ROCKWOOL LRB Mattresses are used where severe conditions of heat are involved like boilers, turbines, furnaces, larger diameter pipes, flues, curved surfaces, vessels and industrial ducts, irregular shaped pieces of equipment such as valves and flanges.

ROCKWOOL LRB Mattresses are also used where noise coupled with vibration and heat conditions are involved like heavy diesel engine exhaust systems / silencers and larger diameter pipe lines where high velocity fluids or gases are transported.

ENVIRONMENT

ROCKWOOL LRB Mattresses are free from gases such as CFC's, HCFC's, HFC's, Pentane and any other ozone depletion material in their manufacture and represent no known threat to the environment. ROCKWOOL LRB Mattresses are classified as zero Ozone Depletion Potential (ODP) and zero Global Warming Potential (GWP) and help in reducing greenhouse effect.

DESCRIPTION

ROCKWOOL LRB Mattresses are flexible, faced one side with wire mesh and manufactured from stable stone fibers bonded with minimum quantity of thermosetting resin binder. ROCKWOOL LRB Mattresses are light in weight, strong, resilient, easy to handle and cut to suit intricate shapes.

FACINGS

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

STANDARD DIMENSIONS

Thickness mm	Width mm	Length mm
40 to120	1220	1520

Non-standard sizes may be available on request

STANDARD DENSITY

Code	Density	
	kg/m ³	lbs/ft ³
LRB 80	80	5.0
LRB 100	100	6.25
LRB 120	120	7.5
LRB 128	128	8
LRB 144	144	9
LRB 150	150	9.375

Non-standard densities may be available on request

PERFORMANCES

WORKING TEMPERATURE

Fibre: Upto 750 °C

PERMANENCE

ROCKWOOL LRB Mattresses are dimensionally stable under varying conditions of temperature and humidity. ROCKWOOL LRB Mattresses are rot proof, odourless and non-hygroscopic. ROCKWOOL LRB Mattresses do not sustain vermin or fungus and will not encourage mould or bacteria. ROCKWOOL LRB Mattresses do not promote pitting corrosion nor stress corrosion cracking of austenitic stainless steel.

THERMAL CONDUCTIVITY

The thermal conductivity of ROCKWOOL LRB Mattresses as per ASTM, C 177, 518 is presented 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

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

Mean Temperature	THERMAL CONDUCTIVITY IN BTU.in/ft ² h.F FOR THE BELOW DENSITIES IN lbs/ft ³						
°F	5.0	6.0	6.25	7.5	8.0	9.00	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

FIRE SAFETY

ROCKWOOL LRB Mattresses are non-combustible when tested in accordance with BS 476 (part 4), ISO 1182 and ASTM E 136 have the following fire safety rating achievements:

- Class1 surface spread of flame in accordance with BS 476 (part 7).
- Class 0 in accordance to the BS 476 (part 6 and part 7) and to British Building Regulations.
- Class A1 in accordance to European norms.
- Surface burning characteristics in accordance to ASTM E 84.
 - Fire Spread Index: Less than 25
 - Smoke Developed Index: Less than 50

MOISTURE ABSORPTION

ROCKWOOL LRB Mattresses absorb less than 1% by volume when tested in accordance with BS 2972, ASTM C 1104. ROCKINSUL LRB Mattresses do not absorb moisture from the ambient air nor water by capillary attraction. Only water under pressure can enter the insulation products, however it quickly dries out owing to the open cell structure of ROCKWOOL LRB Mattresses.

NON TOXIC

ROCKWOOL LRB Mattresses are not hazardous to health and do not contain Asbestos. (see RIL MSDS).

ACOUSTICS

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

PRODUCT	Absorption coefficient at the octave frequencies HZ							
Type	Thickness mm	125	250	500	1000	2000	4000	NRC
85	25	0.06	0.30	0.53	0.75	0.76	0.91	0.60
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.

CORROSIVITY

Non-corrosive to steel and austenitic stainless steel when tested in accordance to ASTM C 665 and ASTM C 795 & C 871 respectively.

SHOT CONTENT

Less than 30% when tested in accordance to ASTM C 1335.

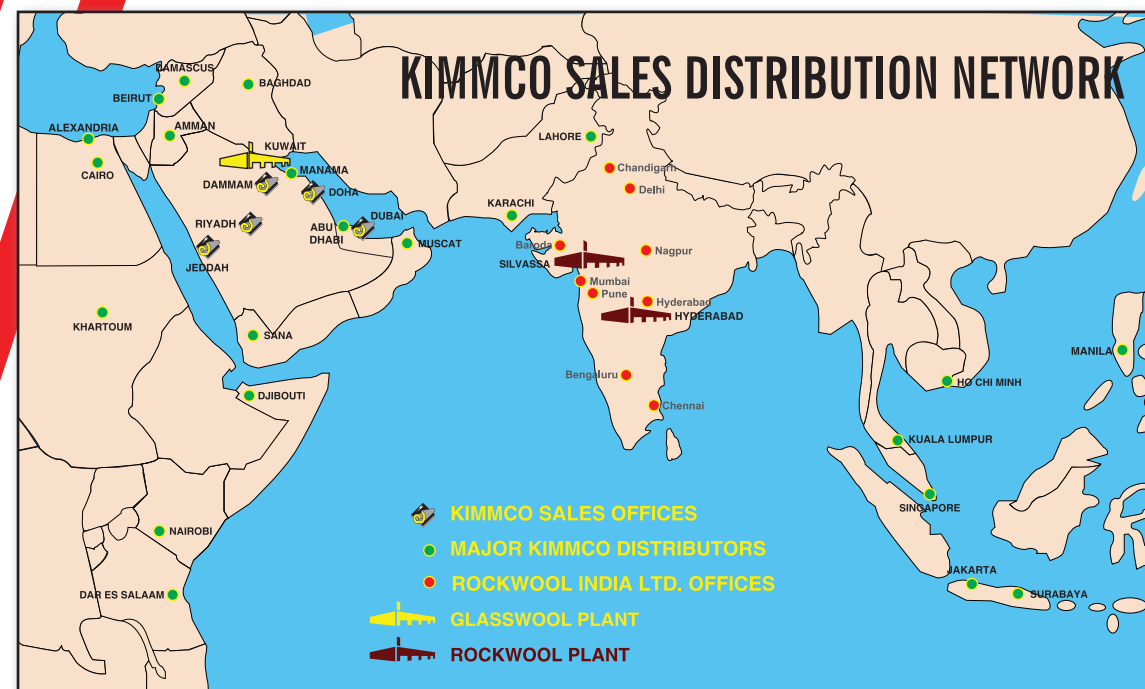
RECOVERY AFTER COMPRESSION

ROCKWOOL LRB Mattresses are highly resilient and offer min. 90% recovery after compression when tested as per IS 3144.

CONFORMITY TO STANDARDS

ROCKWOOL LRB Mattresses comply with the following standards and are manufactured to a quality assurance system which complies with ISO 9001:2000.

American Standards:	ASTM C 177, 411, 423, 518, 592, 665, 692, 795, 871, 1101, 1104, 1335, 1338, E 84, 136
British Standards:	BS 476 (parts 4,6 and 7) and 2972
ISO:	1182
European Standards:	EN ISO 13501-1, EN/TS 15117
Indian Standards:	IS 8183, 3144



HEAD OFFICE

KIMMCO - Kuwait Insulating Material Manufacturing Co.

P. O. Box 10042 Shuaiba, 65451 Kuwait
Tel. : 00965 - 188 11 11 Ext.: 5400 / 5328
Dir. : 00965 - 2326 2020
Fax : 00965 - 2326 1251 / 2326 2027 / 2326 0262
E-Mail: kimmco@alghanim.com

CUSTOMER SERVICES

P. O. Box 10042 Shuaiba, 65451 Kuwait
Tel. : 00965 - 188 11 11 Ext.: 5339 / 5340
Dir. : 00965 - 2326 2020
Fax : 00965 - 2326 1251 / 2326 2027
E-Mail: kimmcocustomer@alghanim.com

KIMMCO SALES OFFICES

EXPORTS

P. O. Box 10042 Shuaiba, 65451 Kuwait
Tel. : 00965 - 188 11 11 Ext.: 5332 / 5335 / 5336
Dir. : 00965 - 2326 2020
Fax : 00965 - 2326 1251 / 2326 2027
E-Mail: kimexp@alghanim.com

UNITED ARAB EMIRATES & OMAN

P. O. Box 9207 Dubai, UAE
Tel. : 00971 - 4296 7660
Fax : 00971 - 4296 7550
E-Mail: kimmcoemirates@alghanim.com

QATAR

P. O. Box 7943 Doha, Qatar
Tel. : 00974 - 4499 5077 / 4499 5075
Fax : 00974 - 4499 5088
E-Mail: kimmcoqatar@alghanim.com

TECHNICAL SERVICES

Tel. : 00965 - 188 11 11 Ext.: 5310
Dir. : 00965 - 2326 2020
Fax : 00965 - 2326 1251 / 2326 2027
E-Mail: kimtech@alghanim.com

KUWAIT SALES OFFICE

P. O. Box 24609, Safat 13107 Kuwait
Tel. : 00965 - 2473 4439
Fax : 00965 - 2473 4538
E-Mail: kimmcokuwait@alghanim.com

KSA - JEDDAH

P. O. Box 402 Jeddah, 21411 Saudi Arabia
Tel. : 00966 - 2660 0139
Fax : 00966 - 2661 3620
E-Mail: kimmcojeddah@alghanim.com

KSA - RIYADH

P. O. Box 63577 Riyadh, 11526 Saudi Arabia
Tel. : 00966 - 1476 3334 / 1476 5731
Fax : 00966 - 1478 1500
E-Mail: kimmcoriyadh@alghanim.com

KSA - DAMMAM & BAHRAIN

P. O. Box 2788 Dammam, 31461 Saudi Arabia
Tel. : 00966 - 3833 1678 / 3832 6488
Fax : 00966 - 3832 6477
E-Mail: kimmcodammam@alghanim.com

STORAGE: KIMMCO ROCKWOOL insulation products stored outside must be kept dry to avoid moisture. ROCKWOOL (INDIA) LIMITED is not liable for the damage resulting from an improper utilization of the products manufactured and marketed by ROCKWOOL (INDIA) LIMITED. ROCKWOOL (INDIA) LIMITED products are manufactured under license of Saint - Gobain ISOVER, using the latest technological developments. ROCKWOOL (INDIA) LIMITED reserves the right to alter product specifications without prior notice as part of its policy of continual development and improvement. The installation methods described in this leaflet are not compulsory. The choice of ROCKWOOL (INDIA) LIMITED materials and methods of fixing are the decision of the specifier, consultant or constructor. For further information, advice or specifications of ROCKWOOL (INDIA) LIMITED products, please contact your local office.



KIMMCO

ROCKWOOL

LRB MATTRESSES



MANUFACTURED
UNDER LICENCE OF
ISOVER
SAINT-GOBAIN

www.kimmcoinsulation.com
www.alghanim.com

A subsidiary of
Alghanim
INDUSTRIES

