

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



www.kimmcoinsulation.com

KIMMCO

means insulation!

MANUFACTURED
UNDER LICENSE OF
ISOVER
SAINT-GOBAIN



Our Insulation Business

As the market leader in Turkey, the GCC and India, the Insulation Group has a well-established reputation for delivering high-quality, energy-efficient insulation solutions to our customers.

We have a strong commitment to quality, as recognized by our accreditation by international standard bodies (ISO, UL, DCL and others); to the environment, as recognized by our selection as the sole insulation supplier and official collaborator with MASDAR City, the world's first zero-carbon, zero-waste city, in Abdu Dhabi; and to the health and safety of our people.

KIMMCO

Recognized as a leading insulation solution provider in the Middle East and Asia, KIMMCO provides insulation solutions for HVAC, building (roofs, walls, floors, metallic buildings) and technical/industrial applications. With an annual production capacity of 35,000 MT, KIMMCO is certified to ISO 9001, ISO 14001 and OHSAS 18001, and is compliant with ISO, ASTM, DIN, BS and other international standards.

SAUDI FIRST INSULATION MANUFACTURING COMPANY (SFIMCO)

Saudi First Insulation Manufacturing Company, a company owned by Alghanim Industries announced the construction of a new stone wool manufacturing facility based in Yanbu Al-Sinaiyah, Kingdom of Saudi Arabia in April 2012. With the

support of Saint-Gobain ISOVER (France), the world leader in insulation, SFIMCO will manufacture a variety of stone wool products for thermal and acoustic insulation. Using Saint-Gobain's latest state-of-the-art technology (REX process), SFIMCO will serve both the industrial and building segments. The manufacturing facility in Yanbu will have a potential of 64,000 MT installed capacity and serve markets in Saudi Arabia, as well as other markets in the GCC, Egypt, Iraq and Levant. The plant is expected to be commissioned in 2013.

ROCKWOOL INDIA LTD.

Rockwool India Ltd. (RIL) is recognized as the leading producer of rockwool insulation in India and has recently started serving customers in the broader GCC and MENA region. RIL operates two manufacturing facilities, one in Hyderabad and one in Silvassa, with a combined capacity of 50,000 MT per annum. RIL is a licensee of Saint-Gobain technology, and is ISO 9001 certified and ASTM compliant.

IZOCAM

IZOCAM is the leading supplier of insulation in Turkey and has been operated as a joint venture between KIMMCO and Saint-Gobain ISOVER since 2006. IZOCAM manufactures a range of glasswool, rockwool, nitrile rubber, and foam-based insulation materials and holds the ISO 9001 quality and ISO 14001 environmental assurance certificates.



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



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KIMMCO Rockwool RB Slabs



- KIMMCO Rockwool RB Slabs are semi-rigid and rigid boards manufactured from stable stone fibres bonded with a minimum quantity of thermosetting resin binder.
- KIMMCO Rockwool RB Slabs are capable of withstanding extreme temperatures up to 750°C and are light weight, strong, resilient, easy to handle, and easy to cut to suit intricate shapes.

Standard Dimensions

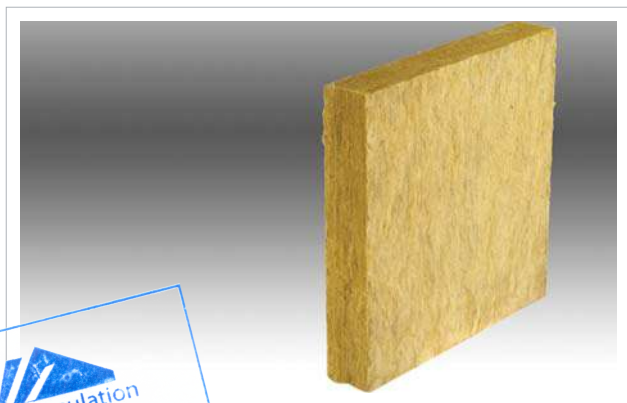
Thickness (mm)	Width (mm)	Length (mm)
25 to 125	600	1,000 to 2,000

Standard Density

Density (kg/m ³)	Thickness (mm)
48	50 - 200
64	40 - 150
80	40 - 125
96	25 - 100
120	25 - 80
144	25 - 80
160	25 - 75
200	25 - 50

Facing Types

KIMMCO Rockwool RB Slabs for Industrial Applications are unfaced, or with a facing of glass reinforced Aluminium foil/Kraft paper laminate facing (FSK) and Black Fibre Glass Tissue (BGT).



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PERFORMANCE

Working Temperature

Up to 750°C

At temperatures in excess of 230°C a limited migration of binder may occur in the insulation in contact with the hot face. This does not impair the insulation performance.

Thermal Performance (K Value)

The thermal conductivity of RB Slabs 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	48	64	80	96	100	128	144	160	200
50	0.042	0.038	0.038	0.037	0.037	0.039	0.039	0.040	0.040
100	0.051	0.046	0.044	0.043	0.043	0.046	0.046	0.047	0.047
150	0.059	0.054	0.053	0.050	0.051	0.052	0.051	0.052	0.053
200	0.074	0.064	0.062	0.059	0.060	0.060	0.059	0.061	0.062
250	0.088	0.072	0.070	0.068	0.069	0.070	0.069	0.070	0.072
300	0.101	0.091	0.086	0.081	0.082	0.082	0.081	0.082	0.083
350	0.120	0.109	0.102	0.095	0.095	0.091	0.091	0.092	0.093

Thermal Conductivity in W/m.K for the following densities in kg/m ³									
Thickness (mm)	48	64	80	96	100	128	144	160	200
25	-	-	-	0.676	0.676	0.641	0.641	0.625	0.625
50	1.190	1.316	1.361	1.351	1.351	1.282	1.282	1.250	1.250
75	1.786	1.974	1.974	2.027	2.027	1.923	1.923	1.875	-
100	2.381	2.632	2.632	2.703	2.703	2.564	2.564	-	-
125	2.976	3.289	3.289	-	-	-	-	-	-
150	3.571	3.947	-	-	-	-	-	-	-
200	4.762	-	-	-	-	-	-	-	-

Acoustic Performance

Rockinsul® RB Slabs 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
48	50	0.24	0.60	0.73	0.93	0.89	0.89	0.80
64	50	0.19	0.59	0.89	0.97	0.90	0.71	0.85
80	25	0.06	0.30	0.53	0.75	0.76	0.91	0.60
96	50	0.28	0.89	1.00	1.00	1.00	0.85	0.95
144	50	0.21	0.84	1.00	1.00	1.00	0.78	0.95

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

Fire Safety Performance

KIMMCO Rockwool RB Slabs 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 RB Slabs 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 RB Slabs.

Applications

- KIMMCO Rockwool RB Slabs are used for thermal and acoustic insulation for internal partitions and in between floor joints in public buildings like hotels, hospitals, schools and offices where fire safety is a primary concern.
- KIMMCO Rockwool RB Slabs are also used for thermal and acoustic insulation for exterior walls, and walls of stair cases and elevator shafts.



Installation Procedures

Before installing KIMMCO Rockwool RB Slabs, make sure to clear away any dust or grease and dry the surface. KIMMCO Rockwool RB Slabs are pre-cut in required dimensions and placed over the surface to be insulated. Care should be taken to ensure that the joints fit properly and no gaps are left at the joints. Depending on the surface and equipment, pins or spacers should be used to fix the Slabs in place.



Handling & 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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