

KIMMCO DUCT INSUL (KDI)



www.kimmcoinsulation.com

KIMMCO

means insulation!

MANUFACTURED
UNDER LICENSE OF
ISOVER
SAINT-GOBAIN

Our Insulation Business

As the market leader in the GCC, Turkey 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 Abu 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 INTERNATIONAL INSULATION MANUFACTURING COMPANY (SIIMCO)

Saudi International Insulation Manufacturing Company, a joint venture between Alghanim Industries and Saint-Gobain ISOVER (France), announced the construction of a new stonewool manufacturing facility based in Yanbu Al-Sinaiyah, Kingdom of Saudi Arabia in April 2012.

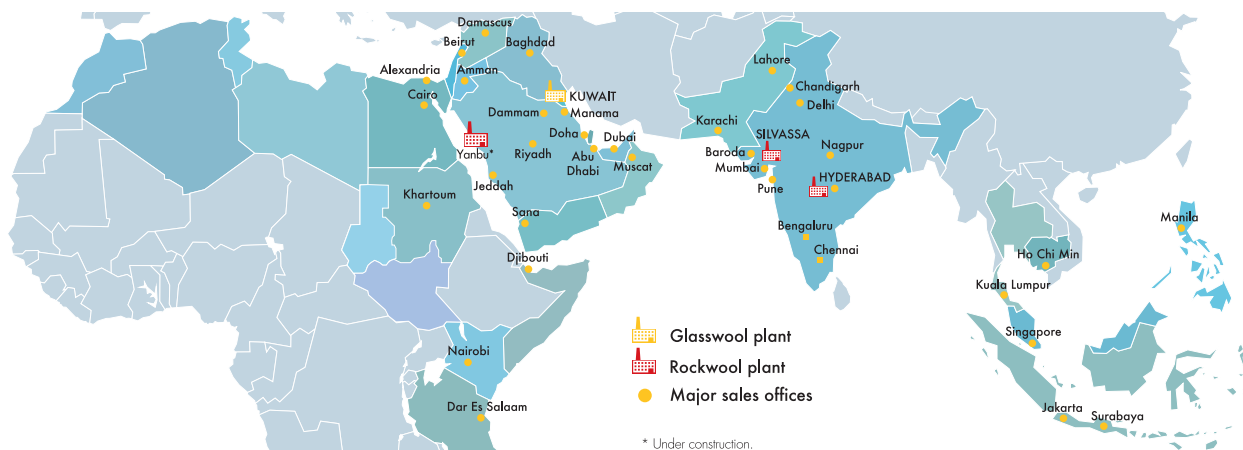
SIIMCO will manufacture a variety of stonewool products for thermal and acoustic insulation. Using Saint-Gobain's state-of-the-art technology (REX process), SIIMCO will serve both the industrial and building segments. The manufacturing facility in Yanbu will have a potential of 64,000 MT installed capacity, and serve markets in Saudi Arabia as well as other markets in the GCC, Egypt, Iraq and the Levant. The plant is expected to be commissioned in early 2014.

ROCKWOOL INDIA LTD.

Rockwool India Ltd. (RIL) is recognized as the leading producer of stonewool 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, stonewool, nitrile rubber, and foam-based insulation materials and holds the ISO 9001 and ISO 14001 certificates.



KIMMCO Duct Insul (KDI)

APPLICATIONS

External insulation of rectangular and circular air ducting and air handling equipment.

DESCRIPTION

KIMMCO Duct Insul (KDI) is in the form of flexible rolls, semi-rigid and rigid slabs manufactured from stable glass fibers bonded with thermo-setting resins, and free from coarse fibers and shot. Easy to handle and cut to fit rectangular ducts and air handling equipment.

Facings

KIMMCO Duct Insul is available unfaced or with a glass reinforced aluminum foil/kraft laminate facing (FSK) which combines a pleasing appearance with excellent vapor resistance.

Standard Dimensions

Availability	Thickness (mm)	Width (m)	Length (m)
Rolls	25, 40, 50, 75, 100	0.4, 0.6, 1.0, 1.2	10 to 45 according to the thickness & density
Slabs	25, 40, 50, 75, 100	1.2	1.0 to 2.4

Other dimension and/or thickness upon request

Nominal Density

KDI	kg/m ³	Lbs/ft ³	Availability
10	10	0.625	Rolls
12	12	0.75	Rolls
16	16	1	Rolls
18	18	1.125	Rolls
20	20	1.25	Rolls
24	24	1.5	Rolls or Slabs
32	32	2	Rolls* or Slabs
36	36	2.25	Rolls* or Slabs
48	48	3	Rolls* or Slabs
64	64	4	Slabs
72	72	4.5	Slabs
80	80	5	Slabs
96	96	6	Slabs

*Rolls according to the thickness

PERFORMANCE

Working Temperature

Fibre	230 °C
Foil Face	100 °C

Permanence

KIMMCO Duct Insul has a high resistance to accident damage from knocks and handling during installation and maintenance. Dimensionally stable under varying conditions of temperature and humidity, rot proof, odourless, non-hygroscopic and will not sustain vermin or fungus.

Combustibility

Base fibers are non combustible when tested in accordance with BS 476 (part 4), ASTM E 136.

Surface Burning Characteristics

When tested as per ASTM E84 / NFPA 255 / UL 723.

Flame spread index : Not over 25

Smoke developed index : Not over 50

Moisture Absorption

Less than 1% by volume when tested in accordance with ASTM C 1104.

KIMMCO Duct Insul does not absorb moisture from the ambient air nor water by capillary attraction. Only water under pressure can enter the insulation products, but that will quickly dry out owing to the material's open cell structure.

FSK faced KIMMCO Duct Insul comply with ASTM E 96 Desiccant Method. Permeance not to exceed 0.02 perms (Federal Standard HH-B-100 B Type 1).

NON TOXIC

**KIMMCO Duct Insul is not hazardous to health.
(See KIMMCO MSDS)**

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Thermal Conductivity

The low thermal conductivity of fiberglass products is due to the fact that they consist of more than 95% air which is trapped and kept stationary by the thin fibers.

Mean Temperature °F	Thermal Conductivity in Btu.in/ft ² h.F for the following densities in lbs/ft ³												
	0.625	0.750	1.000	1.125	1.250	1.500	1.875	2.000	2.250	3.000	3.750	4.000	4.500
32	0.26	0.25	0.23	0.23	0.22	0.21	0.21	0.20	0.20	0.20	0.21	0.21	0.21
50	0.28	0.27	0.25	0.24	0.23	0.22	0.22	0.22	0.21	0.21	0.21	0.23	0.23
77	0.31	0.29	0.27	0.26	0.25	0.24	0.23	0.23	0.22	0.22	0.23	0.23	0.23
122	0.38	0.34	0.31	0.30	0.28	0.27	0.26	0.25	0.25	0.24	0.24	0.24	0.24
167	0.45	0.41	0.35	0.34	0.32	0.30	0.28	0.27	0.27	0.26	0.26	0.26	0.26
212	0.51	0.45	0.40	0.37	0.36	0.33	0.31	0.30	0.30	0.29	0.29	0.29	0.29

Mean Temperature °C	Thermal Conductivity in W/m.K for the following densities in kg/m ³												
	10	12	16	18	20	24	30	32	36	48	60	64	72
0	0.038	0.036	0.034	0.033	0.032	0.031	0.030	0.030	0.029	0.029	0.030	0.030	0.030
10	0.040	0.038	0.036	0.035	0.034	0.032	0.032	0.031	0.030	0.030	0.031	0.031	0.031
25	0.044	0.041	0.039	0.038	0.036	0.035	0.034	0.033	0.032	0.031	0.032	0.032	0.032
50	0.055	0.048	0.044	0.043	0.041	0.039	0.037	0.037	0.036	0.035	0.036	0.036	0.036
75	0.064	0.059	0.051	0.048	0.046	0.043	0.041	0.040	0.039	0.037	0.038	0.038	0.038
100	0.074	0.065	0.057	0.053	0.051	0.047	0.045	0.044	0.043	0.041	0.042	0.043	0.043

These are typical values subject to normal manufacturing and testing variances

CONFORMITY TO STANDARDS

KIMMCO Duct Insul complies with the following standards:

American Standards

ASTM C165, 167, 168, 177, 303, 411, 553, 612 (Class 1 to 3)
665 §13.8 & 13.9, 686, 1045, 1101/1101M,
1104/1104M, 1136 (types 1&2), 1290 (type 3), 1335; E 84,
96, 136

UL 723

F.S. HH-B-100B (Type 1), HH-521F, HH-558B

NFPA 255, NFPA 90A & 90B

NAIMA Standards

ASHRAE 90.1 & 90.2 requirements

SMACNA Standards

British Standards

BS 476 (parts 4, 6 & 7), 874, 2972, 3533,
3958 (part 5), 5422, 5643, 6676 (part 1)

German Standards

DIN 18165, 52612

ISO

8301, 8302, 9229, 9291

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**BKNV.R9703
Batts and Blankets**

[See General Information for Batts and Blankets](#)

KUWAIT INSULATING MATERIAL MFG CO
BEHIND MINA ABDULLAH POLICE STATION
P.O.BOX 10042
65451 SHUAIBA, KUWAIT

R9703

Glass fiber batts and blankets with and without facings on one surface.

The following products are eligible to bear the Laboratories Classification Marking incorporating the designation "FHC 25/50" instead of the individual Surface Burning Characteristic values for flame spread and smoke developed:

Unfaced Blankets

Aluminum Foil Faced Blankets

Foil-Scrim-Kraft Faced Blankets

Glass fiber batts and blankets with and without facings on one surface and Rock wool batts and blankets without facings.

	Basic Blanket	Foil-Scrim Kraft Facing	Vinyl Film Facing	Aluminum Foil Facing	Rock Wool Blanket
Flame Spread	15	15	25	15	0
Smoke Developed	0	0	80-105	0	0

[Last Updated](#) on 2012-06-05

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When the UL Leaf Mark is on the product, or when the word "Environment" is included in the UL Mark, please search the [UL Environment database](#) for additional information regarding this product's certification.

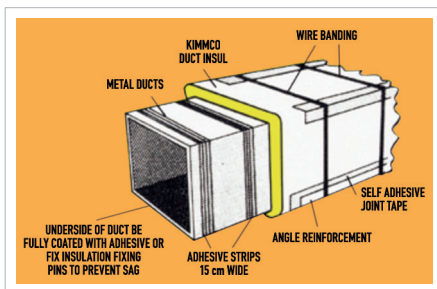
The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

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TYPICAL FIXING DETAILS

Installation 1

Ensure surface of duct is dry and free from dust or grease. Cut insulation to required length to fit around the duct, making sure that edges are straight.



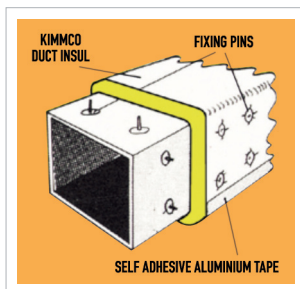
Apply insulation adhesive to duct surface in strips approx. 15 cm wide. Underside of duct should be completely coated with adhesive to prevent sagging.

Wrap insulation, foil face up, to the prepared duct surface once adhesive has become tacky, or as instructed by manufacturer, making sure that all edge joints are closely butted.

Apply uniform hand pressure to outside surface of insulation to obtain good bond.

Tape all longitudinal and transverse joints with a good quality self adhesive insulation tape. Seal any puncture points in insulation around hangers etc. with tape.

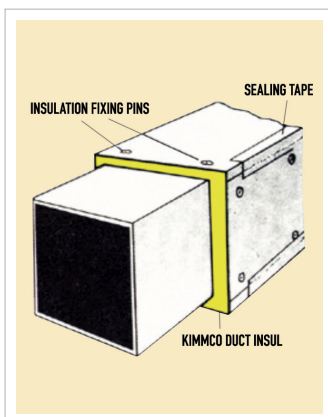
If lacing wire is used for additional security a light gauge galvanized angle should be fitted on each edge to prevent wire from cutting into insulation.



Installation 2

Ensure surface of duct is dry and free from dust and grease. Cut insulation to required length to fit around the duct making sure that edges are straight.

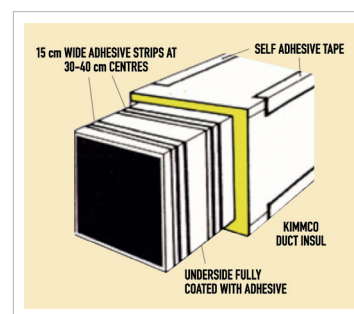
Depending on size of duct, fit 2 or more rows of insulation fixing pins to each face of duct at centers of 30 - 50 cm. Pins can be self adhesive type, bond-on type or stud welded.



Carefully position insulation over the pins, pressing firmly so that pins penetrate through the insulation. Fit spring clip or lock washer over pins pushing them down until tight against insulation. Snip off any excess shank from pin. Seal all joints and openings with self adhesive tape.

Installation 3

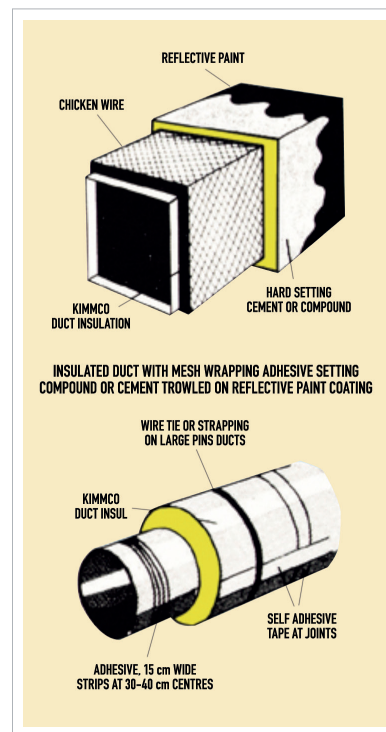
Where KIMMCO Duct Insul (KDI) requires protection against mechanical damage or is to be used outdoors, the insulation can be wrapped with wire mesh to which an application of quick setting compound or cement can be applied.



Installation 4

Circular ducts can be easily insulated with KIMMCO Duct Insul (KDI). Cut KIMMCO Duct Insul to suit the circumference of the duct. Clean surface of duct to remove dust and grease. Apply insulation adhesive in strips approx. 15 cm wide. Wrap insulation onto duct applying firm hand pressure to obtain maximum bond.

When applying each wrap of insulation ensure that longitudinal joints are kept in line. Seal all joints with self-adhesive tape. Large ducts can be reinforced with self adhesive tape, metal or nylon strapping.



Commitment to Quality

Properties of KIMMCO Glasswool 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, rigid and extra-rigid)
- Address a variety of performance requirements (wide range of facing materials)
- Easy to cut and install, minimum wastage on site
- Comparatively light weight
- Dimensionally stable
- No sagging or settling
- Complies with international standards

Our Commitment to Quality

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

Further, we have a strong commitment to quality, as recognized by our certification by international 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 products help developers achieve green building rating certifications such as LEED, Estidama and QSAS.

Further, we are members of the following industry associations:

- Emirates Green Building Council (EGBC)
- Qatar Green Building Council (QGBC)
- MASDAR (The Future Build)
- Middle East Mineral Wool Insulation Manufacturers Association (MEMIMA)

Our Product Listing & Certification

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



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