

# Commitment to Quality

## Properties of KIMMCO-ISOVER Products

- Excellent thermal performance
- Superior acoustic performance
- Excellent fire safety
- Environmentally friendly: made from abundantly available, non-strategic materials.
- 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 in weight
- Dimensionally stable
- No sagging or settling
- Complies with international standards

## Further, we are members of the following industry associations:

- Emirates Green Building Council (EGBC)
- Kuwait Green Building Council (KGBC)
- Qatar Green Building Council (QGBC)
- Singapore Green Building Council (SGBC)
- MASDAR (The Future Build)
- Middle East Mineral wool Insulation Manufacturers Association (MEMIMA)

## Our Commitment to the Environment

KIMMCO-ISOVER 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-ISOVER products help developers achieve green building rating certifications such as LEED, Estidama and QSAS

## Our Product Listing & Certification

- DCL
- UL
- CE
- BV
- ABS

## Our Commitment to Quality

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



# KIMMCO-ISOVER Lamella Insul (KLI)



# About Us

Alghanim Industries and French construction giant Saint-Gobain ISOVER join forces together after the recent launch of their new stone wool plant in Yanbu Saudi Arabia and the integration of KIMMCO in Kuwait.

With a 40 year track record in manufacturing, technology and supply of insulation materials and solutions to the Middle East markets, KIMMCO and Saint-Gobain ISOVER now offer their full range of glass wool and stone wool products and solutions under the brand KIMMCO-ISOVER.



- Alghanim Industries is one of the largest privately –owned companies in the Gulf region
- A heritage of over 100 years as a successful commercial enterprise in the Gulf region
- Operations in over 40 countries and employing
- Over 14,000 employees
- A multi-billion dollar company with more than 30 businesses.



World leader in sustainable habitat and construction market.

Saint-Gobain designs, manufactures and distributes material and solution which are key ingredients in the wellbeing of each of us and the future of all.

- Founded in 1665
- Nearly 179,000 employees
- Operates in 67 countries
- Close to 400 patents filed each year

# KIMMCO-ISOVER Lamella Insul (KLI)

## APPLICATIONS

KLI is designed for thermal insulation of pipes, ducts and vessels. KLI is suitable for a wide range of applications in HVAC and Industrial Sector such as:

- On large pipes, pipe cluster, or over heating traces, where preformed insulation is not appropriate.
- On round or oval duct work, square, or rectangular ducts, where the full insulation thickness on corners is to be maintained.
- On tanks and vessels of various types, particularly under metal cladding or as an additional layer over existing insulation.
- Over decorative roof surfaces such as domes, arches, etc...
- and where load bearing characteristics of insulation are required.

## DESCRIPTION

KLI is manufactured from stable glass fibers bonded with thermosetting resins. The fibers are oriented perpendicular to the plane of adhered facing material.

Easy to handle and supplied in roll form.

### Facings

KLI is available with variety of facings to suit the application such as glass reinforced aluminium foil/kraft paper laminate (FSK), All Service Jacket (ASJ).

## Standard Dimensions

Thickness (mm)	Width (m)	Length (m)
25	1.2	Upto 10
50	1.2	Upto 10
75	1.2	Upto 7.5
100	1.2	Upto 5

Non standard sizes may be available on request.

## PERFORMANCES

### Operating Temperature

Glass Mineral Wool upto 232 °C (450 °F)

Foil Face 100°C (212 °F)

### Permanence:

Dimensionally stable under varying conditions of temperature and humidity, rot proof, odourless, non-hygroscopic and will not sustain vermin or fungus.

### Thermal Performances:

Taste in accordance with ASTM C518.

Mean temperature °C	Thermal conductivity (W/m.K)	Thermal Resistance [m <sup>2</sup> .k/w] for following thickness of KLI			
		25mm	50mm	75mm	100mm
0	0.033	0.757	1.515	2.273	3.030
10	0.035	0.714	1.428	2.143	2.857
30	0.037	0.676	1.351	2.027	2.703
50	0.040	0.625	1.250	1.875	2.500
100	0.049	0.510	1.020	1.531	2.041
150	0.060	0.417	0.833	1.250	1.667

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

Mean temperature °F	Thermal conductivity (Btu.in/ft <sup>2</sup> .h.F)	Thermal Resistance (ft <sup>2</sup> .h./Btu) for following thickness of KLI			
		1 Inch	2 Inch	3 Inch	4 Inch
32	0.23	4.347	8.696	13.043	17.391
50	0.24	4.167	8.333	12.500	16.667
86	0.26	3.646	7.692	11.538	15.385
122	0.28	3.571	7.143	10.714	14.286
212	0.34	2.941	5.882	8.824	11.765
302	0.42	2.381	4.762	7.143	9.524

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

### Fire Safety

Glass Mineral wool is non combustible when tested in accordance with BS 476 (part 4), ASTM E 136.

KLI achieves class 1 when tested as per BS 476 part 7. KLI achieves class 0 when tested as per BS 476 part 6 & 7.

Glass reinforced Aluminium/Kraft laminate facing (FSK) are UL classified as follows;

Flame spread Less than 25

Smoke developed Less than 50

when tested according to ASTM E 84 procedure.

### Moisture Absorption

Less than 1% by volume when tested in accordance with BS 2972 or 6676, ASTM C 553, KLI does not absorb moisture from the ambient air not 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.

### Vapour Permeability

When tested in accordance to ASTM E 96 (desiccant method) FSK or ASJ faced KLI achieves permeance of less than 0.02 Perm.

## NON TOXIC:

KLI is not hazardous to health.

(see KIMMCO-ISOVER MSDS).

### No Corrosion

Does not cause or accelerate corrosion of steel, copper or aluminium.

### Flexibility

KLI will permit expansion and contractions of the metal pipe, duct or vessel without cracking or shrinking.

## CONFORMITY TO STANDARDS

KLI complies with the following standards :

### American Standards

ASTM C 165, 168, 411, 665 § 13.8 and 13.9, 680, 871, 1045, 1104/1104M, 1335, 1338; E 84, 96.

UL 723

F.S. HH-B-100B(type1) NFPA 255, ASHRAE 90.1 requirements

### British Standards

BS 476( part 4,6 &7), 874, 3533, 5643, 5970

### German Standards

DIN 18165,52612

### ISO

4200, 8497, 9229, 9291