

KIMMCO-ISOVER Duct Insulation Plus (KDIP)



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 Duct Insulation Plus (KDIP)

APPLICATIONS

Thermal and acoustic insulation (external) of HVAC equipment and air distribution duct systems. KDIP with ALUGLASS facing has added advantages:

- By adopting advanced fabrication methods, the number of split-joints can be reduced, which ensures less number of thermal breaks and uniform R value throughout the surface area.
- Aluminum foil laminated glass fabric (ALUGLASS) facing protects the system from normal mechanical abuses and stops vapor migration. So this system may not need additional vapor barrier.
- By avoiding highly laborious and costly canvas/open mesh glass cloth and vapor barrier coating, KDIP becomes more cost effective.
- An ideal substitute for conventional thermal insulation practices.

DESCRIPTION

KDIP is manufactured from stable glass fibers bonded with thermo-setting resins, in the form of blankets, semi-rigid or rigid boards with factory applied ALUGLASS (aluminium foil /glass fabric laminate) facing as vapor barrier.

Standard Dimension

Availability	Thickness(m)	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

KDIP	Kg/m ³	Lbs/ft ³	Availability
24	24	1.5	Rolls or Slabs
32	32	2.00	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

* Rolls according to the thickness

PERFORMANCE

Operating Temperature

Glass Mineral wool 232 °C (450 °F)

Facing 100 °C (212 °F)

Permanence

KDIP 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, nonhygroscopic and will not sustain vermin and fungus.

Easy to clean.

Thermal Conductivity

The thermal conductivity of fiberglass insulation products remains same throughout its lifetime because it is manufactured from natural minerals which neither deteriorates nor decays. In accordance to ASTM C518.

Mean Temperature °F	Thermal Conductivity in btu.in/ft ² h.f for the following densities in lbs/ft ³						
	1.500	2.000	2.250	3.000	3.750	4.000	4.500
32	0.21	0.20	0.20	0.20	0.21	0.21	0.21
50	0.22	0.22	0.21	0.21	0.21	0.23	0.23
77	0.24	0.23	0.22	0.22	0.23	0.23	0.23
122	0.27	0.26	0.25	0.24	0.24	0.24	0.24
167	0.30	0.28	0.27	0.26	0.26	0.26	0.26
212	0.33	0.31	0.30	0.29	0.29	0.29	0.29

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

Mean Temperature °C	Thermal Conductivity in w/m.k for the following densities in kg/m ³						
	24	32	36	48	60	64	72
0	0.031	0.030	0.029	0.029	0.030	0.030	0.030
10	0.032	0.031	0.030	0.030	0.031	0.031	0.031
25	0.035	0.034	0.033	0.032	0.032	0.032	0.032
50	0.039	0.038	0.037	0.036	0.036	0.036	0.036
75	0.043	0.041	0.040	0.038	0.038	0.038	0.038
100	0.047	0.045	0.043	0.041	0.042	0.043	0.043

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

FIRE SAFETY

Fibers are non combustible when tested in accordance with BS 476 (part 4), ASTM E 136, KDIP achieves Class 1 when tested as per BS 476 (Part 7). ISO 1182 ALUGLASS facing achieves Class 0 when tested as per BS 476 (Part 6 and Part 7).

Flame spread: Not over 25.

Smoke developed: Not over 50.

When tested in accordance with ASTM E 84.

MOISTURE ABSORPTION

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

ALUGLASS faced Duct insul plus complies with ASTM E 96 Desiccant method. Permeability not to exceed ZERO perms (Federal Standard HH-B-100 B Type 1).

SILENT FEATURES

- KDIP is faced with factory applied ALUGLASS facing.
- ALUGLASS is aluminum foil laminated with glass fabric.
- It has extremely high bursting strength of 270 psi i.e. 3-4 times higher than that of conventional facings.
- It has extremely high tensile strength of 14.5 KN/m i.e. 3-4 times higher than that of conventional facings.
- ALUGLASS has high mechanical strength, durability and dimensional stability.

- No water vapor can penetrate as ALUGLASS achieves zero water vapor permeability.
- KDIP can be used with no additional requirement of handling and weather protection such as application of canvas + vapor barrier.
- KDIP is rot proof, resists the effects of moisture and will not decompose through continual exposure to the elements.
- KDIP will not shrink due to the age or temperature variations.
- KDIP will maintain its thermal properties throughout the lifetime of the construction.
- KDIP is compatible to direct painting. It is recommended to use only anti-fungal and antibacterial paints on KDIP in areas where services are exposed like malls, exhibition centres etc. for aesthetic finish. This will save costly metallic cladding.

NON TOXIC

KDIP IS NOT HAZARDOUS TO HEALTH

(See KIMMCO-ISOVER MSDS).

CONFORMITY TO STANDARDS

KDIP complies with the following standards:

AMERICAN STANDARDS

ASTM C 165, 167, 168, 177, 303, 411, 518, 553, 612 (Class 1 to 3) 665 § 13.8 & 13.9, 686, 1045, 1101 / 1101M, 1104/1104M, 1136 (type 1 & 2) 1290 (type 3), 1335; E 84, 96, 136

UL723

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

NFPA 255, NFPA90A&90B

NAIMA standards

ASHRAE 90.1 & 90.2 requirements

SMACNA standards

BRITISH STANDARDS

BS 476 (parts 4,6&7), 847, 2972, 3533, 3958 (part 5), 5422, 5643, 6676, (part 1)

GERMAN STANDARDS

DIN 18165,52612

ISO

1182, 8301, 8302, 9229, 9291



BKNV.R9703 Batts and Blankets

[Page Bottom](#)

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

Black Glass Fabric 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	Black Glass Fabric
Flame Spread	15	15	25	15	0	25
Smoke Developed	0	0	80-105	0	0	5

	Basic Blanket
Flame Spread	0
Smoke Developed	0

[Last Updated](#) on 2015-07-02

[Questions?](#)[Print this page](#)[Terms of Use](#)[Page Top](#)

© 2016 UL LLC

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 Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2016 UL LLC".

Duct Wrap Installation Procedures

Step 1

Wear Protection tools
(dust mask & hand gloves)



Step 2

Ensure that air duct service is free of oil, grease, or water and tightly sealed at all the joints.



Step 3

Measure the dimension of the duct. Width of insulation needed shall be

Width = (2 x height) + (2 x width) + 8 x thickness of insulation



Step 4

With the foil side of the insulation facing up, Wrap the insulation around the duct ensuring that the ends are butted tightly together.



Step 5

Tape every joint completely with pressure sensitive aluminum tape along the seam where insulation butts together.

Important Remarks:

- Self-adhesive aluminum foil tapes should, ideally, be reinforced and a minimum 75mm in width and have a thickness of at least 30 microns to ensure adequate adhesion
- For circular and rectangular ductwork the use of tie wires, lacing wire and clips are the most common methods.
- It is not recommended that an overlap method of installation is used. The overlap of material causes greater stress to be placed on the self-adhesive aluminum foil tape. This can result in delamination, breaking the vapor barrier provided by the tape.
- Self-adhesive aluminum foil tape should not be used as a mechanical fixing. Its function is to provide a vapor barrier between the foil surface and the separate foil faced insulation.
- Rectangular duct of 600mm width and greater shall be tighten with metal seam to avoid insulation sagging

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
SAINT-GOBAIN

www.kimmco-isover.com

Kuwait Insulating Material Manufacturing Co.
P.O. Box 10042 Shuaiba, 65451 Kuwait