

# Self-Seal

First & Only Self-Adhesive  
Glass Wool Insulation



**Solution  
for  
HVAC Ducts**



# WE'RE THE LEADERS OF MINERAL WOOL INSULATION IN GCC



KIMMCO-ISOVER is a joint-venture between the international leader in construction products Saint-Gobain and Alghanim Industries which is one of the largest privately owned companies in the gulf region. KIMMCO-ISOVER mineral wool solutions are the preferred choice for most of the consultants, contractors and developers in different applications such as HVAC, Façade, Partition, Roof, Industrial, OEM and others.

## OUR PRODUCTION CAPABILITIES CAN ALWAYS FULFILL YOUR DEMAND & STANDARDS

KIMMCO-ISOVER owns 2 factories to cover all the market requirements of Mineral Wool insulations, one in Kuwait for Glass Wool Insulation and another in Saudi Arabia for Stone Wool insulation. We're exporting our products to more than 30 countries in Asia, Levant and Africa.

### GLASS WOOL PLANT

ISO 9001 ISO 14001 ISO 45001

Over 45 years of expertise in manufacturing and supplying glass wool product to markets in GCC, Asia, Africa and other regions



### STONE WOOL PLANT

ISO 9001

Highly sustainable Stone wool manufacturing technology which reduces production wastage to almost Zero.

# SELF ADHESIVE GLASS MINERAL WOOL DUCT INSULATION

## FAST INSTALLATION

Self-Seal sticks 100 % on the duct surface makes it very easy to apply and eliminates the use of glue and additional fastener pins.

## THERMAL COMFORT

Minimum heat loss or gain through HVAC duct.

## ACOUSTIC COMFORT

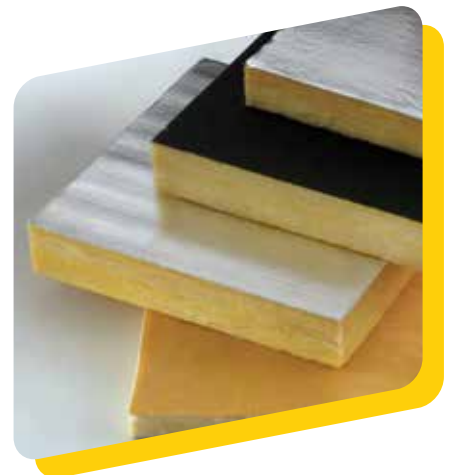
High level of acoustic performance against noise break-out from the duct.

## FIRE SAFETY

Made from non-combustible glass mineral wool.

## CONDENSATION CONTROL

Prevents condensation occurring on the vapor retarder facing.



**Rolls and Slabs**

# Self-Seal

## For all types of HVAC metal duct insulation

### DESCRIPTION

Self Seal is a self-adhering Glass mineral wool roll and slab for thermal and acoustic insulation of HVAC ducts. Self-Seal completely eliminates the use of flammable liquid glue and improves greatly the ease and speed of installation thereby saving cost and time

Self-Seal insulation are resilient and light weight rolls and slabs with factory-laminated vapor retarder facings on the outer side and factory-applied self-adhesive layer on other side

### APPLICATION

Self-Seal offers thermal insulation for HVAC ducts. It can be easily installed on rectangular, flat oval and circular HVAC ductwork. Self-Seal can be used for external or internal HVAC ducts operating at temperature between 4°C and 100°C.

### ADVANTAGES

- Superior thermal insulation properties
- Self-adhesive glass mineral wool insulation
- Strong and full adhesion the duct surface
- Ease of installation
- High acoustic performance
- Moisture resistant
- Long life – No aging
- Environmentally friendly



### SAVINGS

- Eliminates the need of liquid insulation adhesive
- Eliminates the use of insulation fastener pins
- Thermal comfort with Low energy consumption
- Savings on manpower and logistic cost & time
- Reduced project lead time due to easy of application



# Self-Seal

## Economical and efficient duct insulation

### THERMAL & ACOUSTIC COMFORT

Enhanced comfort by reducing heat loss or gain through HVAC duct, conditioned air reaches the designated spaces at temperatures close to design conditions. Suitably insulated duct may therefore be operated at reduced levels, saving energy, while providing the same level of comfort. Self-Seal also provides high level of acoustic performance against noise break-out from the duct.

### FAST INSTALLATION

Self-Seal comes with best in class adhesive layer which sticks 100 % on the duct surface makes it very easy to apply and eliminates the use of additional fasteners. In addition, Self-Seal saves time and logistics in sourcing adhesive and eliminates the risk of stocking flammable insulation adhesive.

### CONDENSATION CONTROL

Self-Seal installed over sealed sheet-metal ducts reduces the likelihood of condensation occurring on the duct surface or on vapour retarder facing. Self-Seal are available with FSK and Aluglass facing with very low permeability, < 0.02 and 0 perm respectively.

### AGING

Self-Seal are made primarily using naturally available silica sand and recycle glass. The product performance does not deteriorate its insulating properties over time. Self-Seal was tested at TUV- PSB, Singapore and successfully passed aging tests.

### FIRE PERFORMANCE

Base glass mineral wool are classified as non-combustible when tested in accordance with BS 476 (part 4) and EN 1 - 13501. In case of fire, product does not emit toxic smoke or develop flaming droplets.

Test	Results
BS 476, part 6 & 7, surface spread of flame	Class 0
ASTM E84, system tunnel test	Class A(1) Flame spread $\leq 25$ Smoke development $\leq 50$
EN 13501-1	Reaction to fire classification : A1 (un-faced , base wool)

### COMPRESSED PACKAGING

Self-Seal pays off even before the ventilation system is put into operation. Thanks to compressed packaging – The product will reduce the transportation costs and optimize the usage of packaging. The storage on site – will occupy less space which leads to a higher flexibility in planning of the project.



# Technical Data

## Product Range

### Slabs

Density (kg/m <sup>3</sup> )	Thickness (mm)	Length (m)	Width (m)
24	50-100	1.0	1.2
32	40-100		
48	25-100		

### Rolls

Density (kg/m <sup>3</sup> )	Thickness (mm)	Length (m)	Width (m)
24	25-75	5-10*	1.2
32			

Other densities and thickness may be available on request

## Physical Characteristic and Performance

Characteristic	Unit	Value	Standards
Width	m	0.6-1.2	ASTM C167 ASTM C303
Length	m	1 ( Slabs)	
		5 - 10 ( Rolls)	
Thickness	mm	50-100	ASTM C1136 ( Type I & II)
Facing	-	FSK or Aluglass	
* Reaction to Fire	-	A1	EN 13501-1
# Surface burning Characteristics		Class A	ASTM E84
# Fire Rating / Surface spread of flame		Class O, Class 1	BS 476 part 6 & 7
*Non Combustibility		Non Combustible	ASTM E136/ BS476 part4

# Al facing side

\* Glass wool only

## Thermal Conductivity:

Thermal conductivity of Self-Seal slabs and rolls when tested according to ASTM C518/ C177 is as below

Mean Temperature	Thermal Conductivity in w/m.k for the following densities in Kg/m <sup>3</sup>			
°C	24	32	36	48
0	0.031	0.030	0.029	0.029
10	0.032	0.031	0.030	0.030
25	0.035	0.033	0.032	0.031
50	0.039	0.037	0.036	0.035

## About Self-Adhesive Layer

Factory laminated Self-adhesive are specially developed layer with reinforcements for stability and covers 100 % of the substrate resulting in adhesive strength that out performance that of regular insulation adhesive.

# Typical Installation of Self-Seal Slabs

## SURFACE PREPARATION

Before installing any insulation ensure the ductwork dry , free from dust, cracks or grease and without any leaks

**Measure** the dimension of the duct to be insulated and cut the insulation Width of insulation needed= $((2 \times \text{height of duct}) + (2 \times \text{width of duct})) + 8 \times \text{thickness of insulation}$

## STEP 1

Place Self-Adhesive tape side of the insulation facing up, use standard insulation material cutting knife to cut required size.

## STEP 2

Remove the liner paper from the insulation board and place the Insulation material on the surface to be adhered. Apply sufficient hand pressure to ensure that the boards are firmly stuck on to the duct surface. Repeat the same to apply insulation to the remaining sides of the duct.

*Note: Care should be taken not to touch the adhesive surface to prevent glue loss, which eventually affects the adhesion strength of the insulation material to the surface)*

## STEP 3

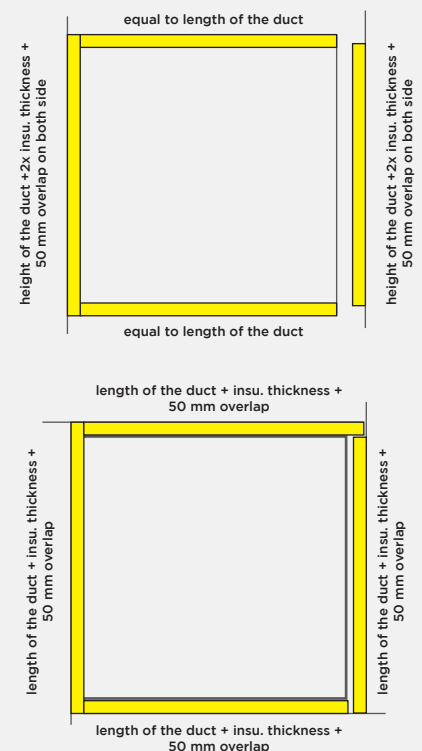
Position the pre-cut duct slab around the duct ensuring that the ends are butted tightly together.

## STEP 4

Tape every joint completely along the seam where insulation Butts together. Apply 3 inch suitable tape (Aluglass tape in case of Aluglass facing and aluminum tape in case of FSK facing) on the joints by positioning the tape along the longitudinal edge of the flap to allow 1 inch overlap on adjacent surface. Rub the tape firmly to ensure good sealing on the boards.

## REQUIRED TOOLS AND ACCESSORIES

- Measuring tape
- Cutting Knife
- Spatula
- Marker
- Aluminum tape



# Installation of **Self-Seal** Rolls

## **SURFACE PREPARATION**

Before installing any insulation ensure the ductwork dry, free from dust, cracks or grease and without any leaks

## **APPLICATION PROCEDURE STEP BY STEP**

- Measure and cut the self-seal roll considering total length of the duct (all 4 sides) and 4 times insulation thickness plus 50mm over lap.
- Total length of insulation = (4xlength of duct + 4X insulation thickness + 50 mm over lap)
- Clean all 4 side of the GI duct surface thoroughly to ensure that surface is dry & free from dust or grease.
- Mark a reference line in the center of the duct with help of marker
- Peel off Self-Seal liner sheet from one end with finger split and align the edge of the Self-Seal piece on the line marked
- Apply sufficient hand pressure to ensure the insulation piece firmly stick on the duct surface.
- Continue to peel the liner sheet & keep guiding the insulation roll to stick on other sides of the duct surface.
- Ensure to the maintain the insulation thickness at the corners of the duct.
- Close the edge with insulation overlapping, applying 3" tape
- Firmly rub the surface of the tape with a spatula to ensure good sealing on the roll surface

## **HANDLING AND STORAGE**

- Self-Seal should be stored inside a dry, cool and protected area
- When stacked outside, needs to be covered with waterproof material
- Self-Seal should be stored in original packing to avoid damages
- The package should be stacked on flat surface, elevated above the ground, away from walls

## **REQUIRED TOOLS AND ACCESSORIES**

- Measuring tape
- Cutting Knife
- Spatula
- Marker
- Aluminum tape





# 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 • BV
- UL • ABS
- CE • EUCEB

## Our Commitment to Quality

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









**Self-Seal**

SELF ADHESIVE GLASS MINERAL WOOL INSULATION



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