

# AEROFLEX<sup>®</sup>

closed cell elastomeric thermal insulation



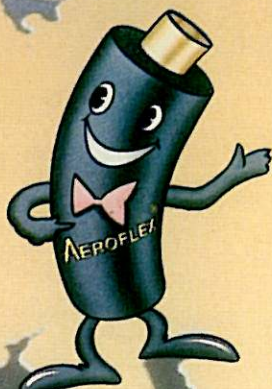
SAVE ENERGY, SAVE THE EARTH.

THE IDEAL EPDM  
THERMAL INSULATION  
FOR HVAC & R



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# AEROC



# AEROFLEX

## INTRODUCTION

**AEROFLEX** Closed Cell Tube and Sheet Insulation is a flexible, closed cell and lightweight elastomeric material designed for insulating liquid cooling and heating lines. The closed cell structure of Aeroflex provides many advantages over most rigid insulations for cooling and heating lines, such as:

- moisture & vapor resistance without using additional vapor barriers.
- stable thermal conductivity (K. value) during service, due to its dense surface skins and closed cell characteristics.
- flexibility which makes installation work easy and neat.
- outstanding ultraviolet and weather resistance.

**AEROFLEX** is an ideal insulation for frost control on cold water plumbing. It prevents heat gain and condensation problems on chilled water and refrigerant pipelines, and it also prevents heat loss from hot water plumbing, liquid and dual temperature piping.



# PRODUCTS AND APPLICATION

## Aeroflex EPDM Tube Insulation

**AEROFLEX** Closed Cell Tube Insulation, made of EPDM (Ethylene Propylene Diene Monomer) as its main raw material, is easily installed to pipe or tubing. The factory-applied coating of talcum powder on the thick and smooth inner skin helps facilitate and speed up preassembly line. When applied to existing lines, tubing should be slitted lengthwise and snapped into place. Slitting can be done on the job easily with razors, blades, knives or shears. Cut edges and joints can be sealed with Aeroseal Adhesive (neoprene base contact cement).

## Aeroflex Standard Sheet (S-series)

The standard sheet is available in size of 36" x 48" and wall thickness from 1/8" to 2" and 0.5m x 2.0m with the wall thickness from 3mm upto 50mm. It prevents heat loss and condensation on large pipelines, tanks, chillers, air ducts and other irregular shaped vessels.

## Aeroflex Pre-cut Sheet Insulation (P-series)

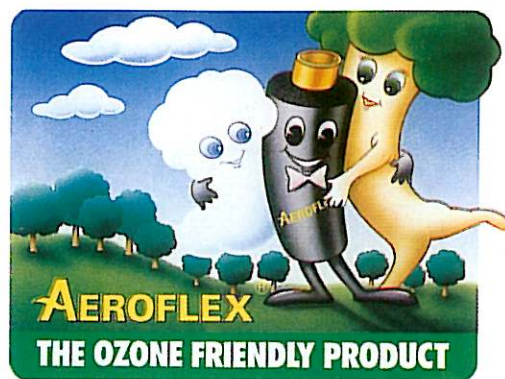
The pre-cut sheets are ready-cut in sizes to suit large pipe sizes ranging from 4" IPS upwards (1/2" to 2" wall thickness are available in 48" length). The pre-cut series makes fabrication easier and more economical because wastage is eliminated. Moreover, Aeroflex pre-cut sheet is manufactured to nominal thickness with smooth and dense skins on both

surfaces. In addition to excellent insulating properties, the pre-cut sheet also has greater resistance to water vapor penetration and water absorption.

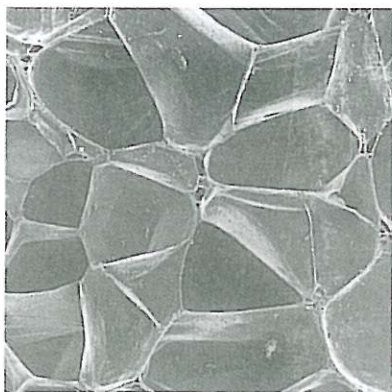
## Aeroflex Continuous Sheet Roll (SR - Series)

**Aeroflex** sheet insulations are also available in continuous roll form. Aeroflex continuous sheet rolls are available from 1/8" (3 mm) to 2" (50 mm) thickness, and 48" (1,220mm) width or 1,000 mm width

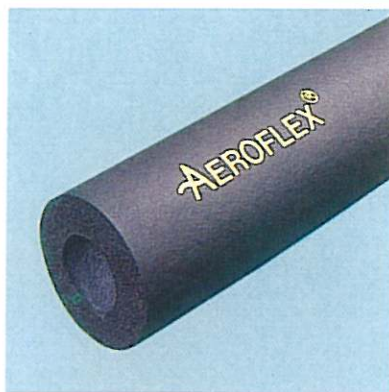
All insulating sheets are made from the same materials as Aeroflex tubing.



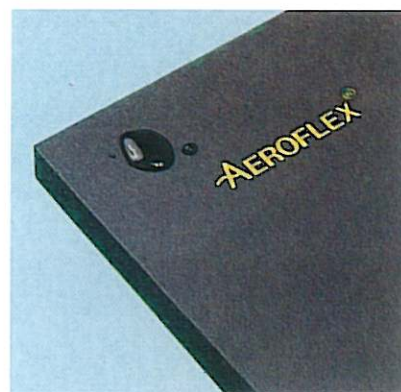
AEROFLEX is processed without any CFCs chemical that is harmful to the earth ozone layer.  
Safe Environment for Better Life



The magnified picture shows the completely closed cell structure of Aeroflex which allows the lowest water absorption and water vapor permeability.



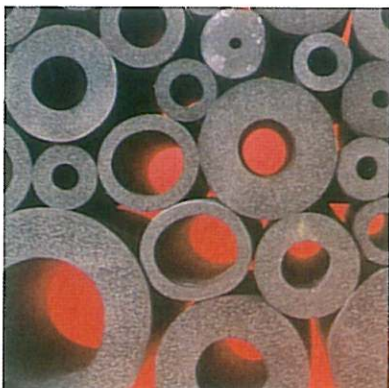
Aeroflex tube insulation has smooth and dense skin internally and externally acting as an additional protection against moisture and water.



Aeroflex sheet insulation with very dense skin on both side can prevent water absorption.



The high flexibility of Aeroflex provides very easy installation to pipes that may be bent to any shape.



The picture shows Aeroflex having the most varied sizes starting from 1/8" (3mm) ID to 6" (150mm) ID and thickness ranging from 1/8" (3mm) to 2 - 1/2" (65mm).



Aeroflex is also available in continuous sheet roll to suit different needs and installation purposes.



# CHARACTERISTICS AND MAIN ADVANTAGES

## Temperature Range

**AEROFLEX** Tubes and Sheet insulate and prevent condensation when used in operating temperatures down to  $-57^{\circ}\text{C}$  ( $-70^{\circ}\text{F}$ ) and insulate against heat loss up to  $125^{\circ}\text{C}$  ( $257^{\circ}\text{F}$ ). Within these recommended operating temperatures, it will not affect the thermal efficiency and water vapor permeability of Aeroflex.

## Moisture Resistance

The Closed Cell Structure protects against moisture, and eliminates the need for a vapor barrier in most applications. However, under severe condition of high humidity (90% RH up), high temperature ( $32^{\circ}\text{C}$  up) and low ventilation such as underground piping, "AEROCOAT" (Acrylic Emulsion Paint) is recommended for use as additional vapor barrier coating.

## Thermal Efficiency

**AEROFLEX** Insulation, made from high quality synthetic elastomers, has low density and closed cell structure. The products, therefore, have a stable low K Factor of 0.25-0.27 (at  $50-90^{\circ}\text{F}$  mean temperature) which can save energy consumption on any heating and cooling lines.

## Flame and Smoke Proof

**AEROFLEX** Tube and Sheet Insulation have been specially compounded to meet the ASTM Standard No. D 635, UL-94 V, JIS Standard No. K 6911 and other standards. The products have low smoke density while

burning, and unlike other thermoplastic materials, Aeroflex will not melt nor drip flaming balls, therefore, it will not cause flame transfer.

## Anti Vibrations and Resonance

The high elasticity of Aeroflex insulation minimizes the vibrations and resonance of chilled water and hot water pipelines during operation.

## Neat Appearance

The flexibility and smooth surface of Aeroflex offer neat-finished appearance even at joints, tees, elbows and crosses. No decorative or protective coating is required for both indoor and outdoor installations.

## Flexibility and Space Saving

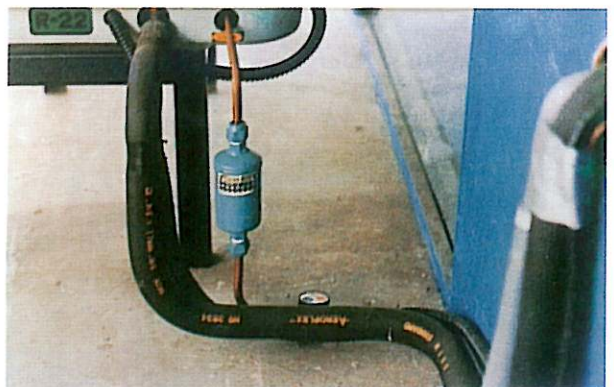
The flexibility of Aeroflex enables quick and easy installation on bent or irregular piping. Due to its low and stable thermal conductivity, Aeroflex requires a thinner wall than other rigid insulations. Therefore, lesser space is needed for installation of Aeroflex.

## Other Advantages

**AEROFLEX** can be safely handled without causing skin irritations and health hazard. It has superior resistance to fungus growth, vermin or rodent attack, and other chemicals such as acids and alkalis. These make Aeroflex ideal for protecting pipings from corrosion caused by atmospheric agents and industrial ambience.



Self-extinguishing property low smoke density and non-melting characteristic while burning make Aeroflex widely used in air-conditioning systems.



For flexibility and outstanding durability, Aeroflex is the most suitable insulation for split type air conditioners.



Flexibility and easy installation. Aeroflex is suitable for chilled water cooling system.



Many advantages as described above, make Aeroflex suitable for insulating chilled water piping.

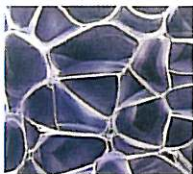


# SPECIFICATIONS

## AEROFLEX<sup>®</sup> Closed Cell Elastomeric Thermal Insulation

PHYSICAL PROPERTIES*		AEROFLEX						TEST METHOD**
Cell Structure		Closed cell						-
Density lbs/ft <sup>3</sup> (g/cm <sup>3</sup> )		3~6 (0.048~0.096)***						ASTM D 1667
Thermal conductivity BTU. in/ft <sup>2</sup> hr.°F (W/mk)	Mean temp.	-4°F (-20°C)	32°F (0°C)	75°F (24°C)	90°F (32°C)	104°F (40°C)	ASTM C177 JIS A 1412 DIN 52613	
	K-value	0.22 0.032	0.23 0.034	0.25 0.037	0.26 0.038	0.27 0.039		
Service temperature****		-70°F to 257°F -57°C ~+ 125°C						AEROFLEX becomes hard at -57°C, but can be used even at -200°C
Water Vapor permeability perm-in		0.10						ASTM C 355 E96*****
Moisture Resistance (μ value)		μ ≥ 7000						DIN 52615
Water Absorption (weight%)		≤ 5						ASTM D 1056
Ozone Resistance		No crack						ASTM D 1171
Heat Stability (%shrinkage) 200°F (93°C) 7 days		6						ASTM C 534
Flammability & Smoke, Density		Class V O						UL - 94
		25/50						ASTM E 84
		Self - extinguishing						ASTM D 635
		Class 1						GB 8624 B1 (China)
		Class 5.3						EMPA (Switzerland)
		Non-Flammable Pass						JIS K 6911 IMO *****
U.V. Weather Resistance		Excellent						-
Corrosion of copper , stainless		Non corrosive						DIN 1988
Nitrosamine Contents*****		Not detected						U.S. FDA
Sound reduction (ΔL <sub>AF</sub> )		27 dB (20 mm)						DIN 52218
Flexibility		Excellent						-

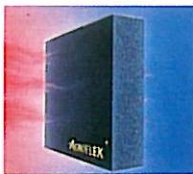
Specifications Comply with ASTM C534-88



Complete crosslinking closed cell structure.



Low density 4-6 lbs/ft<sup>3</sup>  
(0.06-0.10 g/cm<sup>3</sup>)  
ASTM D 1667



Low thermal conductivity  
ASTM C 177



Wide temperature continuous service ranging from -57°C to 125°C.



Low water absorption ASTM D 1056, Low water vapour permeability ASTM E96.



Excellent ozone and weather resistance  
ASTM D 1171, D 1149



Self extinguish ASTM D 635 flame proof  
ASTM E-84.



No problem for copper pipe corrosion even after a long period of service.



CFC<sub>2</sub> free product - Ozone friendly product.

### Note :

- \* Figures show the average values obtained by the world well-known testing institutes
- \*\* Tested according to DIN, JIS ASTM and others
- \*\*\* Average density of insulation thickness over 20 mm.
- \*\*\*\* At temp. under -57°C AEROFLEX becomes hard, but it doesn't affect thermal conductivity nor water vapor permeability. In the heating applications AEROFLEX can stand + 125°C continuously, and the adhesive upto +100°C
- \*\*\*\*\* Water Vapor Permeability test was done under test method ASTM E96 Dehydrate test method at 37.8°C
- \*\*\*\*\* IMO : International Maritime Organization
- \*\*\*\*\* It is reported that Nitrosamin is harmful to human health even during storage. No Nitrosamin compound was detected in AEROFLEX.



# HOT WATER PIPING

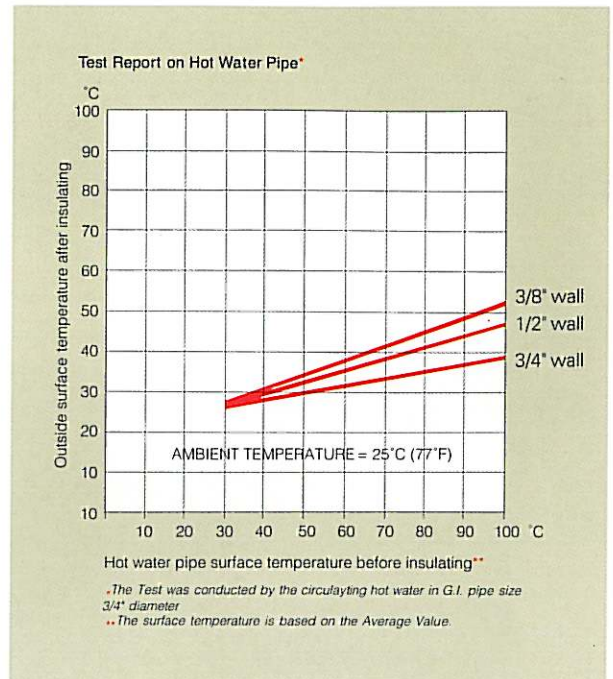
**AEROFLEX** flexible closed cell insulation is very effective in reducing heat loss for indoor and outdoor hot water piping system in Hospitals, Hotels, Residential Buildings and Industrial Plants. Also Aeroflex proves to be the most suitable insulation for outdoor pipe line of Solar Energy Heating System.

No danger of fibrous material when installed in places where hygiene is vital. Aeroflex is manufactured from synthetic polymers which contain no asbestos or fibrous material. This is one of the many reasons why Aeroflex is widely selected as a replacement for fibrous material like fiberglass or rockwool used in hot water piping of up to 100 °C in hotels, hospitals, industrial or residential applications.

The Closed Cell structure and specially-selected elastomeric materials provide the following advantages.

- Service temperature up to 125 °C (257 °F)
- Outstanding ultraviolet and weather resistance when used outdoors.
- Very stable thermal conductivity value throughout service life.
- Very low water absorption and water vapor transmission.
- No jacket is necessary even for outdoor piping
- Flexibility, easy installation.

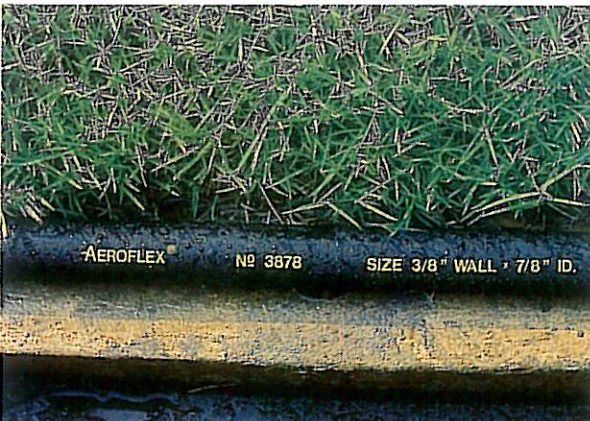
**Note:** Further ultraviolet protection or decorative purpose, the AEROCOAT (acrylic emulsion paint) may be applied.



All advantages described above make Aeroflex an ideal insulator for solar energy hot water system.



A stable K value and outstanding weather resistance throughout service life. Aeroflex is widely used in indoor and outdoor heating & cooling system to replace fiberglass and calcium silicate.



Because of low water absorption and water vapour transmission, no protective coating or jacket is necessary even for outdoor piping.



Two years exposed to sun light experiment proves that Aeroflex has outstanding ultraviolet and weather resistance. The service life under normal condition for hot water pipe is estimated to be more than 10 years.



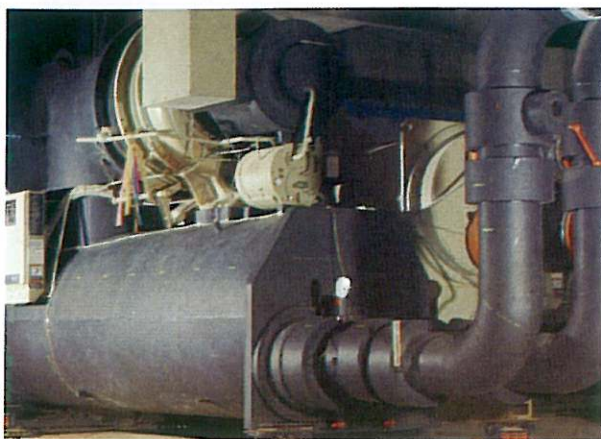
# CHILLED WATER PIPING

In areas with high humidity, condensation problems often occur in chilled water pipelines of central cooling systems. The condensation does not only damage ceiling, carpet and other furniture, but also waste energy by higher heat gain to the chilled water pipes.

Aeroflex Closed Cell Insulation has been widely used in chilled water pipelines due to the following superior characteristics:

- Very low water absorption.
- Low and very stable thermal conductivity (K.Value)
- Non-polar polymer base: high water and moisture resistance.
- Universal Smoke and Flammability Proof Standards.
- Flexibility: quick and easy installation.
- Neat appearance.

The Nomograph (page 10) and recommendation data provide guidelines for solving condensation problems.

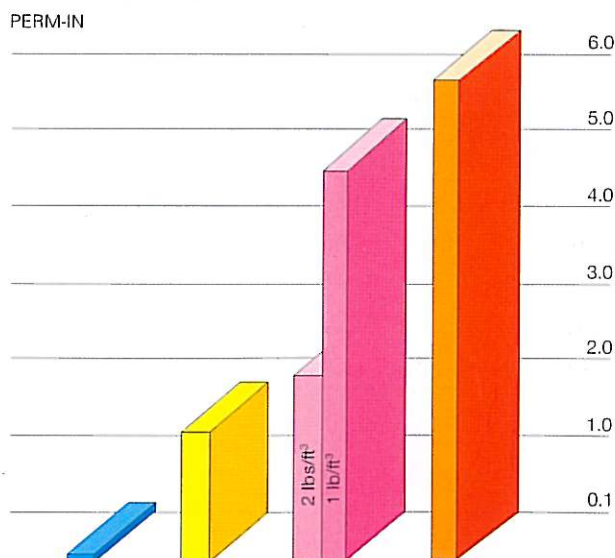


Low thermal conductivity, great resistance to vapor penetration and water absorption, Aeroflex is widely used in chilled water cooling systems.



Flame resistance, flexibility and easy installation makes Aeroflex a very economical insulation material for high standard buildings.

## Water Vapor Permeability

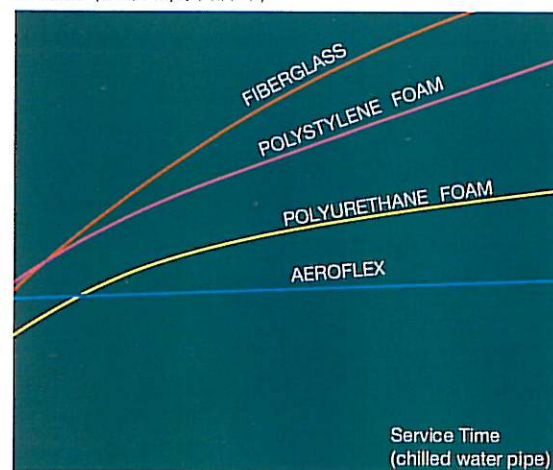


### Note:

This average water vapor permeability data is based on products without vapor barrier.

- Aeroflex: The closed cell structure density 4-6lbs./ft³
- Polyurethane Foam: The semi closed cell structure density 2-4lbs./ft³
- Polystyrene Foam: The interconnecting cell structure density 1-2 lbs./ft³
- Fiberglass: The open cell structure density 2-4 lbs./ft³

K. Value (BTU. in/ft². hr. °F)



### Note:

Service Time largely depends on humidity, temperature and workmanship. Under high humidity of tropical area, the low water vapor transmission is a very important factor for thermal insulation in chilled water pipeline to maintain stable thermal conductivity (K.value) during service. Condensation problem will occur when the k. value of the insulation increases and the surface temperature of insulation drops below DEW POINT. This happens in insulations with high water vapor transmission. (average K. value of water vapor is approx. 4 BTU. in/ft² hr °F)



# DUCTING SYSTEM

Besides being the ideal insulation for chilled and hot water piping, Aeroflex is also used as insulation for all kinds of ducting systems.

Aeroflex has been favoured over fibrous insulating materials mainly because of the possible dangers and health hazards caused by fibrous materials. Aeroflex, made from special modified elastomeric material ensures long service life and can be safely handled without any danger of skin irritation. It is also not hazardous to health so no special precaution is needed.

Aeroflex has superior resistance against moisture, fungus growth, vermin and rodent attack. Not messy and easy to install, it is also neat in appearance because of its smooth surface. With low water absorption and low moisture transmission, Aeroflex can be used both as an internal and external insulation for all kinds of ducting systems.

To suit different decorative purposes, Aeroflex can also be coated with Aerocoat, an acrylic latex emulsion paint.



*Aeroflex can work efficiently as an insulation and sound dampening material when used as internal and external insulation for air ducting system.*

## Thickness Recommendation for Ducting System

Ambient Condition	Operating Temperature			
	60°F (15.5°C)	55°F (12.7°C)	50°F (10°C)	45°F (7.2°C)
80° F (26.6°C) 50% RH	1/4" ( 6 mm.)	1/4" ( 6 mm.)	1/4" ( 6 mm.)	3/8" ( 9 mm.)
85° F (29.4°C) 70% RH	3/8" ( 9 mm.)	3/8" ( 9 mm.)	3/8" ( 9 mm.)	1/2" (12 mm.)
90° F (32.2°C) 80% RH	5/8" (15 mm.)	3/4" (19 mm.)	3/4" (19 mm.)	1" (25 mm.)
90° F (32.2°C) 85% RH	1" (25 mm.)	1" (25 mm.)	1" (25 mm.)	1-1/4" (32 mm.)



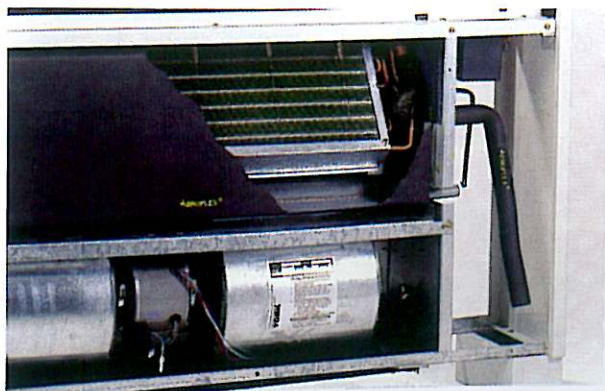
*Aeroflex is also available in continuous sheet roll form to suit different need.*



*Neat in appearance when used as an external insulation for air ducts.*



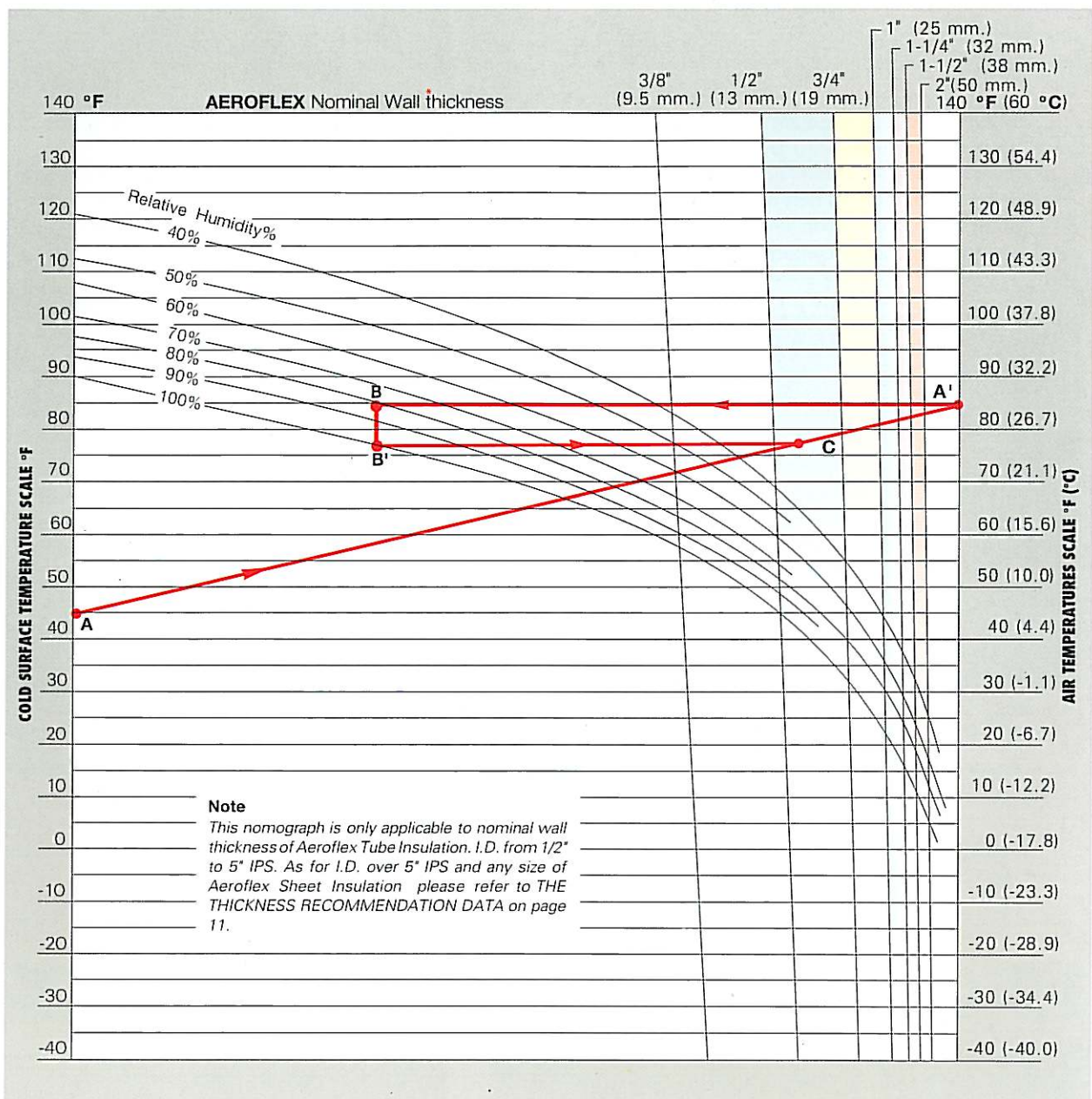
*Because of its many advantages, Aeroflex is being used widely in air-ducting systems.*



*Aeroflex does not contain any fibrous material, so it is safe to use in direct contact with air.*



# CONDENSATION CONTROL NOMOGRAPH



Calculate the thickness of Aeroflex insulation by using computer programme is also available, please contact your nearest distributor.

## Directions

This nomograph is for your convenience in determining the required thickness of Aeroflex Closed Cell Insulation for cold pipes of airconditioning systems, when cold pipe temperature, room temperature, and relative humidity are already known.

### How to determine the required thickness of Aeroflex insulation

EXAMPLE: Cold Pipe Surface Temp. 45°F (7.2°C)  
Room Temperature 85°F (29.4°C)  
Relative Humidity 80%

1. Connect 45°F (point **A**) on Cold Surface Temperature Scale, and 85°F (point **A'**) on Air Temperature Scale with a straightedge, forming straight line between **A** and **A'**.

2. From point **A'**: follow the horizontal line up to the relative humidity 80% curve. From this intersection (point **B**), draw a straight vertical line to the relative humidity 100% curve (point **B'** -saturation curve). Point **B'** (78.2°F, 25.7°C) shows DEW POINT value of the above mentioned atmosphere (air temp. 85°F, relative humidity 80%).
3. From point **B'**: draw a backward straight line, until it intersects the line **A-A'** (point **C**). Point **C** shows the proper thickness of Aeroflex Closed Cell Insulation (Vertical lines 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2" and 2"). To avoid any condensation problem, the 3/4" nominal wall thickness should be used in the situation indicated above.



# RECOMMENDATION

## AEROFLEX® Thickness Recommendation Data

Pipe Size	Line Temp. 60° F (15.5°C)	Line Temp. 50° F (10 °C)	Line Temp. 35° F (1.7 °C)	Line Temp. 0° F (-18 °C)
3/8" ID Thru 3" IPS Over 3" IPS	Based on Normal Condition Max. 85°F (29.4°C) 70% RH *			
	1/4" Wall 3/8" Sheet	3/8" Wall 1/2" Sheet	1/2" Wall 3/4" Sheet	1" Wall 1-1/4" Sheet
3/8" ID Thru 3" IPS Over 3" IPS	Based on Mild Condition Max. 80°F (26.6°C) 50% RH **			
	1/4" Wall 3/8" Sheet	3/8" Wall 1/2" Sheet	3/8" Wall 3/4" Sheet	3/4" Wall 3/4" Sheet
3/8" ID Thru 3" IPS Over 3" IPS Thru 10" IPS Over 10" IPS	Based on Severe Condition Max. 90°F (32.2°C) 80% RH ***			
	1/2" Wall 3/4" Sheet	3/4" Wall 1" Sheet	1" Wall 1-1/8" Sheet	1-1/2" Wall 1-3/4" Sheet
	3/4" Sheet	1" Sheet	1-1/8" Sheet	2" Sheet
3/8" ID Thru 3" IPS Over 3" IPS Thru 10" IPS Over 10" IPS	Based on Extremely Severe Condition Max. 90°F (32.2°C) 85% RH ****			
	3/4" Wall 1" Sheet	1" Wall 1-1/4" Sheet	1-1/4" Wall 1-1/2" Sheet	2" Wall 2-1/2" Sheet
	1" Sheet	1-1/4" Sheet	1-1/2" Sheet	2-1/2" Sheet

## Chemical Resistance Data

Chemicals	Conc%	Temp ( °C)	Resistance
Acetone	100	room temp.	E
Ammonia Water	30	room temp.	E
Aniline	100	room temp.	E
Benzene	100	room temp.	P
Boiling water	-	100 °C	E
Butyl Acetate	100	room temp.	P
Butyl Alcohol	100	room temp.	G
Caustic Soda	50	room temp.	E
Chloric Acid	6	room temp.	G
Cotton Seed Oil	100	room temp.	G
Ethyl Acetate	100	room temp.	F
Ethylene Glycol	100	room temp.	E
Formaldehyde	40	room temp.	G
Glacial Acetic Acid	100	room temp.	G
Hydrochloric Acid	10	room temp.	E
Hydrogen Peroxide	10	room temp.	E
Kerosene	100	room temp.	P
Linseed Oil	100	room temp.	G
M E K	100	room temp.	F
Methyl Alcohol	100	room temp.	E
Methylene Chloride	100	room temp.	P
Nitrobenzene	100	room temp.	G
Phosphoric Acid	85	room temp.	E
Steam	-	120°C	G
Sulfuric Acid	10	room temp.	E
Octane	80	room temp.	P
Toluene	100	room temp.	P
Water	-	(0-100°C)	E

Aeroflex is compounded with special non-polar elastomeric materials which is highly resistant to polar chemicals such as water, moisture vapor, acid and base. But it has moderate or poor resistance to non-polar chemicals such as petroleum oil and petroleum solvent.

In most applications of thermal insulations especially used in low temperature pipelines, such insulations are always in contact with moisture found in the atmosphere. Under these circumstances, Aeroflex -which is made from non-polar elastomers can be in service longer than polar thermal insulation such as NBR/PVC elastomers.

The testing and classification of polarity and non-polarity of most materials can be tested easily by heating any of such material into a microwave oven. Highly polar material will be very hot and can even burn after being heated in a microwave oven for a few minutes. Lower polar material will take a longer time to heat up and non-polar material will only be slightly heated up but not burnt when placed under the same situation or even for a much longer time.

**Wall:** Tubing Insulation. **Sheet:** pre-cut/standard sheet insulation.

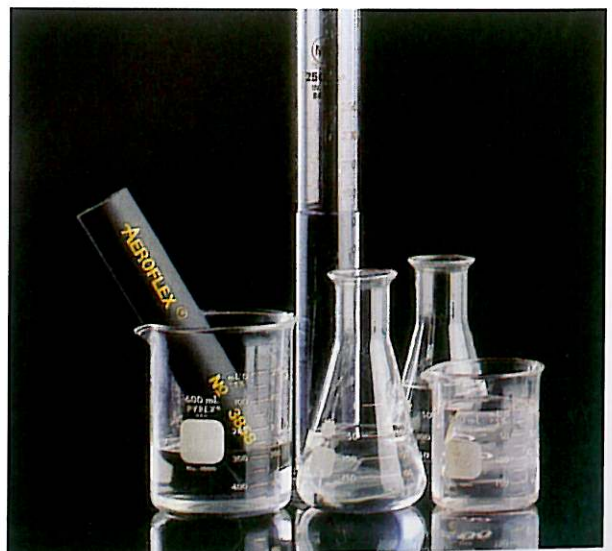
\* AEROFLEX in the thickness noted and within the specified temperature ranges will prevent condensation on piping under normal design condition max. temp. 85°F (29.4°C). 70% RH.

\*\* AEROFLEX in the thickness noted and within the specified temperature ranges will prevent condensation on indoor piping under mild design conditions max. temp. 80°F (26.6 °C), 50% RH. Typical of these conditions are air-conditioned areas.

\*\*\* AEROFLEX in the thickness noted and within the specified temperature ranges will prevent condensation on indoor piping under severe conditions max. temp. 90°F (32.2 °C) 80% RH. Typical of these conditions are indoor areas, in-which excessive moisture is introduced or in-poorly ventilated areas, (AEROFLEX research and field experience indicate that most tropical regions are in this condition). Central cooling by chilled water systems in hotels, shopping centres, office buildings are concerned in this condition.

\*\*\*\* AEROFLEX in this thickness is specially designed for extremely severe conditions, max. temp. 90°F (32.2°C) 85% RH., in the condition that needs maximum protection from condensation, where excessive moisture is introduced or poorly ventilated (85% RH.). Designed for central cooling by chilled water systems for hotels, hospitals, computer or electronics installation areas, military weapon warehouses.

**NOTE:** To prevent condensation problems, use Nomograph or Thickness Recommendation Data in this catalogue. Under extremely severe condition, Good ventilation design is recommended to avoid a continuous condensation problems.





# INSTALLATIONS

## Before Assembly

For small pipe size up to 4" IPS (115 mm), it is easier and more time-saving to apply the insulation before assembling the line. Just slip Aeroflex insulation tube over the pipe. The thick and smooth inner skin is coated with talcum powder for speeding up slipping even around most bends of the pipe. Apply brush coating of Aero seal adhesive to both butt ends to be joined. Allow the adhesive to set until non-tacky to the touch (approx. 5-15 minutes) then press the joints together firmly (see picture 1,2 and 3).

## Fittings

Aeroflex insulation tube is easy to cut and fabricate for tees, elbows, crosses and almost any fitting forms on preassembled lines. Use a clean and sharp knife or electric knife to cut the insulation to the desired shape, depressing the insulation as little as possible to avoid irregular cuts. The commonly used fittings require only 45° and 90° cuts. A miter box will offer more accurate cuts but careful free-hand cuts are usually faster and more convenient on job-site installation. After fabricated fitting covers are done, snap fitting cover in place over a fitting and then apply brush coating of Aero seal adhesive to all joint surfaces. Allow the adhesive to set until non-tacky to the touch (approx. 5-15 minutes), press the joints together firmly. (see picture 4,5 and 6)

## For Existing Line

To insulate existing lines, slit Aeroflex insulation tube lengthwise on one side, or use Aeroflex precut sheet for above 3" IPS (90 mm I.D.), and snap over the pipe. Then seal lengthwise-slit surface and butt joints with Aero seal adhesive. To assure a complete seal, avoiding loss of insulation efficiency, all joint surfaces must be fully and thinly coated with adhesive. Adhesive tape should not be used on seams and joints because tape is less effective than adhesive and may allow passage of moisture and air (see picture 7,8, 9 and 10).

## For Large Pipes and Irregular Shape

All applications cannot be accomplished by pre-formed tubular insulation. The flexibility of Aeroflex insulation allows irregular curves and surfaces of duct work, large piping, tanks and vessels. Cut the insulation sheet in a measured size with a clean sharp knife. Apply Aero seal adhesive on both surfaces to be insulated. Allow the adhesive to set until non-tacky to the touch (5-15 minutes), press the sheet tightly against the surface to be insulated. Be sure it is in the desired position before the adhesive coated surface makes an initial contact since the adhesive forms an instant bond and repositioning after contact is difficult. Then seal both sheet rims with Aero seal adhesive. (see picture 11)



1



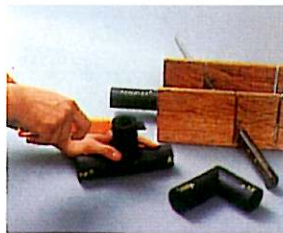
2



3



4



5



6



7



8



9



10



11



## ACCESSORIES



**AEROSEAL** is a Modified Neoprene Contact Adhesive specially formulated for bonding Aeroflex Insulating Materials firmly together. Also, ideal for use with other materials like Metal (painted/unpainted), Cork Board, Polyurethane Foam, Rigid PVC Sheet, Formica, and Melamine Board and Rubber Sheet.

The high water vapor resistance and good weathering resistance of **AEROSEAL** can prevent water or moisture from penetrating the joints.

**AEROSEAL** forms a strong, firm and permanent bonding between the applied materials providing long lasting service.



**AEROTAPE** is a flexible and self-adhesive insulation foam tape, which is made from the same elastomeric material as **AEROFLEX** Closed Cell Insulation.

Ideal for wrapping hot or cold pipings and fittings. Energy efficient and very easy to use. Excellent for preventing condensation problems. Designed specially for retarding heat loss in hot pipings and preventing heat gain or frost formation on cold, chilled water pipings or refrigeration lines.

Adheres firmly to all metals. No problem of delamination. **AEROTAPE** is specially coated with primer on the non-adhesive side for long service life.



**EVERSEAL** INSULATION CORK TAPE is specially designed for all types of climates. It insulates cold pipes for all kinds of air conditioners used in cars and homes, freezers and refrigerators.

Helps stop condensation problems. Ideal for retarding heat gain in cold pipes and preventing heat loss in hot pipes.

**EVERSEAL** INSULATION TAPE is an effective sound dampening material, and can also be used for gasketing purposes.

**EVERSEAL** INSULATION TAPE sticks to all kinds of dry metals. It seals tightly without drying. It is flexible and does not shrink or melt within the service temperature of  $-20^{\circ}\text{F}$  ( $-29^{\circ}\text{C}$ ) to  $+200^{\circ}\text{F}$  ( $+93^{\circ}\text{C}$ )



**AEROCOAT** is a water based paint formulated with selected pure acrylic emulsion mixed with other special chemicals. Excellent for coating especially onto Aeroflex insulation surfaces giving greater protection against ultraviolet rays or other adverse weather conditions.

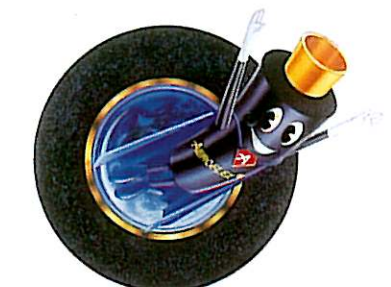
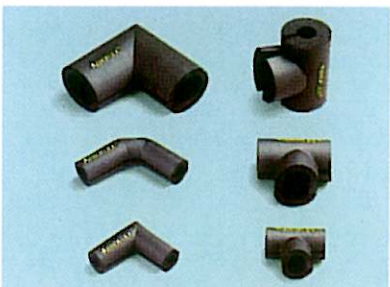
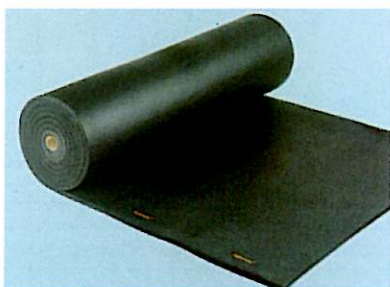
Available in shades of white, blue, green and black. **AEROCOAT** can be painted onto pipe insulation surfaces for easy identification of the different pipe functions.



# AEROFLEX<sup>®</sup> FAMILY

**AEROFLEX** Insulation Tubes and Sheets offer the widest range of thicknesses and sizes which are also available in roll form. To compliment its customers' needs, other products including Aerotape Foam Tapes,

Aeroseal Glue, Everseal Cork Tapes, Aerocoat Acrylic Emulsion Paint, Aeroduct Flexible Air Ducts, etc., are also available at the distribution network of Aeroflex.



# AEROFLEX<sup>®</sup>

THE IDEAL THERMAL INSULATION FOR HVAC & R



# PACKING

**AEROFLEX** Insulation Tube is available in both 6 feet and 2 meter length. It is packed in standard size cartons. Aeroflex Insulation Tube is packed in a standard export 5-ply carton, which is specially designed for piling up to 15 cartons to save storage space.



Aeroflex insulation tube standard packing.



The strong middle support of the carton enable the carton to be loaded up to 15 cartons per row.



A specially designed 5-ply carton protects Aeroflex from damages, and allows piling up to 15 cartons to save storage space.



Aeroflex will reach your port in a satisfactory condition due to our strong packing.

## Carton Sizes and Shipping Factor:

Imperial System	Carton Size	Full Container Load	
	W X H X L ( cm ) m <sup>3</sup>	20 ft	40 ft
1. Tube (6 feet length)	45 x 23 x 192 (0.198)	150 ctn	310 ctn
2. Sheet (3'x 4')	102 x 19 x 130 (0.252)	120	244
3. Precut Sheet (For 4" IPS. pipe size)	102 x 19 x 130 (0.252)	120	244
4. Precut Sheet (For 5", 6" IPS. pipe size)	69 x 19 x 130 (0.170)	168	355
5. Precut Sheet (For 8" IPS. pipe size)	86 x 19 x 130 (0.212)	138	286
6. Sheet Roll (4 feet width)	46 x 46 x 130 (0.275)	107	225
Metric System	Carton Size	Full Container Load	
	W X H X L ( cm ) m <sup>3</sup>	20 ft	40 ft
1. Tube (2 meter length)	45 x 23 x 207 (0.214)	138 ctn	288 ctn
2. Sheet (0.5 x 2 m)	56 x 19 x 207 (0.220)	135	279
3. Sheet Roll (1 m Width)	46 x 46 x 110 (0.223)	125	270
Other Products (Common Sizes Between Imperial. & Metric System)	Carton Size	Full Container Load	
	W X H X L ( cm ) m <sup>3</sup>	20 ft	40 ft
1. Everseal Cork Tape	24 x 35 x 45 (0.038)	780 ctn	1,590 ctn
2. Aerotape Foam Tape	24 x 29 x 45 (0.031)	1,000	2,120
3. Aeroseal Glue Can	31 x 14 x 41 (0.018)	1,568	3,248
4. Aeroseal Glue Gallon	17 x 28 x 32 (0.015)	1,872	3,848
5. Aerocoat Paint Gallon	38.5 x 20 x 38.5 (0.030)	1,080	2,232
6. Aerocoat Paint Can	25 x 14.5 x 37 (0.014)	2,140	4,350

Full 20 Feet Container Load = 29 - 30 m<sup>3</sup>, Full 40 Feet Container Load = 59-60 m<sup>3</sup>

\* The final shipping Volume should be confirmed by the Manufacturer/Exporter.



# STANDARD PACKING (Imperial System)

## AEROFLEX Insulation tube : 6 Feet length/Piece

I.D. SIZE		I.P.S.	Code Number (Quantity : Pieces/Carton)							
INCH	MM		1/4" wall (6 mm)	3/8" wall (9 mm)	1/2" wall (13 mm)	3/4" wall (19 mm)	1" wall (25 mm)	1-1/4" wall (32 mm)	1-1/2" wall * (38 mm)	2" wall * (50 mm)
1/4"	6	—	1414 (180)	3814-9 (132)	1214 (80)	3414 (32)	1014 (24)	—	—	—
3/8"	10	—	1438 (140)	3838-9 (110)	1238 (70)	3438 (32)	1038 (24)	—	—	—
1/2"	13	1/4"	1412 (110)	3812-9 (84)	1212 (60)	3412 (32)	1012 (20)	11412 (14)	—	—
5/8"	16	3/8"	1458 (80)	3858-9 (70)	1258 (50)	3458 (28)	1058 (18)	11458 (14)	11258 (8)	—
3/4"	19	—	1434 (70)	3834-9 (60)	1234 (40)	3434 (24)	1034 (18)	11434 (14)	11234 (8)	—
7/8"	22	1/2"	1478 (70)	3878-9 (54)	1278 (32)	3478 (20)	1078 (16)	11478 (12)	11278 (8)	—
1"	25	3/4"	1410 (60)	3810-9 (44)	1210 (30)	3410 (18)	1010 (12)	11410 (10)	11210 (8)	2010 (4)
1-1/8"	28	—	14118 (50)	38118-9 (36)	12118 (28)	34118 (18)	10118 (12)	114118 (8)	112118 (8)	20118 (4)
1-1/4"	32	—	14114 (40)	38114-9 (34)	12114 (24)	34114 (18)	10114 (12)	114114 (8)	112114 (8)	20114 (4)
1-3/8"	35	1"	14138 (40)	38138-9 (32)	12138 (20)	34138 (16)	10138 (10)	114138 (8)	112138 (6)	20138 (4)
1-1/2"	38	—	14112 (32)	38112-9 (30)	12112 (18)	34112 (12)	10112 (10)	114112 (8)	112112 (6)	20112 (4)
1-5/8"	42	1-1/4"	14158 (30)	38158-9 (28)	12158 (18)	34158 (12)	10158 (8)	114158 (8)	112158 (6)	20158 (4)
1-3/4"	45	—	—	38134 (24)	12134 (18)	34134 (10)	10134 (8)	114134 (8)	112134 (6)	20134 (4)
1-7/8"	48	1-1/2"	—	38178 (20)	12178 (16)	34178 (10)	10178 (8)	114178 (8)	112178 (6)	20178 (3)
2"	51	—	—	38200 (18)	12200 (14)	34200 (8)	10200 (8)	114200 (6)	112200 (4)	20200 (3)
2-1/8"	54	—	—	38218 (18)	12218 (14)	34218 (8)	10218 (8)	114218 (6)	112218 (4)	20218 (3)
2-1/4"	57	—	—	38214 (18)	12214 (14)	34214 (8)	10214 (8)	114214 (6)	112214 (4)	20214 (3)
2-3/8"	60	2"	—	38238 (16)	12238 (12)	34238 (8)	10238 (6)	114238 (6)	112238 (4)	20238 (3)
2-1/2"	64	—	—	38212 (16)	12212 (10)	34212 (8)	10212 (6)	114212 (4)	112212 (4)	20212 (3)
2-5/8"	67	—	—	38258 (14)	12258 (10)	34258 (8)	10258 (6)	114258 (4)	112258 (4)	20258 (3)
2-7/8"	73	2-1/2"	—	38278 (10)	12278 (10)	34278 (6)	10278 (6)	114278 (4)	112278 (3)	20278 (2)
3"	76	—	—	38300 (10)	12300 (8)	34300 (6)	10300 (6)	114300 (4)	112300 (3)	20300 (2)
3-1/8"	80	—	—	38318 (10)	12318 (8)	34318 (6)	10318 (6)	114318 (4)	112318 (3)	20318 (2)
3-1/4"	83	—	—	38314 (10)	12314 (8)	34314 (6)	10314 (6)	114314 (4)	112314 (3)	20314 (2)
3-1/2"	90	3"	—	38312 (8)	12312 (8)	34312 (6)	10312 (4)	114312 (4)	112312 (3)	20312 (2)
3-5/8"	92	—	—	38358 (8)	12358 (8)	34358 (6)	10358 (4)	114358 (4)	112358 (3)	20358 (2)
3-7/8"	98	—	—	38378 (8)	12378 (8)	34378 (4)	10378 (4)	114378 (2)	112378 (3)	20378 (2)
4"	102	3-1/2"	—	38400 (8)	12400 (8)	34400 (4)	10400 (4)	114400 (2)	112400 (2)	20400 (2)
4-1/8"	105	—	—	38418 (6)	12418 (6)	34418 (4)	10418 (4)	114418 (2)	112418 (2)	20418 (2)
4-1/2"	115	4"	—	38412 (6)	12412 (6)	34412 (4)	10412 (4)	114412 (2)	112412 (2)	20412 (2)
5-1/8"	130	—	—	—	12518 (4)	34518 (4)	10518 (2)	114518 (2)	112518 (2)	20518 (2)
5-1/2"	140	5"	—	—	12512 (4)	34512 (4)	10512 (2)	114512 (2)	112512 (2)	20512 (2)

Note : The above are standard sizes always kept in stock. For other I.D. and wall thickness, it may be available upon request.

\* 1-1/2" and 2" thick tube may be slitted lengthwise.

## AEROFLEX Pre-Cut Sheet Insulation (4 Feet length/Sheet)

I.D. Size (IPS)	Sheet Size	Code Number (Quantity : Sheets / Carton)					
		1/2" wall (13 mm)	3/4" wall (20 mm)	1" wall (25 mm)	1-1/4" wall (32 mm)	1-1/2" wall (38 mm)	2" wall (50 mm)
4-1/2"	(4" IPS)	P12412 (24)	P34412 (16)	P10412 (12)	P114412 (10)	P112412 (8)	P20412 (6)
5-1/2"	(5" IPS)	P12512 (12)	P34512 (8)	P10512 (6)	P114512 (5)	P112512 (4)	P20512 (3)
6-1/2"	(6" IPS)	P12612 (12)	P34612 (8)	P10612 (6)	P114612 (5)	P112612 (4)	P20612 (3)
8-1/2"	(8" IPS)	P12812 (12)	P34812 (8)	P10812 (6)	P114812 (5)	P112812 (4)	P20812 (3)
10-1/2"	(10" IPS)	P121012 (12)	P341012 (8)	P101012 (6)	P1141012 (5)	P1121012 (4)	P201012 (3)

Note : The above sheet size is for 1" wall thickness. For other thickness pre-cut sheet size will vary to cover circumference

## AEROFLEX Standard Sheet Insulation (4 Feet x 3 Feet Sheet)

Sheet size	Code Number (Quantity : Sheets/Carton)								
	1/8" wall	1/4" wall	3/8" wall	1/2" wall	3/4" wall	1" wall	1-1/4" wall	1-1/2" wall	2" wall
36"x 48"	S 1843 (48)	S 1443 (24)	S 3843 (16)	S 1243 (12)	S 3443 (8)	S 1043 (6)	S 11443 (5)	S 11243 (4)	S 2043 (3)

## AEROFLEX Continuous Sheet Roll (4 Feet Width Roll)

Code	Size			
	Thickness (inch)	Width (ft)	Length (ft)	Ft <sup>2</sup> /Roll
SR 18*	1/8"	4	150	600
SR 14*	1/4"	4	72	288
SR 38*	3/8"	4	50	200
SR 12*	1/2"	4	36	144
SR 58	5/8"	4	32	128
SR 34	3/4"	4	23	92
SR 10	1"	4	18	72
SR 114	1-1/4"	4	13	52
SR 112	1-1/2"	4	10	40
SR 20	2"	4	8	32

Decoding of Aeroflex Insulations (Imperial Unit) :

Aeroflex Insulation Tube :  
 3 4 2 1 8  
 Wall thickness in inch (=3/4")  
 Inner Diameter in inch (=2-1/8")

Aeroflex Sheet Insulation :  
 S 1 1 4 4 3  
 Standard Sheet  
 Size 4 feet x 3 feet Sheet  
 Sheet thickness in inch (=1-1/4")

Aeroflex Sheet Roll :  
 SR 1 0  
 Sheet Roll  
 Thickness of the sheet in inch (=1")

Note : Packing may be subjected to change without prior notice.

\* 1/8", 1/4", 3/8" x 1/2" thick sheet have one side skin.



# STANDARD PACKING (Metric System)

## AEROFLEX Insulation tube : 2 Meters length/Piece

I.D. SIZE		I.P.S.	Code number (Quantity : Meters/Cartron)							
MM	INCH		6 mm wall	9 mm wall	13 mm wall	19 mm wall	25 mm wall	32 mm wall	38 mm wall *	50 mm wall *
6	1/4"	—	M06006 (360)	M09006 (264)	M13006 (160)	M19006 (64)	M25006 (48)	—	—	—
10	3/8"	—	M06010 (280)	M09010 (220)	M13010 (140)	M19010 (64)	M25010 (48)	—	—	—
(12)13	1/2"	1/4"	M06013 (220)	M09013 (168)	M13013 (120)	M19013 (64)	M25013 (40)	M32013 (28)	—	—
(15)16	5/8"	3/8"	M06016 (160)	M09016 (140)	M13016 (100)	M19016 (56)	M25016 (36)	M32016 (28)	M38016 (16)	—
(18)19	3/4"	—	M06019 (140)	M09019 (120)	M13019 (80)	M19019 (48)	M25019 (36)	M32019 (28)	M38019 (16)	—
22	7/8"	1/2"	M06022 (140)	M09022 (108)	M13022 (64)	M19022 (40)	M25022 (32)	M32022 (24)	M38022 (16)	—
25	1"	3/4"	M06025 (120)	M09025 (88)	M13025 (60)	M19025 (36)	M25025 (24)	M32025 (20)	M38025 (16)	M50025 (8)
28	1-1/8"	—	M06028 (100)	M09028 (72)	M13028 (56)	M19028 (36)	M25028 (24)	M32028 (16)	M38028 (16)	M50028 (8)
32	1-1/4"	—	M06032 (80)	M09032 (68)	M13032 (48)	M19032 (36)	M25032 (24)	M32032 (16)	M38032 (16)	M50032 (8)
35	1-3/8"	1"	M06035 (80)	M09035 (64)	M13035 (40)	M19035 (32)	M25035 (20)	M32035 (16)	M38035 (12)	M50035 (8)
38	1-1/2"	—	M06038 (64)	M09038 (60)	M13038 (36)	M19038 (24)	M25038 (20)	M32038 (16)	M38038 (12)	M50038 (8)
42	1-5/8"	1-1/4"	M06042 (60)	M09042 (56)	M13042 (36)	M19042 (24)	M25042 (16)	M32042 (16)	M38042 (12)	M50042 (8)
45	1-3/4"	—	—	M09045 (48)	M13045 (36)	M19045 (20)	M25045 (16)	M32045 (16)	M38045 (12)	M50045 (8)
48	1-7/8"	1-1/2"	—	M09048 (40)	M13048 (32)	M19048 (20)	M25048 (16)	M32048 (12)	M38048 (12)	M50048 (6)
51	2"	—	—	M09051 (36)	M13051 (28)	M19051 (16)	M25051 (16)	M32051 (12)	M38051 (8)	M50051 (8)
54	2-1/8"	—	—	M09054 (36)	M13054 (28)	M19054 (16)	M25054 (16)	M32054 (12)	M38054 (8)	M50054 (6)
57	2-1/4"	—	—	M09057 (36)	M13057 (28)	M19057 (16)	M25057 (16)	M32057 (12)	M38057 (8)	M50057 (6)
60	2-3/8"	2"	—	M09060 (36)	M13060 (24)	M19060 (16)	M25060 (12)	M32060 (8)	M38060 (8)	M50060 (6)
64	2-1/2"	—	—	M09064 (32)	M13064 (20)	M19064 (16)	M25064 (12)	M32064 (8)	M38064 (8)	M50064 (6)
67	2-5/8"	—	—	M09067 (28)	M13067 (20)	M19067 (16)	M25067 (12)	M32067 (8)	M38067 (8)	M50067 (6)
73	2-7/8"	2-1/2"	—	M09073 (20)	M13073 (20)	M19073 (12)	M25073 (12)	M32073 (8)	M38073 (6)	M50073 (4)
76	3"	—	—	M09076 (20)	M13076 (16)	M19076 (12)	M25076 (12)	M32076 (8)	M38076 (6)	M50076 (4)
80	3-1/8"	—	—	M09080 (20)	M13080 (16)	M19080 (12)	M25080 (12)	M32080 (8)	M38080 (6)	M50080 (4)
83	3-1/4"	—	—	M09083 (20)	M13083 (16)	M19083 (12)	M25083 (12)	M32083 (8)	M38083 (6)	M50083 (4)
90	3-1/2"	3"	—	M09090 (16)	M13090 (16)	M19090 (12)	M25090 (8)	M32090 (8)	M38090 (6)	M50090 (4)
92	3-5/8"	—	—	M09092 (16)	M13092 (16)	M19092 (12)	M25092 (8)	M32092 (8)	M38092 (6)	M50092 (4)
98	3-7/8"	—	—	M09098 (16)	M13098 (16)	M19098 (8)	M25098 (8)	M32098 (4)	M38098 (6)	M50098 (4)
102	4"	—	—	M09102 (16)	M13102 (16)	M19102 (8)	M25102 (8)	M32102 (4)	M38102 (4)	M50102 (4)
105	4-1/8"	—	—	M09105 (12)	M13105 (12)	M19105 (8)	M25105 (8)	M32105 (4)	M38105 (4)	M50105 (4)
115	4-1/2"	4"	—	M09115 (12)	M13115 (12)	M19115 (8)	M25115 (8)	M32115 (4)	M38115 (4)	M50115 (4)
130	5-1/8"	—	—	—	M13130 (8)	M19130 (8)	M25130 (4)	M32130 (4)	M38130 (4)	M50130 (4)
140	5-1/2"	5"	—	—	M13140 (8)	M19140 (8)	M25140 (4)	M32140 (4)	M38140 (4)	M50140 (4)

Note : The above are standard sizes always kept in stock. For other I.D. and wall thickness, it may be available upon request.

\* 38 mm. and 50 mm. thick tube may be slitted lengthwise.

## AEROFLEX Standard Sheet Insulation

Sheet size	Code Number (Quantity : M <sup>2</sup> / Carton)								
	3mm wall	6mm wall	9mm wall	13mm wall	19mm wall	25mm wall	32mm wall	38mm wall	50mm wall
0.5mx2.0m (1m <sup>2</sup> /sheet)	MS1-03 (48)	MS1-06 (24)	MS1-09 (16)	MS1-13 (12)	MS1-19 (8)	MS1-25 (6)	MS1-32 (5)	MS1-38 (4)	MS1-50 (3)
1.0 x 2.0m (2m <sup>2</sup> /sheet)	MS2-03 (96)	MS2-06 (48)	MS2-09 (32)	MS2-13 (24)	MS2-19 (16)	MS2-25 (12)	MS2-32 (10)	MS2-38 (8)	MS2-50 (6)

## AEROFLEX Continuous Sheet Roll (1 Meter Width Roll)

Code	Size			
	Thickness (mm)	Width (m)	Length (m)	Area/Roll (m <sup>2</sup> )
MSR 03*	3	1.0	45	45
MSR 06*	6	1.0	22	22
MSR 09*	9	1.0	15	15
MSR 13*	13	1.0	11	11
MSR 16	16	1.0	10	10
MSR 19	19	1.0	7	7
MSR 25	25	1.0	5	5
MSR 32	32	1.0	4	4
MSR 38	38	1.0	3	3
MSR 50	50	1.0	2	2

Note : Packing may be subjected to change without prior notice.

\* 3,6,9 and 13 mm. thick sheet have one side skin.

Decoding of Aeroflex Insulations (Metric Unit) :

Aeroflex Insulation Tube :

M 19 05 4  
Metric System  
Wall thickness in mm (=19 mm)  
Inner Diameter in mm (=54 mm)

Aeroflex Sheet Insulation :

MS 1 - 2 5  
Metric System  
Standard Sheet  
Sheet thickness in mm (=25mm)  
Sheet area in m<sup>2</sup> (=1m<sup>2</sup>)

Aeroflex Sheet Roll :

MSR 3 2  
Metric System  
Sheet Roll  
Sheet thickness in mm (=32mm)

## AEROFLEX Average Nominal Wall Thickness Insulation Tube

I.D. SIZE	nominal wall 1/4"(6mm)	nominal wall 3/8"(9mm)	nominal wall 1/2"(13mm)	nominal wall 3/4"(19mm)	nominal wall 1"(25mm)	nominal wall 1-1/4"(32mm)	nominal wall 1-1/2"(38mm)	nominal wall 2"(50mm)
9 mm. to 28 mm.	6 ± 1 mm.	9 ± 1	12.5 ± 1	19 ± 1	25 ± 1	32 ± 2	38 ± 2	50 ± 2
32 mm. to 80 mm.	7 ± 1 mm.	9.5 ± 1	13.5 ± 1	20 ± 1	26 ± 1	33 ± 2	39 ± 2	51 ± 2
90 mm. to 140 mm.	—	10 ± 1	14.5 ± 1	21 ± 1	27 ± 1	34 ± 2	40 ± 2	52 ± 2

Remark : I.D. size 9 mm. to 28 mm... + approx. 1.5 mm. I.D. size 35 mm. to 80 mm... + approx. 2.0 mm

I.D. size 90 mm. to 140 mm... + approx. 3.0 mm. Aeroflex 6 feet length... 182 ± 3 cm. Aeroflex 2 meter length... 202 ± 3 cm.



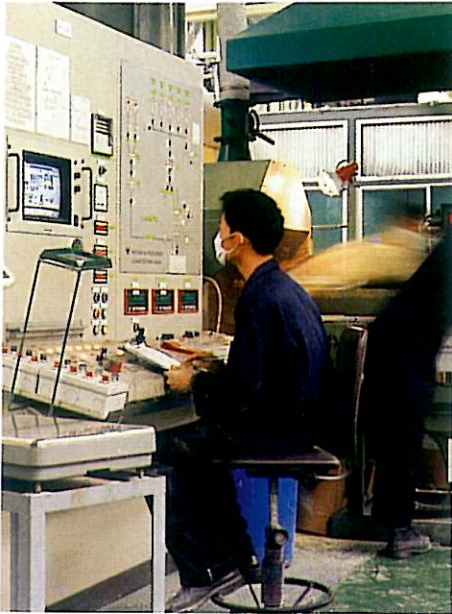
# AEROFLEX<sup>®</sup> QUALITY CONTROL

**AEROFLEX** is a quality product which has undergone careful control at every stage starting from raw materials to chemical and compounding testing. All these tests are conducted in modern laboratories equipped with sophisticated instruments.

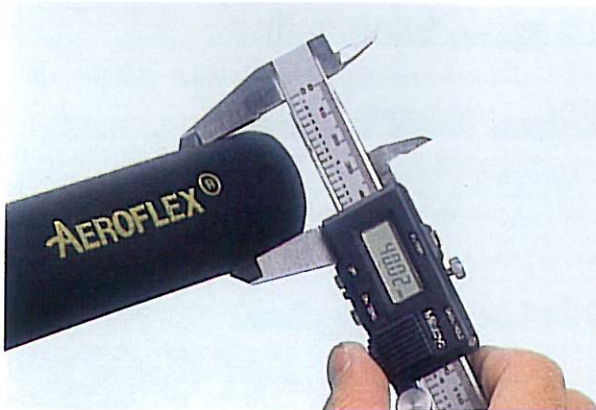
Control at every steps of processing to the final stage as a finished product requires a lot of precision control.

All these quality controls ensure that our products meet our customers' requirements and satisfaction.

Moreover, constant research and development is also being conducted so as to supply Aeroflex as a high quality product with reasonable price.

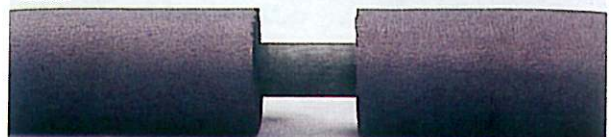


TECHNICAL CENTER

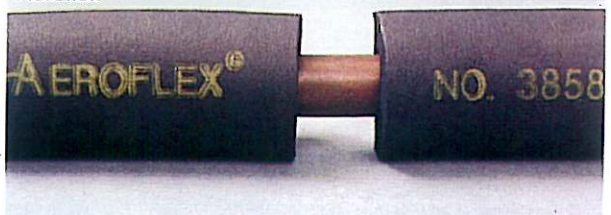


**AEROFLEX** has the widest range of thicknesses available as compared to other insulating products. All size control is conducted with high precision.

Other



Aeroflex

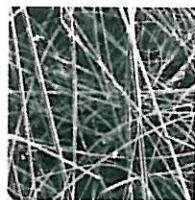


**AEROFLEX** contains negligible sulphur and non-corrosive function chemicals. It does not corrode copper tubings unlike some other insulations with high level of corrosive chemicals which causes copper pipes to corrode very easily. Such corrosion of copper will create pipe leakage problems.

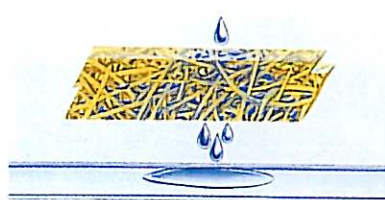


# AEROFLEX® TECHNICAL INFORMATION

## Water Absorption



SEM. x 30



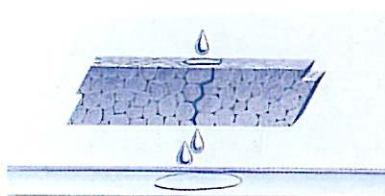
(SEM X 30)

### FIBERGLASS (Open-Cell Structure)

SEM micrograph shows 30 times of an open cell structure of fiberglass thermal insulation, very high water absorption and water vapor permeability.



SEM. x 7

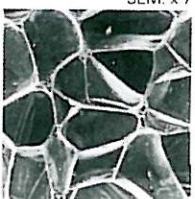


(SEM X 7)

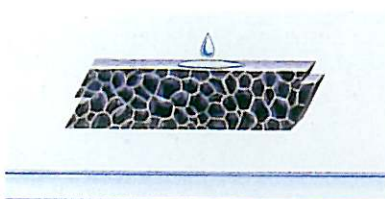
### POLYSTYRENE FOAM

(Interconnecting Cell Structure)

SEM micrograph shows 7 times of an interconnecting cell polystyrene foam, high water absorption and water vapor permeability.



SEM. x 20

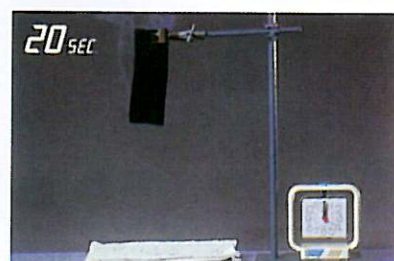
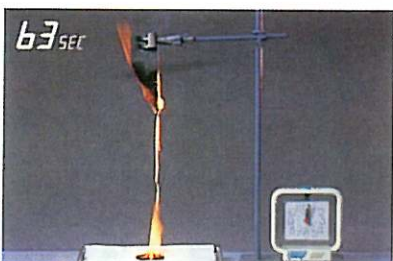
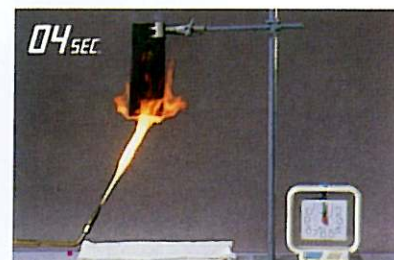
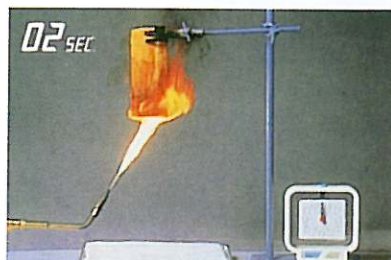


(SEM X 20)

### AEROFLEX (Closed Cell Structure)

SEM micrograph shows 20 times Aeroflex's closed cell elastomeric thermal insulation, lowest water absorption and water vapor permeability. Aeroflex's specially selected elastomers and closed cell structure act as multilayers of vapor barriers to maintain stable K value during long service life without need of vapor barriers.

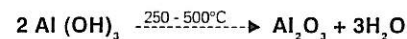
## Flammability Test



**PE. FOAM :** this plastic insulation is manufactured from polyethylene plastic with a density of approximately 2 lbs/ft<sup>3</sup>. Most PE insulation is highly combustible and can cause rapid flame transfer. It will melt and drop flaming balls (fire balls), causing flame transfer to other materials in buildings such as ceilings, carpets and furniture.

**PU. FOAM :** a polyurethane foam insulation made of polyols mixed with polyisocyanates. Although there may be some self-extinguishing grades, it will still produce large quantities of smoke while burning, releasing hydrogen cyanide gas (HCN), one of the most noxious gases which is fatal to victims within a very short time (HCN 300 ppm only will be fatally noxious within 2-3 minutes).

**AEROFLEX :** Aeroflex is made from high quality synthetic elastomers which are non-halogenated materials mixed with an optimum quantity of fire-extinguishing and smoke suppressing chemicals. It will not melt nor drop flaming balls (fire balls). It produces low smoke density. The main gases released when burned are hydrocarbon and carbon dioxide which are very mild when compared to hydrogen cyanide gas. Aeroflex is self-extinguishing within a short time when the flame is removed. The main flame retardant chemical used in Aeroflex is Aluminium Trihydrate (ATH) which when decomposed will give out water serving the function as a flame retarder under the following equation :



### Note :

The tests are conducted similarly to the standards of UL-94V, ASTM D635 and DIN 4102 by using insulation with samples size of 3/4" x 2" x 6"

For easy inflammable insulation, flame from lighter will be directed at the corner for 15 seconds, but for hardly inflammable insulation, flame from welding torch will be directed to the sample for the same amount of time. These experiments demonstrate relative combustibility of the materials.



Aeroflex can be classified as a Fire Safety Insulating Material.



# AEROFLEX® IN SERVICE WORLDWIDE

**AEROFLEX** has been installed in thousands of high standard buildings including Hotels, Hospitals, Office Buildings, Buildings Worldwide.



THE UNITED NATION CONFERENCE CENTRE, BANGKOK - THAILAND.



TRAIN STATION, TOKYO - JAPAN.



LUTH, KUALA LUMPUR - MALAYSIA.



RAFFLES CITY COMPLEX - SINGAPORE.



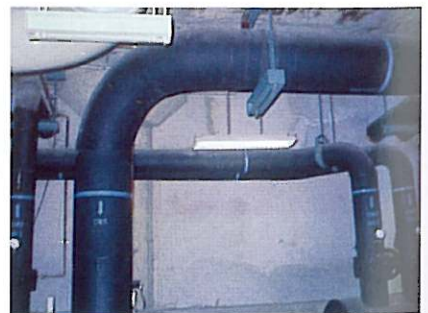
SHK TAHNOON BUILDING, ABU-DHABI - UAE.



QUEEN SIRIKIT NATIONAL CONFERENCE CENTER, BANGKOK - THAILAND.



BANGKOK INTERNATIONAL AIRPORT, BANGKOK - THAILAND.





Conference Centers, Shopping Complexes, Computer Centers, International Airports, Clean Room Factories and other Industrial



WORLD TRADE CENTER, BEIJING - CHINA.



ASCOM HQ. - SWITZERLAND.



WORLD TRADE CENTER, BANGKOK - THAILAND.



IMPERIAL QUEEN'S PARK HOTEL, BANGKOK - THAILAND.



GRAND HYATT ERAWAN HOTEL, BANGKOK - THAILAND.



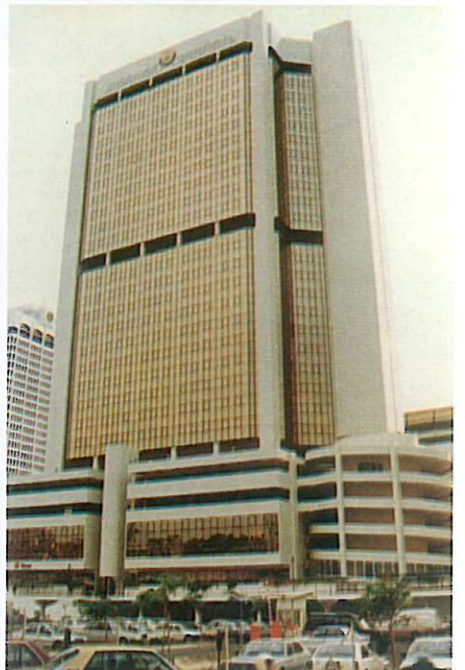
LUXURY CONDOMINIUM - SINGAPORE.



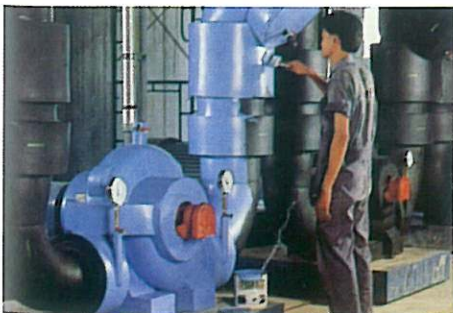
5,000 ROOM AMBASSADOR JOMTIEN HOTEL, PATTAYA - THAILAND.



P.T.T. HQ., BANGKOK - THAILAND.



EPF, KUALA LUMPUR - MALAYSIA.



... AND MANY OTHER OF HIGH STANDARD BUILDINGS WORLDWIDE.



# AEROFLEX<sup>®</sup> TECHNICAL SERVICE

AEROFLEX has completely illustrative catalogues providing full technical information compiled through years of expertise, experience and continuous research and development effort of our Company.

Our catalogues are well designed for easy reference and our team of technical staff are specially trained to handle and provide technical information or assistance on all matters regarding insulating materials.



Modern and updated programs by using computers are also being designed to help calculate the thickness of Aeroflex Insulations for preventing condensation problems under different situations.

## Catalogue

Product	Code
1. Aeroflex	EP 80 D Thai
2. Aeroflex	EP 80 D Chinese
3. Aeroflex	EP 80 D Japanese
4. Aeroflex	EP 80 D Korean
5. Aeroflex	EP 80 D English
6. Aeroflex	EP-01 K Thai
7. Aeroflex	EP-01 K English
8. Aeroflex	EP-01 K Chinese
9. Aeroflex	EP-01 J German
10. Aeroflex	EP-01 K Japanese
11. Aeroflex	EP-02 L English
12. Aeroflex	EP-04 L Japanese
13. Aeroflex	EP-03 L English
14. Aeroflex	EP-05 L Japanese
15. Aeroflex	EP-08 L Thai
16. Aeroflex	EP-07 L Thai
17. Aerocoat	EP-AC 921105 English
18. Aerofoil	EP-AS 921105 English
19. Aertape	EP-AT 911201 English
20. Everseal	EP-ES 911201 English
21. Aeroflex	EP-01 Polish
22. Aeroflex	EP-01 Portuguese
23. Aeroflex	EP-01 Bulgarian
24. Aeroflex	EP-9401 English



The physical or chemical properties of Aeroflex Closed Cell Insulation represent typical average values obtained in accordance with accepted test methods. However, Eastern Polymer Industry Co., Ltd. has no control over the end applications of these materials particularly when used with or attached to other products and in different environment. Therefore, the same results as described herein may not be obtained. It is recommended that end user consult the manufacturer or appointed distributors for more information, otherwise, make his own tests to determine adaptability of material for his particular application.

Due to continuous development of the products, some properties are subjected to change without notice.



# AEROFLEX<sup>®</sup> INTERNATIONAL DISTRIBUTION



## AEROFLEX<sup>®</sup> is distributed in the following areas :

### ASIA :

China, Japan, Korea, Taiwan,  
Hong Kong, Philippines,  
Thailand, Malaysia, Indonesia  
Brunei, Singapore, Myanmar,  
Pakistan, Sri Lanka, Bangladesh  
Maldives, India, Vietnam, Nepal,  
Laos, Cambodia.

### MIDDLE EAST :

Kuwait, U.A.E., Qatar, Oman,  
Bahrain, Jordan, Saudi Arabia,  
Egypt, Iran, Syria, Lebanon.

### AUSTRALIA & OCEANIA :

Australia, New Zealand, Fiji,  
Papua New Guinea,  
Caledonia.

### AFRICA :

Mauritius, Tanzania,  
South Africa, Ghana,  
Ethiopia, Nigeria, Kenya.

### EUROPE :

Finland, Sweden, Norway,  
Denmark, Germany, France,  
Benelux, Poland, Switzerland,  
Bulgaria, Portugal, Hungary,  
Turkey, Cyprus, Slovakia,  
Croatia, Slovenia, Romania,  
Estonia, Lithuania, Latvia,  
Russia, Spain, Czech Republic,  
Greece, U.K., Austria, Israel,  
Malta, Italy.

### NORTH AMERICA :

U.S.A., Canada.

### SOUTH AMERICA :

Peru, Chile, Argentina, Cuba,  
Dominican republic, Panama,  
Trinidad, Uruguay, Venezuela.

**OVERSEA PLANTS :** AEROFLEX INSULATION SHANGHAI CO.,LTD. (China).  
AEROFLEX U.S.A, INC. Tennessee (U.S.A.).



Eastern Polymer Industry Co., Ltd./Aeroflex International Co.,Ltd.  
Total area 1,000,000 m<sup>2</sup> (10.8 million ft<sup>2</sup>)



## EASTERN POLYMER INDUSTRY CO., LTD.

### International Sales Office

770 MU 6, TEPARAK RD., TEPARAK, SAMUTPRAKARN 10270, THAILAND

TEL : +(66)0 2383 6599 FAX : +(66)0 2383 6531, 0 2759 5550

EMAIL : [marketing@aeroflex.co.th](mailto:marketing@aeroflex.co.th) WEBSITE : [www.aeroflex.co.th](http://www.aeroflex.co.th)

For more information, please contact your local distributor..

Distributor :





**AEROFLEX<sup>®</sup>**

THE IDEAL EPDM  
THERMAL INSULATION  
FOR HVAC & R

