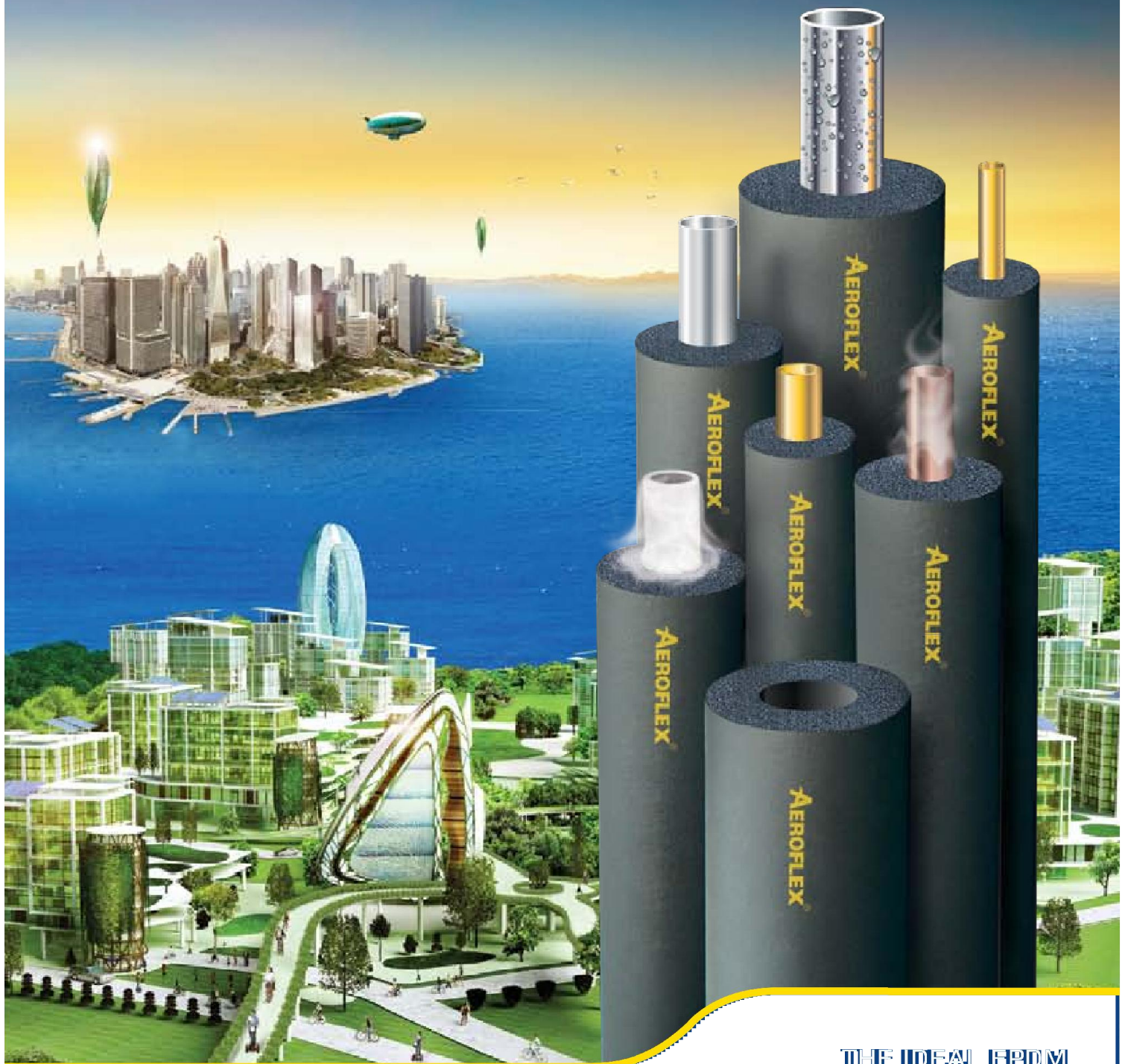


AEROFLEX[®]

closed cell elastomeric thermal insulation



THE IDEAL EPDM
THERMAL INSULATION
FOR HVAC & IR



PRODUCTS SPECIFICATIONS

AEROFLEX- STANDARD

WIDELY USED TO SAVE ENERGY AND PREVENT CONDENSATION

AEROFLEX standard is an EPDM based closed cell light weight elastomeric thermal insulation specially formulated to meet UL 94 V-0, ASTM E 84, Class 5.3 EMPA (Switzerland), IMO (International Marine Organization) and other international fire standards.

Aeroflex standard sheet and tube elastomeric thermal insulation are widely used to save energy and prevent condensation problem on chilled water and refrigeration systems. They also efficiently reduce heat flow on hot water plumbing, liquid heating and dual temperature piping.



AEROFLEX-Standard Specification :

Properties*1		Aeroflex-Standard					Test Method
Cell Structure		Closed Cell					-
Density lbs/ft ³ (Kg/m ³)		2.5-5.0 (40-80)*2					ASTM D 1667
Thermal Conductivity BTU.in/ft ² hr °F (W/ m.K)	Mean Temp	-4°F (-20°C)	32°F (0°C)	75°F (24°C)	90°F (32°C)	104°F (40°C)	ASTM C 177 ASTM C 518 JIS A 1412 EN ISO 8497
	K-Value	0.215 (0.0310)	0.230 (0.0330)	0.247 (0.0356)	0.256 (0.0365)	0.259 (0.0374)	
Service Temperature *3		-70 °F to 257 °F -57 °C to 125 °C					Becomes hard at -57°C but can be used even at -200°C
Water Absorption		< 10% (by weight)					ASTM D 1056
		< 0.20% (by volume)					ASTM C 209
Water Vapor Permeability perm.in (g/Pa.s.m)		< 0.10 (1.44 x 10 ⁻¹⁰ g/Pa.s.m)					ASTM E 96
Ozone Resistance		Very Good					ASTM D 1149 ASTM D 1171
UV Weather Resistance		Very Good					ASTM G 154
Heat Stability (%Shrinkage) @ 220°F (104°C) x 7 days		< 7%					ASTM C 534
Flammability & Smoke Density		Class V-0					UL 94
		25/50					ASTM E 84
		Self-Extinguishing					ASTM D 635
		Class 5,3					EMPA (Switzerland)
		Non-Flammable					JIS K 6911
		Pass					IMO *4
Mold Resistance		Meet Requirement (Rating 1)					UL 181
Fungi Resistance		No Growth					ASTM C1338
Bacteria Resistance		Meet Requirement (Anti-Bacteria)					ASTM E 2180
Corrosion of Copper/ Stainless Steel		Non Corrosive					DIN 1988
Nitrosamine Contents *5		Not Detected					FDA CPG 7117.11
RoHS		Not Detected					EN Restriction of the Use of Hazardous Substances Directive (RoHS) 2002/95/EC
Sound Reduction (AF)		32 dB (20 mm)					DIN EN ISO10052, DIN 4109-11
Flexibility		Excellent					ASTM C 534

Note : *1. Figures show the average values obtained by world's well-known and recognized testing institutes.

*2. Because of wide range of products from thickness 6mm up to 50mm and ID from 6mm up to 150mm, insulation skin and volume ratio is varied for each product item, making thicker insulation lower in density, while thinner insulation higher in density.

*3. At temp. under - 57 °C, AEROFLEX becomes hard but it does not affect thermal conductivity nor water vapor permeability. For heating applications, AEROFLEX can stand upto +125°C continuously, and the adhesive up to +100 °C.

*4. IMO : International Maritime Organization

*5. It is reported that Nitrosamin is harmful to human health even during storage. No Nitrosamin compound was detected in AEROFLEX.

AEROFLEX- HT

FOR HIGH TEMPERATURE APPLICATION UP TO +150° C

AEROFLEX-HT is an EPDM based closed cell light weight elastomeric thermal insulation specifically designed for solar and steam heating applications with service temperature up to +150 °C. AEROFLEX-HT has excellent ozone, UV and weather resistance properties suitable for outdoor applications. However, for outdoor installation with long term direct contact to sunlight, protective coating or jacketing are recommended. The flexibility of AEROFLEX - HT enables quick and easy installation on bent or irregular piping. AEROFLEX - HT is self-extinguished and does not melt when burnt.

AEROFLEX-HT Specificaiton :

Properties	Aeroflex-HT						Test Method	
Cell Structure	Closed Cell						-	
Density lbs/ft ³ (Kg/m ³)	2.5-5.0 (40-80)						ASTM D 1667	
Thermal Conductivity BTU.in/ft ² hr °F (W/ m.K)	Mean Temp	68°F (20°C)	104°F (40°C)	140°F (60°C)	176°F (80°C)	212°F (100°C)	303°F (150°C)	ASTM C 177 EN ISO 8497
	K-Value	0.250 (0.036)	0.263 (0.038)	0.277 (0.040)	0.284 (0.041)	0.305 (0.044)	0.395 (0.057)	
Service Temperature	Up to +150 °C Up to +302 °F						ASTM C 411	
Water Absorption	< 10% (by weight)						ASTM D 1056	
	< 0.20% (by volume)						ASTM C 209	
Ozone Resistance	No Crack						ASTM D 1149 ASTM D 1171	
UV Weather Resistance	Very Good						ASTM G 154	
Flammability	Self-Extinguishing						ASTM D 635	
	Class V-0						UL 94	
RoHS	Not Detected						EN Restriction of the Use of Hazardous Substances Directive (RoHS) 2002/95/EC	

AEROFLEX- HF

HALOGEN FREE THERMAL INSULATION

AEROFLEX-HF is halogen-free elastomeric thermal insulation especially developed for high standard with requirement of very low halogen content and very low corrosive acid gases from combustion. AEROFLEX-HF is formulated with very low chlorine and bromine content. AEROFLEX-HF is used for heating and cooling piping, tanks and air ducts, and to prevent stress corrosion with stainless steel pipe in the electronic control room, computer center, hospitals, laboratory, ships, trains and other areas where non-halogenated chemical materials are required.

AEROFLEX-HF Specificaiton :

Properties	Aeroflex-HF				Test Method	
Cell Structure	Closed Cell				-	
Density lbs/ft ³ (Kg/m ³)	2.5-5.0 (40-80)				ASTM D 1667	
Thermal Conductivity BTU.in/ft ² hr °F (W/ m.K)	Mean Temp	32°F (0°C)	75°F (24°C)	90°F (32°C)	104°F (40°C)	ASTM C 518 EN ISO 8497
	K-Value	0.242 (0.035)	0.257 (0.037)	0.263 (0.038)	0.277 (0.040)	
Service Temperature	-70 °F to 257 °F -57 °C to 125 °C				Becomes hard at -57°C but can be used even at -200°C	
Water Absorption	< 10% (by weight)				ASTM D 1056	
	< 0.20% (by volume)				ASTM C 209	
Water Vapor Permeability perm.in (g/Pa.s.m)	≤ 0.10 (1.44 x 10 ⁻¹⁰ g/Pa.s.m)				ASTM E 96	
Ozone Resistance	No Crack				ASTM D 1149 ASTM D 1171	
UV Weather Resistance	Very Good				ASTM G 154	
Flammability & Smoke Density	Self-Extinguishing				ASTM D 635	
	S4				DIN5510 (Railway)	
	Pass				IMO	
Corrosion of Copper/ Stainless Steel	Non Corrosive				DIN 1988	
Nitrosamine Contents	Not Detected				FDA CPG 7117.11	
RoHS	Not Detected				EN Restriction of the Use of Hazardous Substances Directive (RoHS) 2002/95/EC	
Flexibility	Excellent				ASTM C 534	

AEROTAPE®



AEROTAPE®
The High Quality Self Adhesive
Insulation Foam Tape

AEROTAPE®

The High Quality Self Adhesive Insulation Foam Tape



AEROTAPE® is the 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 saving 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.

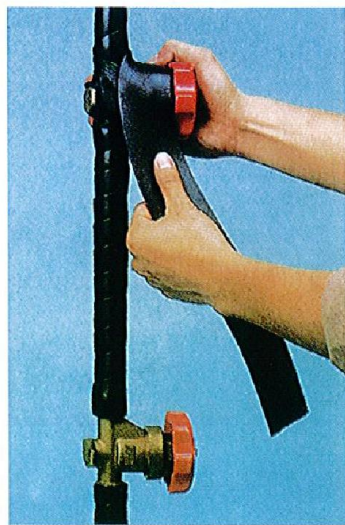
Adheres firmly to all metals. No problem of delamination. AEROTAPE is specially coated with selected acrylic pressure sensitive adhesive providing long service life.

SPECIFICATION :

Size : 1/8" thick, 2" wide and 30' long per roll
(3 mm.x 50 mm.x 9.1 m.) ± 3%
(other sizes available upon request.)

PACKING :

One roll of Aerotape wrapped in a plastic bag and packed in one individual box. (10 boxes in one carton)



YONG CHANG
GM-REPRINT MAR 2009

PHYSICAL PROPERTIES :

Composition	: Closed cell, elastomeric thermal insulation. Same material as AEROFLEX Insulation Tubes and Sheets.
Color	: Black
Density	: 5±1 pounds per cubic feet. (0.06~0.10 g/cm ³) ASTM D-1667
Thermal Conductivity	: 0.26 BTU. in/ft ² hr. °F at 75 °F (0.04 W/mk at 24 °C) (ASTM C-177)
Water Absorption	: Max. 5% by weight (ASTM D-1056)
Water Vapor Permeability	: 0.12 Perm-inch. (ASTM C-355)
Temperature Range	: -20 °F (-29 °C) to + 200 °F (+93 °C)

THICKNESS TO PREVENT CONDENSATION:

Ambient Temperature and Relative Humidity	Pipe Temperature	
	50 °F (10 °C)	35 °F (2 °C)
80 °F (27 °C) & 50% RH	Single Layer	50% Overlap
85 °F (30 °C) & 70% RH	50% Overlap Plus Single Layer	50% Overlap Plus 50% Overlap



Eastern Polymer Industry Co.,Ltd./Aeroflex International Co.,Ltd. Total area 1,000,000 m² (10.8 million ft²)



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