

# AEROCEL® AEROFIT®

## GENERAL

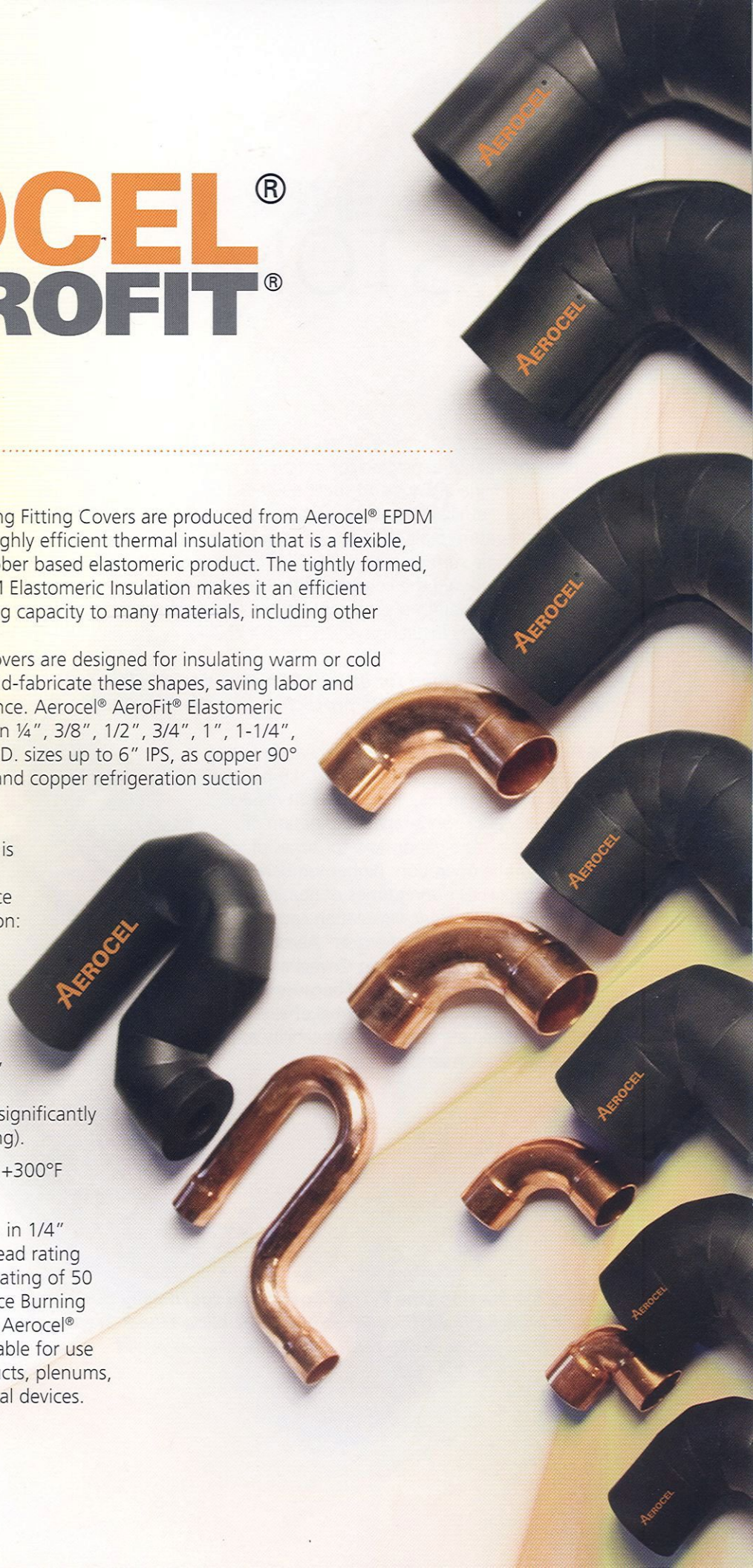
Aerocel® AeroFit® Elastomeric Insulating Fitting Covers are produced from Aerocel® EPDM Elastomeric Insulation. Aerocel® is a highly efficient thermal insulation that is a flexible, closed-cell, and lightweight EPDM-rubber based elastomeric product. The tightly formed, closed-cell structure of Aerocel® EPDM Elastomeric Insulation makes it an efficient insulation, providing superior insulating capacity to many materials, including other elastomeric insulations.

Aerocel® AeroFit® Insulating Fitting Covers are designed for insulating warm or cold piping fittings without the need to field-fabricate these shapes, saving labor and providing enhanced project performance. Aerocel® AeroFit® Elastomeric Insulating Fitting Covers are supplied in 1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2" and 2" thickness', in popular I.D. sizes up to 6" IPS, as copper 90° long-radius and short-radius elbows, and copper refrigeration suction line P-Trap shapes.

Aerocel® EPDM Elastomeric Insulation is manufactured to consistently provide actual values on these key performance criteria for mechanical system insulation:

- ▶ Thermal Conductivity: 0.245
- ▶ Water Vapor Transmission, Perms: 0.03
- ▶ UV Resistance: Minimal change, ASTM G7 and ASTM G90
- ▶ Fire Rating: Will not contribute significantly to fire (simulated end-use testing).
- ▶ Service Temperature: -297°F to +300°F

Aerocel® EPDM Elastomeric Insulation, in 1/4" through 2" thickness, has a flame spread rating of 25 or less and a smoke developed rating of 50 or less as tested by ASTM E 84 "Surface Burning Characteristics of Building Materials." Aerocel® EPDM Elastomeric Insulation is acceptable for use in air distribution systems including ducts, plenums, air handling equipment and air terminal devices.





# AEROCEL<sup>®</sup> AEROFIT<sup>®</sup> ELASTOMERIC INSULATING

## USES

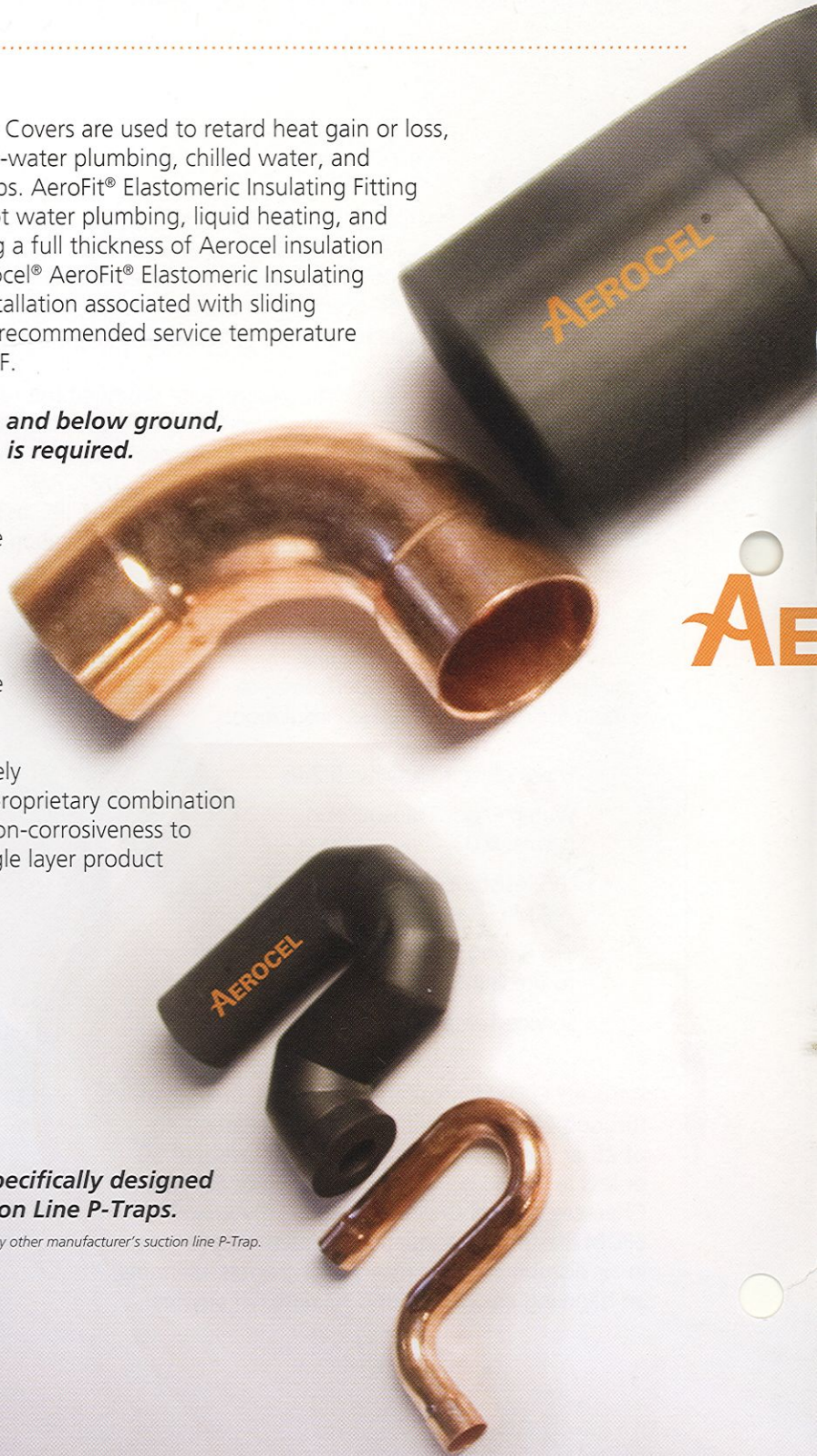
Aerocel<sup>®</sup> AeroFit<sup>®</sup> Elastomeric Insulating Fitting Covers are used to retard heat gain or loss, and to control condensation formation on cold-water plumbing, chilled water, and refrigeration line elbows and suction line P-Traps. AeroFit<sup>®</sup> Elastomeric Insulating Fitting Covers more efficiently reduce heat flow on hot water plumbing, liquid heating, and dual-temperature piping fittings by maintaining a full thickness of Aerocel insulation over the whole surface area of the fitting. Aerocel<sup>®</sup> AeroFit<sup>®</sup> Elastomeric Insulating Fitting Covers avoid the common pitfalls of installation associated with sliding elastomeric insulation over piping fittings. The recommended service temperature range for Aerocel Insulation is -297°F to +257°F.

***Aerocel<sup>®</sup> is designed for installation above and below ground, indoors and outdoors. No protective finish is required.***

Aerocel<sup>®</sup> AeroFit<sup>®</sup> Elastomeric Insulating Fitting Covers are uniquely suited to dual-temperature HVAC piping systems. This unique fit results from Aerocel's proprietary combination of very low moisture vapor flow for times of cooling-mode operation, higher temperature usage properties during times of heating-mode operation, and superior insulating capacity in either operating mode. Aerocel<sup>®</sup> AeroFit<sup>®</sup> Elastomeric Insulating Fitting Covers are uniquely suited to Solar piping systems because of the proprietary combination of UV Resistance, greater thermal efficiency, non-corrosiveness to copper or stainless steel, and availability as single layer product in greater thicknesses.

***AeroFit<sup>®</sup> Suction Line P-Trap Covers are specifically designed to fit Mueller Industries Streamline<sup>®</sup> Suction Line P-Traps.***

Aeroflex USA, Inc. will not warrant the fit of this insulating fitting cover for any other manufacturer's suction line P-Trap.





# FITTING COVERS



## KEY FEATURES NOW E84 25/50

- ▶ Easy to Install – Lowers Installation Costs, Increases Project Quality – Keeps Job Costs as Estimated
- ▶ UV Resistant – Added Weather Protection Not Required, Saves on First Cost and Maintenance
- ▶ Lower Thermal Conductivity – Saves Additional Energy Costs
- ▶ 257° Upper Use Limit – Greater Application Range – Cryogenic to Low Pressure Steam
- ▶ E 84 25/50 to 2" Thickness – Lowers Installation Costs with Fewer Layers
- ▶ Versatile for Heating, AC, Refrigeration, Solar, Plumbing – Single Product for All Systems

**AEROCEL®**  
**AEROFIT®**

## RESISTANCE TO MOISTURE VAPOR FLOW

The unique cell structure of Aerocel® EPDM Insulation effectively retards the flow of moisture vapor. Aerocel is considered a low transmittance vapor retarder. In normal service conditions, Aerocel requires no supplemental vapor retarder protection. When used in extremely low-temperature or extremely high-humidity conditions, an additional vapor barrier may be required.

## APPLICATIONS

Aerocel® AeroFit® Elastomeric Insulating Fitting Covers are to be installed prior to straight-run pipe insulation. For systems operating below-ambient temperature, Aerocel® AeroFit® Elastomeric Insulating Fitting Covers are designed to be slit open, installed on the pipe fitting to be insulated, then sealed closed using AeroSeal® adhesive.

The use of Aeroflex's Protape® to finish the glued seam is optional. For systems operating above-ambient temperature, Aerocel® AeroFit® Elastomeric Insulating Fitting Covers are designed to be slit open, installed on the pipe fitting to be insulated, then sealed closed, using either AeroSeal® Adhesive or Aerocel® Protape. In no case, is PVC, duct, or electrical tape an acceptable closure product. The straight-piping insulation is then butted, with a slight compression fit, to the AeroFit® fitting cover. Butt joints are to be sealed with contact adhesive on below-ambient and above-ambient systems, with the option of using only Aerocel® Protape on above-ambient systems.

***Aerocel® is designed for installation above and below ground, indoors and outdoors. No protective finish is required.***






In addition to the specifications listed below, Aerocel also is approved by or conforms to the requirements of the following: ASTM C 534 Type I and II, NY City MEA #171-04-M, City of LA RR-8413, UL 181 Section 13 Mold Growth/Humidity, ASTM G 21 Fungal Resistance Test, UL181 Section 18 Air Erosion, NFPA 90A & 90B, MIL15280J, CAN/ULC-S102-07.

**Aerocel EPDM elastomeric insulations meet the energy code requirements of International Energy Conservation Code(IECC) and ASHRAE for R-4 for Refrigeration Piping at 1" wall thickness.**

## SPECIFICATIONS

PHYSICAL PROPERTIES		RESULT					TEST METHOD
CELL STRUCTURE		Closed Cell					—
Thermal Conductivity BTU.in/ft. <sup>2</sup> hr. °F	Mean temperature	-4°F (20°C)	32°F (0°C)	75°F (24°C)	90°F (32°C)	104°F (40°C)	ASTM C 518/C 177
	K-value	.22	.23	.245	.25	.265	
Service Temperature		-297°F to +300°F -57°C to +149°C					ASTMC 411 AEROCEL loses flexibility at -70°F. This does not affect the insulating properties of the material
UV Resistance		Pass					ASTM G 7 / G 90
Ozone Resistance		No cracking					ASTM D 1171
Water Vapor Permeability		.03 perm (4.38 x 10-11)					ASTM E 96
Water Absorption (weight %)		.2%					ASTM C 209
Fire Safety Properties Through 2" wall		UL-94 5 V-A, V-O					File E 228536
		25/50					ASTM E 84
		Self Extinguishing					ASTM D 635
Corrosion of Stainless Steel		Non corrosive					ASTM C 692/DIN1988
Nitrosamine Contents		Not detected					U.S. FDA CPG No. 7117.11 BSEN 12868
Flexibility		Pass					ASTM C 534

## THICKNESS RECOMMENDATION TO PREVENT CONDENSATION

Design Conditions - 85 Deg. F, 70% RH, Low Air Movement				
Insulation Thickness	Pipe Operating Temperature			
	50 Deg.	38 Deg. F	0 Deg. F	-20 Deg. F
Pipe Outside Diameters				
1/4"	3/8" - 1"	-	-	-
3/8"	3/4" - 6"	3/8" - 3/4"	-	-
1/2"	-	7/8" - 6"	-	-
3/4"	-	-	3/8" - 1-1/2"	3/8" - 1/2"
1"	-	-	1-5/8" - 6"	3/4" - 2-1/2"
1-1/4"	-	-	-	2-5/8" - 6"
Design Conditions - 80 Deg. F, 50% RH, Low Air Movement				
1/4"	3/8" - 6"	3/8" - 6"	-	-
3/8"	-	-	3/8" - 3/4"	-
1/2"	-	-	7/8" - 6"	3/8" - 1"
3/4"	-	-	-	1-1/8" - 6"
Design Conditions - 90 Deg. F, 80% RH, Low Air Movement				
1/2"	3/8" - 7"	-	-	-
3/4"	1" - 6"	3/8" - 2"	-	-
1"	-	2-1/8" - 6"	3/8" - 1/2"	-
1-1/4"	-	-	3/4" - 2"	3/8" - 7/8"
1-1/2"	-	-	2-1/8" - 6"	1" - 2-1/8"
2"	-	-	-	2-1/4" - 6"

\*Although in some areas of the country, 1/4" and 3/8" wall thicknesses are recommended, Aeroflex USA recommends 1/2" minimum wall thickness for optimum performance.

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