

AEROCEL® AEROFIT®

GENERAL

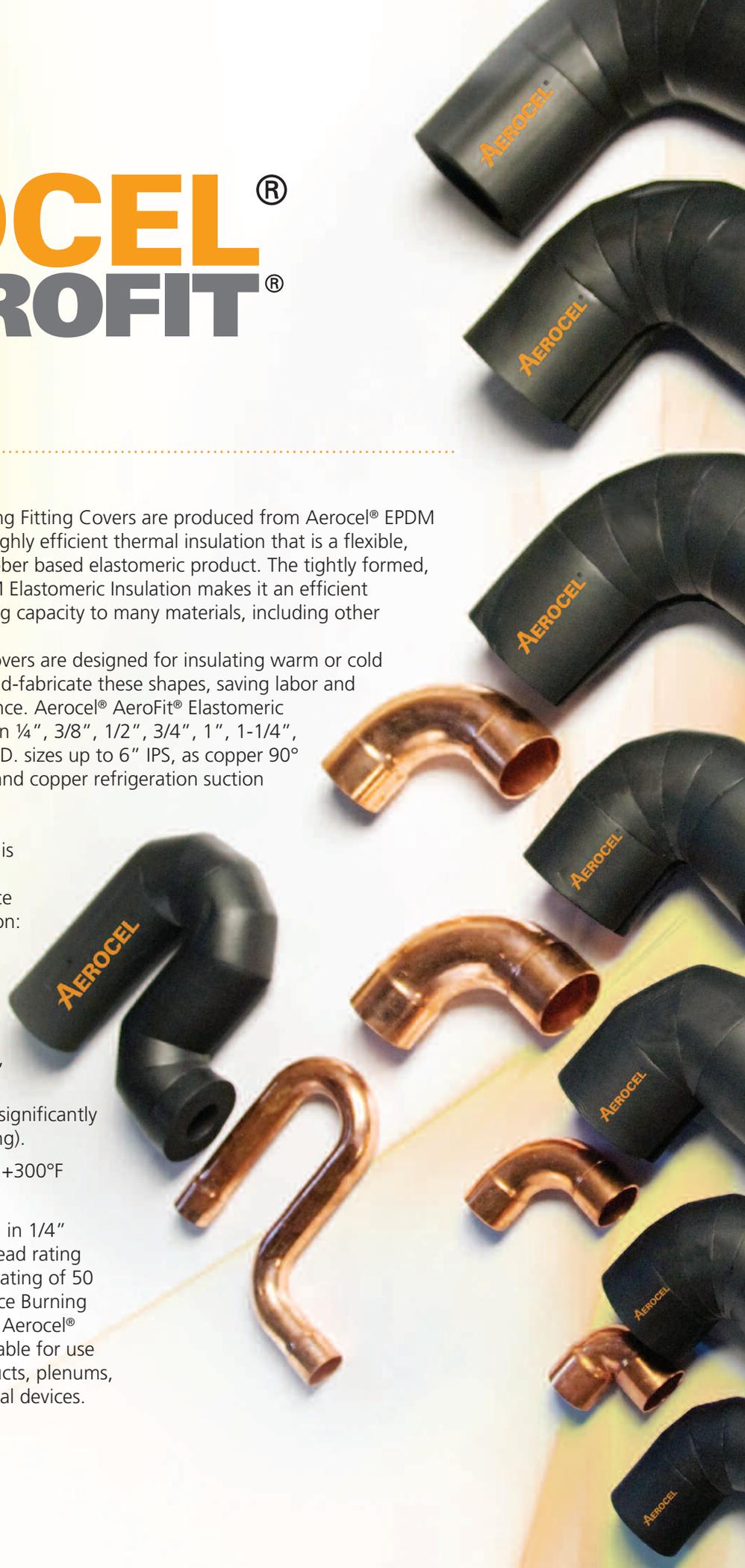
Aerocel® AeroFit® Elastomeric Insulating Fitting Covers are produced from Aerocel® EPDM Elastomeric Insulation. Aerocel® is a highly efficient thermal insulation that is a flexible, closed-cell, and lightweight EPDM-rubber based elastomeric product. The tightly formed, closed-cell structure of Aerocel® 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[®] AEROFIT[®] ELASTOMERIC INSULATING

USES

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

Aerocel[®] AeroFit[®] 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[®] AeroFit[®] 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[®] Suction Line P-Trap Covers are specifically designed to fit Mueller Industries Streamline[®] 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.



G 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

ROCEL®
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 maybe 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. ² 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.

