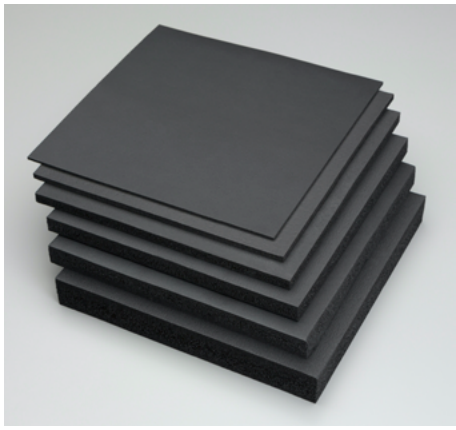




# Aerocel® REF™

Sheet & Roll Insulation

*Available with standard and PSA back*





# Aerocel<sup>®</sup> REF<sup>™</sup>

## Sheet & Roll Insulation

HVAC | Refrigeration | Chilled Water | Equipment Duct Wrap | Hot and Cold Water Piping

Closed-cell elastomeric foam insulation in smooth, durable sheets and rolls. Ideal for large pipes, fittings, chillers, tanks, equipment and duct wrap. Reduces both structure-borne sound and air-borne sound. Most thicknesses available with or without pressure-sensitive adhesive backing.

Proprietary blend of non-polar EPDM rubber is key to consistent, long-lasting thermal performance and protection against moisture and environmental stresses.

Wide range of sizes and thicknesses to meet energy code and condensation control requirements. See back cover.

### Fast, simple to install

#### Available with pressure sensitive adhesive (PSA) backing

Low thermal conductivity - reduced insulation thicknesses

Built-in vapor retarder - No supplemental vapor barrier required for most applications\*

#### Superior environmental stability

Non-polar - does not induce or react with water

Greater UV resistance than NBR/PVC insulation

Non-corrosive on stainless steel and copper piping

Suitable for interior and exterior applications\*\*

#### Safe and quiet

Attenuates lower frequency mechanical noise

Superior fire safety - 25/50 rated (ASTM E84), NFPA 90A/90B and self-extinguishing (ASTM D635) thru 2-inch thick

GREENGUARD Gold Certified for low chemical emissions (VOCs)

Verified Environmental Product Declarations (EPD's) and Health Product Declarations (HPD's)

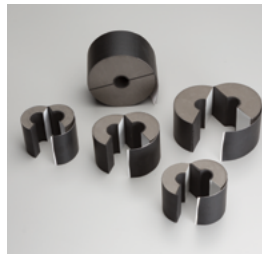
No CFCs, HFCs, HCFCs, PBDEs, formaldehyde, nitrosamine or fibers

Ultra-low PVC content - less than 1%

Naturally mold-resistant with a smooth, cleanable surface



### Aeroflex insulation system solutions



#### Aerofix<sup>®</sup>

Light-weight, rigid pipe supports, pre-insulated with closed-cell EPDM foam rubber and encased with zero-perm EPDM polymer membrane. Includes built-in pressure sensitive Protape<sup>®</sup> closure system.



#### AeroFit<sup>™</sup>

Pre-fabricated fitting covers made of closed-cell EPDM rubber for fast installation on HVAC and plumbing piping.



#### Protape<sup>®</sup>

Zero-perm EPDM-based, self-adhering rubber tape for sealing glued insulation seams and termination points.



#### Aeroflex Adhesives

Specially formulated adhesives for bonding and vapor-sealing Aerocel insulation. Fast tack and LVOC formulations available.

\*Supplemental vapor barrier may be required in extreme low-temperature or high-humidity applications. Protective jacket required for direct-bury applications and if insulation may be subjected to mechanical damage.

\*\*Note: National, state & local energy codes require protection of cellular foam pipe insulation from solar radiation for exterior applications. Jackets and insulation coatings are acceptable. Adhesive tapes are not permitted.

**Product:** Closed-cell EPDM (Ethylene Propylene Diene Monomer)-based rubber elastomeric foam insulation for HVAC, refrigeration and plumbing piping and equipment.

**Installation Instructions:** [www.aeroflexusa.com/wp-content/uploads/2021/06/Aeroflex\\_Installation-Guide\\_062521-1.pdf](http://www.aeroflexusa.com/wp-content/uploads/2021/06/Aeroflex_Installation-Guide_062521-1.pdf)

**Standard Specification:** ASTM C534 Type II Grade 1

**Thermal Conductivity (K) Btu-in/hr-Ft<sup>2</sup> -°F (W/m.K)**

Mean Temperature	K Value	Test Method
50°F (10°C)	0.237 (0.0342)	
75°F (24°C)	0.245 (0.0353)	
100°F (38°C)	0.252 (0.0363)	
125°F (52°C)	0.260 (0.0375)	ASTM C518/C177
150°F (66°C)	0.267 (0.0385)	
200°F (93°C)	0.282 (0.0406)	
250°F (121°C)	0.315 (0.0454)	

**Physical and Operational Properties**

Property	Test Value/Rating	Test Method
Service Temperature, CONTINUOUS	-297°F to 257°F (-183°C to 125°C) -22°F to 248°F (-30°C to 120°C) with PSA	ASTM C411 <sup>1</sup>
UV Resistance	Minimal Cracking or color change	ASTM G7
Ozone Resistance	No cracking	ASTM D1171
Water Vapor Permeability, Max	0.03 perm-inch (4.38 x 10 <sup>-11</sup> g/Pa.s.m)	ASTM E96
Water Absorption (% by Volume), Max	0.2%	ASTM C209
Fire Safety Characteristics thru 2" thickness	Class V-O	UL 94
	25/50	ASTM E84
	Pass	NFPA 90A/90B
	Self-extinguishing	ASTM D635
Corrosion of Stainless Steel	Non-corrosive	ASTM C692, DIN 1988
Fungi Resistance	No Growth	ASTM C1318/G21
Mold Resistance	No Growth	UL181 Section 13
Flexibility	Pass	ASTM C534
Air Erosion	Pass	UL181 Section 18

<sup>1</sup> AEROCEL flexibility begins to decrease at -70°F and below. This does not impact the insulating properties of the material.

**Additional Approvals, Certifications & Compliance**

ASTM D1056, 2C1	Standard Specification for Flexible Cellular Materials–Sponge or Expanded Rubber
ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1	International Green Construction Code® (igCC®)
ANSI/ASHRAE/IES Standard 90.1	Energy Standard for Buildings Except Low-Rise Residential Buildings
Buy American	Buy American, Federal Acquisition Regulation, FAR 52.225 Buy American
CA Title 24	California Building Energy Efficiency Standards
CDPH Specification 01350	California Department of Public Health (VOC Emissions)
EPA TSCA Section 6(h)	Toxic Substances Control Act Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
IECC®	International Energy Conservation Code®
LEED®	U.S. Green Building Council - Leadership in Energy and Environmental Design
MEA #171-04-M	City of New York Material and Acceptance Pipe Insulation
MIL-P-15280 (Form S, Form T)	U.S. Department of Defense - Qualified Products List (06/24/2005)
REACH	European Chemicals Agency (ECHA) - Registration, Evaluation, Authorization and Restriction of Chemicals
RoHS	European Union - Restriction of Hazardous Substances

**Potential LEED® Credit Contributions**

Energy & Atmosphere (EA)	Prerequisite: Minimum Energy Performance Credit: Optimize Energy Performance
Materials & Resources (MR)	Credit: Building Product Disclosure and Optimization - Environmental Product Declarations (EPD), Product Specific Type III Credit: Building Product Disclosure and Optimization - Material Ingredients, verified HPD
Indoor Environmental Quality (EQ)	Credit: Low-Emitting Materials Credit: Indoor Air Quality Assessment Credit: Thermal Comfort Credit: Acoustic Performance
Innovation (IN)	Credit: Occupant Comfort Survey



**Aerocel® REF™ Sheet Insulation R-Values**

<b>Wall Thickness (inches)</b>	<b>1/8</b>	<b>1/4</b>	<b>3/8</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>	<b>1</b>	<b>1-1/4</b>	<b>1-1/2</b>	<b>2</b>	<b>2-1/2</b>	<b>3</b>
<b>R-value</b>	0.5	1.0	1.6	2.1	2.6	3.1	4.1	5.2	6.1	8.0	10.0	12.0

**Aerocel® REF™ Roll Insulation R-Values**

<b>Wall Thickness (inches)</b>	<b>1/8</b>	<b>1/4</b>	<b>3/8</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>	<b>1</b>	<b>1-1/4</b>	<b>1-1/2</b>	<b>2</b>	<b>2-1/2</b>	<b>3</b>
<b>R-value</b>	0.5	1.0	1.6	2.1	2.6	3.1	4.1	5.2	6.1	8.0	10.0	-