



**AEROFLEX®**

EPDM Sheet & Roll Insulation

**Aerocel® ULP®**

Ultra-Low Perm Sheet & Roll Insulation





# Aerocel<sup>®</sup> ULP<sup>®</sup>

## Ultra-Low Perm Sheet & Roll Insulation

HVAC | Refrigeration | Chilled Water  
Dual Temperature Systems | Cryogenic

Closed-cell elastomeric foam insulation with exceptionally low water vapor permeability and superior UV resistance. Flexible, lightweight alternative to cellular glass.

Ideal for very humid environments or wherever there is a high risk for condensation formation, including extreme cold water applications, HVAC, refrigeration systems and cryogenics.

Easy to install on large pipes, chillers and tanks.

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

### Fast, simple to install

#### Available with or without pressure sensitive adhesive (PSA) backing

Flexible elastomeric foam - no breakage or fabrication when compared with cellular glass

No gloves or masks required for installation

No protective finish or vapor barrier required\*

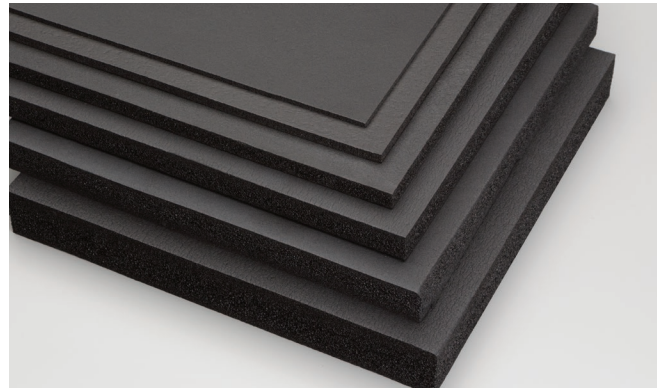
#### Superior efficiency and environmental stability

Lower thermal conductivity than cellular glass

Ideal for low-temperature systems in hot and humid environments (-320° F to 257°F or -22°F to 248°F with PSA)

#### Industry's lowest permeability for a closed-cell elastomeric insulation - .01 perm-inch!

UV-resistant without added protection

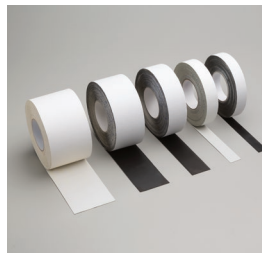


### All-inclusive solutions for insulation systems:



#### AeroFit<sup>™</sup>

Pre-fabricated fitting insulators made of closed-cell EPDM rubber for fast installation on hot/cold-water and refrigerant piping.



#### Protape<sup>®</sup>

EPDM-based, self-adhering rubber tape for sealing butt joints and termination points.



#### Aeroflex Adhesives

Specially formulated for bonding of Aerocel insulations.

### Safe for indoor environments

GREENGUARD Gold Certified for low chemical emissions (VOCs)

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

Naturally mold-resistant - no biocides required

Can contribute to LEED<sup>®</sup> credits

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

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

**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
75°F (24°C)	0.245 (0.0353)	ASTM C518 /C177
90°F (32°C)	0.250 (0.0360)	

**Physical and Operational Properties**

Property	Test Value/Rating	Test Method
Service Temperature, CONTINUOUS	-320°F/-196°C to +257°F/+125°C -22°F/-30°C to +248°F/+120°C with PSA	ASTM C411 <sup>1</sup>
U.V. Resistance	Minimal Cracking or color change	ASTM G7
Ozone Resistance	No cracking	ASTM D1171
Water Vapor Permeability, Max	0.01 perm-inch (1.45 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-0	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

**Additional Approvals, Compliances, Etc.**

ASTM D1056, 2C1	Standard Specification for Flexible Cellular Materials–Sponge or Expanded Rubber (2C1- Closed Cell Rubber, Oil resistant with medium mass change, Compression Deflection of 2 - 5 psi.)
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
IECC®	International Energy Conservation Code®
CA Title 24	California Building Energy Efficiency Standards
MEA #171-04-M	City of New York Material and Acceptance Pipe Insulation
CDPH Specification 01350	California Department of Public Health (VOC Emissions)
LEED®	U.S. Green Building Council - Leadership in Energy and Environmental Design
REACH	European Chemicals Agency (ECHA) - Registration, Evaluation, Authorization and Restriction of Chemicals
RoHS	European Union - Restriction of Hazardous Substances
MIL-P-15280 (Form S, Form T)	U.S. Department of Defense - Qualified Products List (06/24/2005)

**Potential LEED® Credit Contributions**

Energy & Atmosphere (EA)	Prerequisite: Minimum Energy Performance Credit: Optimize Energy Performance
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

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

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**Aerocel® ULP® Ultra-Low Perm R-Values (Sheet)**

<b>Wall Thickness (in 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>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

**Aerocel® ULP® Ultra-Low Perm R-Values (Roll)**

<b>Wall Thickness (in 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>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