



**AEROFLEX®**

Ultra-Low Perm EPDM Pipe Insulation



# Aerocel® ULP®

Ultra-Low Perm EPDM Pipe Insulation





# Aerocel<sup>®</sup> ULP<sup>®</sup>

## Ultra-Low Perm EPDM Pipe Insulation Unslit Tubes & Stay-Seal<sup>®</sup> with Protape<sup>®</sup> (SSPT<sup>™</sup>)

Sub-Zero Refrigeration | DX Refrigeration  
VRF | Chilled Water | Cryogenic

Closed-cell elastomeric pipe insulation with ultra-low permeability and built-in vapor retarder for the harshest environments and most demanding applications.

Aerocel<sup>®</sup> ULP<sup>®</sup> offers a flexible, lightweight alternative to cellular glass. Eliminates time consuming fabrication and costly product loss due to jobsite and supply chain breakage, both of which are commonly associated with cellular glass.

Select ULP whenever low operating temperatures in extreme temperatures and humidity are expected and/or when vapor drive is an overriding concern.

Available in unslit and Stay-Seal<sup>®</sup> with Protape<sup>®</sup> (SSPT<sup>™</sup>) tubes in a wide range of sizes and thicknesses to meet energy code and condensation control requirements. See back cover.

### Reliable in demanding applications

Non-polar - does not induce or react with water

Lower continuous service temperature to -320°F (-196°C)

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

Helps prevent corrosion under insulation (CUI)

### Easy to handle and install

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

No gloves or masks required

Available in unslit tube and SSPT<sup>™</sup> with dual-tape closure

Suitable for interior and exterior applications\*\*

\*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.

### Aeroflex insulation system solutions



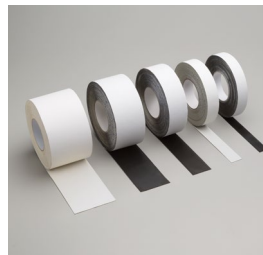
#### Aerofix<sup>®</sup>

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.

### Saves installation and operating costs

Lower thermal conductivity - reduced insulation thicknesses

No supplemental vapor retarder required for most applications\*

Field-fabricated

Flexible - minimizes product waste due to breakage

### Supports Indoor Air Quality

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

25/50 rated (ASTM E84) and self-extinguishing (ASTM D635) thru 2-inches thick

GREENGUARD Gold Certified for low chemical emissions (VOC)

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

Ultra-low PVC content - less than 1%

\*\*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 pipe insulation for HVAC and refrigeration piping.

**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 I 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	<b>-320°F</b> to 257°F -196°C to 125°C	ASTM C411 <sup>1</sup>
UV Resistance	Minimal Cracking or color change	ASTM G7
Ozone Resistance	No cracking	ASTM D1171
<b>Water Vapor Permeability, Max</b>	<b>0.01 perm-inch (1.45 x 10<sup>-11</sup> g/Pa.s.m)</b>	<b>ASTM E96</b>
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



**Aeroce1® ULP® R-Values (Unslit Tube)**

Pipe Size (inches)	IPS (inches)	Wall Thickness (inches)							
		1/4	3/8	1/2	3/4	1	1-1/2	2	3
1/4		1.7	3.0	4.0	6.7	10.0	17.5		
3/8		1.6	2.7	3.6	6.0	9.0	15.8	24.0	
1/2	1/4	1.5	2.5	3.4	5.5	8.3	14.4	21.9	
5/8	3/8	1.4	2.4	3.2	5.2	8.0	13.5	20.6	32.6
3/4		1.4	2.3	3.1	5.0	7.7	13.0	19.7	31.2
7/8	1/2	1.3	2.3	3.2	5.3	7.4	12.9	18.5	30.6
1-1/8	3/4	1.3	2.1	3.0	5.0	6.9	12.1	17.3	28.5
1-3/8	1	1.3	2.1	3.1	5.0	6.5	11.3	16.2	26.7
1-5/8	1-1/4		2.3	3.0	4.8	6.3	11.1	15.9	26.0
1-7/8	1-1/2		2.2	2.9	4.7	6.0	10.6	15.2	24.7
2-1/8			2.2	3.0	4.6	5.9	10.3	14.8	24.0
2-3/8	2		2.2	3.0	4.5	5.8	10.0	14.3	23.2
2-5/8			2.2	2.9	4.4	5.7	9.8	14.0	22.6
2-7/8	2-1/2		2.1	2.9	4.3	5.5	9.5	13.6	21.9
3-1/8			2.1	2.9	4.3	5.5	9.4	13.4	21.6
3-1/2	3		2.1	3.0	4.2	5.3	9.1	12.9	20.8
3-5/8			2.1	3.0	4.2	5.3	9.1	12.9	
4-1/8			2.1	2.9	4.1	5.2	8.9	12.5	20.0
4-1/2	4		2.0	2.9	4.0	5.1	8.7	12.2	19.6
5-1/8					4.0	5.1	8.5	11.9	19.0
5-1/2	5			2.8	3.9	5.0	8.4	11.7	18.6
6-1/8				2.8	3.9	4.9	8.2	11.5	
6-5/8	6			2.8	3.9	4.9	8.1	11.3	17.8

**Aeroce1® ULP® R-Values Stay-Seal® with Protape® (SSPT™) Tube**

Pipe Size (inches)	IPS (inches)	Wall Thickness (inches)					
		3/8	1/2	3/4	1	1-1/2	2
1/4				6.7	10.0		
3/8		2.7	3.6	6.0	9.0	15.8	
1/2	1/4	2.5	3.4	5.5	8.3	14.4	21.9
5/8	3/8	2.4	3.2	5.2	8.0	13.5	20.6
3/4		2.3	3.1	5.0	7.7	13.0	19.7
7/8	1/2	2.3	3.2	5.3	7.4	12.9	18.5
1-1/8	3/4	2.1	3.0	5.0	6.9	12.1	17.3
1-3/8	1	2.1	3.1	5.0	6.5	11.3	16.2
1-5/8	1-1/4	2.3	3.0	4.8	6.3	11.1	15.9
1-7/8	1-1/2	2.2	2.9	4.7	6.0	10.6	15.2
2-1/8		2.2	3.0	4.6	5.9	10.3	14.8



282 Industrial Park Road Sweetwater, TN 37874  
 423.337.2493 Fax: 423.337.7675 Toll Free: 866.AEROCEL  
[www.aeroflexusa.com](http://www.aeroflexusa.com)

111521