

# AEROCEL-SSPT®

## Closed Cell Elastomeric Thermal Insulation for HVAC & R

### General

**AEROCEL-SSPT®** Tube and Sheet Insulation is a flexible, closed-cell and light weight EPDM\* based elastomeric material designed for insulating liquid cooling and heating lines. 3/8", 1/2", 3/4" and 1" wall in popular I.D. sizes up to 6" IPS. The closed-cell structure of Aerocel Pipe Insulation makes it an efficient insulation.

Aerocel-SSPT is manufactured to consistently provide actual values on these key performance criteria for mechanical system insulation:

**Thermal Conductivity:** 0.25

**Water Vapor Transmission:** 0.1

**Fire Rating:** Will not contribute significantly to fire (simulated end-use testing).

Aerocel-SSPT Pipe Insulation in 3/8", 1/2", 3/4" and 1" thicknesses 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."

Note: Numerical flammability ratings alone may not define the performance under actual fire conditions. They are provided only for use in the selection of products to meet limits specified.

### Key Features

- UV Resistant
- Low thermal conductivity
- Easy to install
- 25/50 rated
- Versatile for heating, AC, refrigeration and plumbing

### Uses

**AEROCEL-SSPT®** Pipe Insulation is used to retard heat gain and control condensation drip from cold-water plumbing, chilled water, and refrigeration lines. It also efficiently reduces heat flow for hot water plumbing, liquid heating and dual temperature piping. The recommended temperature usage range for Aerocel Pipe Insulation is -70°F to +257°F.

### Resistance to Moisture Vapor Flow

The closed-cell structure of Aerocel-SSPT Insulation effectively retards the flow of moisture vapor, and Aerocel is considered a low transmittance vapor retarder. Aerocel requires no supplemental vapor retarder protection.



## Application

**AEROCEL-SSPT**<sup>®</sup> utilizes a unique 2-step sealing system to insure a permanent seal. Step 1 is an acrylic adhesive seam seal. Step 2 is an EPDM flap that utilizes a cellular fusion adhesive. This adhesive chemistry bonds the EPDM to the tube ensuring a seal for the life of the system. Aerocel-SSPT is available in 1/2", 3/4" and 1" wall thicknesses and ID.'s from 3/8" I.D. through 4" IPS.

The closed-cell structure of Aerocel-SSPT retards heat gain on low temperature applications and prevents heat loss on hot water applications. It resists moisture and vapor without the use of an additional barrier. It has a low and stable thermal conductivity. The raw material used for Aerocel-SSPT has an excellent ultraviolet and weather resisting property.

In addition to the specifications listed below, Aerocel also conforms to the following: ASTM C 534, ASTM D 1056, NY City MEA #171-04-M, City of LA RR-8413, UL 181 Section 12 Mold Growth/Humidity, UL 181 Section 17 Air Erosion, UL 94 5 V-0, UL 723, NFPA 90A & 90B, MIL 15280J.

## Specifications

PHYSICAL PROPERTIES*			AEROCEL				TEST METHOD**	
CELL STRUCTURE			CLOSED CELL				—	
DENSITY Lbs/ft³ (qm/cm³)			3/6 Lbs/ft³				ASTM D 1667	
THERMAL CONDUCTIVITY BTU.in/ft.²hr. °F	Mean temp.	-40°F (-20°C)	32°F (0°C)	75°F (24°C)	90°F (32°C)	104°F (40°C)	ASTM C177 JIS A 1412	
	K-value	0.22	0.23	0.25	0.26	0.27		
SERVICE TEMP		****	-70°F to 257°F -57°C to +125°C			AEROCEL becomes hard at -57°C, but can be used even at -200°C		
U.V. Weather Resistance			Excellent			ASTM G-23		
Ozone Resistance			No cracking			ASTM D 1171		
Water Vapor Permeability			0.10 perm-in (0.15 x 10 <sup>-12</sup> )			ASTM C355		
Water Absorption (weight %)			0.2%			ASTM C 209		
Flammability, Smoke Density			Class V O			UL-94		
			25/50			ASTM E84		
			Self extinguishing			ASTM D 635		
Corrosion of copper, stainless			Non corrosive			DIN 1988		
Nitrosamine Contents			Not detected			U.S. FDA		
Flexibility			excellent			—		

## AEROCEL-SSPT<sup>®</sup> Thickness Recommendation Data

Pipe Size	Line Temp. 60°F (15.5°C)		Line Temp. 50°F (10°C)		Line Temp. 35°F (1.7°C)		Line Temp. 0°F (-18°C)	
3/8" ID Thru 3" IPS Over 3" IPS	Based on Normal Condition Max. 85°F (29.4°C) 70% RH *							
	1/4" * 3/8" *	Wall Sheet	3/8" 1/2"	Wall Sheet	1/2" 3/4"	Wall Sheet	1" 1-1/4"	Wall Sheet
3/8" ID Thru 3" IPS Over 3" IPS	Based on Mild Condition Max. 80°F (26.6°C) 50% RH **							
	1/4" * 3/8" *	Wall Sheet	3/8" 1/2"	Wall Sheet	3/8" 3/4"	Wall Sheet	3/4" 3/4"	Wall Sheet
3/8" ID Thru 3" IPS Over 3" IPS Thru 10" IPS Over 10" IPS	Based on Severe Condition Max. 90°F (32.2°C) 80% RH ***							
	1/2" 3/4" 3/4"	Wall Sheet Sheet	3/4" 1" 1"	Wall Sheet Sheet	1" 1-1/8" 1-1/8"	Wall Sheet Sheet	1-1/2" 1-3/4" 2"	Wall Sheet Sheet
	Based on Extremely Severe Condition Max. 90°F (32.2°C) 85% RH ****							
3/8" ID Thru 3" IPS Over 3" IPS Thru 10" IPS Over 10" IPS	3/4" 1" 1"	Wall Sheet Sheet	1" 1-1/4" 1-1/4"	Wall Sheet Sheet	1-1/4" 1-1/2" 1-1/2"	Wall Sheet Sheet	2" 2-1/2" 2-1/2"	Wall Sheet Sheet

\* 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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