

**Semi-Slit**



**Self-Sealing**



**Self-Sealing Tees & Elbows**



**FLAME AND SMOKE RATING**  
Wall thicknesses of 2" (50mm) and below have a flame spread rating of 25 or less and a smoke development rating of 50 or less as tested to ASTM E84, "Surface Burning Characteristics of Building Materials". It is acceptable for duct/plenum applications, meeting the requirements of NFPA 90A/B.

Numerical Flammability ratings alone may define the performance of products under actual fire conditions. They are provided only for use in the selection of products to meet limits specified when compared to a known standard.

# POLY PIPE INSULATION

PHYSICAL PROPERTIES	K-FLEX® PE	Test Methods	Required	Pass/Fail
Nominal Density, pcf	1.5 +/- 0.5	ASTM D 1622		
Specification		ASTM C 1427, Type I, Type II		
*Upper Use Limit, °F (°C)	200 (93)	ASTM C 411	200 (93)	Pass
Lower Use Limit, °F (°C)	-200 (-129)		-150 (-101)	Pass
Thermal Conductivity, Btu-in./hr-ft² °F (W/(m-K))		ASTM C 177 OR C 518		
75°F (24°C) Mean Temp	.27 (.039)		<0.35 (.050)	Pass
120°F (49°C) Mean Temp	.295 (.042)		<0.37 (.053)	Pass
Water Vapor Permeability	<0.05	ASTM E 96	0.05 max	Pass
Water Absorption Max %	<0.20	ASTM C 209	% by volume (0.20 max)	Pass
Linear Shrinkage at Max Use Temp (200°F)	-1.2%	ASTM C 1427	% change (2.0 max)	Pass
** Flame/Smoke Rating (max)* Up to and including 1" Thickness	25/50	ASTM E 84	25/50	Pass
Microbial Resistance	Excellent	ASTM G 21	No Growth	Pass
Fungi Resistance	Excellent	UL 181	No Growth	Pass
Odor Emission	None	ASTM C 1304	None	Pass
Corrosion Resistance (Steel, Copper, AL)	None	ASTM C 665	None	Pass
Ozone Resistance (50 mPa)	No Cracks	ASTM D 1171	No Cracks	Pass

\* Meets the requirements of NFPA 90A/90B when tested at 250°F (125°C)

\*\* Numerical flammability ratings alone may not define the performance of products under actual fire conditions. They are provided only for the use in the selection of products

**THICKNESS RECOMMENDATIONS TO PREVENT CONDENSATION**

SERVICE TEMPERATURE	50°F (10°C)			35°F (2°C)			0°F (-18°C)			-20°F (-29°C)		
	Mild	Normal	Severe	Mild	Normal	Severe	Mild	Normal	Severe	Mild	Normal	Severe
Pipe Size												
3/8" ID to 1-1/8" ID	3/8"	3/8"	3/4"	3/8"	1/2"	3/4"	1/2"	3/4"	-	1/2"	1"	-
1-3/8" ID to 4-1/2" ID	3/8"	3/8"	3/4"	3/8"	3/4"	1"	1/2"	1"	-	3/4"	-	-

Thickness listed for the specified ranges will prevent condensation on indoor piping under the defined design conditions. Normal 85°F and 70% R.H. Mild: Most air conditioned spaces and arid climates: 80°F and 50% R.H. Severe: Areas where excessive moisture is introduced or in poorly ventilated areas where the temperature may be depressed below the ambient: 90°F and 80% R.H. Contact K-FLEX Technical Support for additional information.

**RANGE**

Wall Thickness (nominal) 3/8", 1/2", 3/4", and 1" - (10, 13, 19 and 25 mm)  
Inside Diameter, Tubular Form 3/8" - 4-1/2" ID - (10 mm ID to 114 mm ID)  
Length of Sections, Tubular Form 6' (1.83m)

**R-VALUES**

INSULATION NOMINAL I.D.	COPPER TUBE SIZE (NOM. I.D. PLUMBING)	COPPER TUBE SIZE (O.D. HVAC/R)	IPS NOMINAL	3/8"	1/2"	3/4"	1"
3/8"	1/4"	3/8"	1/8"	2.4	3.3	5.1	7.7
1/2"	3/8"	1/2"	1/4"	2.3	3.1	4.9	7.2
5/8"	1/2"	5/8"	3/8"	2.3	3	4.9	6.9
3/4"	5/8"	3/4"	1/2"	2.1	2.8	4.9	6.8
7/8"	3/4"	7/8"	-	2.1	2.9	4.9	6.5
1"	-	-	3/4"	2.1	2.9	4.8	6.6
1-1/8"	1"	1-1/8"	-	2	2.8	5	6.4
1-1/4"	1-1/8"	1-1/4"	-	2	2.9	4.9	6.6
1-3/8"	1-1/4"	1-3/8"	1"	2	2.9	4.8	6.6
1-5/8"	1-1/2"	1-5/8"	1-1/4"	2.2	2.8	4.7	6.4
2"	-	-	1-1/2"	2.1	2.7	4.5	6.1
2-1/8"	2"	2-1/8"	-	2.1	2.7	4.4	6
2-3/8"	-	-	2"	2.1	2.7	4.3	5.9
2-5/8"	2-1/2"	2-5/8"	-	2.1	2.8	4.3	5.8
2-7/8"	-	-	2-1/2"	2.1	2.7	4.2	5.7
3-1/8"	3"	3-1/8"	-	2.1	2.8	4.2	5.6
3-1/2"	-	-	3"	2.1	2.9	4.2	5.6
3-5/8"	3-1/2"	3-5/8"	-	2.1	2.9	4.2	5.5
4-1/8"	4"	4-1/8"	-	2.1	2.8	4.2	5.4
4-1/2"	-	-	4"	2.6	2.9	4.2	5.4