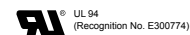
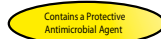


INSUL-TUBE®

Flexible Closed-Cell Pipe Insulation Designed for the HVAC/R Industry



Made in USA



FEATURES AND BENEFITS

- Non-fibrous and resists mold growth.
- GREENGUARD® certified as “Children and Schools” and “Mold resistant”.

- Retard heat gain and prevent condensation.
- Can be used for applications ranging from -297°F to 220°F.
- Tough skin for durable performance.

- Low transmittance vapor retarder.
- Insul-Tube® White is designed for exposed piping areas or areas to be painted (hygienic appearances is preferred).

Physical Properties	INSUL-TUBE® Insulation		Test Methods
Thermal Conductivity (K)	90°F (32°C) Mean Temp	.27 (.039)	ASTM C 177/C 518
BTU - in/hr - Ft ² - °F (W/mK)	75°F (24°C) Mean Temp	0.25 (0.036)	ASTM C 177/C 518
Density		3-6 PCF	ASTM D 1622/D 3575
Operating Temperature Range	Upper	220°F (104°C)	
Flexible to -40°F (-40°C)	Lower	-297°F (-182°C)	
Water Vapor Permeability Dry Cup. Perm-In		<0.06	ASTM E 96
Water Absorption %		<0.20 by volume	ASTM C 209
Flame Spread (up to 2" wall)		Not greater than 25	ASTM E 84
Smoke Developed (up to 2" wall)		Not greater than 50	ASTM E 84
Ozone Resistance		Pass	ASTM D 1171
Chemical/Solvent Resistance		Good	
Mildew Resistance/Air Erosion		Pass	UL 181
UV Weather Resistance		Pass	QUV Chamber Test

INSUL-TUBE® “R” Values

Pipe O.D or Normal Insulation I.D	R Value 3/8" (10 mm) wall	R Value 1/2" (13 mm) wall	R Value 3/4" (19 mm) wall	R Value 1" (25 mm) wall	R Value 1 1/2" (38 mm) Wall	R Value 2" (50 mm) Wall
3/8"	2.6	3.5	5.5	-	-	-
1/2"	2.5	3.3	5.2	-	-	-
5/8"	2.4	3.2	5.3	7.4	12.5	17.5
3/4"	2.3	3.0	5.3	7.3	11.8	16.5
7/8"	2.2	3.1	5.3	7.0	11.3	15.8
1-1/8"	2.3	3.1	5.5	7.1	10.8	15.5
1-3/8"	2.1	3.1	5.2	7.2	10.0	14.6
1-5/8"	2.5	3.1	5.2	7.1	9.8	14.4
1-1/2" IPS	2.4	3.0	5.0	6.7	9.3	13.6
2-1/8"	2.5	3.2	5.0	6.8	9.3	13.4
2" IPS	2.5	3.1	4.9	6.6	9.1	13.0
2-1/2" IPS	2.5	3.2	4.8	6.4	8.7	12.4
2-5/8"	2.4	3.2	4.8	6.5	8.8	12.7
3-1/8"	2.3	3.1	4.6	6.2	8.4	12.2
3" IPS	2.4	3.3	4.7	6.2	8.4	11.9
3-5/8"	2.3	3.2	4.6	6.0	8.2	11.8
4-1/8"	2.3	3.1	4.6	5.9	8.0	11.5
4" IPS	2.3	3.2	4.6	5.9	7.9	11.4
5" IPS	-	3.0	4.3	5.6	7.5	10.9
6" IPS	-	3.1	4.4	5.7	7.5	10.6
8" IPS	-	3.0	4.3	-	-	-

Note: “R” factors were calculated using a K factor of 0.2575 (0.25 plus 3% test error allowance at 75°F, 24°C mean temp.) and nominal wall thickness is each case. Lower operating temperatures will result in improved R values. Contact Technical Services for specific recommendations.

SPECIFICATION COMPLIANCE

- ASTM C 411 (Test Method for Hot Surface Performance of High Temperature Thermal Insulation)
- ASTM C 534 Type 1 (Tubing), Grade 1
- ASTM D 1056-00-2C1
- ASTM E 84 2" 25/50-tested according to UL 723 and NFPA 255 complies with requirements of CAN/ULC S102-03 (Insul-Tube® White only 1-1/2")
- New York City MEA 186-86-M Vol. V
- UL 94-5V Flammability Classification (Recognition No. E300774)
- FMRC Approval Guide Chapter 14 Pipe Insulation
- Meets requirements of NFPA 90A Sect. 2.3.3 for Supplementary Materials for Air Distribution Systems
- Meets requirements of UL 181 sections 11.0 and 16.0 (Mold Growth/Air Erosion)
- NFPA No. 101 Class A Rating
- MIL-P-15280, For T (Tubing)



K-Flex USA - 100 Nomaco Drive - Youngsville, NC 27596 - toll free 800-765-6475 - fax 800-765-6471 - www.kflexusa.com

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