Insulated ACR Tube

For HVACR Applications

Job Name	**Contractor**
Job Location	**Wholesaler**
Engineer	**Linesets, Inc. Rep**

Product Description: Linesets, Inc. Insulated ACR Tube are only available in coated elastomeric for use in HVACR applications. All Insulated ACR Tube will be manufactured in the United States.

Material: Linesets, Inc. Insulated ACR Tube shall be made from C12200 grade of copper. Insulation is coated elastomeric. TITAN® Coated elastomeric has additional UV protection and comes with 5 year warranty.

Key Specifications: Linesets, Inc. Insulated ACR Tube is made to meet the requirements of ASTM B280 and can be used with synthetic refrigerants and sub-critical CO2 systems.

Installation: Installations and insulation material shall comply with the latest applicable building codes for the local jurisdiction. TITAN® Coated elastomeric insulation requires no additional protection. Additional coating, jacketing or placement in a channel is optional.

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The cleaning, purging and pressurizing process assures the high level of tube cleanliness in conformance to ASTM B280, the refrigeration industry standard. The tube is sealed with plugs which maintain the standard of cleanliness from the factory to the job site.

Copper Tube Pressurized with Nitrogen provides maximum protection against the formation of harmful oxides normally formed during brazing operations. Reduction of these oxides greatly reduces system contamination. Plugs are reusable. When less than a 20' length of tube is required for an installation the unused length of tube may be re-plugged to prevent atmospheric contamination during storage.

Nitrogenized seamless copper tube is available in sizes 3/8" OD through 2-1/8" OD. Manufactured and cleaned in accordance with ASTM B280. 20-ft. lengths hard drawn - cleaned and capped - color coded - Marked "ACR/MED".

TYPE K NITROGENIZED ACR / MED — **RATED WORKING PRESSURE (PSIG)**

O.D. DIA.	WT / FT	150°F	200°F	250°F	300°F	400°F
3/8	0.145	913	877	860	842	537
1/2	0.269	960	923	904	885	565
5/8	0.344	758	728	713	698	446
3/4	0.418	700 †	700 †	700 †	577	368
7/8	0.641	700 †	700 †	700 †	668	426
1-1/8	0.839	700 †	700 †	700 †	513	327
1-3/8	1.04	700 †	700 †	700 †	416	266
1-5/8	1.36	700 †	700 †	700 †	387	247
2-1/8	2.06	700 †	700 †	700 †	341	217

TYPE L NITROGENIZED ACR / MED — **RATED WORKING PRESSURE (PSIG)**

O.D. DIA.	WT / FT	150°F	200°F	250°F	300°F	400°F
3/8	0.126	777	747	731	716	457
1/2	0.198	700 †	700 †	700 †	612	391
5/8	0.285	700 †	700 †	700 †	567	362
3/4	0.362	700 †	700 †	700 †	496	316
7/8	0.455	700 †	700 †	700 †	457	292
1-1/8	0.655	700 †	700 †	700 †	388	248
1-3/8	0.884	700 †	700 †	700 †	344	220
1-5/8	1.14	348	334	327	320	205
2-1/8	1.75	309	297	291	285	182

Tables give computed allowable stress for annealed copper tube at indicated temperature.

† *UL Recognized to 700 PSI (select sizes)*

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TITAN® Coated Elastomeric Insulation Specification

Insulation:

"R" Values

Pipe Insulation Size	Wall 1/2"	Wall 3/4"	Wall 1"	Wall 1-1/2"
1/4"	4.0	6.1	9.6	16.5
3/8"	3.6	5.6	8.5	14.6
1/2"	3.4	5.4	7.9	13.5
5/8"	3.3	5.4	7.5	12.8
3/4"	3.1	5.4	7.5	12.4
7/8"	3.2	5.4	7.2	11.6
1-1/8"	3.1	5.5	7.1	10.8
1-3/8"	3.2	5.3	7.3	10.2
1-5/8"	3.1	5.1	7.1	9.8
2-1/8"	3.0	4.9	6.6	9.2

Specification Compliance:

- ASTM B1003
- ASTM C 534, Grade 1, Type I Tubular*
- ASTM E 84, NFPA 255, U L 723
- NFPA 90A, 90B
- ASTM G21/C1338*
- ASTM G22*
- ASTM D 1056, 2B1*
- MIL-P-15280J, FORM T*
- UL 94 5V-A, V-0, HF-I (File E 300774)
- 2012, 2015, 2018 IECC, IMC, IRC
- 2016 CA Title 24, Part 6, Subchapter 3, Section 120.3
- RoHS Compliant

**Base Insulation*

Physical Properties:

Property	Values	Test Method
Thermal Conductivity, Btu • in./h • ft2 • °F (W/mK), 75°F Mean Temperature (24°C)	0.242 (0.035)	ASTM C 177 or C 518
Water Vapor Permeability, Perm-in. [Kg/(s • m • Pa)]	<0.01 perm-in. insulation ≤0.05 perms jacket	ASTM E 96
Water Absorption, % by Volume	0.2	ASTM C 209
Flame Spread and Smoke Developed Index through 1-1/2" (37.5mm)*	25/50	ASTM E 84
Mold Growth Fungi Resistance Bacterial Resistance	UL181 ASTM G21/C1338 ASTM G22	Meets requirements Meets requirements Meets requirements
Water Absorption, % by Volume	0%	ASTM C 209
Upper Use Limit	220°F (105°C)**	ASTM C 534
Lower Use Limit	-297°F (-183°C)**	ASTM C 534
Hot Surface Performance 250°F	ASTM C411, NFPA 90A	Meets requirements
UV Resistance (Artificial Aging)	ASTM G153	Meets requirements