

Alternative Specifications For Securing Tubular, Closed-Cell, Elastomeric Thermal Insulation Around Copper Tubing in HVAC/R Applications

1. Scope

- 1.1 This specification covers the Klo-Shure® Insulation Couplings for securing preformed, flexible, tubular elastomeric cellular thermal insulation used in HVAC/R and related applications.
- 1.2 Tubular elastomeric products are used in commercial, industrial, and residential HVAC/R applications to insulate copper tubing used for refrigerant lines, cold-water plumbing, chilled water systems, hot water plumbing, liquid heating, and dual-temperature piping. Tubular insulation used in HVAC/R applications typically has a temperature usage range of -40° F to 220° F (-40° to 105° F) per ASTM C534 Type 1-Tubular. Additional specifications referring to thermal insulation products include: ASTM D 1056, 2B1; MIL-C 3133C (MIL STD 670B), Grade SBE 3; MIL-P-15280J, Form T; CAN/ULC S102; ASTM E84; CGSB CAN 2-51, 40-M80; UL 94 5VO; and MEA 96-85-M.

2. Definition

- 2.1 The Klo-Shure Insulation Coupling is a one-piece, tubular sleeve with an internal configuration that supports, secures, and seals tubular insulation, and supports and levels copper tubing in strut-mounted suspension devices and all types of drop hangers.
- 2.2 The Klo-Shure Insulation Coupling is pre-scored to allow easy opening for placement around installed copper tubing. A metal clip is provided to close and secure Couplings that have been opened.

3. Significance of Use

- 3.1 The Klo-Shure Insulation Coupling creates a 360° vapor barrier seal at suspension points to prevent water intrusion caused by moisture vapor flow.
- 3.2 The Klo-Shure Insulation Coupling creates a 360° vapor barrier where sections of tubular insulation are joined between suspension points.
- 3.3 The Klo-Shure Insulation Coupling prevents compression and premature failure of tubular, closed-cell, elastomeric insulation by independently supporting and securing tubing and tubing insulation.
- 3.4 The Klo-Shure Insulation Coupling eliminates the labor, time, and material costs required to cut, trim, double wrap, glue, and tape insulation around suspension devices.
- 3.5 The Klo-Shure Insulation Coupling improves the finished appearance of insulated pipe runs.
- 3.6 The Klo-Shure Insulation Coupling allows suspension devices to be adjusted and tubing to be leveled without the use of spacers and wedges prior to installing insulation.