ICC-ES PMG Listing

PMG-1010

Effective Date: August 1, 2011
This listing is subject to re-examination in one year.

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CSI: Division: 23 00 00— Heating, Ventilating and Air-Conditioning (HVAC)
Section: 23 21 13—Hydronic Piping

Product certification system:

The ICC-ES product certification system includes testing samples taken from the market or supplier's stock, or a combination of both, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the supplier's quality system.

Product: Unipipe® PEX-AL-PEX for Use in Hydronic Heating System

Listee: Uponor Incorporated
5925 148th Street West
Apple Valley, Minnesota 55124
www.uponor.com

Compliance with the following codes:

2012, 2009, 2006, and 2003 *International Mechanical Code*® (IMC)
2012, 2009, 2006, and 2003 *International Residential Code*® (IRC)

Compliance with the following standards:

ASTM F 1281-03 Standard Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure

LC1004 PMG Listing Criteria for PP, PEX, PEX-AL-PEX, and PP-AL-PP Piping, Tube and Fittings Used in Radiant Heating and Water Supply Systems

Identification:

Pipe: The Unipipe® piping covered by this report must be labeled every 3 feet (914 mm) with the manufacturer's name and/or trademark (Uponor Inc.), product name (Unipipe®), nominal tubing size, material designation (PEX-AL-PEX), temperature and pressure ratings, ASTM F 1281 designation, the name of the third-party inspection agency (NSF International), and either the ICC-ES evaluation report number (ESR-1402) or the ICC-ES PMG listing number (PMG-1010) and/or the ICC-ES PMG listing mark.

Fittings: The packages containing Multi-Press (MP) fittings and screwed fittings covered by this listing must be labeled with the Uponor name and the nominal pipe size.

Installation:

Radiant piping must be installed in accordance with the manufacturer's published installation instructions and Chapter 12 of the IMC or Chapter 21 of the IRC, as applicable. The installation is subject to approval by the code official.

Only Uponor's proprietary fittings must be used in the Uponor system. Fittings must be attached to piping in strict accordance with the Uponor Inc. installation instructions, which are provided with the product.

Clearances from heat-producing equipment must be in accordance with Chapter 5 of the *International Fuel Gas Code*®.

Models: **Pipe:**

Unipipe® is available in $^{3}/_{8}$- through 1-inch-diameter (9.5 through 25.4 mm) coils or 5-meter straight lengths, with three types of fittings. The pressure rating is in excess of 100 psi at 180°F (690 kPa at 82°C).

Fittings (see Figure 1):

Uponor supplies two types of proprietary fittings for use with Unipipe®. Fittings must be one of these two types:

Multi-Press (MP) fittings utilize a single or double O-ring seal and are joined to the pipe by use of a proprietary installation tool which presses the outer metal sleeve over the piping onto the fitting's inner serrated layer.

Screwed fittings use the tightening torque to make the fitting compress over the piping. The screwed portion of the fitting can then be removed.

Conditions of Listing:

1. Details on the design and installation of the heating system must be submitted to the building official for approval.
2. The tubing must be maintained at the proposed operating pressure during placement of the concrete cover for a hydronic piping system.
3. The tubing installation must be pressure-tested for leaks in the presence of the building official or the official's designated representative.
4. When installation is in fire-resistive assemblies, evidence of compliance with IBC Chapter 7 or UBC Chapter 7 must be provided to the building official.
5. The potable water connections must be protected against backflow from the hydronic heating system.
6. The tubing must not be used as a source of electrical ground.
7. The minimum cold bending radius is five times the outside tube diameter.
8. The tubing is limited to hydronic applications using potable water as the transfer fluid.

PRESSED FITTING **SCREWED FITTING**

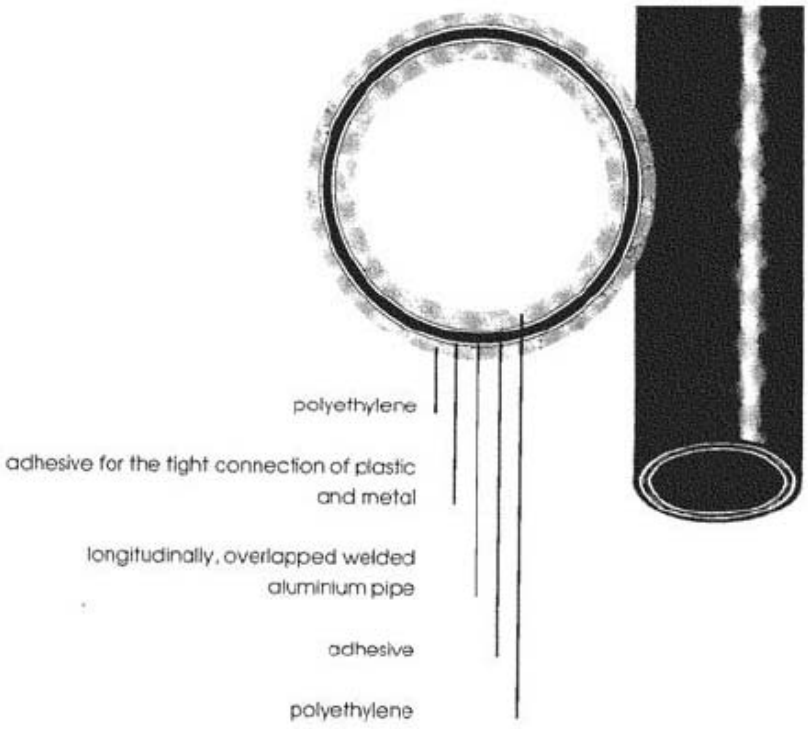

FIGURE 1—SYSTEM COMPONENTS