

ICC-ES PMG Listing**PMG-1008***Effective Date: December 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
 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.

Products: Watts Radiant PEX

Listee: Watts Radiant, Inc.
 4500 East Progress Place
 Springfield, Missouri 65803
 www.wattsradiant.com

Compliance with the following codes:

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

**Uniform Mechanical Code* is a copyrighted publication of the International Association of Plumbing and Mechanical Officials

Compliance with the following standards:

ASTM F 876-2010, Standard Specification for Crosslinked Polyethylene (PEX) Tubing
ASTM F 877-2011, Standard Specification for Crosslinked Polyethylene (PEX) Hot- and Cold-Water Distribution Systems
ASTM F 1807-2010, Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing

Identification:

Marking on the tubing shall include the followings, spaced at intervals of not more than 5 feet:

- Manufacturer's name or trademark
- Production code indicating the date of production.
- Nominal tubing size
- Type of plastic tubing material in accordance with the designation code given in the section 3.2.7 of ASTM F876.
- A distinctive marking that identify the presence of an inner, middle or outer layer
- Standard dimension ratio "SDR 9"
- Pressure rating(s) for water and temperature(s) for which the pressure(s) rating are valid
- The designation "ASTM F876"
- Standard designation(s) of the fitting system(s) for which the tubing is recommended for use by the tubing.
- ICC-ES PMG listing mark

Marking on fittings shall include:

- Manufacturer's name or trademark
- If size permits, PEX/PE-RT or "ASTM F 1807", or a combination thereof
- Marking on package shall include manufacturer's name, fitting size and "ASTM F1807"
- ICC-ES PMG listing mark

Installation:

Installation of Watts Radiant PEX by Watts tubing is to comply with the applicable code and the manufacturer's published installation instructions.

Fittings for Watts Radiant PEX by Watts tubing are to consist of brass, copper or polysulphone resin insert fittings and copper crimp rings, complying with ASTM F 876, ASTM F877, and ASTM F1807 as applicable. Fittings are to comply with the applicable code and be recognized in a current ICC-ES evaluation report or listing.

Clearances from heat-producing equipment must be in accordance with the *International Fuel Gas Code*[®], the *International Residential Code*[®], the *International Mechanical Code*[®] and the *Uniform Mechanical Code*[®].

Models: Tubing:

The Watts Radiant PEX is tubing produced from cross-linked polyethylene compound complying with ASTM F 876 and NSF-61.

The Watts Radiant PEX tubing is available in orange, white, natural, red or blue, and with an oxygen barrier on the outside layer.

Products are available in nominally $\frac{1}{4}$ -, $\frac{3}{8}$ -, $\frac{1}{2}$ -, $\frac{5}{8}$ -, $\frac{3}{4}$ -, 1-, $1\frac{1}{4}$ -, $1\frac{1}{2}$ - and 2-inch diameters (6.4, 9.5, 12.7, 15.9, 19.1, 25.4, 32, 38 and 51 mm) and come in 100- to 1200-foot-long (30.5 to 365.8 m) coils.

Some diameters of both products are also available in 5-, 10- and 20-foot-long (1.5, 3.0 and 6.1 m) straight lengths.

Conditions of Listing:

1. Details on the design and installation of the radiant 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 concrete cover for 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 applicable sections of the *International Building Code*[®] 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. Minimum bending radius is eight times the outside tube diameter of the PEX tube. The outside diameter is the nominal diameter plus $\frac{1}{8}$ inch (3.2 mm).
8. The products are manufactured at Watts Water Technologies in Kansas City Missouri under a quality control program with annual surveillance audits by NSF International (AA-633).