# ICC-ES PMG Listing

**PMG-1039**

*Effective Date: April 1, 2009*

*This listing is subject to re-examination in one year.*

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CSI: DIVISION: 15—MECHANICAL
Section: 15140—Domestic Water Piping
Section: 15180—Heating and Cooling Piping
Section: 15411—Fittings, Trim and Accessories

Products: ZurnPEX® and QestPEX® Tubing and Fittings
ZurnPEX® and QestPEX® Hydronic Barrier Tubing and Fittings

Listee: Zurn PEX, Inc.
Highway 11 East
Commerce, Texas 75428
www.zurn.com

Compliance with the following codes:

2006 *International Plumbing Code*® (IPC)
2006 *International Mechanical Code*® (IMC)
2006 *International Residential Code*® (IRC)
2006 IAPMO *Uniform Plumbing Code* (IAPMO UPC)
2006 IAPMO *Uniform Mechanical Code* (IAPMO UMC)
1997 ICBO *Uniform Mechanical Code* (ICBO UMC)

Compliance with the following standards:

ASTM D 2837
ASTM F 876
ASTM F 877
ASTM F1807
ICC-ES AC122
LC1004
NSF 14
NSF 61

Identification:

Tubing is marked every 5 feet (1524 mm) with the following:

- Company name (Zurn PEX, Inc.)
- Product designation (ZurnPEX® or QestPEX®)
- Nominal tube size
- Material designation (PEX)
- Potable water designation (PW)
- Standard dimension ratio (SDR9)
- Temperature and pressure ratings
- ASTM F 876/F 877 designation
- Production code

- The name of the inspection agency (NSF International, AA-633)
- The ICC-ES PMG listing number (PMG-1039) or the ICC-ES PMG listing mark.

Brass insert fittings are marked with the following:

- Manufacturer designation
- Nominal size
- Potable water marking (PW)
- The designations ASTM F 877 or ASTM F 1807

Copper crimp rings are marked with the designations “Q”, “PEX” and “F1807”.

Packaging for the fittings is marked with the product code and the ICC-ES PMG listing number (PMG-1039) or the ICC-ES PMG listing mark.

Installation:

ZurnPEX® and QestPEX® tubing and fittings must be installed in accordance with the applicable code and the manufacturer’s published installation instructions.

**Water Distribution:** Horizontally laid pipe must be secured in such a manner that temperature-induced expansion and contraction are accommodated. Mounting brackets and installation hardware are provided by the manufacturer. In areas using the IAPMO UPC, PEX tubing is not to be installed within the first 18 inches (457 mm) of piping connected to a water heater.

**Water Service:** The tubing is to be installed under ground in a manner that ensures external loads will not cause a decrease in the vertical dimension of the cross section exceeding five percent. Tubing installation is to provide an allowance for contraction of the tubing due to temperature change prior to backfilling. In areas with poor soil conditions (plastic clays), the trench bottom is to be prepared using granular material, to provide a stable base. Potable water service tubing is not to be located in, under or above cesspools, septic tanks, septic tank drainage fields or pits.

**Radiant Heating Systems:** Details of the design and installation of the radiant heating system must be submitted to the code official for approval. All circuits must be formed from continuous lengths of tubing, from manifold supply to return. No splices are allowed. The system may be installed in either concrete or wood floors. When the system is embedded in concrete floors, a moisture barrier must be laid over a concrete base slab that has a minimum thickness of $3^1/_2$ inches (38 mm). Under-floor insulation and reinforcing mesh must be placed on the slab. The tubing is uncoiled and attached to the mesh using soft steel wire or clips. A concrete topping is laid over the tubing. When embedment is in concrete, the installation, including minimum concrete cover, must comply with IBC Section 1906.3, UBC Section 1906.3 or IRC Section R506, as applicable. When the tubing is installed over polystyrene boards, the boards must comply with IBC Section 2603, UBC Section 2602 or IRC Section R314, as applicable.

Models:

**ZurnPEX® and QestPEX® tubing** is cross-linked polyethylene (PEX) tubing used in potable hot- and cold-water distribution systems. The PEX materials comply with NSF 14 and NSF 61 as well as ASTM F876 and ASTM F877.

ZurnPEX® tubing is manufactured from blue, red, white or natural cross-linked PEX.

The tube is available in nominal diameters of $^3/_8$, $^1/_2$, $^3/_4$, 1 and $1^1/_4$ inches (10, 13, 19, 25 and 32 mm) in straight lengths, and in coils 100 to 1000 feet (30.5 to 304.8 m) long. (The $1^1/_4$-inch (32 mm) tubing is for potable water only.)

ZurnPEX® tubing is also offered under the QestPEX® name. QestPEX® is identical to the ZurnPEX® product.

**ZurnPEX® and QestPEX® Hydronic Barrier Tubing i**s similar to the ZurnPEX® tubing, but with the addition of an oxygen barrier as the outside layer. ZurnPEX® hydronic barrier tubing is also offered under the QestPEX® hydronic barrier name, which is identical to the ZurnPEX® hydronic barrier product.

**Fitting assemblies** for ZurnPEX® tubing, including hydronic barrier tubing, consist of brass insert fittings and copper crimp rings. Fitting assemblies comply with ASTM F 1807.

**The ZurnPEX® and QestPEX® Tubing and Fitting System** meets the requirements of ASTM F 876, ASTM F 877 and NSF 14. All components in contact with potable water meet the requirements of NSF 61. ZurnPEX® and QestPEX® tube and fitting products are pressure-rated for 100 psi (689 kPa) at 180°F (82°C), and 160 psi (1100kPa) at 73°F (23°C), for a standard dimension ratio of 9. Standard dimension ratio is the ratio of outside diameter to wall thickness and is constant for all tube sizes over $^1/_2$ inch (12.7 mm).

Conditions of Listing:

1. The tubing must be pressure-tested for leaks before installation of covering. The leak test must be witnessed by the code official or the code official's designated representative.

2. When installation is in fire-resistance-rated assemblies, evidence of compliance with IBC Section 712 (penetrations), IBC Section 720 (prescriptive fire resistance), UBC Section 709 (walls and partitions) or UBC Section 710 (floor/ceiling or roof/ceiling), as applicable, must be provided to the code official for approval.

3. The tubing and fittings must be protected from exposure to direct sunlight. Tubing and fittings must be protected from physical damage with an oversized flexible corrugated sleeve at structural mass penetrations and when the tube is uncovered. Annular spaces between sleeves and pipes must be filled or tightly caulked in an approved manner.

4. All systems must be installed by Zurn PEX, Inc., trained installers in accordance with Zurn PEX, Inc., installation instructions, which are provided with the product. Installation must conform to relevant requirements of the referenced codes and is subject to approval by the code official. Manufacturer's instructions must be furnished to the code official upon request.

5. During placement of the cover over the tubing, the tube must be maintained at the greater of $1^1/_2$ times the working pressure or 100 psi (689.4 kPa).

6. Clearances from heat-producing equipment must be in accordance with the applicable code.

7. Minimum bending radius of the tube must be eight times the outside tube diameter. The outside diameter is nominal diameter plus $^1/_8$ inch (3.2 mm).

8. ZurnPEX® and QestPEX® tubing and fitting systems are manufactured by Zurn PEX, Inc., in Commerce, Texas and Harborcreek, Pennsylvania, under a quality control program with three surveillance inspections per year by NSF International (AA-633).