

ICC-ES PMG Listing

PMG-1013

Effective date: January 1, 2012

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

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CSI: DIVISION: 22 00 00—PLUMBING
Section: 22 11 16—Domestic Water Piping
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.

Products: REHAU RAUPEX, UV-SHIELD, MUNICIPEX, and O₂ Barrier Tube and Fittings

Listee: REHAU Construction LLC
1501 Edwards Ferry Road
Leesburg, Virginia 20176
www.rehau.com

Compliance with the following codes:

2012, and 2009 *International Plumbing Code*® (IPC)
2012, and 2009 *International Residential Code*® (IRC)
2012, and 2009 *International Mechanical Code*® (IMC)
2009 IAPMO *Uniform Plumbing Code* (IAPMO UPC)*
2009 IAPMO *Uniform Mechanical Code* (IAPMO UMC)*

*UPC and UMC are copyrighted publications of International Association of Plumbing and Mechanical Officials.

Compliance with the following standards:

ASTM F 876-2010, Specification for Cross-linked Polyethylene (PEX) Tubing
ASTM F 877-2011, Specification for Cross-linked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems
NSF 14-2010, Plastic Piping System Components and Related Materials
NSF 61-2011, Drinking Water System Components – Health Effects
LC1004-2009 (Editorially revised June 2010), PMG Criteria for PEX, PEX-AL-PEX and PP-AL-PP Piping, Tubing and Fittings Used in Radiant Heating and Water Supply Systems

Identification:

Tubing: The tubing is marked every 3 feet (914 mm) with the following: REHAU company name, product designation (REHAU RAUPEX, MUNICIPEX, RAUPEX UV-Shield or RAUPEX O₂ BARRIER), nominal tube size, material designation (PEX 3006 or PEX 3306), potable water designation (PW), standard dimension ratio (SDR9), temperature and pressure ratings, ASTM F 876

Listings are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the listing or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this listing, or as to any product covered by the listing.

/ F 877 designation, production code, the name of the inspection agency (NSF International AA-633), and the ICC-ES PMG listing mark.

Fittings: REHAU fittings are marked with the following: REHAU name, nominal diameter, letter designation of fitting manufacturer, logo of the inspection agency (NSF International), and the ICC-ES PMG listing mark.

Installation:

REHAU tubing and fittings must be installed in accordance with the manufacturer's published installation instructions, the applicable codes and this listing.

Water Distribution: Horizontally-laid pipe must be secured in such a manner that temperature-induced expansion and contraction are accommodated. In jurisdictions enforcing the IAPMO UPC, PEX tubing must not be installed within the first 18 inches (457 mm) of piping connected to a water heater.

Inspection of Water Distribution Tubing: Installed piping must be pressure-tested and inspected as required by IPC Section 312, IRC Section P2503.7 or IAPMO UPC Sections 103.5 and 609.4.

Radiant Heating Systems: The tubing must be pressure-tested for leaks before installation of the cover, as noted in IRC Section M2103.4, IMC Section 1208 or IAPMO UMC Section 1207, as applicable. The leak test must be witnessed by the code official.

Clearance from heat-producing equipment must be in accordance with IFGC Section 503.7.8, IRC Section M1306 or IAPMO UMC Section 802.10.5, as applicable.

Models:

Tubing: REHAU tubing products are manufactured from cross linked polyethylene (PEX) materials.

RAUPEX tube is white.

O₂ Barrier is similar to RAUPEX but has an added red-colored oxygen barrier coating.

RAUPEX UV SHIELD and MUNICIPEX are similar to RAUPEX but have an added white-, red- or blue-colored polyethylene coating.

The tube is available in $\frac{3}{8}$ -, $\frac{1}{2}$ -, $\frac{5}{8}$ -, $\frac{3}{4}$ -, 1-, $1\frac{1}{4}$ -, $1\frac{1}{2}$ - and 2-inch (10, 13, 16, 19, 25, 32, 38 and 51 mm) nominal diameter sizes, and in coils 100, 300, 500 and 1000 feet (30.4, 91.4, 152.4 and 304.8 m) long, or in straight lengths 20 feet (6.2 m) long. REHAU tube and fitting products are pressure-rated for 100 psi (689 kPa) at 180° F (82° C), and 160 psi (1100 kPa) 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 REHAU tube sizes.

Fittings:

Two REHAU brass compression fitting types are utilized: compression sleeve fittings and compression nut fittings.

The permanent compression sleeve fittings, identified as EVERLOC, are used to join tubes for couplings, elbows, tees and adapters, and consist of fittings and sleeves. The compression sleeve fitting requires proprietary equipment for installation.

Compression nut fittings are used for adapters and to connect tubing to manifolds, and consist of an insert, a split brass compression ring and a compression nut.

When used with RAUPEX tubing and when installed in accordance with this listing, the REHAU compression fittings described above comply with ASTM F 877. The compression fittings are illustrated in Figure 1.

Conditions of Listing:

1. Details on the design and installation of the heating system must be submitted to the code official for approval.
2. During placement of cover over the tubing, the tube must be maintained at the greater of $1\frac{1}{2}$ times the working pressure or 100 psi (689.4 kPa).
3. The tubing installation must be pressure-tested for leaks in the presence of the code official or the code official's designated representative.
4. When installation is in fire-resistance-rated assemblies, evidence of compliance with IBC Section 713 (penetrations), UBC Section 709 (walls and partitions) or UBC Section 710 (floor/ceiling or roof/ceiling), as applicable, must be provided to the code 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 six times the outside tube diameter for cold-bent tube and three times the outside diameter for hot-bent tube. The outside diameter is the nominal diameter plus $\frac{1}{8}$ inch (3.2 mm).
8. The tubing serving as a component of radiant systems is limited to applications using potable water as the transfer fluid.
9. When the system is embedded in concrete, tubing must be covered a minimum of $\frac{3}{4}$ inch (19.1 mm) and installation must comply with IBC Section 1906.3 or UBC Section 1906.3, as applicable.
10. REHAU 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.
11. The tubing is manufactured by REHAU in Viechtach, Germany and Cullman, Alabama. The fittings are manufactured for REHAU in Frankfort, Illinois, under a quality control program with inspections by NSF International (AA-633).

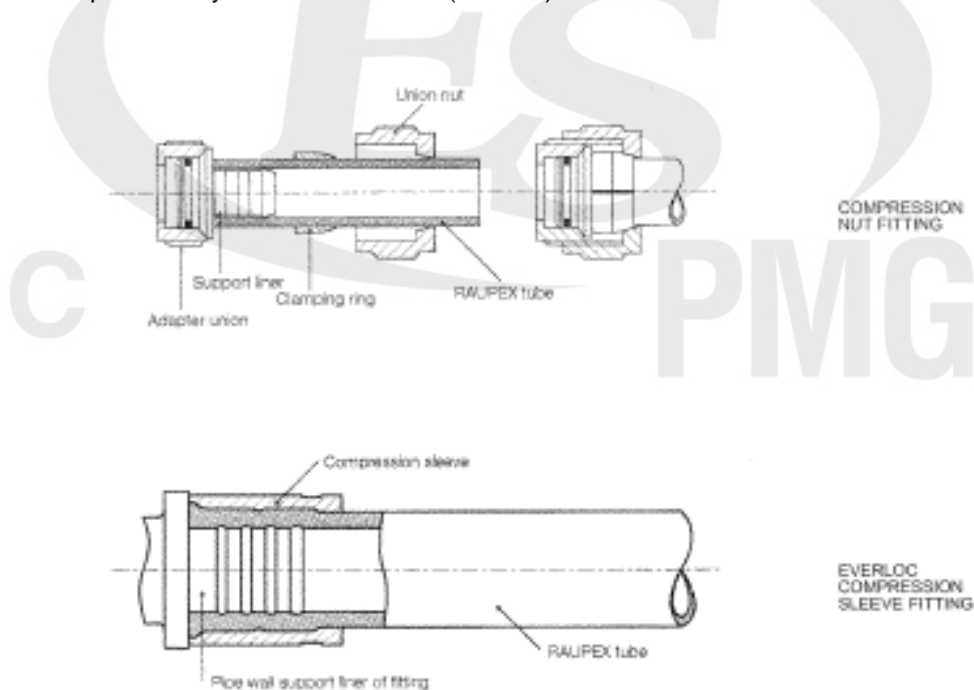


FIGURE 1—REHAU FITTINGS