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# ICC-ES PMG Product Certificate

# **PMG-1559**

Effective Date: December 2024 This listing is subject to re-examination in one year.

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A Subsidiary of the International Code Council®

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:

6

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: PIPEX® PE-Xa and PIPEXFLOOR® PE-Xa Tubing System
- Listee: Auray Managing, SL C / Mercaders, 4 Palau Solita i Plegamans, 08184 Barcelona, Spain www.pipex.es

Additional Listee:

EVERFLOW SUPPLIES, INC. 100 Middlesex Ave Carteret, NJ, 07008, USA

PEXSuperstore 14710 Torba Ct, Chino, CA, 91710, USA

Alro Products 2348 Linden Blvd Brooklyn, NY, 11208, USA

Calefactio Solution inc. 1120 Boulevard Michèle Bohec Blainville, QC, J7C 5N5, Canada

Jones Stephens Corp. 3249 Moody Parkway Moody, AL, 35004, USA

Mr Pex Systems 14799 Jackal St NW, Suite 100 Ramsey, MN 55303, USA STREAM33 PRODUCTS LLC

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.



2620 Ridgewood Rd. Akron, OH, 44313, USA

Wavin USA Inc. 950 Winter Street Waltham, MA 02451

Compliance with the following codes:

2024, 2021, 2018, 2015, 2012 and 2009 International Plumbing Code<sup>®</sup> (IPC) 2024, 2021, 2018, 2015, 2012 and 2009 International Mechanical Code<sup>®</sup> (IMC) 2024, 2021, 2018, 2015, 2012 and 2009 Uniform Plumbing Code<sup>®</sup> (UPC)\* 2024, 2021, 2018, 2015, 2012 and 2009 Uniform Plumbing Code<sup>®</sup> (UPC)\* 2024, 2021, 2018, 2015, 2012 and 2009 Uniform Mechanical Code<sup>®</sup> (UMC)\* 2022, 2019, 2016, 2013 and 2010 California Plumbing Code (CPC) 2022, 2019, 2016, 2013 and 2010 California Mechanical Code (CMC) 2023, 2020 and 2017 City of Los Angeles Plumbing Code 2023, 2020 and 2017 City of Los Angeles Mechanical Code 2023, 2021, 2017 and 2007 Code of Massachusetts Regulation 248 CMR 10.00: Uniform State Plumbing Code 2023, 2021 and 2017 Massachusetts State Building Code 780 CMR Ninth Edition: Chapter 28 2020, 2015 and 2010 National Plumbing Code of Canada<sup>®</sup> (NPC\*\*)

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Compliance with the following standards:

ASTM F876-2024b, Standard Specification for Cross-linked Polyethylene (PEX) Tubing ASTM F877-2024, Standard Specification for Cross-linked Polyethylene (PEX) Hot- and Cold-Water Distribution Systems NSF/ANSI 14-2023, Plastics Piping System Components and Related Materials NSF/ANSI/CAN 61-2023, Drinking Water System Components – Health Effects CSA B137.5-2023, Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications

#### Identification:

The tubing must be marked every 5 feet (1524 mm) with the manufacturer's product name; nominal tubing size; material designation (e.g. PEX 5106, 5206, or 0006, as applicable); standard dimension ratio (SDR9); temperature and pressure ratings; ASTM F876 designation; production code; the potable water designation, if applicable (PW or Potable Water), and the ICC-ES PMG listing mark.

#### Installation:

PEX-a tubing must be installed in accordance with the manufacturer's published installation instructions, the applicable codes and this listing. Where differences exist, the instructions in this listing must govern.

Water Service: PEX-a tubing must be installed underground in a manner that ensures external loads will not cause a decrease in the vertical dimension of the cross section exceeding 5 percent. Tubing must be installed to provide an allowance for contraction of the line due to temperature change prior to backfilling. In areas with poor soil conditions (plastic clays), the trench bottom must be prepared using granular material to provide a stable base. Potable water service tubing must not be located in, under or above cesspools, septic tanks, septic tank drainage fields or pits.

**Water Distribution:** PEX-a tubing laid horizontally must be secured in such a manner that temperatureinduced expansion and contraction are accommodated. In areas using the UPC, PEX-a tubing must not be installed within the first 18 inches (457 mm) of piping connected to a water heater.

**Radiant Heating Systems:** PEX-a tubing is used in radiant heating systems. Installation is to comply with the applicable chapters in the referenced mechanical codes and with the manufacturer's published installation instructions. Details of the design and installation of the radiant heating system are to be submitted to the code official for approval. All circuits are to 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 is to be laid over a concrete base slab a minimum of 3<sup>1</sup>/<sub>2</sub> inches (89 mm) thick. Under-floor insulation and reinforcing mesh is then to be placed on the slab. The tubing is uncoiled and attached to the mesh using plastic fasteners. A concrete topping is then laid over the tubing. When embedment is in concrete, installation (including minimum concrete cover) is to comply with IBC Section 1906.3. When the tubing is installed over polystyrene foam plastic boards, the boards are to comply with IBC Section 2603 or IRC Section R316. Mounting brackets and installation hardware are provided by the manufacturer. Horizontally laid pipe is to be secured in such a way that temperature-induced expansion and contraction are accommodated.

Combustible piping may be installed in areas required to be of noncombustible construction. PIPEX® PE-Xa and PIPEXFLOOR® PE-Xa Insulated Piping System were tested to ASTM E84 and ULC S102.2 and were found to have a flame-spread index (FS) rating of not more than 25 and a smoke-developed index (SD) rating of not more than 50 when tested , this rating are applicable when the pipe is insulated with Micro-Lk HP fiberglass insulation. The insulated piping systems have been evaluated for installation in either horizontal or vertical orientations in return-air plenums.

Models:

# <u>AURAY</u>

# Tubing:

PIPEX<sup>®</sup> PE-Xa (PEX 5106 or PEX 5206) for water distribution and heating applications is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14 and 61, as well as ASTM F 876. PIPEX<sup>®</sup> PE-Xa tubing is available in natural, red, blue, orange and white. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length. Tubing has been found to meet the chlorine resistance requirements of ASTM F876 when tested in accordance with ASTM F2023.

PIPEXFLOOR<sup>®</sup> PE-Xa (PEX 0006) for heating applications only is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14, as well as ASTM F 876. PIPEXFLOOR<sup>®</sup> PE-Xa tubing is available in natural and red. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length.

# Fittings:

Fittings for the PIPEX<sup>®</sup> PE-Xa and PIPEXFLOOR<sup>®</sup> PE-Xa tubing must comply with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.

Additional Listee Models:

# **EVERFLOW SUPPLIES, INC.**

# Tubing:

PEXFLOW (PEX 5106 or PEX 5206) for water distribution and heating applications is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14 and 61, as well as ASTM F 876. PIPEX® PE-Xa tubing is available in natural, red, blue, orange and white. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length. Tubing has been found to meet the chlorine resistance requirements of ASTM F876 when tested in accordance with ASTM F2023.

# Fittings:

Fittings for the PEXFLOW tubing must comply with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.

# PEXSUPERSTORE

# Tubing:

ALPHA PEX GUY (PEX 5106 or PEX 5206) for water distribution and heating applications is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14 and 61, as well as ASTM F 876. PIPEX<sup>®</sup> PE-Xa tubing is available in natural, red, blue, orange and white. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length. Tubing has been found to meet the chlorine resistance requirements of ASTM F876 when tested in accordance with ASTM F2023.

# Fittings:

Fittings for the ALPHA PEX GUY tubing must comply with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.

#### ALRO PRODUCTS

#### Tubing:

ALROPEX (PEX 5106 or PEX 5206) for water distribution and heating applications is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14 and 61, as well as ASTM F 876. PIPEX<sup>®</sup> PE-Xa tubing is available in natural, red, blue, orange and white. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length. Tubing has been found to meet the chlorine resistance requirements of ASTM F876 when tested in accordance with ASTM F2023.

#### Fittings:

Fittings for the ALROPEX tubing must comply with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.

#### CALEFACTIO SOLUTIONS, Inc.

# Tubing:

CALEFACTIO (PEX 5106 or PEX 5206) for water distribution and heating applications is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14 and 61, as well as ASTM F 876. PIPEX<sup>®</sup> PE-Xa tubing is available in natural, red, blue, orange and white. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length. Tubing has been found to meet the chlorine resistance requirements of ASTM F876 when tested in accordance with ASTM F2023.

#### Fittings:

Fittings for the CALEFACTIO tubing must comply with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.

#### JONES STEPHENS Corp.

# Tubing:

JONES STEPHENS (PEX 5106 or PEX 5206) for water distribution and heating applications is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14 and 61, as well as ASTM F 876. PIPEX<sup>®</sup> PE-Xa tubing is available in natural, red, blue, orange and white. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length. Tubing has been found to meet the chlorine resistance requirements of ASTM F876 when tested in accordance with ASTM F2023.

#### Fittings:

Fittings for the JONES STEPHENS tubing must comply with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.

#### Mr Pex Systems

#### Tubing:

Mr PEX (PEX 5106 or PEX 5206) for water distribution and heating applications is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14 and 61, as well as ASTM F 876. PIPEX<sup>®</sup> PE-Xa tubing is available in natural, red, blue, orange and white. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length. Tubing has been found to meet the chlorine resistance requirements of ASTM F876 when tested in accordance with ASTM F2023.

#### Fittings:

Fittings for the Mr PEX Systems tubing must comply with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.

#### STREAM33 PRODUCTS LLC

#### Tubing:

STREAM33 (PEX 5106 or PEX 5206) for water distribution and heating applications is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14 and 61, as well as ASTM F 876. PIPEX<sup>®</sup> PE-Xa tubing is available in natural, red, blue, orange and white. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length. Tubing has been found to meet the chlorine resistance requirements of ASTM F876 when tested in accordance with ASTM F2023.

# Fittings:

Fittings for the STREAM33 tubing must comply with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.

#### Wavin USA Inc.

#### Tubing:

Wavin (PEX 5106 or PEX 5206) for water distribution and heating applications is manufactured from cross-linked polyethylene (PEX-a) materials satisfying NSF 14 and 61, as well as ASTM F 876. PIPEX<sup>®</sup> PE-Xa tubing is available in natural, red, blue, orange and white. The tubing is available in nominal diameters of 1/8 inch through 2 inch (3.2 through 60 mm), and in coils ranging from 25 to 2000 feet (8 to 610 m) in length. Tubing has been found to meet the chlorine resistance requirements of ASTM F876 when tested in accordance with ASTM F2023.

#### Fittings:

Fittings for the Wavin tubing must comply with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.

# Conditions of Listing:

- 1. Tubing must be manufactured, identified and installed in accordance with this listing, the applicable code and the manufacturer's published installation instructions. Tubing and fittings must be installed by trained installers. The manufacturer's published installation instructions must be furnished to the code official. The instructions within this listing must govern if there are any conflicts between the manufacturer's published instructions and this listing.
- 2. When installation is in fire-resistance-rated assemblies, evidence of compliance with IBC Section 713 (penetrations) must be provided to the code official for approval.
- 3. PEX-a tubing 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 tubing is uncovered. Annular spaces between sleeves and pipes must be filled or tightly caulked in an approved manner.
- During placement of cover over the tubing, the tubing must be maintained at the greater of 1<sup>1</sup>/<sub>2</sub> times the working pressure or 100 psi (689.4 kPa).
- 5. Each installation must be pressure-tested for leaks in the presence of the code official or the code official's designated representative.
- 6. Clearances from heat-producing equipment must be in accordance with the applicable code.
- 7. Fittings used with PEX-a tubing must complying with ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098 or ASTM F 2159, as applicable.
- 8. The use of tubing on hydronic systems is limited to applications using potable water as the transfer fluid.
- 9. Minimum bending radius of the tube must be eight times the outside tube diameter. The outside diameter is the nominal diameter plus <sup>1</sup>/<sub>8</sub> inch (3.2 mm).
- 10. The PEX-a tubing is under a quality control program with bi-annual inspections by ICC-ES.