QAI LABORATORIES
CERTIFICATION TESTING INSPECTION

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BUILDING PRODUCTS LISTING PROGRAM

Customer: Viega, LLC
Class: Fire Protection - Plastic Piping and Accessories
Location: McPherson, KS
Website: www.viega.us

Listing No. P342-2
Report No. P342-2 ED1
Project No. P342-2 ED1
Effective Date: July 16, 2019
Last Revised Date: July 16, 2019
Expires: N/A

Standards: UL 1821 "Thermoplastic Sprinkler Pipe and Fittings for Fire Protection Service"
Product: ViegaPEX™ PureFlow Pipe and Fittings

Markings: All PEX tubing, connectors, manifolds, and angle stop valves shall be permanently marked with the following content applied to an area that is readily visible after installation:

1. Manufacturer's name, Trademark or other recognized symbol or identification
2. Model Name
3. Standards: UL 1821
4. Nominal Size
5. QAI Logo with 'us' indicator
6. QAI File number (P341)
7. Manufacturing Traceability Label - Production date code

Models / Ratings:

Component	Nominal Pipe Size (inches)
ViegaPEX™ PureFlow Pipe	¾, 1, 1 ¼, 1 ½, 2
Fitting Adapter (PEX x Copper)	¾ x ½, ¾, 1, 1 x 1, 1 ¼ x 1 ¼, 1 ½ x 1 ½, 2
Tubing Adapter (PEX x Copper)	¾ x ¾, 1, 1 x 1, 1 ¼ x 1 ¼, 1 ½ x 1 ½, 2

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Component	Nominal Pipe Size (inches)
Female Adapter (PEX x NPT)	¾ x ½, ¾, 1 x ¾, 1 x 1
Male Adapter (PEX x NPT)	¾ x ½, ¾, 1, 1 x ¾, 1, 1 ¼ x 1 ¼, 1 ½ x 1 ½, 2
Viega PureFlow Press Adapter (PEX x Copper)	¾ x ¾, 1 x 1, 1 ¼ x 1 ¼, 1 ½ x 1 ½, ¾ x ¾
Viega PureFlow Press Adapter	¾ x ¾
90 Degree Elbow	¾, 1, 1 ¼, 1 ½, 2
Coupling	¾, 1, 1 ¼, 1 ½, 2
Reducing Coupling	¾ x ½, 1 x ¾, 1 ¼ x ¾, 1 ½ x ¾, 2 x 1 ½
Cap	¾, 1, 1 ¼, 1 ½, 2
Tee	¾, 1, 1 ¼, 1 ½, 2
Reducing Tee	½ x ½ x ¾, ¾ x ½ x ½, ¾ x ¾ x ½, 1 x ½ x ½, 1, 1 x ¾ x ½, ¾, 1 x 1 x ½, 1 ¼ x 1 x ¾, 1 ¼ x 1 ¼ x 3/4, 1 ¼ x 1 x 1, 1 ¼ x 1 ¼ x 1, 1 ½ x 1 x ¾, 1 ½ x 1 ½ x ¾, 2 x 1 ½ x 1, 2 x 1 ½ x 1 ¼, 2 x 1 ½ x 1 ½
Sprinkler Adapter (PEX x NPT)	¾ x ½
Sprinkler Angle Adapter (PEX x PEX x NPT)	¾ x ¾ x ½
Sprinkler Tee – Vertical (PEX x PEX x NPT)	¾ x ¾ x ½, 1 x ¾ x ½, 1 x 1 x ½
Sprinkler Tee – Horizontal (PEX x PEX x NPT)	¾ x ¾ x ½, 1 x ¾ x ½, 1 x 1 x ½

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Component	Nominal Pipe Size (inches)
Sprinkler Elbow (PEX x NPT)	¾ x ½, 1 x ½
PEX Coupling	¾, 1, 1 ¼, 1 ½, 2
PEX 90 Degree Elbow	¾, 1, 1 ¼, 1 ½, 2
PEX 45 Degree Elbow	1 ½, 2
PEX Tee	¾, 1, 1 ¼, 1 ½, 2
PEX Plug	¾, 1, 1 ¼, 1 ½, 2
PEX Reducing Coupling	¾ x ½, 1 x ¾, 1 ¼ x ¾, 1, 1 ½ x ¾, 1, 1 ¼, 2 x 1 ½
REX Reducing Tee	½ x ½ x ¾, ¾ x ½ x ½, ¾, ¾ x ¾ x ½, 1 x ½ x ½ 1 x ¾ x ½, 1 x 1 x ½, ¾, 1 ¼ x 1 x ¾, 1 ¼ x 1 ¼ x ¾, 1 ½ x 1 x ¾, 1 ½ x 1 ¼ x ¾, 1, 1 ¼, 1 ½ x 1 ½ x ¾, 1, 1 ¼, 2 x 1 ½ x ¾, 1, 1 ¼
PEX Fire Sprinkler Elbow (PEX x NPT)	¾ x ½, 1 x ½
PEX Fire Sprinkler Straight Adapter (PEX x NPT)	¾ x ½
PEX Fire Sprinkler Tee (PEX x PEX x NPT)	¾ x ¾ x ½, 1 x ¾ x ½, 1 x 1 x ½
PEX Fire Sprinkler Wall Tee (NPT x NTP x PEX)	½ x ½ x ¾, ½ x ½ x 1

Sprinklers: All automatic sprinklers must be listed by an approved agency to ANSI/UL 1626, “Residential Sprinklers for Fire Protection Service” for use in the noted assemblies of this listing.

Max System Pressure: 130 psig.

Installation and Design Manual: Special installation and design criteria relative to pipe-hanger spacing, piping and sprinkler restraint, sprinkler temperature rating, piping location, testing location, testing procedures and friction loss characteristics are specified in the Viega installation instructions.

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Approved Installations:

Assembly 1: Exposed Wood Joist Ceiling Assemblies

ViegaPEX™ PureFlow can be installed and left exposed in wood joist ceiling assemblies where the following conditions are met:

1. Joists are of dimensional lumber, engineered wood, wood I-joist or open web wood joists (wood floor trusses).
2. Joist are of depths from 6 – 16 inches (152 – 204 mm).
3. Joist are of spacing from 12 – 24 inches (305 – 610 mm) on center.
4. Joists can be exposed after installation.
5. Metal pipe hangers spaced at maximum 24 inches (610 mm) on center are used.
6. Listed residential automatic sprinklers of maximum activation temperature rating of 165°F (68°C).

Assembly 2: Exposed Finished Ceiling Assemblies

ViegaPEX™ PureFlow can be installed exposed across finished ceiling assemblies where the following conditions are met:

1. Ceiling is finished with one of the following approved membranes:
   a) Minimum 3/8 inch (9.5 mm) thickness code complying gypsum wallboard or;
   b) Suspended membrane ceiling with lay-in panels or tiles having a minimum weight of 0.35 lb/ft^2(1.76 kg/m^2) when installed with metallic support grids, or;
   c) ½ inch (13 mm) code complying plywood or solid sheathing.
2. Metal pipe hangers spaced at maximum 24 inches (610 mm) on center are used.
3. Listed residential automatic sprinklers of maximum activation temperature rating of 165^{o}F (68^{o}C)

PEX pipe and fittings are not intended for use in areas where the maximum ambient temperature exceeds 120°F. If the ambient temperature is expected to exceed this limitation, refer to the Installation and Design Manual for additional information on methods to reduce the pipe exposure temperatures.

This system is not intended for outdoor applications.

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CONDITIONS OF ACCEPTANCE:

1. Products must comply with the QC information included in this Evaluation Report.
2. The product must continue to have UL certification to UL 1821 or submit supporting data to QAI to show the product continues to comply to UL 1821 sections 14 through 30.
3. The product must be installed in accordance with the manufacturer's published installation instructions and the relevant building codes accepted by the Authority Having Jurisdiction (AHJ).
4. Final acceptance of the product in the intended application is to be determined by the Authority Having Jurisdiction (AHJ).
5. These requirements cover thermoplastic pipe and fittings for use in wet pipe sprinkler systems for fire protection service.
6. The pipe and fittings covered by these requirements are intended to be installed in accordance with the Standard for Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, NFPA 13D; the Standard for Sprinkler Systems in Low-Rise Residential Occupancies, NFPA 13R; or the Standard for Installation of Sprinkler Systems, NFPA 13.
7. Thermoplastic pipe and fittings covered by these requirements are intended for use in sprinkler systems in any of the following types of occupancies:

    a) Light hazard occupancies as defined in the Standard for Installation of Sprinkler Systems, NFPA 13;

    b) Residential occupancies as defined in the Standard for Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, NFPA 13D; and

    c) Residential occupancies as defined in the Standard for Installation of Sprinkler Systems in Low-Rise Residential Occupancies, NFPA 13R.

Notes:

The materials, products or systems listed herein have been qualified to bear the QAI Listing Mark under the conditions stated with each Listing. Only those products bearing the QAI Listing Mark are considered to be listed by QAI.

No warrantee is expressed or implied, and no guarantee is provided that any jurisdictional authority will accept the Listing found herein. The appropriate authorities should be contacted regarding the acceptability of any given Listing.

Visit the QAI Online Listing Directory located at www.qai.org for the most up to date version of this Listing and to validate that this QAI Listing is active.

Questions regarding this listing may be directed to info@qai.org. Please include the listing number in the request.

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