BUILDING PRODUCTS PROGRAM

Class: Plastic Piping and Accessories

Customer: UPONOR, INC.
Location: Apple Valley, Minnesota

Listing No. P321-2
Effective Date: August 28, 2012
Last Revised: December 8, 2015
Expires: N/A
Website: www.uponor-usa.com

Product(s): Cross-linked Polyethylene PEX Piping, Fittings and Valves


Models: AquaPEX™ (natural, red, blue)
hePEX™
hefloPEX™ X2
RCW PEX™
Pre-insulated PEX Pipe (AquaPEX™, hePex™, helioPEX™, and RCW PEX™)
ProPEX™ EP Fittings
ProPEX™ EP MultiPort Tees
PEX rings
ProPEX™ EP Connectors
ProPEX™ CPVC Adapters and Valves

Marking(s): All PEX tubing, connectors, angle stop valves, and other accessories (if sufficient space available) shall be permanently marked with the following content applied to an area that is readily visible after installation:

- Manufacturers name or trademark
- Model Name
- Standard: ASTM E84
- Flame Spread Rating < 25, Smoke Developed Rating < 50
- Nominal Size
- QAI Logo with ‘c’ and ‘us’ indicator

Rating(s): The following outlines the performance of UPONOR PEX pipe determined in accordance with the noted standards.

ASTM E84 – Surface Burning Characteristics

<table>
<thead>
<tr>
<th>Limitations</th>
<th>Flame Spread Index</th>
<th>Smoke Developed Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ½-inch maximum nominal diameter tubing; supported continuously with 23 gauge UPONOR PEX-a Pipe supports, with exposed area of UPONOR pipe between PEX-a-Pipe supports is encased with approved pipe insulations. Piping is to be clamped with standard support clamps following UPONOR installation instructions.</td>
<td>&lt; 25</td>
<td>&lt; 50</td>
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Note: Different sizes and different colors corresponding to AquaPEX™, hePEX™, helioPEX™ X2 are dependent on manufacturer’s availability.
Note2: List of approved pipe insulation providers:

The following list of insulation types (at minimum thickness of ½”) are approved for use with UPONOR’s AquaPEX™, hePEX™, helioPEX™ X2 products when installed with UPONOR fittings and valves meter of 3 ½ inches. The insulations noted must be Listed to ASTM C547 by an approved.

<table>
<thead>
<tr>
<th>Insulation</th>
<th>Flame Spread Rating (according to ASTM E84)</th>
<th>Smoke Developed Rating (according to ASTM E84)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mason Alley-K</td>
<td></td>
<td>&lt; 25</td>
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<tr>
<td>Armaflex Composite</td>
<td></td>
<td>&lt; 50</td>
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<tr>
<td>Johns Manville Micro-Lok</td>
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<tr>
<td>Johns Manville Micro-Lok HP</td>
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<tr>
<td>Owens Corning Vapor Wick</td>
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<tr>
<td>Owens Corning Fiberglass</td>
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<td>GLT Pipe and Tank</td>
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<tr>
<td>Knauf Earthwool Redi-Klad</td>
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<td>Nomalock</td>
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</table>

In order to show above insulation installation compliance, testing of various representative configurations of UPONOR materials with differing insulations were conducted.

Note: These products are subjected to limitations as specified above and must be installed in accordance with the manufacturers’ instructions. Authorities having jurisdiction should be consulted regarding allowable applications. See manufacturer’s listings for other standards listed under QAI certification programs.

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.

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