

<p style="text-align: center;"><b>DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT</b> Housing - Federal Housing Commissioner</p> <p><b>TO: DIRECTORS, SINGLE FAMILY HOCs</b> <b>DIRECTORS, MULTIFAMILY HUBs</b></p>	<p><b>Series and Series Number:</b> <b>MATERIALS RELEASE NO: 1269d</b> (Supersedes issue dated June 30, 2006)</p>
	<p><b>ISSUE DATE</b> January 13, 2009</p>
	<p><b>REVIEW DATE</b> January 13, 2012</p>
<p><b>SUBJECT:</b></p> <ol style="list-style-type: none"> <li>1. <b>Product</b> AquaPEX™ Crosslinked Polyethylene (PEX) Plastic Pipe and Fittings</li> <li>2. <b>Name and address of Manufacturer</b> Uponor, Inc. 5925 148<sup>th</sup> Street West Apple Valley, MN 55124</li> </ol>	

Data on the nonstandard product described herein have been reviewed by the Department of Housing and Urban Development (HUD) and determination has been made that it is considered suitable from a technical standpoint for the use indicated herein. This Release does not purport to establish a comparative quality or value rating for this product as compared to standard products normally used in the same manner.

This Materials Release cannot be used as an indication of endorsement or approval by HUD of the described product, and any statement or representation, however made, indicating such approval or endorsement by HUD is unauthorized. See Code 18, U.S.C. 709.

Any reproduction of this Release must be in its entirety.

USE: The Uponor AquaPEX™ crosslinked polyethylene (PEX) plastic pipe and fittings system is intended for use in potable hot and cold water distribution systems up to a maximum continuous pressure of 160 psi at 73°F and 100 psi at 180°F. It may also be used in irrigation systems, heating and steam condensate lines.

DESCRIPTION:

The Uponor AquaPEX™ water distribution system shall be made from high density polyethylene having a minimum density of 58 lbs/cubic foot. After extrusion, the cross-linked polyethylene shall have a minimum density of 57 lbs/cubic foot. The pipe shall have one standard dimension ratio SDR 9 and the fittings shall have a nominal size from 1/4" to 2". Only fittings recommended by Uponor are acceptable for use with this PEX system.

REQUIREMENTS:

The Uponor AquaPEX™ water distribution system shall comply with the following standards or more recent versions:

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|----------------|---|
| ASTM F 876-06  | "Standard Specification for Crosslinked Polyethylene (PEX) Tubing"  |
| ASTM F 877-07  | "Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems"  |
| ASTM F 1960-08 | "Standard Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Crosslinked Polyethylene (PEX) Tubing."   |
| NSF 14-2007    | "Standard for Plastic Piping System Components and Related Materials" except that the brass fittings shall also comply with Wirsbo Company fitting recommendation dated January 1996  |
| NSF 61-2007a   | "Standard for Drinking Water Systems Components-Health Effects"   |
| AWWA C 904-06  | "Cross-Linked Polyethylene (PEX) Pressure Pipe for Water Service" for 1/2" thru 3" tubing except: <ol style="list-style-type: none"><li>1. The minimum radius of curvature is 6 diameters.</li><li>2. If the AquaPEX tubing is kinked during installation, a heat gun may be used to repair the kinked portion in accordance with the Wirsbo Installation Handbook.</li></ol> |

INSTALLATION:

1. The Uponor AquaPEX™ plastic pipe and fitting system shall be installed according to the manufacturer's instructions described in the Uponor Installation Handbook.
2. Only fittings approved by Uponor shall be used.
3. The PEX plastic pipe shall not be exposed to direct sun light for more than 30 days.

4. Do not install PEX pipe within 6" of any gas appliance vents, or within 12" of any recessed light fixtures.
5. PEX plastic pipe should not be anchored rigidly but allow 3/8" to 1/2" per yard of pipe for thermal expansion.

CERTIFICATION AND IDENTIFICATION:

Uponor certifies that the AquaPEX™ Crosslinked Polyethylene pipe and fittings and systems shall be produced in conformance to this MR, and are in compliance with a validation program at NSF International, Inc., in accordance with the Code of Federal Regulations, 24 CFR 200.935. NSF International, Inc., shall inspect the manufacturer's facility to assure that the quality control procedures are being followed. Four samples of this product shall be selected and tested each year to validate the manufacturer's conformance to the requirements of this MR. Each pipe and fittings certified as conforming to this MR, shall be labeled with the following information:

1. The NSF validation mark.
2. The manufacturer's name.
3. The manufacturer's conformance to this MR.

MANUFACTURING PLANTS:

The product covered under this MR will be produced at the following plant:

Uponor, Inc.  
5925 148<sup>th</sup> Street West  
Apple Valley, MN 55124  
952-987-4296

WARRANTY:

Uponor warrants the AquaPEX™ crosslinked polyethylene pipe and fittings systems for ten (10) years, under normal use, against defects in materials and workmanship. Should any defect or poor performance occur, Uponor will make a full cost allowance for the replacement of the defective product.

MANUFACTURER'S RESPONSIBILITIES:

Issuance of this Materials Release (MR) commits the manufacturer to fulfill, as a minimum, the following:

1. Produce, label and certify the material, product or system in strict accordance with the terms of this MR.
2. Provide necessary corrective action in a timely manner for all cases of justified complaint, poor performance or failure reported by HUD.
3. When requested, provide the FHA Standards, Office of Manufactured Housing Programs, HUD Headquarters, with a representative list of properties, in which the material, product or system has been used, including complete addresses or descriptions of locations and dates of installation.
4. Inform HUD in advance of changes in production facilities, methods, design of the product, company name, ownership or mailing address.

EVALUATION:

This MR shall be valid for a period of three years from the date of initial issuance or most recent renewal or revision, whichever is later. The holder of this MR shall apply for a renewal or revision 90 days prior to the Review Date printed on this MR. Submittals for renewal or revision shall be sent to:

U. S Department of Housing and Urban Development  
FHA Standards, Office of Manufactured Housing Programs  
451 7<sup>th</sup> Street, SW, Room 9168  
Washington, DC 20410-8000

Appropriate user fee shall be sent to:

U. S. Department of Housing and Urban Development  
Miscellaneous Income – Technical Suitability of Products Fees  
Bank of America  
P. O. Box 198762  
Atlanta, GA 30384-8762

The holder of this MR may apply for revision at any time prior to the Review Date. Minor revisions may be in the form of a supplement to the MR.

If the Department determines that a proposed renewal or supplement constitutes a revision, the appropriate User Fee for a revision will need to be submitted in accordance with Code of Federal Regulations 24 CFR 200.934, "User Fee System for the Technical Suitability of Products Program," and current User Fee Schedule.

CANCELLATION:

Failure to apply for a renewal or revision shall constitute a basis for cancellation of the MR. HUD will notify the manufacturer that the MR may be canceled when:

1. conditions under which the document was issued have changed so as to affect production of, or to compromise the integrity of the accepted material, product, or system,
2. the manufacturer has changed its organizational form without notifying HUD, or
3. the manufacturer has not complied with responsibilities it assumed as a condition of HUD's acceptance.

However, before cancellation, HUD will give the manufacturer a written notice of the specific reasons for cancellation, and the opportunity to present views on why the MR should not be canceled. No refund of fees will be made on a canceled document.

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This Materials Release is issued solely for the captioned firm, and is not transferable to any person or successor entity.  
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