



PLUMBING SYSTEMS

PRE-INSULATED
AQUAPEX®

PRODUCT GUIDE

Uponor Pre-insulated AquaPEX®

Offers Industry's First Pre-insulated PEX Tubing

Energy-efficient, Sustainable Building

To ensure the building industry is equipped with the latest, most innovative products, Uponor is the first to offer a pre-insulated PEX tubing product for residential and commercial plumbing applications.

Our Pre-insulated AquaPEX® offers all the benefits of Uponor AquaPEX (PEX-a) tubing — flexible, durable, corrosion-resistant, 20-year proven

history in plumbing, 25-year limited warranty — with a layer of ½" PEX-foam insulation surrounding the tubing to insulate potable-water lines and meet national, state and local energy-code requirements.

And using Pre-insulated AquaPEX can even help a home or building earn LEED® or National Green Building Standard™ points for energy savings. (For information about points on your specific project, refer to www.usgbc.org or www.nahb.org.)

Saves Up to 37% on Install Costs

The most valuable benefit for building professionals is the time and cost savings Pre-insulated AquaPEX offers. Compared to the traditional two-step installation and insulation process, Pre-insulated AquaPEX saves up to 37% on install costs, when combining the product cost savings and labor savings.

No Second Contractor Needed

Because the tubing is already insulated, Pre-insulated AquaPEX eliminates the need for a separate contractor to come in and insulate the tubing after installation. This helps the installation schedule stay on track and also saves valuable install costs.

Ideal for Tight Installations

For plumbing applications with tight installation requirements, such as re-pipe jobs, Pre-insulated AquaPEX offers a significant advantage. Pre-insulated AquaPEX features the same tight bend radius as Uponor AquaPEX tubing — 6 times the outside diameter of the tubing. And because the insulation is already on the tubing, Pre-insulated AquaPEX eliminates the hassle of trying to insulate in tight, confined spaces.

Features and Benefits

- Saves approximately 37% on install costs over installing the insulation as a secondary step*
- Meets national, state, provincial and local energy-code requirements for insulation of potable-water lines
- Available in sizes from ½" to 2"
- Appropriate for residential and commercial plumbing applications

*Source: RS Means Construction Data



Code Bodies That Specify Insulation

- IECC 2006: Residential Energy Efficiency, Section 403: Systems (Mandatory)
- IECC 2003: Residential Energy Efficiency, Section 504 Service Water Heating
- IECC 2006: Commercial Energy Efficiency, Section 504 Service Water Heating (Mandatory)
- IECC 2003: Commercial Energy Efficiency, Section 804 Service Water Heating
- IPC 2006: Section 607: Hot Water Supply System
- IRC 2006: Energy Efficiency, Section N1103 Systems
- ASHRAE 90.1 2007: Section 6 Heating, Ventilating and Air Conditioning
- ASHRAE 90.1 2007: Section 7.4.3 Service Hot-Water Piping Insulation

R-value and Heat Loss of Pre-insulated AquaPEX

Size	R value	Heat loss
½"	4.8	6.1 BTU/hr-ft at 70 ΔT
¾"	4.3	8.0 BTU/hr-ft at 70 ΔT
1"	4.0	9.7 BTU/hr-ft at 70 ΔT
1¼"	3.8	11.4 BTU/hr-ft at 70 ΔT
1½"	3.7	13.1 BTU/hr-ft at 70 ΔT
2"	3.5	16.3 BTU/hr-ft at 70 ΔT

Pre-insulated AquaPEX Offering

Part No.	Part Description
F6040500	½" Pre-insulated AquaPEX, ½" Insulation, 100-ft. coil
F6040750	¾" Pre-insulated AquaPEX, ½" Insulation, 100-ft. coil
F6041000	1" Pre-insulated AquaPEX, ½" Insulation, 100-ft. coil
F6921250	1¼" Pre-insulated AquaPEX, ½" Insulation, 20-ft. straight length, 100 ft.
F6921500	1½" Pre-insulated AquaPEX, ½" Insulation, 20-ft. straight length, 100 ft.
F6922000	2" Pre-insulated AquaPEX, ½" Insulation, 20-ft. straight length, 100 ft.



F6040500



F6040750



F6041000



F6921250



F6921500



F6922000

Codes, Standards, Assemblies and Listings

Hydrostatic Temperature and Pressure Ratings:

- 200°F at 80 psi (93.3°C at 5.51 bar)
- 180°F at 100 psi (82.2°C at 6.89 bar)
- 73.4°F at 160 psi (23°C at 11 bar)

Manufacturing Standards:

- ASTM F876
- ASTM F877
- ASTM F877
- ASTM F2023
- ASTM F1960
- ANSI/NSF Standard 14
- ANSI/NSF Standard 61

AquaPEX Product Listings:

- IAPMO
- NSF
- CSA
- ITS
- HUD
- ICC

Applicable Codes:

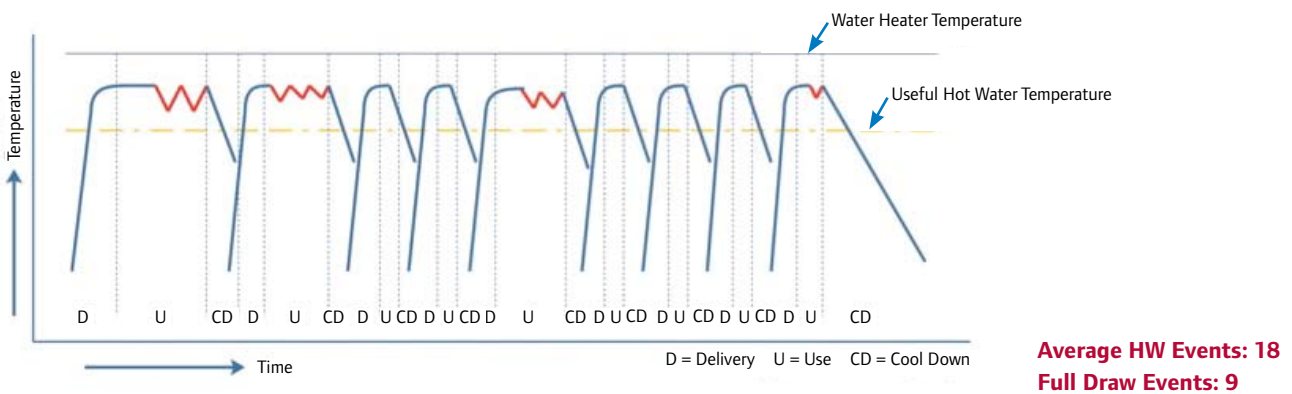
- IPC
- UPC
- NSPC
- NPC of Canada

Why Insulate Plumbing Lines?

Hot-water Events — Insulated Pipes Average Daily Household Usage



Hot-water Events — Un-insulated Pipes Average Daily Household Usage



What Does Insulation Have to Do with Hot-water Delivery?



Average Residential Household Hot-water Usage is 52.6 gpd*

10.52 gpd

Hot-water heated and not used or used after cooled

+ **6.35** gpd

Water sent down drain waiting for hot water

= 16 gpd

Water lost due to no insulation

30%

Water wasted down the drain every day per household

Pipe insulation reduces waste and reduces delivery wait times. **

*gpd = gallons per day

** James Lutz, Estimating Energy and Water Losses in Residential Hot Water Distribution Systems, 2005

Pre-insulated AquaPEX FAQs

Is Uponor the first to offer this technology?

Although this technology is similar to a product offering in Europe, Uponor is the first PEX manufacturer to offer pre-insulated tubing.

What sizes are available?

Uponor is offering Pre-insulated AquaPEX in ½", ¾", 1", 1¼", 1½" and 2" sizes. The ½", ¾" and 1" sizes are available in 100-foot coils. The 1¼", 1½" and 2" sizes are available in 20-foot straight lengths

What kind of cost savings does Pre-insulated AquaPEX offer?

On average, Uponor Pre-insulated AquaPEX saves approximately 37% over the two-step installation and insulation method.*

*Source: RS Means Construction Data

Can you use Pre-insulated AquaPEX in a plenum?

Pre-insulated tubing is not currently listed for installation in a plenum. Uponor is in the process of evaluating the product in this application.

Can you bury Pre-insulated AquaPEX?

Yes, provided the tubing is buried in an area away from contact with groundwater. Although the water will not compromise the integrity of the AquaPEX tubing or insulation, it will have a detrimental effect on the insulating value of the insulation.

What's the bend radius?

The bend radius is the same as Uponor AquaPEX, which is 6 times the outside diameter of the tubing.

Where can I use Pre-insulated AquaPEX?

Pre-insulated AquaPEX can be used in all areas of the potable water system.

Are there any accessories or guidelines for insulating connections (tees, ells, etc.) in conjunction with the straight pipe?

The insulation can be pulled over the expanded PEX Ring leaving only the fitting body un-insulated. Uponor does not offer insulation kits for the fittings; however, insulation kits are available in the industry if needed for your specific application.

Is there any recycled content in the insulation?

Currently, the insulation does not contain any recycled content. However, we are in the process of evaluating the inclusion of recycled content in the insulation.



For more information, visit our websites listed below.

Uponor, Inc.
5925 148th Street West
Apple Valley, MN 55124 USA
Tel: (800) 321-4739
Fax: (952) 891-2008
Web: www.uponor-usa.com

Uponor Ltd.
2000 Argentia Rd., Plaza 1, Ste. 200
Mississauga, ON L5N 1W1 CANADA
Tel: (888) 994-7726
Fax: (800) 638-9517
Web: www.uponor.ca

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