

BUILDING PRODUCTS PROGRAM

Class: Plumbing – Plastic Piping and Accessories

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

Listing No.: P321-1
Effective Date: August 28, 2012
Last Revised: November 23, 2015
Expires: N/A
Website: www.uponor-usa.com

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

Standard(s): ASTM E84 *“Standard Test Method for Surface Burning Characteristics of Building Materials”.*
 CAN/ULC S102.2 *“Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies”.*
 ASTM E119 *“Standard Test Methods for Fire Tests of Building Construction and Materials”.*
 CAN/ULC S101 *“Standard Methods of Fire Endurance Tests of Building Construction and Materials”.*
 UL 263 *“Fire Tests of Building Construction and Materials”.*

Models: AquaPEX™ (natural, red, blue)
 hePEX™
 helioPEX™ 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; CAN/ULC S102.2
- Flame Spread Index < 25, Smoke Developed Index < 50
- Nominal Size
- QAI Logo with ‘c’ and ‘us’ indicator on UPONOR PEX pipe products where appropriate.
- Manufacturing Traceability Label - Production date code

Rating(s): **The following outlines the performance of UPONOR pipe determined in accordance with the noted standards. The ratings outlined in the some of the tables below are achieved in assemblies that are defined in the QAI Design Listings.**

ASTM E84 – Surface Burning Characteristics

Products	Limitations	Flame Spread Index	Smoke Developed Index
AquaPEX™ (natural, red, blue) [*] hePEX™ helioPEX™ X2 RCW PEX™	Maximum 3/4-inch nominal diameter tubing; 18-inch minimum spacing between adjacent runs of tubing	< 25	< 50
ProPEX™ EP Fittings ProPEX™ EP MultiPort Tees PEX rings ProPEX™ EP Connectors ProPEX™ CPVC Adapters and Valves	Maximum 3-inch nominal diameter piping products and accessories, installed with approved minimum ½-inch thickness pipe insulation [°] ; No spacing requirements between adjacent runs.	< 25	< 50

CAN/ULC S102 – Surface Burning Characteristics

Product	Limitations	Flame Spread Index	Smoke Developed Index
AquaPEX™ (natural, red, blue) [*] hePEX™ helioPEX™ X2 RCW PEX™	Maximum 1-inch nominal diameter tubing; 18-inch minimum spacing between adjacent runs of tubing.	< 25	< 50
ProPEX™ EP Fittings ProPEX™ EP MultiPort Tees PEX rings ProPEX™ EP Connectors ProPEX™ CPVC Adapters and Valves	Maximum 3-inch nominal diameter pipe products and accessories, installed with approved minimum ½-inch pipe insulation [°] ; No spacing requirements between adjacent runs.	< 25	< 50

Note^{*}: Different sizes and different colors corresponding to AquaPEX™, hePEX™, and helioPEX™ X2 are dependent on manufacturer's availability

Note[°]: List of approved pipe insulation providers:

The following list of fiberglass insulation types (at minimum thickness of ½") are approved for use with UPONOR's hePEX, AquaPEX, and helioPEX X2 products when installed with UPONOR fittings and valves to maximum sizes outlined in tables above. The insulations noted must be Listed to ASTM C547 by an approved agency and are approved for use at the dimension specified above.

Insulation	Flame Spread Index	Smoke Developed Index
	(according to ASTM E84 / CAN/ULC S102.2)	
Manson Alley-K	< 25	< 50
Armaflex Composite		
Johns Manville Micro-Lok		
Johns Manville Micro-Lok HP		
Owens Corning Vapor Wick		
Owens Corning Fiberglass		
GLT Pipe and Tank		
Knauf Earthwool Redi-Klad		
Nomalock		

UL 263, ASTM E119, CAN/ULC S101 – Wall Assemblies

QAI Design #	Wall Type:	Wall Load:	Fire Endurance Period:
P321-1A	Light Gauge Steel Stud	Non-Load Bearing	1 hour
P321-1B	Wood Dimensional Lumber Stud	Restricted Load Bearing	
P321-1G	Light Gauge Steel Stud	Non-Load Bearing	2 hour
P321-1H	Wood Dimensional Lumber Stud	Non-Load Bearing	

UL 263, ASTM E119, CAN/ULC S101 – Floor/Ceiling Assemblies

QAI Design #	Floor/Ceiling Type:	Floor Load:	Fire Endurance Period:
P321-1C	Concrete	Restricted Load Bearing	2 hour
P321-1D	Concrete ^d	Restricted Load Bearing	
P321-1E	Concrete/Steel Joist	Load Bearing	1 hour
P321-1F	Wood Joist	Restricted Load Bearing	

Note^d: Either a 1-1/2 hour or 2 Hour Assembly

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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