

## RIIFO Oxygen Barrier PEX Tubing Specifications

### Product Information

RIIFO Oxygen Barrier PEX tubing is manufactured with a high quality cross-linked polyethylene with an oxygen barrier layer that restricts the passage of oxygen for use in hydronic radiant heating systems.

### Materials

RIIFO Oxygen Barrier PEX tubing is manufactured from cross-linkable high density polyethylene produced by grafting organo-silanes onto a polyethylene base. A catalyst is added to the cross-linkable polyethylene during extrusion to initiate the cross-linking process. Cross-linking is completed with hot water or steam. RIIFO Oxygen Barrier PEX tubing includes three (3) layers. The first layer is cross-linked, high density polyethylene. The second layer is an adhesive for the third layer, the ethylene vinyl alcohol layer (EVOH oxygen barrier). EVOH is highly resistant to the passage of oxygen.

### Recommended Applications

RIIFO Oxygen Barrier tubing is recommended for use in hydronic radiant heating, cooling, and snow melting systems using water or a water/glycol mix as the heat transfer medium. Tubing may be installed in concrete, gypsum based lightweight concrete, sand, asphalt (in accordance with special guidelines) in or under wood flooring or behind wallboard or plaster. RIIFO Oxygen Barrier PEX may also be used as transfer lines for baseboard heating systems with a maximum operating temperature of 200°F @ 80psi.

### Handling and Installation

Install RIIFO Oxygen Barrier PEX in accordance with installation manuals provided by manufacturer and applicable code requirements. Water or air can be used to pressure test the system. Please follow manufacturer's requirements on pressure and length of time. RIIFO Oxygen Barrier PEX is rated for 90 day UV protection. For information on the suitability for other applications, contact your RIIFO representative.

### Features & Benefits

- Corrosion resistant when exposed to acidic water
- Highest chlorine resistance rating available through ASTM
- Flexible multi-length coils require less fittings reducing connection errors and are easier to install
- Highly flexible and expands, making it more resistant to freeze breakage
- Coils are available in 100', 300', 500', and 1000' lengths
- Straight lengths are available in 20'
- 25 year warranty as a RIIFO system

### Quality Assurance

When the product is marked with ASTM F876/F877 and CSA B137.5 designation, it affirms that the product was manufactured, inspected, sampled and tested in accordance with these specifications and has been found to meet the specified requirements and includes evaluation of the degree of cross-linking of the finished tubing according to the ASTM D2765 standard method.

### Certifications

RIIFO Oxygen Barrier PEX tubing has been tested for health effects to ANSI/NSF61 and performance to ANSI/NSF14.

**PEX 5206** – Tested and listed to the NSF-pw (CL5) chlorine resistance rating for an end use condition of 100% at 140°F per ASTM F876/F877, which is the highest chlorine resistance rating available through ASTM. When the product is marked with the PEX5xxx NSF-pw (CL5) designation, it affirms the product is approved for use in continuous domestic hot water circulation systems with up to 140°F.



## RIIFO Oxygen Barrier PEX Tubing

### Pressure Drop Table

Expressed as PSI/ft. Pressure Loss

GPM	3/8"	1/2"	5/8"	3/4"	1"
0.5	0.025	0.051	0.002		
1	0.075	0.017	0.007	0.003	
2	0.261	0.053	0.021	0.010	
3	0.541	0.110	0.043	0.021	
4		0.184	0.073	0.035	0.010
5		0.274	0.110	0.053	0.016
6		0.381	0.153	0.730	0.022
7			0.210	0.963	0.029
8			0.256	0.123	0.037
9			0.317	0.151	0.046
10				0.183	0.055
11				0.217	0.065
12				0.254	0.076
13					0.088
14					0.101
15					0.114

### Tube Spacing

When the RIIFO Oxygen Barrier PEX tube space is less than the minimum recommended bending dimension, the loop ends should be swept out to at least the dimensions shown.

Otherwise, if tube spacing is equal or greater than "X", a standard loop may be used.



Tubing Size	With the coil
3/8"	8"
1/2"	10"
5/8"	12"
3/4"	14"
1"	18"

Note: Minimum bend radius: 6 x O.D.

### RIIFO Oxygen Barrier PEX Oxygen Permeation

All sizes have less than 0.1 gram/m<sup>3</sup>/day

NOTE: RIIFO Oxygen Barrier PEX Tubing meets DIN 4726 requirements for oxygen tight pipes.

### RIIFO Oxygen Barrier PEX Tubing

ASTM F876/F877 (Available in both coils and straight lengths)

Stock Code	Tubing Size	O.D.	Wall Thickness	Nom I.D.	Weight per ft.	Vol (gal) per ft.
BPX38	3/8"	0.500±0.003	0.070+0.010	0.360	.0450	0.50
BPX12	1/2"	0.625±0.004	0.070+0.010	0.485	.0580	0.92
BPX58	5/8"	0.750±0.004	0.083+0.010	0.574	.0838	1.34
BPX34	3/4"	0.875±0.004	0.097+0.010	0.681	.1100	1.83
BPX1	1"	1.125±0.005	0.125+0.013	0.875	.1706	3.03

Note: Dimensions are in English units. Tolerances shown are ASTM requirements. RIIFO Oxygen Barrier PEX is manufactured within these specifications.