

PEX-A

Red PEX Pipe

SharkBite® PEX-A is a cross-linked polyethylene tubing designed for use in residential and commercial plumbing applications. PEX-A pipe is flexible and easy to work with, which reduces the number of fittings needed to complete a job reducing cost and leak points. PEX-A is also extremely durable and corrosion/ freeze resistant. Approved for use with SharkBite EvoPEX, SharkBite Universal push-to-connect (ASSE 1061), poly and brass expansion fittings (ASTM F1960), plastic barb (ASTM F2159) and brass barb (ASTM F1807) fittings.

Features and Benefits

- PEX-a offers superior flexibility
- Chlorine & UV Resistant. Highest-rated chlorine resistance.
- Freeze - Resistant. PEX-A pipe is freeze-resistant and can expand slightly if frozen; PEX-A will contract back to its original form when thawed. PEX-A is not freeze-proof. PEX-A should be insulated to prevent freezing. The PEX-A pipe is approved for water service lines and burial applications, including being buried under concrete.
- Optimize Performance and Efficiency. Reduces the number of fittings needed to complete jobs; saving on overall cost and reducing leak points
- Warranty. 25-year warranty
- Superior Flexibility. Able to bend pipe around corners which removes the need for 45° or 90° elbows in certain situations. SharkBite has gone through a change in our coiling process that will increase the flexibility of our coiled pipe even more.
- Cost Effective. SharkBite PEX-A is substantially lower in cost than copper pipe — SharkBite PEX-A pipe costs a third of the price of copper. SharkBite PEX-A pipe is a fixed cost as prices don't fluctuate daily like copper pipe.

Applications

Potable water distribution, radiant heating¹, direct burial², embedded in concrete, snow & ice melting, geothermal ground-loops, turf conditioning, municipal water service lines, fire suppression³ & plenum application⁴.

Specifications

The system shall be plumbed using SharkBite PEX-A pipe, and all joints shall be made using SharkBite expansion fittings with expansion rings, SharkBite push-to-connect fittings, SharkBite brass barb fittings, or SharkBite barb fittings used with copper crimp rings or stainless steel clamps. Pipe and fittings shall be installed as outlined in the SharkBite PEX-A installation manual.

¹ Approved for radiant heating when heating system components are made of non ferrous metals.

² Approved for water service lines and burial applications including being buried under Concrete.

³ 3/4" & 1" PEX pipe are approved for residential multipurpose (fire sprinkler/home plumbing systems).

⁴ Approved for installation in a supply or return plenum (HVAC air distribution box.)



Specification Data

Materials

Cross-Linked Polyethylene / PEX-A/ Peroxide Method

Performance Data

(5) Chlorine Resistance	We are rated for continuous recirculation at 140°F
(0) UV Resistance	zero-month UV resistance
(06) Hydrostatic Stress	Tested to 630 psi at 73°F

Technical Data

Minimum working temperature	33°F to 73°F at 160 psi 180°F at 100 psi
Maximum working pressure	200°F at 80 psi

Typical Installation

Proper Support of SharkBite PEX

SharkBite PEX must be properly supported to protect against excessive strain. For both vertical and horizontal applications, we recommend the tubing be supported every 32 in. between supports, leaving a little slack (1/8"-1/4") in the tube to allow for normal expansion and contraction. Always use approved PEX supports and never use a support that has sharp edges.

Bend Radius

Minimum Bending Radius is 8 times Outside Diameter (OD)

Support Spacing

Horizontal

Nominal size 1" & smaller 32"

Nominal Size 1-1/4" and larger 48"

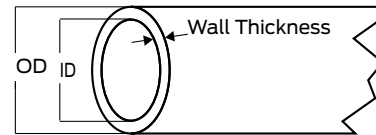
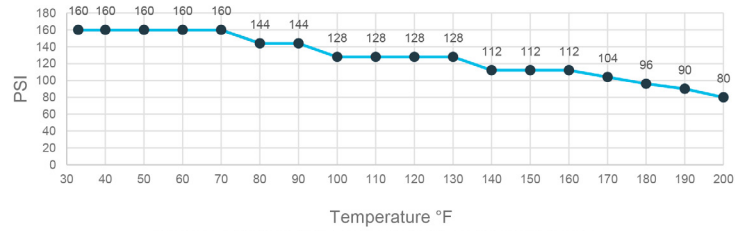
Vertical

Base of riser Mid-story guide/every 5'

Expansion and Contraction

Since SharkBite PEX-A tubing will expand and contract during temperature changes, please allow slack when running the tube through the building. SharkBite PEX-A will expand and contract at a rate of approximately 1" per 100 feet of tubing for each 10°F change in temperature (see equation below). We recommend that offsets and expansion loops be used as ways to compensate for expansion and contraction. Expansion rate $1.1" / 10^{\circ}\text{F} / 100'$

Temperature and Pressure Performance

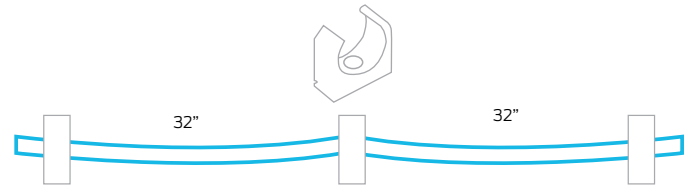


Dimensional Data

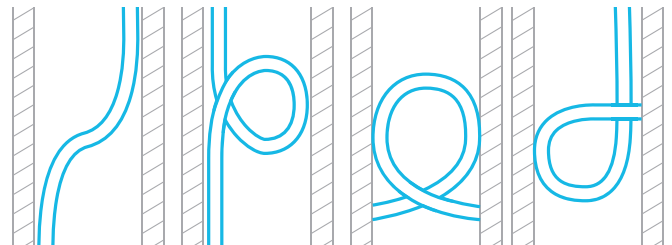
Nominal Size	O.D.	Wall Thickness	Median	Weight per ft. (lbs)	Vol. per ft. (gal.)
1/2"	0.625 ± 0.004	0.070 + 0.010	0.475	0.054	0.025
3/4"	0.875 ± 0.004	0.097 + 0.010	0.671	0.103	0.035
1"	1.125 ± 0.005	0.125 + 0.013	0.862	0.17	0.045

Dimensions are in English units. Tolerances referenced from ASTM F876.

Proper PEX Support



Expansion/Contraction Loop Methods



Concrete Installation

The SharkBite PEX tubing can be submerged in concrete but we recommend following these guidelines to ensure a long-lasting, maintenance-free installation.

- Protect the tubing with non-metallic sleeves when entering or exiting the concrete slab. A larger diameter piece of SharkBite PEX also works well in this application.
- Do not allow joints within the slab. Use a continuous length of SharkBite PEX within the slab and be sure to check for leaks before pouring concrete.

Codes and Standards

NSF/ANSI/CAN 61	Drinking Water System Components - Health Effects
NSF/ANSI 14	Plastics Piping System Components and Related Materials
ASTM F876	Standard for Cross-linked Polyethylene (PEX) Tubing
ASTM F2023	Standard Test Method for Evaluating the Oxidative Resistance of Crosslinked Polyethylene (PEX) Pipe, Tubing and Systems to Hot Chlorinated Water
ASTM F2657	Standard Test Method for Outdoor Weathering Exposure of Cross-linked Polyethylene (PEX) Tubing
ASTM F877	Standard for Cross-linked Polyethylene (PEX) Hot- and Cold- Water Distribution Systems
NSF/ANSI/CAN 372	Drinking Water System Components - Lead Content
ASTM E84	Standard Test Method for Surface Burning Characteristics of Building Materials
CAN/ULC S102.2	Standard Method of Test for Surface Building Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies
ASTM E119	Standard Test Method for Fire Tests of Building Construction and Materials
CAN/ULC S101	Standard Methods of Fire Endurance Tests of Building Construction and Materials
CSA B137.5	Cross-linked Polyethylene (PEX) Tubing Systems for Pressure Applications



Pressure Loss Data

Flow Rate GPM	Pressure Loss psi/100 ft of pipe		
	1/2"	3/4"	1"
0.2	0.099	0.019	0.006
0.3	0.204	0.039	0.012
0.4	0.341	0.065	0.019
0.5	0.508	0.097	0.029
0.6	0.703	0.135	0.040
0.7	0.926	0.177	0.053
0.8	1.175	0.225	0.067
0.9	1.450	0.278	0.082
1	1.751	0.335	0.099
1.1	2.076	0.397	0.118
1.2	2.425	0.464	0.138
1.3	2.799	0.535	0.159
1.4	3.195	0.611	0.181
1.5	3.615	0.691	0.205
1.6	4.058	0.776	0.230
1.7	4.523	0.865	0.256
1.8	5.010	0.958	0.284
1.9	5.519	1.055	0.313
2	6.050	1.157	0.343
2.5	9.024	1.724	0.511
3	12.510	2.390	0.708
3.5	16.500	3.150	0.933
4	20.970	4.002	1.185
4.5	25.900	4.943	1.463
5	31.300	5.972	1.768
6	43.440	8.284	2.451
7		10.930	3.232
8		13.890	4.108
9		17.170	5.076
10		20.750	6.134
11		24.630	7.281
12		28.810	8.514
13			9.832
14			11.240
15			12.720