# PEX-A
# White 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 the highest-rated 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 45º or 90º 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 heating[1], direct burial[2], embedded in concrete, snow & ice melting, geothermal groundloops, turf conditioning, municipal water service lines, fire suppression[3] & plenum application[4].

## 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.)



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# Specification Data

## Materials

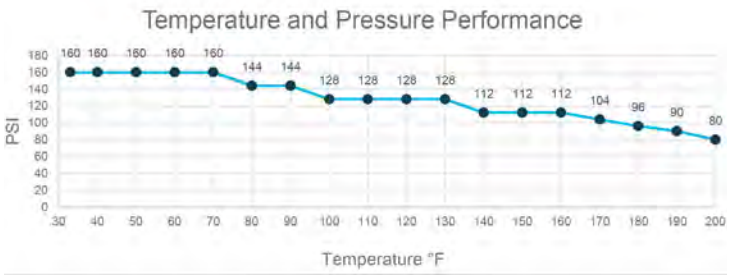
Cross-Linked Polyethylene / PEX-A/ Peroxide Method

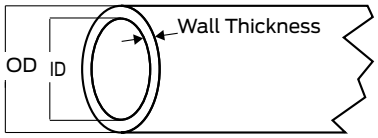
## Performance Data

| | |
|---|---|
| (5) Chlorine Resistance | We are rated for continuous recirculation at 140ºF |
| (1) UV Resistance | one-month UV resistance |
| (06) Hydrostatic Stress | Tested to 630 psi at 73ºF |

## Technical Data

| | |
|---|---|
| Minium working temperatur | 33ºF to 73ºF at 160 psi<br>180ºF at 100 psi |
| Maximum working pressure | 200ºF 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

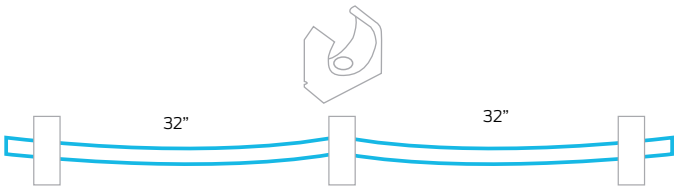
Since SharkBite PEX-A tubing will expand and contract during temperature changes, please allow slack when running the tube through the building. SharkBite PEX-A will expand and contract at a rate of approximately 1" per 100 feet of tubing for each 10ºF change in temperature (see equation below). We recommend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

## Dimensional Data

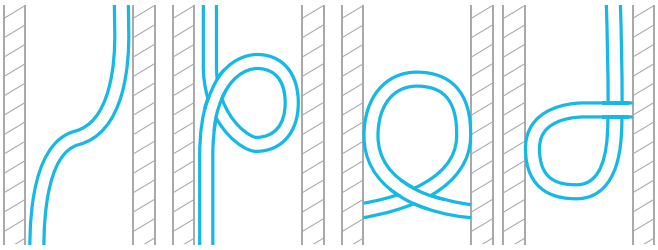
| Nominal Size | O.D. | Wall Thickness | Median | Weight per ft.(lbs) | Vol. per ft.(gal.) |
|---|---|---|---|---|---|
| 1/2" | 0.625 ± 0.004 | 0.070 + 0.010 | 0.475 | 0.054 | 0.025 |
| 3/4" | 0.875 ± 0.004 | 0.097 + 0.010 | 0.671 | 0.103 | 0.035 |
| 1" | 1.125 ± 0.005 | 0.125 + 0.013 | 0.862 | 0.17 | 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 |
| **AWWA C904** | Cross-linked Polyethylene (PEX) Pressure Pipe, 3/4 in. (13mm through 3 in. (76 mm), for Water Service (3/4" and larger) |

## 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 |