Background

Cross-linked polyethylene (PEX) is a high-temperature, flexible, polymer pipe. Cross-linking technology was first developed in Europe 35 years ago and has been used around the world for a variety of applications.

PEX pipe was introduced into the North American market in 1984 due to the success in Europe with extensive testing for durability and material performance.

The PEX piping industry is highly regulated. The letter designations of PEX Pipe are not related to any type of rating system. All PEX pipe must meet the same qualification requirements as specified in the PEX Standards. Continuous use temperature ratings as high as 200°F (93°C) are required as well as standardized chlorine resistance testing to ensure that the piping will withstand the most aggressive drinking water conditions.

SharkBite PEX

SharkBite PEX is an economical solution meeting the highest chlorine resistance standards and utilizing the most energy efficient manufacturing process in Cullman, AL. SharkBite PEX can bend up to 6 times the outside diameter of the pipe which is the maximum bend radius recommended by PEX pipe manufacturers and can be used in a wide variety of applications including:

- Fire suppression systems (residential fire sprinklers)
- Municipal water service pipe for use in underground applications
- Radiant floor heating systems for suspended floor systems or in slab construction
- Snow and ice melt systems for sidewalks, driveways, entrances, and ramps
- Turf conditioning for greenhouses, golf courses, and sports fields
- Water reuse and reclamations systems

For more information, please contact Customer Service at customerservice@sharkbite.com
Benefits of SharkBite PEX Compared to CPVC

**Health/Safety**
SharkBite PEX doesn’t require glue, which means no respirator or need for open, well-ventilated work area. CPVC glue is noxious, stains clothes, and is hazardous if in contact with eyes.

**Air Testing**
CPVC cannot be air tested as the product is brittle. Air testing CPVC can cause severe personal injury and damage as the tubing can explode. SharkBite PEX can be air-tested at normal operating pressures.

**Thermal Expansion**
The directional changes and slack in the SharkBite PEX pipe installation accommodates for thermal expansion and contraction.

**Speed of Installation**
The connections with a SharkBite PEX system (especially with SharkBite push to connect fittings) are quicker to make than dry fit install with CPVC cement.

**Cement Installation Issues**
There isn’t a measurement of the proper amount of cement needed to make a good connection with CPVC fittings and pipe. Excess cement will reduce the bore size and water flow as well as soften the interior wall that can lead to rupture. Insufficient amount of cement causes gaps in the joint which leads to water leaks.

**Wet or Dry Installation**
SharkBite PEX pipe can be installed with SharkBite push to connect fittings in a wet or dry installation. Plumber must dry fit CPVC fittings and pipe which can lead to leaks or fittings blowing off without cement at the joint.

**Cold Conditions**
SharkBite PEX piping is freeze damage resistant and can expand and contract as water freezes and thaws within the tubing. No tubing is freeze proof. CPVC pipe is susceptible to cracking at temperatures below 50°F.

**CPVC Cement Limitations**
CPVC cement has a defined shelf life, must be sealed properly, and cannot be used if frozen. CPVC cement cans must be discarded following government regulations due to solvent.

**Flexibility**
SharkBite PEX pipe offers much tighter bend radius to CPVC. Example: PEX has bend radius of 3½” inches for ½” pipe as opposed to 18” bend radius for ½” CPVC pipe.

**Weather Conditions**
Rain and high humidity can affect the seal of the CPVC fitting joint as the moisture can dilute the cement. High humidity can lead to a slower install as it may cause longer drying time of the cement.

**Fewer Fittings**
SharkBite PEX is able to bend around corners which removes the need for 45° or 90° elbows in certain situations.