

PEX FAQ

What is PEX?

PEX is an acronym for: crosslinked high density polyethylene (HDPE) tubing. PEX tubing is created by melting HDPE and extruding it into continuous tubing to form a resilient, high performing product with impressive operating characteristics. Crosslinking HDPE causes the material to become stronger and resistant to cold temperature cracking or brittleness on impact while retaining its flexibility for efficient use in potable plumbing, radiant heating, and hydronic systems.

What are advantages of PEX in general?

- System durability, longevity, and efficiency:
 - PEX does not pit or corrode and resists scale build up.
 - PEX is highly flexible and expands, making it more resistant to freeze-breakage.
 - PEX installations require fewer fittings; less potential for connection errors.
 - PEX is capable of moving water at higher velocities and absorbing water hammer; Reduces possibilities of erosion corrosion and noise associated with quick stop valves.
 - PEX has a low thermal conductivity value; It does not transfer heat/cold as easily, making it more energy efficient.
 - PEX offers colored tubing; Blue and red tubing for quick and easy install and identification of hot and cold water lines.
- Safety and cleanliness:
 - PEX does not require a flame or threading equipment.
 - PEX does not require the use of glues/solvents, solder, or flux.
 - No burn permits or fire watch needed, no chemicals, oils or metal shavings to clean up.
- Installation and material cost savings;
 - PEX is faster and easier to install with fewer fittings and flexible tubing.
 - PEX can be tested immediately after installation; Crimp and press PEX fitting systems can be tested immediately without the need to allow for curing, retraction, or cooling.
 - PEX tubing is less expensive than other traditional materials.
 - PEX has little aftermarket value; Jobsite theft is reduced.

What are the types of PEX?

Per the European standard, there are three main classifications of PEX by manufacturing process. Regardless of brand or propaganda, these letters/classifications are not grades nor do they have any relation to the quality or performance of the tubing. All listed PEX must adhere to the same minimum industry standards.

Define Engel (PEX-a)

PEX-a is produced by the peroxide (Engel) method and performs a “hot” crosslinking, above the crystal melting point. During the process a crosslinked bond forms between carbon atoms. The polymer must be kept at high temperature and pressure for long periods during the process.

Define Silane (PEX-b)

The silane method, also called the “moisture cure” method, results in PEX-b. In this method, crosslinking is performed in a secondary post-extrusion process, producing crosslinks between a cross-linking agent. The process is accelerated with heat and moisture. The crosslinked bonds are formed through silanol condensation between two grafted units, connecting the polyethylene chains.

Define Irradiation/Electron Beam (PEX-c)

PEX-c is cross-linked in a post-extrusion process where the PE is passed through an electron radiation beam. The radiation beam breaks the existing linear links between the polymer molecules and creates new crosslinked bonds.

Advantages of PEX-b (Silane)

- First widely accepted US industry standard
- Greater resistance to UV
- Greater chlorine resistance
- Greater molecular density means a lower degree of crosslinking required to meet performance standards

Advantages of crimp system?

- Proven longevity of F1807, F2159 and F877 systems in US construction
- Immediate testing ability
- Price competitive
- Simple tooling

What are the advantages of PEX over CPVC?

- Flexible tubing – easier install
- Longer runs – minimize fittings
- Freeze forgiving – flexibility allows for some expansion over rigid piping
- Reduced water hammer noise
- No harmful VOC's when in contact with water

What are advantages of PEX over PE-RT?

- Proven longevity of US industry standard
- More robust material
- PE-RT tested to a lower temperature of 180° F for F876 standard vs. PEX at 200° F
- E84 plenum rated for fire suppression
- PEX undergoes cross-linking at the molecular level which provides a superior and more robust product over PE-RT

What are the advantages over copper?

- Safety – no flame
- Environmental – no burning or off-gassing
- Less threat of product being stolen
- Reduction in noise resulting from water hammer
- More durable to damage/dents
- Water conservation with proper line sizing

What is the RIIFO warranty?

- **Pipe:** 25 years as a RIIFO system (tubing and fittings)/10 years with use of another manufacturer's fittings
- **Fittings:** 10 years

What are best installation practices?

- Under slab
- Sleeve or protect PEX tubing at point of slab penetration
- Replace any kinks or bends in tubing
- Utilize bend supports where necessary
- Calibrate tooling daily as required

Product storage recommendation

- All PEX should be stored inside to limit UV exposure

RIIFO

1650 Horizon Parkway Suite 100
Buford, Georgia 30518 USA

T: (1) 833-GO RIIFO (467-4436)

W: www.riifo.com/us