

Guest Column,

New Home Construction, Plumbing Part One

By Ronnie Godfrey, CGB, president, R Godfrey Homes

I titled this article “Part One” because there is much to be covered in the plumbing topic. Today let’s talk about the water supply lines that will go into your new home. We’ll begin with a product called Pex. It is rapidly replacing the use of copper for new home water lines.

Pex is the industry given name for a form of plastic plumbing lines for water supply in a new home. The correct name is cross-linked polyethylene. A special manufacturing process has created a durable plastic ideal for use in water supply lines. PEX tubing is made from a plastic created from molecules of high-density polyethylene that have been permanently linked together by a process called cross-linking. There have been attempts in the past to develop plastic lines and these have met with varying degrees of success or lack thereof.

This time they got it right. Here is what the **Partnership for Advancing Technology in Housing** had to say about Pex on their Toolbase.org website (see link below):

“In parallel layouts where supply lines are dedicated to one fixture, only two fittings are used. Labor costs can be lower than rigid piping system installations.

There is less heat loss from PEX than there is from metallic pipe. The small diameter tubing that can be used in parallel installations allows less water consumption waiting for delivery of the heated water.

Polyethylene has no VOCs and can be recycled.

Successfully used in Europe and the U.S. for over 30 years. Extensive testing and certification is conducted to assure durability and resistance to effects of high and low temperatures and chlorine.”

http://www.toolbase.org/pdf/techinv/pexhomerunplumbing_techspeg.pdf

It is important to note that Pex is approved by all codes in the US. The plumbing industry is rapidly embracing it as it proving to be the far superior product.

In a typical installation when using copper, the supply lines are placed under and in the slab foundation. The problem with that is if you develop a leak under the slab, then you must jack hammer your floor to access the leak, if you can find it. Copper reacts with concrete and will corrode over time if in direct contact. Plumbers try to sleeve the copper where it passes through the foundation, but can't always be sure that in the placement of the concrete that the sleeving wasn't compromised.

Pex may be installed under the slab as well. Where it passes through the concrete it does not require a sleeve as it does not react with the concrete. We have found the better way to install is overhead. In our homes there are no water lines in the foundation. Consideration must be given to protection from freezing when installed in such a manner. This of course is no problem as our entire attic is insulated space since we apply our insulation to the underside of the roof (see my article, "Nothing Insulates Like Insulation").

Another benefit to Pex is that usually we install, inside the home, a manifold that is easy to access. This allows you to turn off water to any fixture that you desire. If you need to make a repair to a faucet or install a new one, you simply turn the handle labeled for that fixture and the water is off.

The only downside to Pex that we see in the industry is that like anything new it requires training. Make sure your plumber is properly trained. The manufacturers of Pex send their field representatives to the plumbers and train them on its proper use and installation, using videos, technical documents and hands on demonstrations.

Here is a different water supply; ¹³Jesus answered, "Everyone who drinks this water will be thirsty again, ¹⁴but whoever drinks the water I give him will never thirst. Indeed, the water I give him will become in him a spring of water welling up to eternal life." John 4, 13:14.

In our next article we will look at other aspects of plumbing you new home.

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