

POLYBUTYLENE WATER PIPES

The plumbing systems can include polybutylene water pipes, commonly referred to as PB, that have been alleged to be defective, and could be replaced at no cost to the consumer. They were installed in homes between 1978 and 1995.

How to identify:

Polybutylene (PB) plumbing, when used for the potable water supply system in the house, is a gray, (possibly silver or black) plastic pipe. Since the pipe is used with copper stab-outs for fixtures with exposed plumbing (such as in the bathroom), it is necessary to look in an area where the main water supply plumbing is exposed, such as in an unfinished basement, crawlspace or under the kitchen sink. Note: PB for underground service from the water company to a structure or "Yard Service Line" is blue (possibly gray or black). Yard Service is not readily visible. PB pipe is not used for drains, waste or vent piping

The condition of the PB pipe and fitting cannot be determined by any inspection method since there are no visible signs of deterioration until failure occurs.

What to do?

There is no single course of action that is recommended for consumers with a PB system. Many recommend replacing the entire system, even if there have not been any problems. This course of action should be considered on an individual basis, taking into account a person's level of risk aversion, the types of materials used and the age of the system, as well as past performance. For information on the Cox v Shell settlement contact the Consumer Plumbing Recovery Center at (800) 356-3496 or visiting their web site at www.pbpipe.com.

Problems With Polybutylene:

Although some poly piping problems stem from improper installation, most complaints are with the integrity of the piping itself. Polybutylene pipe is known to deteriorate due to contact with oxidants normally found in public water supplies. The failure can occur in the plastic fittings or in the pipe itself. A main concern regarding poly pipe is that, since the oxidants are carried in the water, the pipe deteriorates from the inside. This makes it very difficult to determine if the pipe is truly in good condition. Most home inspectors cannot give a reliable assessment on the condition of poly piping unless there is a visible problem with the exterior of the pipe or its installation. In addition, when a leak occurs, it may be extremely severe because the deterioration occurs from within.

Poly pipe leaks are unpredictable and there are no symptoms to warn of an impending leak. Some factors that affect polybutylene piping adversely can include:

- o Poor installation
- o Water quality
- o Pipe age
- o Chlorine levels
- o Deterioration of fittings (both metal and plastic)

When polybutylene pipe reacts with the oxidants in normal tap water, it becomes brittle, sometimes scaling or flaking. This results in a fracturing of the interior surface of the pipe, which allows for more deterioration. Eventually the pipe will begin to leak, causing damage throughout a home. Poly pipe with plastic fittings or with metal fittings will eventually incur damage; poly piping is not a reliable piping under any circumstances. If a pipe has been leaking for some time without the knowledge of a homeowner, severe structural damage to the home can result, making repairs extremely difficult.

Damage from polybutylene pipe leaks can be expensive, in some cases more than the original cost of the house. Insurance companies sometimes cancel or refuse policies for homes with known poly piping problems, and it is difficult to market a home that has such an unreliable plumbing system.

Poly piping can be used anywhere in the home's plumbing system - usually its presence can be ascertained by checking the attachments under household sinks, near hot water heaters, or leading into toilets. Following is a list of common places you may inspect for the presence of poly piping:

Interior

- o Entering the water heater
- o Crossing basement ceilings
- o Feeding sinks, toilets, and bathtubs

Exterior

- o Entering the home through basement walls, etc
- o Attached to your home's main water shutoff valve
- o Attached to your home's water meter (often a copper pipe at a water meter will be attached to poly pipe somewhere underground, so it is wise to check both ends of the pipe)

Note: Not all polybutylene piping systems use polybutylene fittings; some use copper. Therefore, if you see copper fittings on a pipe, it does not indicate that you do not have poly piping.

Another important area where poly piping may have been installed is the incoming water supply line to your house. If this incoming pipe is a light blue plastic pipe, it is likely that you have a type of poly pipe informally called "Big Blue". This pipe is extremely prone to failure and unexpected bursting. If you have this type of pipe as an incoming water supply line, it is recommended that you have it inspected by a licensed plumber for replacement as soon as possible.

Remediation/Replacement:

The only way to eliminate the possibility of problems that can come from deteriorating polybutylene piping is to replace the pipe itself. Fortunately, this procedure is relatively inexpensive and can usually be performed by a certified plumber or re-pipe specialist. The process of re-piping (both interior and exterior) can involve some of the following procedures:

Exterior

- o Slight excavation with a trencher

- o Pipe-splitting (whereby the pipe is purposefully cut in half and a new, stable pipe is run through it)
- o Deep trench excavation (in areas with an exceptionally deep-buried pipe system)

Interior

- o The possible cutting of several holes in walls and floors

Poly piping runs behind the walls and under the floors of a home, but while the re-piping of a house will require that holes be cut in the walls and floors, a professional can perform it with a minimum of damage to walls and other structures. If there has already been damage to your home from a poly pipe leak, then the cost of re-piping and repairing your home will be increased considerably.

Property Values, Ownership, and Buyer Notification:

When a home containing poly piping is placed on the market, buyers will often discount the price (due to the material defect) - even if the poly has not yet shown any leaks - because it is known that poly piping will leak eventually. If a seller is aware, it is wise to replace any poly piping before putting a house on the market.

We are not aware of any current laws specifically regarding the disclosure of poly piping on a property, but some property brokers have been sued for not disclosing the presence of polybutylene piping in buildings they sell. Real Estate brokers selling homes containing poly piping should be prepared to be held liable if buyers have a non-disclosure complaint. At the very least, both sellers buyers should be provided with some sort of information regarding poly piping and its dangers, and sellers should be given the opportunity to replace their piping before putting their home on the market.

There has been a **\$950 million** class action suit that may provide financial aid for homeowners who have suffered damage from polybutylene piping installed under certain conditions. The deadline is expected to occur in **2007**.

Polybutylene vs. PEX

Polybutylene pipe is typically gray or black, but is sometimes blue. There is another type of piping - PEX piping - that is more reliable than poly piping but is also known to be colored blue. It should not be confused with poly piping