



Home Tips®



• CHRISTIAN BUILDING INSPECTORS, INC., 1003 STAR COURT, NORCROSS, GEORGIA 30093, (770) 925-8518 • AUGUST 1995 •

Q & A

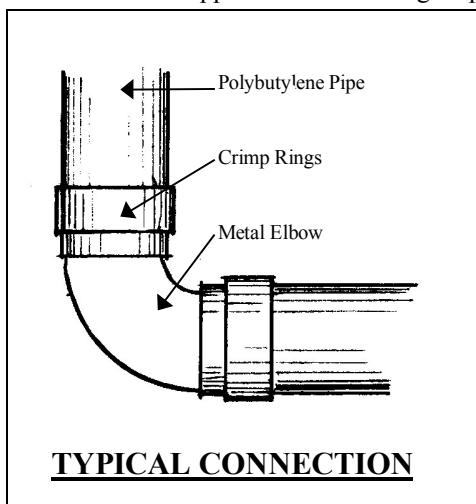
What Is The Problem With Polybutylene Water Pipes?

We have gray plastic water pipes in our house and we have been told that they may be defective. How can you tell and what can we do about it?

The gray flexible plastic piping you are referring to is called Polybutylene commonly referred to as PB piping which was produced originally by Shell Oil Company. In the 1980's Shell promoted PB piping as a cheap, easily installed successor to copper.

According to Michael Casey, with Michael Casey and Associates, El Cajon, CA., a great deal of controversy has surrounded PB piping in recent years because of leaks in both interior and exterior supply piping. The industry at first blamed them all on faulty installation. It later acknowledged that the plastic fittings were a problem. The original plastic fittings used barbed inserts made of polyacetal. The acetal fittings were used from approximately 1980 through 1986. The plastic fittings are stressed and crack by pressure used to secure the crimp rings, leaving the material susceptible to attack by chlorine and other chemicals in the water supply.

Around 1985 copper and brass fittings replaced the plastics.



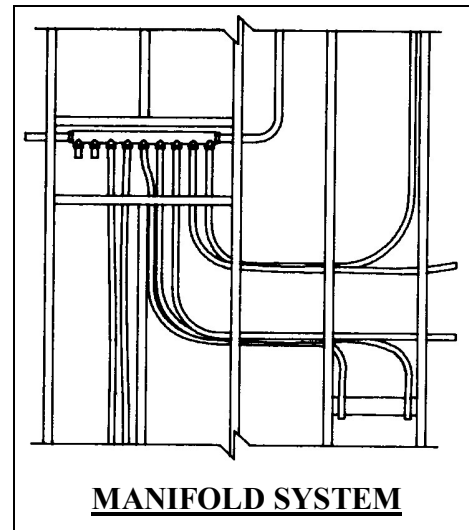
TYPICAL CONNECTION

The fittings were attached to the pipe with crimp rings. The crimp rings were originally made of aluminum and then changed to copper. The crimping tool used to affix the rings at the fittings was a combination

tool capable of crimping both 1/2" and 3/4" piping. Due to the difficulty of keeping this tool calibrated, these fittings sometimes leaked also. The combination tool was discontinued in 1985. Installers were advised to use separate

tools for various sizes which did away with the calibration problem.

Another solution to the fitting problem has been solved by using what is referred to as a "Manifold System". This system utilizes a manifold, located at the main water supply,



where all of the pipe connections are made out in the open so you will be able to inspect all of the connections. The pipes run all the way to the fixtures without any fittings being concealed. This eliminates the problems associated with leaking fittings that are hidden

or concealed. The manifolds are gaining in popularity especially in the Atlanta area.

The problems with the pipe itself is not consistent or very clear. Some people think the pipe cannot stand up to normal levels of chlorine, hot water, and physical stress - a charge which the industry denies. We find very few problems with the actual pipe around Atlanta. The biggest piping problem seems to be with the main piping from the street called "Big Blue" for its typically blue color. Although rare, sometimes this pipe fails underground and has to be replaced.

Just because you have polybutylene piping in your home does not mean you will experience any problems. The industry has improved on the products and most homeowners find that they do not experience problems. If you do have problems, contact your plumber and they will assist you in evaluating your system or refer you to someone who can.

Information on proper installation procedures and common problems are outlined in the booklet "PB Handbook One" which can be obtained from the Plastic Pipe and Fitting Association, 800 Roosevelt Road, Building C, Suite 20, Glen Ellyn, Illinois, 60137, (708) 858-6540.

In addition, the Plumbing Claims Group (PCG) is a hotline set up by the manufacturers of polybutylene to provide information and warranty service. PCG can be contacted at 500 North Central Expressway, Suite 125, Plano, Texas 75094-0744 or call (800) 356-3496. It is not uncommon for homeowners who have two or more major leaks in their

