

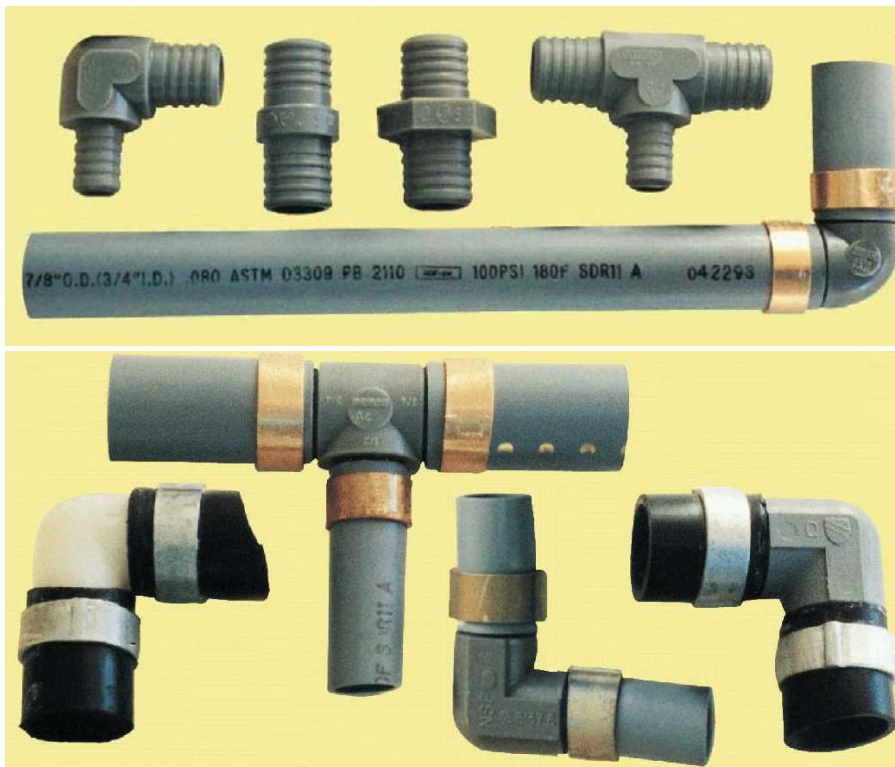


What is Polybutylene Piping

What Is Polybutylene Piping



Polybutylene Pipe- Yard Service Line is typically blue (13), gray (14), or black (15). Inside Pipe is typically gray (14) or Black (15). Not that polybutylene pipe marked "PB 2110 M" is excluded.



Polybutylene pipe is usually gray or black plastic. The acetal inset fittings are usually gray and sometimes white. There are a variety of other fitting systems used with this type of pipe, but only pipe assembled with the fittings shown above are involved in the Spencer class action law suit. The Spencer class action suit encompasses Polybutylene pipe configured as shown in the above pictures. This type of pipe can be prone to pin holes or bursting. Normally this type of pipe is used for feed lines from the street source to the house. Some builders did use this pipe in the interior walls of homes, but it is rare. Check with a certified home inspector to determine if this pipe is in place.

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What is Polybutylene Piping

Uses Of Polybutylene Piping

Polybutylene is a form of plastic resin that was used extensively in the manufacture of water supply piping from 1979 until about 1995. Due to the low cost of the material and ease of installation, polybutylene piping systems were viewed as "the pipe of the future." As a substitute for traditional copper piping which requires skilled labor for its installation, polybutylene piping and fittings were used in millions of homes throughout the United States and Canada. It is most commonly found in the "Sun Belt" where residential construction was most intense through the 1980's and early-to-mid 90's, but it is also very common in the Mid Atlantic and Northwest Pacific States.

The piping was believed to be used in the construction of over 6,000,000 homes, but some experts indicate that it may have been used in as many as 10,000,000 homes. It was used as underground water mains and/or as interior water piping. Most probably, the piping was installed in about one of every four homes built during the years in which the pipe was manufactured.

Polybutylene piping and fittings were used for both underground water mains as well as for interior water distribution systems. Exterior polybutylene underground water mains are usually blue, but may be gray or black (do not confuse black poly with polyethylene pipe). Exterior poly is usually 3/4" or 1" in diameter, and it may be found entering your home through the basement wall or floor, concrete foundation/slab or coming up through your crawlspace; frequently it enters the home near the water heater. Your main shutoff valve is attached to the end of the water main. Also, you should check at the water meter that is located at the street, near the city water main. It is wise to check at both ends of the underground pipe because we have found cases where copper pipe enters the home, and poly pipe is at the water meter. Obviously, both pipes were used and connected somewhere in the middle, underground.

Polybutylene used inside your home is most frequently used for interior water distribution. It is a substitute for the traditional copper pipes that you see in most homes, so you should look for poly where you normally see copper: near the water heater, running across the ceiling in unfinished basements, and coming out of the walls to feed sinks and toilets. **WARNING:** In some parts of the country, plumbers used copper "stubs outs" where the pipe exits a wall to feed a fixture, so seeing copper here does not mean that you do not have poly.

Problems Of Polybutylene Piping

While scientific evidence is for the most part unavailable, it is believed that oxidants in public water supplies (such as chlorine) react with the polybutylene piping and fittings, causing it to scale and flake and become brittle. Micro-fractures result, and the basic structural integrity of the pipe is reduced. The pipe becomes weak, and is susceptible to sudden failure. It is believed that other factors may also contribute to the failure of polybutylene systems, such as improper installation, but it is impossible to detect installation problems throughout an **entire** system.

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Litigation Involving Polybutylene Piping

Numerous homeowners have been complaining about leaking polybutylene potable water piping. This type of plastic piping has been in use for about ten years, but it is fading from the construction scene in light of recent adverse publicity.

Plaintiffs have filed class action lawsuits against the manufacturers of the raw material for the piping as well as the pipe manufacturers. These manufacturers have set up a hotline called the Plumbing Claims Group at (800) 356-3496 to assist homeowners experiencing problems with polybutylene plumbing pipes.

This particular piping material is found in two forms commonly on residential properties: (1) bright blue piping used underground from the street water meter to the house and (2) a medium-gray colored piping used inside the house. Where the two pipes join, a male-male fitting is used to connect the ends which is then clamped at the joints with either brass or aluminum bands.

There are many theories on why the material appears to be defective. One theory is that when the piping is stored outdoors for a period of time or exposed to sunlight after installation, ultraviolet (UV) radiation from sunlight adversely alters the chemistry of the plastic causing deterioration. The second theory is that chlorine in water attacks the plastic. Homeowners should also be aware that problems occur at pipe joints where improper installation of clamps causes leaks. In addition, some homeowners report having discovered deteriorated underground piping upon digging it up in their yards.

To the best of my knowledge, manufacturers of polybutylene potable water piping and investigators have not conducted any controlled studies proving the material to be inherently defective. No findings of controlled studies have been published. Thus, reports of problems are only anecdotal at this time.

In Arizona, two lawsuits are pending in Maricopa County Superior Court to recover damages from PB manufacturers for Arizona homeowners with PB failure. One of the cases is a class action suit similar to the one filed in Texas.

Average costs for PB-related home repairs are about \$4,000. However, the replacement or refund could be worth between \$3,000 and \$20,000. In some cases, homeowners are finding that homeowners insurance companies will either cancel their coverage when extensive damage is caused by PB or refuse coverage to homes piped with PB.

Spencer v. DuPont

Shell Oil and Hoechst Celanese Corporation have recently agreed to pay \$850 million as the result of a "class" action law suit for a refund or for homeowners to replace polybutylene water pipe in their homes or rental property.

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What is Polybutylene Piping

You are part of the "class" if you own real property or structures in which Polybutylene pipe was installed between January 1, 1978 and July 31, 1995.

Property owners who have polybutylene plumbing systems faced a claims deadline on August 20, 1999. Within the *Spencer v. DuPont* settlement, property owners must have their polybutylene plumbing systems replaced by August 20, 1999, or within 15 years of original installation, whichever date is later.

Therefore, any systems that will be 15 years old on August 20, 1999, fall out of the class action on August 21, 1999, unless the system is replaced by August 20, 1999. Until August 20, 1999, there is no age limit to qualify within the class action. In addition to the date limit, there are specific qualifications that must be met to qualify within the class action.

Polybutylene plumbing systems were installed from 1979 through 1995 in more than six million home. Hundreds of thousands of alleged leaks led to several class action lawsuits.

For additional information, see <http://www.polybutylene.com>, or call toll-free (888) 410-2281. Class action forms are available for *Spencer v. DuPont* by calling (800) 490-6997 and for *Cox v. Shell* by calling (800) 356-3496.

<http://www.spencerclass.com/notice.htm> - <http://www.spencerclass.com/notice.htm>

For more information on how to file a claim, call or write:

Compliance Research Group, Inc.

Product Liability Research (they process and research claims for single- and multi-family homes for a fee)

305-472-9200

or,

Class Counsel

In re Cox v. Shell Oil

PO Box 175

Minneapolis, MN 55440-0175

800-876-4698

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Despite the decidedly bad news associated with PB use, manufacturers and other defenders of PB piping insist the product on the market today doesn't deserve its bad reputation. Manufacturers of raw PB, including Shell Oil, Hoeschst Celanese Corp., and Dupont De Nemours, blame the bulk of leaks and ruptures on improper installation.

PB manufacturer spokesperson Carrie Chassin says, "The main problem has been at the joints. Some plumbers just took old brass fittings and used them for plastic -- that's one piece of the puzzle." Chassin says the makers of PB piping have corrected problems with leaks.

A contractor familiar with PB problems says ninety percent of all leaks are at joints in the piping. The contractor figures that about thirty percent of the problems at leaking joints are due to installation errors. Leaks occurring inside a line are almost always in hot water lines, sometimes in areas with no stress.

PB manufacturers have addressed joint problems with a new type of manifold design, which eliminates the use of T-joints and other traditional fittings used with copper and C-PVC pipes. Also known as the "manablock" system, the new design runs flexible 3/8 inch PB pipes from one common source to each fixture. Pipes are joined with a copper tube secured by two crimped copper bands to seal the connection.

Some contractors are not convinced that the copper bands are the solution to the problem. There have been complaints of leaking shutoff valves located at individual fixtures in the manifold system.

Several contractors say that the biggest failures in the new manifold design is that the PB tubing itself has been splitting. Others claim the problems in the improved manifold system are the result of faulty fittings from improper installation. The new copper fittings are an improvement over the old PB joints, but "crimpers" need constant calibration to make sure [copper bands] are not too tight." If bands are crimped too snugly, excessive pressure on PB results and leaks are more likely to occur.

As debate continues about whether and to what extent faulty installation contributes to PB failure, another PB issue is getting attention -- whether chlorine added to water supplies deteriorates PB causing weakness or holes in the pipes.

PB manufacturers contracted H.D.R. Engineering Inc., a Bellevue, Washington company, to study the effects of chlorine on PB joints. There's been some evidence from the tests that the acetal polymers that have been used to form some of the joint materials used with the plastic pipe, have a lack of resistance to some of the chlorine species common in distribution water systems."

H.D.R. also found that "some forms of oxidants [e.g., chlorine] are more adverse than others and cause exfoliation that weakens the structure. Because [the joints] are under tension, it causes a leak." In other words, the pre-manifold PB joints, which were made from different plastics than the pipe itself, did deteriorate in the laboratory in the presence of chlorine.

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H.D.R. says they have not looked at the susceptibility of the pipe to deterioration in the presence of chlorine. PB piping remains popular among many home builders because it offers savings of \$200 to \$600 per home compared to C-PVC and copper piping. PB piping is almost the exclusive material used in plumbing inexpensive tract houses and mobile homes. The piping itself is about half the cost of copper, but somewhat more expensive than C-PVC. Major cost savings come from lower installation costs -- PB can be installed quickly by semi-skilled labor.

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