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This article was written at the request of, Judith Clausen, Buyers Advantage Real Estate of Metro Denver. We, as inspectors have received several emails and phone calls regarding polybutylene plumbing that was overlooked by home inspectors. Sadly, we have spoken with inspectors who were totally unaware of the dangers of polybutylene.

### **Polybutylene Plumbing: Waiting to Burst**

Polybutylene pipe was thought to be the plumbing product of the future in the late 1970s. It was cheap, flexible and easy to install. What was not anticipated was that chlorine in city water supplies attacks the pipe from the inside out. Bursting polybutylene pipe has caused extensive damage to homes across the country. It is estimated that Polybutylene was used in one out of every four houses built between 1978 and 1995. It was also used in many commercial applications.

Polybutylene pipe generally fails after 10-15 years of use. It is unpredictable when it will fail, but it is certain that it will fail. Piping that show no outward signs of distress may burst at any moment. The oxidizing agents in municipal water supplies cause the inside of the pipe to become brittle and flake. Small fractures result that eventually burst.

Most leaks begin at joints and unions. These may be inside a wall where a small leak can cause substantial damage before discovery. Plastic joints are most likely to fail. Some joints are made of copper or brass and last longer than the plastic, but the pipe itself is destined to fail under normal conditions, regardless of the kind of joints. The only remedy for polybutylene pipe is total replacement.

A normal home inspection may not detect the presence of Polybutylene pipes. In some cases, plumbers installed copper stubs protruding through the walls connected to polybutylene hidden in the walls. Polybutylene used as a main water line can be disguised by ending at either street or house in copper. Most inspectors do not have the tool required for opening water mains to check for polybutylene. It is not a normal part of a home inspection.

The most common place to find polybutylene pipe is in feed pipes for toilets and sinks. This grey flexible pipe is still available. It was used by many do-it-yourselfers for routine plumbing maintenance. Replacing these pipes is easy and inexpensive and can be done by the average homeowner. Left unchanged these feed pipes will eventually break and cause damage if not discovered immediately.

Polybutylene pipe may be grey, white, blue or black. White, or black pipe may not be polybutylene. The safest way to check for polybutylene is to have a professional plumber thoroughly check the system.



Polybutylene pipe may be used anywhere in the plumbing system, inside or out. The most likely place to find polybutylene pipe is:

#### **Inside**

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

#### **Outside**

- Entering the home through basement walls, etc
- Attached to your home's main water shutoff valve
- Attached to your home's water meter
- Main water service from the meter entering the house

Copper pipe may be attached to poly pipe somewhere underground. Copper may be at either end of the main water supply.

### **What to do if you have polybutylene pipe in your house**

The first thing to do if you discover polybutylene pipe in your house is to contact: The Plumbing Claims Group – 800-356-3496. This is the contact for the insurance settlement supplied by the manufacturers of polybutylene.

There are limitations on payments. You must have experienced leaks and there are age limitations. If you qualify, the settlement seems generous, but limitations may exclude your home.

The only way to prevent damage that will come from this plumbing is to replace it. Specialists claim that they can replace a polybutylene system, in an average house, with copper for about the price of a re-carpet. They have developed methods to cause minimal damage during the remediation cutting costs and time requirements. Average remediation time is claimed to be one week.

Re-piping may involve:

- Excavation with a trencher. A small trench is dug to replace pipe in areas where the freeze depth is shallow.
- Pipe-splitting. A wedge is pulled through the polybutylene pipe splitting as it moves through the old pipe. A new copper pipe is pulled behind the splitter. The new pipe is installed without digging.
- Deep trench excavation. In areas where pipes must be buried deeper, and feeding the new pipe behind a splitter doesn't work, a deep trench must be dug the length of the main water line.
- Cutting holes in walls and floors. The polybutylene replacement specialists have developed methods to minimize hole cutting. 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.

Houses with polybutylene plumbing are harder to sell and have the possibility of legal action from buyers against seller, inspector and broker. These houses need remediation and have an escalating probability of water damage occurring as replacement is delayed. If you are involved with a house built between 1978 and 1995 that has any kind of plastic water lines, assume it is polybutylene until you find out differently.