Polybutylene Piping: Time Bomb?

Q. *I have used polybutylene piping in many of my construction projects (including my own home). After reading about a pending class-action lawsuit against the piping manufacturers, I'm concerned, and I don't feel I'm getting the straight story from my plumbers or supply houses. Have I unknowingly created a time bomb?*

A. *Dan Friedman responds:*
Polybutylene (PB) piping has been used since the mid-1970s for water supply and in-house supply piping. Two types of PB piping failures have led to class-action lawsuits against PB plumbing manufacturers: leaks due to improper installation and leaks due to defective materials.

Early failures were found in Celcon acetyl-plastic insert fittings (tees and elbows) used for connections. A portion of the insert fitting is inserted into the pipe and then clamped in place using an aluminum or copper crimp ring over the outside of the pipe. Leaks have also occurred with the more recent copper and brass insert fittings. While the earlier fitting failures were attributed in part to defective material, the PB industry blames current fitting leaks on improper installation.

The industry has taken a number of steps to reduce failures, which include detailed installation instructions, a redesigned crimping tool, a "go/no-go" gauge, and a suggestion to use metal insert fittings and annealed-copper crimp rings. These recommended methods and materials have significantly reduced problems, and some builders are still installing PB piping in new construction.

But a second problem may be looming. Testimony from a class-action lawsuit, a 1991 *60 Minutes* program, and an installation instruction booklet all indicate that the piping itself may crack and leak in some conditions. PB piping may be particularly vulnerable where higher levels of chlorine are present in the water supply. If you've installed this material in environments where there are elevated levels of chlorine, the risk of future leaks is greater.

A PB-related class-action lawsuit has been filed, and preliminary approval of the settlement has been granted. You may want to reduce your own risk and improve relations with your customers by warning them of your concern, and providing them with contact information regarding the class-action lawsuit. If a qualifying leak has already occurred, deadlines for submitting claims are as early as August 21, 1996.

For more information, contact the Industry-PB Technology Center at 800/338-7732, or for information about the class-action settlement agreement, the Consumer Plumbing Recovery Center at 800/876-4698.

Those with World Wide Web access can view the class-action notice at: *http://www.hunt.com/polybutylene/pipe/notice.htm* and the class-action proposed settlement at *http://www.hunt.com/polybutylene/pipe/propset.htm*. To see photos that will help you identify the materials involved, see *http://www.hunt.com/polybutylene/pipe/pipe.htm*.

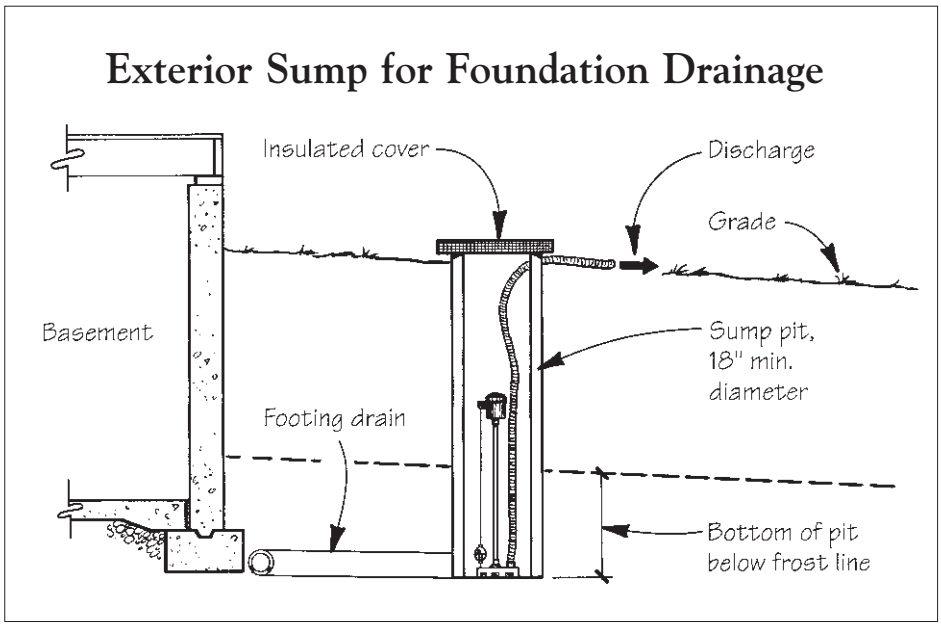
Dan Friedman operates American Home Service Co., a residential and commercial property inspection service in Poughkeepsie, N.Y.

Wood Glue: Okay After Freezing?

Q. *We use a yellow carpenter's glue for wood-to-wood gluing chores. Every winter, I invariably leave the container in my truck overnight, and the glue freezes. Can this glue be thawed and used after it has frozen?*

A. *Carl Hagstrom responds:*
"Carpenter's" glue generally comes in two flavors: polyvinyl acetate (better known as white glue) and aliphatic resin (yellow glue).

When I spoke to Mark Roberts at



If a sump pump is unavoidable, it should be installed in an outside sump pit with an insulated cover. Make sure the bottom of the pit is below the frostline.

Franklin International, manufacturers of Titebond wood glue, he said that their white and yellow glues can undergo five freeze/thaw cycles before they should be discarded. Frozen glue often thaws to a thicker consistency, and Roberts mentioned that up to 5% water can be added (by volume or weight) to thin their glues.

Jeff Pitcher of Custom-Pak Adhesives notes that not all glues are freeze/thaw stable, but those that are should be allowed to thaw *completely* and stirred thoroughly before use.

If you're uncertain about the number of freeze/thaw cycles a glue has undergone, Eugene Wengert, an extension specialist in the Department of Forestry at the University of Wisconsin-Madison, offers this advice: If the glue appears to be the same in color and consistency after thawing, chances are it can be used. But keep things in perspective. By using questionable glue, are you risking costly callbacks in an effort to save a few dollars? If the glue is lumpy or differs in consistency, then toss it.

Carl Hagstrom is an Associate Editor at the Journal of Light Construction.

Sump for Foundation Drain

Q. *Should an exterior perimeter drain be connected to an interior drain and sump pit?*

A. *Henry Spies responds:* It's not a good idea to bring exterior water into the structure. Whenever possible, a "daylight" footing drain should be installed.

If a daylight drain is not feasible, I'd recommend installing a sump pit on the exterior of the house. Locate the bottom of the pit well below the frostline (which is where the perimeter tile along the footing should be), and top it off with an insulated cover to prevent freezing (see illustration, next page). The pit should be at least 18 inches in diameter to allow room to install and service the pump.

Since it's easier to install a sump and pump in the basement than in an outdoor pit, many builders do bring the exterior footing tile inside the foundation. If an exterior drain is connected to an interior sump, some form of backup pump should be installed. This can be a second line-voltage pump and a generator, or a battery-powered pump.

For houses on a municipal water supply, my favorite is a water-powered jet pump. The power can be off longer than a battery-power pump will run, but municipal water pressure seldom fails. The jet pump has no moving parts, but it does use about as much water as it pumps and is limited to about 7 gallons per minute. This is not a serious limitation for a backup system, and it is less expensive than a battery-powered pump. One such pump is the Home Guard (distributed by HiLo Industries, P.O. Box 16056, Louisville, KY 40256; 502/778-0234).

Keep in mind that if the exterior footing drain is installed properly, there should be no need for an interior perimeter drain. If there is a spring under the floor or the water table is higher than the basement floor, a full basement should be avoided. ■

Henry Spies is a building consultant formerly with the Small Homes Council-Building Research Council of the University of Illinois.

Got a question about a building or renovation project? Send it to On the House, *JLC*, RR 2, Box 146, Richmond, VT 05477.