

## STUDENT WRITING: COMPARISON/CONTRAST

### **Water Pipes: Copper or P.V.C.?**

**By Daniel Wolbert**

Choosing water piping for your new or existing home can be a difficult and even costly decision. Most professionals think copper is the only choice, but I believe there are benefits to both types. Let's begin by exploring the major differences between the two most common types of piping; there are others, but most are either illegal or outdated. Copper pipe comes in ten- and twenty-foot sticks or sections. It is rated by the wall thickness. The most common copper pipes are types L and M, the latter being the thickest and the most durable. Copper is joined together by copper couplings, which are sweated with a cleaning flux, solder and torch, providing an extremely solid and long lasting joint. P.V.C. pipe also comes in ten- and twenty-foot sticks. It is also rated by wall thickness. The only type still rated for use in water systems is Schedule Forty; there are others, but they are primarily used for sewer and drainage applications. P.V.C. comes in two types: P.V.C. for use with cold water and C.P.V.C. for use on hot water. They are not interchangeable. P.V.C. is joined with couplings and a fusion type glue. C.P.V.C. is joined using couplings and a filler glue. The joint on P.V.C. is usually fairly weak and needs support to keep from separating. Now let's look at price. Copper pipe is very expensive to purchase, and labor costs are usually at least three times that of P.V.C., but once installed properly, it will last indefinitely. P.V.C. is inexpensive and easy to install, but it can be easily damaged. In new homes, where cost is usually not a big factor, I highly recommend the use of copper. In existing homes, where cost or length of service is a problem, I recommend P.V.C. There is no doubt that copper pipe is the best; but, if installed properly, P.V.C. is a viable alternative for temporary or low cost use.