

WHAT IS THE DIFFERENCE BETWEEN PVC AND CPVC PIPE?

PVC

You're probably familiar with PVC pipe. It's the white plastic pipe commonly used for plumbing and drainage. PVC stands for polyvinyl chloride, and it's become a common replacement for metal piping. PVC's strength, durability, easy installation, and low cost have made it one of the most widely used plastics in the world. PVC is a thermoplastic material that is moulded into different shapes to create pipes, fittings, valves and other liquid handling supplies.

CPVC

CPVC and PVC are similar in many ways, but they shouldn't be used interchangeably. Both are made of the same basic elements with one distinguishing factor. CPVC is altered by a free radical chlorination reaction that effectively increases the chlorine content of the material. CPVC is also a thermoplastic that is moulded into many of the same products as PVC. This difference in makeup allows CPVC to withstand a wider range of temperatures. This is why many building codes require the use of CPVC as opposed to PVC for use in hot water applications. PVC to be used in applications not exceeding 60 °Celsius. Temperatures over this can cause softening of the material and weakening of joints. CPVC on the other hand can handle temperatures up to 93 °Celsius.

OTHER DIFFERENCES BETWEEN PVC & CPVC

There are a few other differences between the two materials. Often CPVC is a light yellowish colour, while schedule 80 CPVC is a light grey colour. PVC pipe and fittings usually comes in white or dark grey. Always check the manufacturer printing on the pipe to be sure. Because of the differences in chemical makeup, sometimes PVC or CPVC also require different primers and solvents for connecting pipe and fitting joints. The creation of a strong joint depends on the cement's ability to chemically soften the plastic. For this reason you should always use a cement specific to the material you are using.

APPLICATIONS OF PVC & CPVC

	PVC	CPVC
Hot water applications up to 93 °Celsius		✓
Hot water applications between 60 °Celsius and 93 °Celsius		✓
Unheated water, vent and drainage systems	✓	
Hot and cold potable water		✓
Commercial and Industrial applications		✓
Recreational use, building, cold water systems, vent systems and drainage systems	✓	