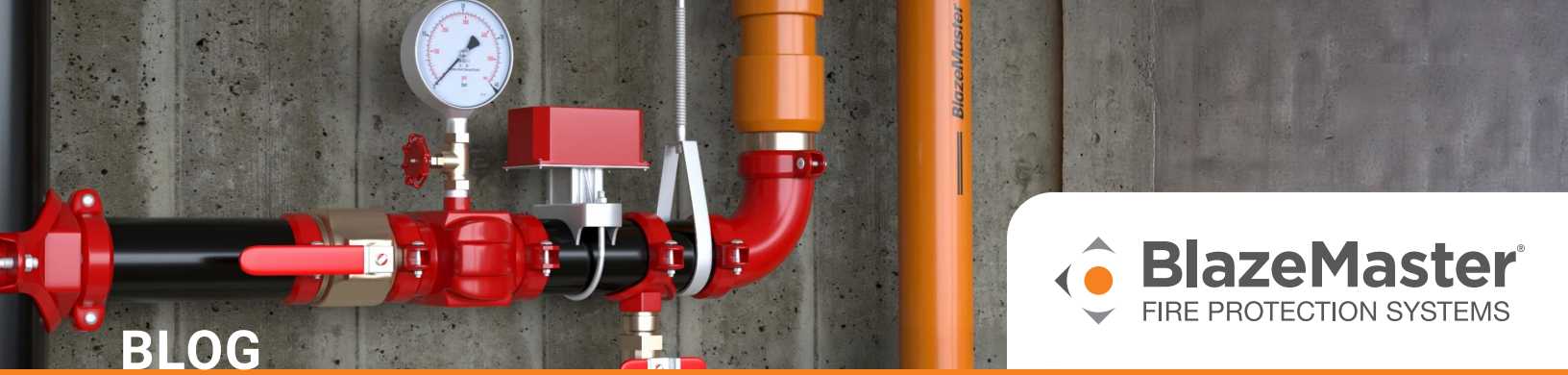

BlazeMaster®
FIRE PROTECTION SYSTEMS

SCIENCE. SERVICE. SAFETY.

By Sean Pearce | Published Jan 4, 2021 | Updated May 29, 2024

BlazeMaster® CPVC: The Right Choice for Drain Pipes

BlazeMaster® CPVC offers a variety of advantages over steel for fire protection systems. Yet after more than 30 years on the market, there remain lingering myths and misinformation about CPVC. For instance, there's a long-standing misconception that steel is required for drain pipes.

In fact, the National Fire Protection Association (NFPA) guidelines do not require specific materials for drain pipes. That's good news for fire protection system providers and the customers you serve, because CPVC offers a variety of advantages over steel for drain pipes.

Corrosion-Resistant CPVC Prevents Leaks

The combination of water, treatment chemicals and oxygen cause steel pipe to corrode anywhere in a fire protection system – including drain pipes. Large quantities of water are flushed through the pipe, which creates wet conditions and condensation.

Corrosion is the primary source of metal loss in wet-pipe fire sprinkler systems. Under conditions common in commercial buildings, CPVC will remain free of corrosion while metallic pipes will begin to corrode before they are even installed.

As a result, steel pipe can develop pinhole leaks in as little as two years, creating the unintended consequence of an environment in the wall cavity where mold can thrive. This can potentially impact the health of the building occupants. The leaks can go undetected as the drains do not have constant water pressure applied to them, corrosion is most likely to occur at the high points of the wet pipe system where trapped air accumulates, this perfectly describes the environment of a fire sprinkler drain. These air pockets act as reservoirs of oxygen, which dissolves into the adjacent water and drives the corrosion reaction.

Since steel drain pipes are typically inside a wall, repairs are complex, time-consuming and costly. Imagine taking hospital beds out of services, displacing the tenants of a 30-story condominium tower, or finding alternate classrooms for students to repair a drain pipe. By contrast, BlazeMaster CPVC will never corrode, allowing safety and peace of mind.

Easier Installation, Lower Cost of Ownership

BlazeMaster CPVC is lighter and more flexible compared to steel, making it easier to move on the job site and install in tight spaces. It's a one-person job using basic tools. Steel requires at least two installers, and extra precaution is needed to prevent beads on the inside of the pipe that can lead to scale build-ups, constrict water flow and speed corrosion.

CPVC's installation advantage is especially strong on drain pipes. With steel installation, some off-site pre-fabrication is usually needed. But drain pipes cannot be pre-fabricated, and workers must thread pipe onsite – an expensive, time-consuming process. It's another reason CPVC is less expensive to install.

BlazeMaster CPVC offers an initial material cost advantage, as steel prices fluctuate frequently and are typically higher. Labor costs are also lower given the ease of CPVC installation.

Given these advantages, BlazeMaster CPVC is clearly the best option for the entire fire protection system, including the drain pipes. For more information and to deliver these benefits on your next project, contact our team of piping systems consultant today.

LEARN MORE
Steel vs. BlazeMaster® CPVC Commercial Fire Protection Systems Guide

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