

April 30, 2009

**TYCO UPDATE
ON ALLIED ABF® II STEEL COATED PIPE AND CPVC**

Since its introduction in 2004, Allied Tube & Conduit's ABF® II anti-microbial steel sprinkler pipe has been installed and successfully maintained in millions of feet of steel-CPVC applications. Recently, Allied and Tyco Fire Suppression & Building Products became aware of a small number of sites with environmental stress cracking (ESC) failures of CPVC pipe and fittings. Some customers have expressed concern that the ESC was caused by chemical components of the anti-microbial coating on the ABF II coated steel pipe. To put this into context, these instances of failure involve less than one tenth of one percent of the installed base in combined systems in the Americas.

ESC failures can occur in CPVC pipe and fittings when exposed to sufficient levels of stress and when an environmental stress cracking agent is present in sufficient concentration over a period of time. An ESC failure results in cracks in the wall of the pipe or fitting. These cracks typically result in weeping, dripping, and other small leaks from the fire sprinkler system.

In response to recent concerns, Tyco gathered a team of scientists and industry experts working in conjunction with Lubrizol and customers to investigate. Tyco's investigation has included an analysis of how the ABF II coating may be released and transported through the piping system, and how it may interact with other components of the system.

The initial findings of the investigation suggest that in some circumstances, components of the ABF II coating may wash from the interior of the steel pipe and transport to downstream CPVC pipe and fittings. In combination with ancillary products used in the system, such as cutting oils and lubricants, the ABF II coating components may collect in sufficient concentration and in some circumstances pose a potential risk to the CPVC.

However, in the instances of CPVC failure investigated and not linked to poor quality CPVC pipe or fittings, unusually high mechanical stress has been present. Unusually high amounts of mechanical stress create an environment that makes CPVC pipe and fittings more susceptible to ESC. For example, some approved hangers have been found to put an excessive mechanical stress on the pipe. Tyco is continuing to analyze the causes and effects of mechanical stresses on the safety tolerances of CPVC pipe and fittings used in conjunction with ABF II coated steel pipe. Because steel-CPVC systems are installed using a variety of techniques and in a myriad of diverse environments, there are a large number of mechanical and chemical variables and combinations that a comprehensive investigation must include.

It is important to note that Tyco's analysis to date does not indicate an inherent risk associated solely with using ABF II coated steel pipe in combination with CPVC pipe and fittings. As a conservative approach while the investigation continues, Tyco recommends that ABF II coated steel pipe not be used in new systems containing CPVC. For these applications, Allied will continue to make uncoated steel pipe available. ABF II coated steel pipe should still be used in all-steel systems, where it provides industry-leading anti-microbial protection.

The overwhelming majority of installations of ABF II coated steel pipe with CPVC pipe and fittings have provided reliable service without incident for many years. Based on this experience and the initial findings, Tyco does not believe that previously installed systems are at an increased risk of ESC failure. For systems that are already installed or in the process of being installed, Tyco does not recommend removal of the CPVC or ABF II coated steel pipe.

For additional information or questions, visit www.alliedtube-sprinkler.com/cpvc or contact Tyco at 1-888-890-2278 in the US, and at 1-708-339-1610 extension 7301 outside the US.

As a responsible leader in the fire sprinkler industry, Tyco is committed to the industry and its customers. Tyco will continue its investigation, testing, and analysis to enable it to provide the additional answers that it, the industry, and its customers seek. Thank you for your continued support.

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