EMBEDDED FOR SUCCESS



INSTALLATION IN CONCRETE

This document provides examples of installation and design for installation in concrete. Refer to individual manufacturer's Installation and Design Manual for specific listings, approvals, and limitations.







BLAZEMASTER® FIRE PROTECTION SYSTEMS

INSTALLATION INSTRUCTIONS



Blazel/aster[®] FIRE PROTECTION SYSTEMS

- As the BlazeMaster CPVC is laid out it shall not come into contact with sharp objects or edges, such as rocks, metal, or structural members. Any open pipe ends shall be protected from debris or concrete getting into the system.
- When laying out BlazeMaster CPVC pipe it is best to use straight runs of pipe. However, CPVC pipe is inherently ductile and it is possible for CPVC pipe to be snaked when it is laid out. This can be useful in some installations when some offset from a straight run can be helpful in avoiding various construction obstacles. Straight runs of pipe will minimize any stress that is exerted on the pipe. When the pipe is embedded in concrete there is not opportunity to relieve any stress once the concrete is poured. Therefore, it is important to layout the piping such that the stress is minimized from the time of installation. (Refer to Pipe Deflection section for allowable deflection.)
- Avoid the contact of BlazeMaster pipe and fittings with construction materials that are incompatible with CPVC. Verify the suitability of a product for use with CPVC with the manufacturer of the chemical additive to confirm chemical compatibility.

BLAZEMASTER PIPE AND FITTINGS HAVE BEEN SUCCESSFULLY INSTALLED ENCASED IN CONCRETE

FOR MANY YEARS. Lubrizol is unaware of any problems that have been caused by chemical incompatibility between BlazeMaster pipe and fittings and concrete or any chemicals that have been added to concrete. However, since new construction materials are regularly introduced to the market, Lubrizol recommends contacting the manufacturer of the products or chemicals to confirm chemical compatibility.

Steps must be taken to prevent the wire mesh or reinforcing bars from causing any abrasion damage to the BlazeMaster pipe and fittings. This is mostly of concern prior to pouring the concrete. BlazeMaster pipe and fittings shall not be installed in concrete that is to be post tensioned. The post tensioning process can create excessive forces which can damage the BlazeMaster Fire Protection System.



- When there are pipe joints that will be covered in concrete, the installation shall be pressure tested prior to pouring the concrete. If there will not be any joints covered by concrete, there is no need to pressure test the system prior to pouring the concrete.
- Prior to the pouring of the concrete, the BlazeMaster CPVC pipe shall be intermittently secured to prevent movement during this process. Nonabrasive, plastic fasteners are good choices for this application. When hangers are used, most metal hangers designed for metal pipe are suitable for BlazeMaster CPVC. Do not use undersized hangers. Hangers with sufficient load bearing surface shall be selected based on pipe size (e.g., 1-1/2 in. hangers for 1-1/2 in. pipe). The hanger shall not apply compressive load or have rough or sharp edges that come into contact with the pipe.
- Care shall be taken so that the BlazeMaster pipe and fittings are not damaged by the tools and equipment used to pour and finish the concrete. All standard methods of pouring concrete onto the ceiling construction with concrete pumps or concrete containers followed by compaction with vibrators can be used in combination with BlazeMaster fire protection systems. BlazeMaster pipe and fittings shall not come into contact with equipment such as tampers and agitators.
- As the concrete is poured, assure that the pipe has not moved from its intended positioning.
- Thermal expansion and contraction is not an issue for BlazeMaster pipe and fittings that are embedded in concrete. Those forces are relieved in a manner that does not affect the pipe or fittings. However, expansion and contraction shall be incorporated in the design of those sections of pipe that are not embedded in concrete. Failure to adequately allow for stress at these points may result in damage to the pipe where it enters and exits the concrete.

BLAZEMASTER® CPVC TESTED FOR LIFE



Blazel/aster[®] FIRE PROTECTION SYSTEMS

Visit BlazeMaster.com or call 216-447-5330 to learn more.

©Lubrizol Advanced Materials, Inc. 2020, all rights reserved. All marks are property of Lubrizol Advanced Materials, a Berkshire Hathaway Company.

The information contained herein is reliable based on current information but the advertiser makes no representations, guarantees or warranties, express or implied, including any implied warranties of merchantability or fitness for a particular purpose, or regarding the completeness, accuracy, or timeliness of any information. Always consult your pipe and/or fitting manufacturer for current recommendations.