

Using Heat Tapes to Protect Pipes From Freezing

Freezing temperatures are just around the corner and many of our customers are asking about methods to protect their water system. Using heat tapes to protect pipes and equipment from freezing is one of the simplest and more commonly used methods used.

Warning: There are approximately 3300 residential fires in the US each year involving heat tapes. Make sure manufacturers instructions are followed and old tapes are regularly checked for cracks and bare wires.

Heat tapes come in many various lengths and manufactures. The better quality tapes use a thermal sensor embedded in the tape to turn on the heating process once the temperature drops to around 38 degrees F (2 degrees C).

Manufacturers instructions are provided on the package on how to properly install the tape. These instructions should be followed carefully. Normally the tape is wrapped around the pipe according to instructions. Increasing the number of wraps per lineal foot will compensate for lower temperature environments however wraps must not contact each other.

It is common to enclose the tape and pipe inside a fireproof insulation to keep the heat in and cold out but follow the manufactures instructions. Some tapes are not compatible with this practise.

Heat tapes work fine on copper, brass, or galvanized iron piping, for both supply and drain piping but we prefer the type that use an automatic thermostat so that we are not using electricity unnecessarily. Be sure that the heat tape is properly installed and that you don't cover the thermostat nor place it in a warm rather than cold spot on the piping.

If your building plumbing pipes are plastic, such as PVC water piping, use only pipe heat tape that has an automatic thermostat to control the heat tape temperature. Otherwise a very hot heating tape may damage the piping or even cause a leak.

Some older or less costly models of heating tapes present a fire risk, particularly if the heating tape is crossed over itself. Be sure to read the product specifications, safety warnings, and installation guide before installing a heating tape on building piping of any kind.

The U.S. Consumer Products and Safety Commission has provided safety recommendations for homeowners using heat tapes to help prevent fires:

- Replace heat tapes that are older than three years

- Use only heat tapes certified to meet recognized voluntary fire safety standards such as those provided by Underwriters Laboratories (UL), the Canadian Standards Association (CSA), and the Factory Mutual Research Corporation (FMRC).

Plug the grounded (3-prong) plug into a grounded GFCI (ground-fault circuit interrupter) protected electrical outlet

Protect the sealed end-cap of the heat tape from damage and water leaks which could cause a short circuit or fire.

Use heating tape only for the application approved for that particular heating tape, such as for use on piping. Some heat tapes are designed for use in gutters or driveways while others are designed for use on piping .

Be sure that the heat tape thermostat (if one is provided) is placed where the instructions say. For example some heat tape thermostats should be placed in contact with the pipe, others left hanging in air.

Replace any heat tape that is discolored (a sign of overheating), cracked, melted, or damaged in any way.