

# Risk A/T<sup>®</sup> Work



*Risk A/T<sup>®</sup> Work* is a forum dedicated to sharing safety and loss control tips with our brokers and insureds. **Risk A/T<sup>®</sup>** is our proprietary risk management approach promoting informed risk analysis based on two behavioral factors — **A**ptitude and **T**olerance.

## Preventing Property Damages Due to Frozen Pipes

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When the temperature drops, pay close attention to the plumbing – especially the pipes! Frozen pipes are one of the most dangerous and costly issues for property owners and managers. When water in a pipe freezes and expands the pipe may crack or burst, resulting in significant property damage as well as business interruption.

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### Prevention is Key:

While we can't control the weather, there are preventative measures that can be taken to keep pipes from freezing before colder weather hits, starting with identifying areas where pipes are exposed or not properly insulated. Once these areas are inspected, consider taking the following additional precautions:

1. Adding UL approved heat tape, insulated jackets or other insulating products to the exposed piping, ensuring that the pipes are sufficiently covered.
2. Using a supplemental heating source, such as a heater with a thermostat, to maintain a room temperature of at least, 40° F (4° C) in poorly heated areas.
3. Investing in a generator to keep heat sources operational and temperatures at safe levels in case of power outages.

4. Servicing building equipment regularly, focusing on the boiler systems, water heaters, and heating devices; have a qualified technician conduct a site inspection at least once a year.
5. Properly labeling shut-off valves and piping systems; training maintenance staff how to safely operate valves and isolate leaks in case of a pipe burst or crack.
6. Installing a Building Automation System (BAS) to alert maintenance management if a problem occurs after-hours or when the building is vacant.
7. Monitoring excess flow switches for incoming water lines that provide early detection of broken pipes and valves.
8. Draining and shutting off non-critical exposed plumbing during winter months at all properties, including those that are vacant.

### Fire Protection Systems and Frozen Pipes

Another potentially devastating by-product of frozen pipes is the impact on your fire protection systems. In wet pipe sprinkler systems, water sits still in the pipes and tends to freeze before other pipes. Even if the pipe doesn't burst, frozen water can cause a dangerous obstruction, rendering the system useless in the event of a fire.

To prevent "freeze failure" in fire protection systems, wet sprinkler piping systems should be inspected regularly and reliable heat sources (preferably with backup power) should be used to maintain temperatures near piping above 40° F (4° C). Additionally, if an insulation method not prescribed by the



National Fire Protection Association (NFPA) is used, a heat loss calculation by a professional engineer should be performed.

If using an anti-freeze sprinkler system, ensuring the appropriate type and concentration of anti-freeze is critical. Be sure that NFPA 13 requirements are met, specifically citing that the solution used will not ignite when discharged from the sprinkler.

Another alternative to wet pipe sprinkler systems is a dry pipe sprinkler system, but it should be noted that these systems aren't immune to freezing. To avoid the wet pipe freeze failures, dry sprinkler pipes should be sloped back to the water source or to an auxiliary drain so that after the system has been activated, excess water can exit the pipes, minimizing the potential for freezing.

Remember pipes can freeze in any building whenever the temperature drops below freezing. By taking a few preventative measures, you can reduce the risk of frozen pipes and the potential resulting catastrophic effects.

### We Are Here to Help

For additional information on implementing a preventative pipe safety maintenance program, please reach out to your Sompo Risk Control Specialist or contact us at +1 877 667 5733 or [RiskControlQuestions@sompo-intl.com](mailto:RiskControlQuestions@sompo-intl.com) for guidance on safeguarding your property and people with confidence.

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