
STANDATA bulletin 23-BCB-005/ 23-FCB-003

Building/Fire

Sprinkler systems with antifreeze solutions

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Purpose

To provide clarification of the acceptance of sprinkler systems which require the use of an antifreeze solution.

Discussion

The National Building Code – 2023 Alberta Edition and the National Fire Code – 2023 Alberta Edition reference the National Fire Protection Association (NFPA) 13D, “Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes”, NFPA 13R, “Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies”, and NFPA 13, “Standard for the Installation of Sprinkler Systems”.

Buildings with existing sprinkler systems designed to accommodate an antifreeze solution system and any new buildings sprinkler system designed for use of an antifreeze solution, in accordance with NFPA 13, 13R or 13D, are to ensure the antifreeze used is listed and certified to a standard. A standard recognized by NFPA is ANSI/CAN/UL 2901, “Antifreeze Solutions for Use in Fire Sprinkler Systems”.

Owners who have an existing sprinkler system currently using an antifreeze solution should plan with their service provider to verify the antifreeze solution used is a listed and certified product for use in sprinkler systems. Engagement with the local authority having jurisdiction – Fire Prevention Office – is necessary, if the current antifreeze solution is not listed and due to any of the following reasons must remain in place:

- Listed antifreeze is not compatible with current piping, gaskets, seals, coatings, etc.
- Minimum design pressure and system volume limitations;
- Minimum use temperature for the lowest usable temperature to avoid freezing; or
- Other installation, design and maintenance requirements.

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Unless stated otherwise, all Code references in this STANDATA are to the National Building Code – 2023 Alberta Edition and National Fire Code – 2023 Alberta Edition

Issued by the Provincial Building and Fire Administrators

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