



## 13D Multipurpose Sprinkler System

1. **A bucket test is required to confirm Flow requirements.**
2. Nonmetallic pipe used in multipurpose piping systems and passive purge systems not equipped with a fire department connection shall be designed to withstand a working pressure of not less than 130 psi (9 bar) at 120°F (49°C). [Reference NFPA 13D 2022 Edition Section 5.2.2.3]
3. A multipurpose piping system shall be installed in accordance with 6.3.2 through 6.3.4. ). [Reference NFPA 13D 2022 Edition Section 6.3.1]
4. Multipurpose piping systems shall be approved by the local plumbing or health authority. ). [Reference NFPA 13D 2022 Edition Section 6.3.2]
5. All piping in the system supplying sprinklers shall be listed and conform to the piping specifications of this standard. ). [Reference NFPA 13D 2022 Edition Section 6.3.3.
6. Piping connected to the system that supplies only plumbing fixtures shall comply with local plumbing and health authority requirements but is not required to be listed. ). [Reference NFPA 13D 2022 Edition Section 6.3.3.1
7. Reference NFPA 13D 2022 Edition Section 6.3.4 for the following: A warning sign, with minimum 1/4 in. (6 mm) letters, shall be affixed adjacent to the main shutoff valve and shall state the following: ***WARNING: The water system for this home supplies fire sprinklers that require certain flows and pressures to fight a fire. Devices that restrict the flow or decrease the pressure or automatically shut off the water to the fire sprinkler system, such as water softeners, filtration systems, and automatic shutoff valves, shall not be added to this system without a review of the fire sprinkler system by a fire protection specialist. Do not remove this sign.***
8. Where common supply pipes serve both fire sprinkler and domestic use, they shall comply with 6.5.2 and 6.5.3. [Reference NFPA 13D 2022 Edition Section 6.5.1]
9. In common water supply connections serving more than one dwelling unit, 5 gpm (20 L/min) shall be added to the sprinkler system demand to determine the size of common piping and the size of the total water supply requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler. [Reference NFPA 13D 2022 Edition Section 6.5.2]
10. Reference NFPA 13D 2022 Edition Section 6.5.3 : Where water treatment and filtration are installed, one of the following conditions shall be met:
  - a. The flow restriction and pressure loss through the water treatment equipment shall be taken into account in the hydraulic calculations.
  - b. An automatic bypass shall be installed around the water treatment equipment that directs all water directly to the system.

**11. Ensure that all areas of the building containing water-filled piping is, and will be maintained at a minimum temperature of 40°F (4.4°C) and not exposed to freezing conditions.** [Reference NFPA 13D 2022 Edition, Section 9.1.2.1]

12. Acceptance Tests required for wet pipe system [Reference NFPA 13D 2022 Edition, Section 11.2]:

- a. Where a fire department pumper connection is not provided, the system shall be hydrostatically tested at normal system operating pressure without evidence of leakage.
- b. Where a fire department pumper connection is provided, the system shall pass a hydrostatic pressure test performed in accordance with NFPA 13.
- c. Evidence of leakage shall be determined by a drop in pressure at a gauge over a period of 2 hours or by visually checking the piping system for leakage.