

SUGGESTED SPECIFICATION

PVC – WATER PIPE

POLYVINYL CHLORIDE (PVC) WATER PIPE

SCOPE: This specification covers the furnishing of PVC pressure pipe for potable water projects as designated on project drawings.

PIPE AND FITTINGS: All PVC water pipe and fittings shall be manufactured in accordance with one of the following Standard Specifications:

- a. AWWA C900, “Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 in. through 12 in. (100 mm through 300 mm) for Water Distribution”
- b. AWWA C905, “Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 in. through 48 in. (350 mm through 1,200 mm), for Water ion and Distribution”
- c. AWWA C907, “Polyvinyl Chloride (PVC) Pressure Fittings for Water – 4 in. through 8 In (100 mm Through 200 mm)”
- d. AWWA C909, “Molecularly Oriented Polyvinyl Chloride (PVCO) pressure Pipe, 4 In. through 24 In. (100 mm through 300 mm), for Water Distribution”
- e. ASTM D2241, “Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR PR Series)”

JOINTS: Pipe joints shall be gasket, push-on type. Gaskets shall be part of a complete pipe section and purchased as such. Lubricant shall be as recommended by the pipe or fitting manufacturer and shall not adversely affect the potable qualities of the water to be transported. The gasketed joint shall meet the laboratory performance requirements specified in ASTM D3139. (This is a qualification test to verify a leak-free design of the specified joint.)

CERTIFICATIONS: PVC water pipe shall be certified to NSF International Standard No. 61.

ACCEPTANCE: Pipe may be rejected for failure to comply with any requirement of this specification.

POLYVINYL CHLORIDE (PVC) WATER PIPE DESIGN AND INSTALLATION

PRESSURE CLASS: All PVC water pipe shall have a pressure class (PC) or pressure rating (PR) that equals or exceeds the anticipated working pressure for the pipe section being designed or replaced. “Working pressure” is defined as the maximum sustained operating pressure.

EMBEDMENT REQUIREMENTS: The embedment requirements for PVC water pipe shall be in accordance with AWWA Standard C605 for “Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water”.

SERVICE CONNECTIONS: All service line connections to PVC water pipe shall be made in accordance with the recommendations of AWWA C605.

POLYVINYL CHLORIDE (PVC) WATER PIPE POST-INSTALLATION TEST REQUIREMENT

HYDROSTATIC TEST: A post- installation hydrostatic test shall be performed on the installed system in accordance with AWWA C605. Lines shall be filled slowly with potable water at a maximum velocity of 1 ft/s (0.3 m/s) while venting all air. Precautions shall be taken to prevent entrapping air in the lines.

No installation will be accepted if the make-up water is greater than that determined by the formula:

$$Q = \frac{LD\sqrt{P}}{148,000}$$

Where **Q** is the allowable make-up water, in gallons per hour; **L** is the length of pipe section being tested; **D** is the nominal diameter of the pipe, in inches; and **P** is the average test pressure during the test, in pounds per square inch (gauge).

The duration of the test shall be two hours, unless otherwise specified.