

## Short-Form Specification

### SCOPE

This specification provides the requirements for Bionax Molecularly Oriented Polyvinyl Chloride (PVCO) pipe for potable-water systems and other pressure-pipe applications. Bionax Gasketed Cast-Iron-Pipe Outside Diameter (CIOD) Pressure pipe is available in the following pressure classes and nominal sizes:

- o PC 235psi 4" through 18" (100mm – 450mm)
- o PC 165psi 16" through 18" (400mm – 450mm)

### MATERIALS

Bionax pipe shall be manufactured from rigid Polyvinyl Chloride (PVC) compound meeting the requirements of ASTM D1784 cell class 12454. Bionax gaskets shall meet ASTM F477 for high-head applications.

### HYDROSTATIC DESIGN BASIS

Starting-stock for Bionax shall have a Hydrostatic Design Basis (HDB) of 4000 psi and finished pipe shall have an HDB of 7100 psi as determined by testing in accordance with ASTM D1598, with data evaluated in accordance with ASTM D2837.

### PIPE

Bionax shall be manufactured with Cast-Iron-Pipe Outside Diameters (CIOD) in all sizes. Pipe walls shall meet minimum thickness requirements for AWWA C909 and CSA B137.3.1. Pipe shall be joined by means of integral-bell elastomeric-gasket joints conforming to ASTM D3139. Spigot ends shall be chamfered by the manufacturer. Pipe ends shall be capped at the production facility prior to storage and shipping.

### STANDARDS

PVCO pipe shall conform to the following standards:

- ANSI/NSF 14 Plastics Piping System Components and Related Materials
- ANSI/NSF Standard 61: Drinking Water System Components – Health Effects
- ASTM F1483 Standard Specification for Oriented Poly(Vinylchloride), PVCO, Pressure Pipe (PR 200psi)
- AWWA C909: Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 inch and larger
- BNQ NQ 3660-950 Safety of Products and Materials in Contact with Drinking Water
- CSA B137.3.1: Molecularly Oriented Polyvinyl Chloride (PVCO) pipe for pressure applications (PR 1,620kPa)
- BNQ 3624-500 certification protocol to CSA B137.3.1
- FM 1612 Polyvinyl Chloride (PVC) Pipe and Fittings for Underground Fire Protection Services (PC 150psi, 4" through 12")