



< STANDARDS >



ASTM/NSF 14
ASTM/NSF 61
ASTM F1483



AWWA
C909



BNQ NQ
.3660-950



CSA
B137.3.1



FM 1612

BIONAX® SR™ is PVC-O pipe used for potable water systems and other pressure pipe applications where enhanced resistance to seismic activity is a requirement. Manufactured using a patented process, Bionax SR is extruded, hydrotested, factory capped and shipped in 6.1 meter (20 foot) lengths.

PRODUCT AVAILABILITY

Material	PVC-O
Size Range	6" – 12" (150mm – 300mm)
Pressure Class	235 psi (CSA/AWWA)

Short-Form Specification

Scope

This specification provides the requirements for Bionax SR molecularly oriented polyvinyl chloride (PVCO) pipe for potable-water systems and other pressure-pipe applications. Bionax SR Gasketed cast-iron-pipe outside diameter (CIOD) Pressure pipe is available in the following pressure classes and nominal sizes:

- PC 235psi 6" through 12" (150mm – 300mm)

Material

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

Hydrostatic Design Basis

Starting-stock for Bionax SR 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 SR 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. Laying lengths shall be 6.1 meters (20 feet). 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

Bionax SR 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 (Polyvinyl Chloride), PVCO, Pres-sure Pipe (PR 200psi)
- AWWA C909: Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 inch through 24 inch (100 mm through 600 mm) for Water Distribution
- 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 1620kPa)
- FM 1612 Polyvinyl Chloride (PVC) Pipe and Fittings for Underground Fire Protection Services (PC 150psi, 4" through 12")

Fittings

Bionax SR piping systems shall include IPEX Blue Brute molded and fabricated fittings.

Lubricant

Pipe must be assembled with IPEX water-soluble lubricant listed to NSF Standard 61.

Color Coding

CIOD pipe shall be color coded blue.

Joining

The gasket shall be carefully fitted to the bell groove if not already factory-installed. Both bell and spigot shall be clean and free of debris before lubricant is applied. The pipe shall be joined by push-fitting bell and spigot joint to the depth line marked on the spigot. When pipe has been cut in the field, the end shall be made square and bevelled to a 10-degree chamfer and the insertion line shall be redrawn per IPEX's Pressure Pipe Installation Guide.

Dimensions

Size		Pressure Class/Rating 235 psi @ 73°F (1,620 kPa @ 23°C)					
		Average OD		Min. Wall Thickness		Average ID	
in.	mm	in.	mm	in.	mm	in.	mm
6	150	6.90	175	0.221	5.62	6.44	163
8	200	9.05	230	0.290	7.36	8.44	214
10	250	11.10	282	0.356	9.03	10.35	263
12	300	13.2	335	0.423	10.74	12.31	313

Size		Insertion Depth			
		Minimum		Maximum	
in.	mm	in.	mm	in.	mm
6	150	6.6	167	7.6	192
8	200	8.1	207	9.1	232
10	250	8.5	217	9.5	242
12	300	10.9	277	11.9	302

Installation

Please consult with our PVC Pressure Pipe and Fittings Installation Guide for complete installation information including:

- Receiving and Handling Pipe Shipments
- Trench Preparation
- Lowering Pipe and Fittings into Trench
- Assembling IPEX Joints
- Curvature of the Pipeline
- Assembling to Iron Appurtenances
- Cutting and Chamfering the Pipe

The guide is available at ipexna.com

About the IPEX Group of Companies

As leading suppliers of thermoplastic piping systems, the IPEX Group of Companies provides our customers with some of the world's largest and most comprehensive product lines. All IPEX products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have established a reputation for product innovation, quality, end-user focus and performance.

Markets served by IPEX group products are:

- Electrical systems
- Telecommunications and utility piping systems
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- Electrofusion systems for gas and water
- Industrial, plumbing and electrical cements
- Irrigation systems
- PVC, CPVC, PP, PVDF, PE, ABS, and PEX pipe and fittings

Products are manufactured by IPEX Inc.

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