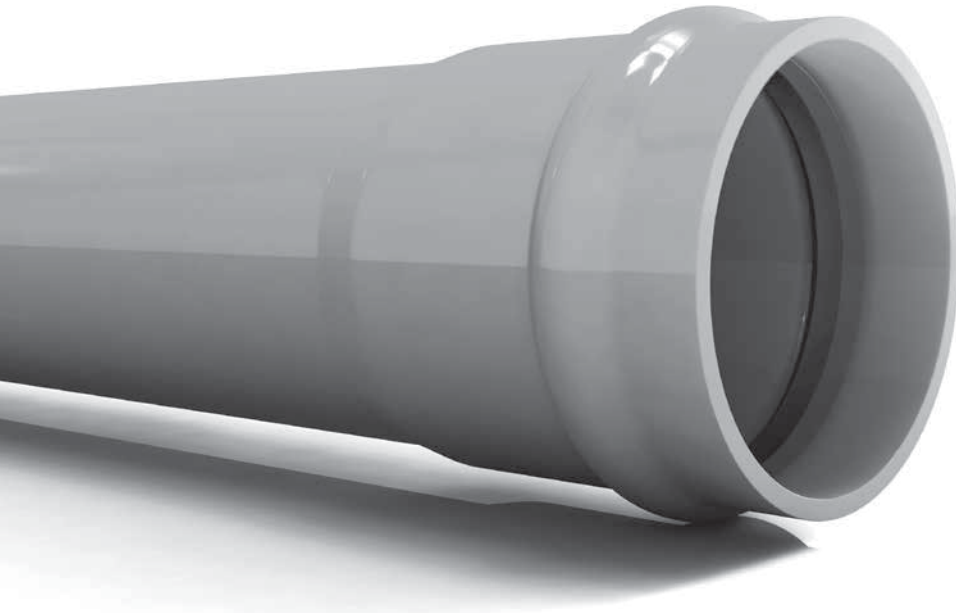


Bionax® PVCO Pipe

Product Data Sheet



< STANDARDS >



AWWA



B137.3.1



D1784
D3139
F477
F1483



NSF 14
NSF 61

Bionax PVCO pipe and Blue Brute PVC fittings eliminate corrosion and provide a reliable long-term piping system. Although Bionax is compatible with iron fittings, IPEX recommends the use of Blue Brute fittings since they result in an all-plastic system that prevents corroding iron fittings.

It is advisable to specify pipe and fittings from the same manufacturer to ensure a completely matched system. If Bionax pipe is specified with Blue Brute fittings, the pipe and fittings will provide matched pressure capacities.

PRODUCT AVAILABILITY

Material	PVCO
Size Range	4" – 30" (100mm – 750mm)
Pressure Ratings	73°F / 23°C for 165 psi 73°F / 23°C for 235 psi 73°F / 23°C for 305 psi

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Short Form Specifications

SCOPE

This specification provides the requirements for molecularly oriented polyvinyl chloride (PVCO) pipe for potable-water systems and other pressure-pipe applications.

MATERIALS

- PVCO pipe shall be manufactured from rigid polyvinyl chloride (PVC) compound meeting the requirements of ASTM D1784 cell class 12454B.
- Gaskets shall meet ASTM F477 for high-head applications.

HYDROSTATIC DESIGN BASIS

- Starting-stock PVC pipe shall have a hydrostatic design basis (HDB) of 4,000 psi.
- Finished PVCO pipe shall have an HDB of 7,100 psi.

PIPE

- Pipe shall be biaxially oriented (molecularly oriented in hoop and axial directions).
- Pipe shall be produced with cast-iron-pipe outside diameters (CIOD) in all sizes.
- Pipe shall be joined by integral-bell gasketed joints conforming to ASTM D3139.
- Pipe spigot ends shall be chamfered by the manufacturer.
- Pipe ends shall be capped at the production facility prior to storage and shipping.
- Pipe shall be color-coded blue.

CIOD CERTIFICATIONS

- PVC compound shall be CSA-certified to ASTM D1784 cell-class 12454B.
- PVCO pipe shall be CSA-certified to CSA Standard B137.3.1 and third-party certified through NSF Standard 14 to AWWA Standard C909 and ASTM F1483.
- PVCO pipe joints shall be third-party certified to ASTM D3139.

STANDARDS

PVCO pipe shall conform to the following standards:

- ANSI/NSF Standard 14: Plastic Piping System Components and Related Materials
- ANSI/NSF Standard 61: Drinking Water System Components – Health Effects
- ASTM D1784: Rigid Polyvinyl Chloride (PVC) Compounds
- ASTM D3139: Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
- ASTM F1483: Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe
- ASTM F477: Elastomeric Seals (Gaskets) for Joining Plastic Pipe
- AWWA C909-09: Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 inch through 24 inch (100 mm through 600 mm)
- CSA B137.3.1: Molecularly oriented polyvinyl chloride (PVCO) pipe for pressure applications

Bionax® PVC-O Pipe

Product Data Sheet

Sizes & Ratings CIOD Pipe

Pressure Class Rating
at 73°F/23°C for 165 psi/1,135 kPa

Pipe Size		OD		Product Code
inches	mm	inches	mm	
14	350	15.30	389	120022*
16	400	17.40	442	120023*
18	450	19.50	495	120024*
20	500	21.60	549	120010
24	600	25.80	655	120011
30	750	32.00	813	120012

Pressure Class Rating
at 73°F/23°C for 305 psi/2,100 kPa

Pipe Size		OD		Product Code
inches	mm	inches	mm	
14	350	15.30	389	†
16	400	17.40	442	†
18	450	19.50	495	†
20	500	21.60	549	†
24	600	25.80	655	†
30	750	32.00	813	†

Pressure Class Rating
at 73°F/23°C for 235 psi/1,620 kPa

Pipe Size		OD		Product Code
inches	mm	inches	mm	
4	100	4.80	122	118000
6	150	6.90	175	118001
8	200	9.05	230	118002
10	250	11.10	282	118003
12	300	13.20	355	118004
14	350	15.30	389	120019*
16	400	17.40	442	120020*
18	450	19.50	495	120021*
20	500	21.60	549	120007
24	600	25.80	655	120008
30	750	32.00	813	†

† Coming soon

* Please validate product code before placing an order

Dimensions

Pressure Class Rating
165 psi at 73°F (1,135 kPa at 23°C)

Size	Average OD		Min. Wall Thickness		Average ID		
	in	mm	in	mm	in	mm	
14	350	15.30	389	0.347	8.83	14.57	370
16	400	17.40	442	0.395	10.04	16.57	421
18	450	19.50	495	0.443	11.25	18.54	471
20	500	21.60	549	0.491	12.46	20.59	523
24	600	25.80	655	0.586	14.88	24.53	623
30	750	32.00	813	0.735	18.42	30.43	773

Pressure Class Rating
305 psi at 73°F (2,100 kPa at 23°C)

Size	Average OD		Min. Wall Thickness		Average ID		
	in	mm	in	mm	in	mm	
14	350	15.30	389	0.347	8.83	13.96	354
16	400	17.40	442	0.395	10.04	15.88	403
18	450	19.50	495	0.443	11.25	17.80	452
20	500	21.60	549	0.890	22.60	19.72	501
24	600	25.80	655	1.063	26.99	23.54	598
30	750	32.00	813	1.334	33.44	29.20	742

Pressure Class Rating
235 psi at 73°F (1,620 kPa at 23°C)

Size	Average OD		Min. Wall Thickness		Average ID		
	in	mm	in	mm	in	mm	
4	100	4.80	122	0.154	3.91	4.48	114
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	13.20		0.423	10.74	12.31	313
14	350	15.30	389	0.494	12.54	14.33	364
16	400	17.40	442	0.557	14.16	16.30	414
18	450	19.50	495	0.625	15.88	18.23	463
20	500	21.60	549	0.692	17.58	20.16	512
24	600	25.80	655	0.827	21.00	24.02	610
30	750	32.00	813	1.025	26.04	29.84	758

Design & Installation

For design and installation recommendations, please consult the IPEX Pressure Piping Systems Design Manual as well as the IPEX Municipal Systems Installation Guide. Both documents are 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

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A policy of ongoing product improvement is maintained. This may result in modifications of features and/or specifications without notice.