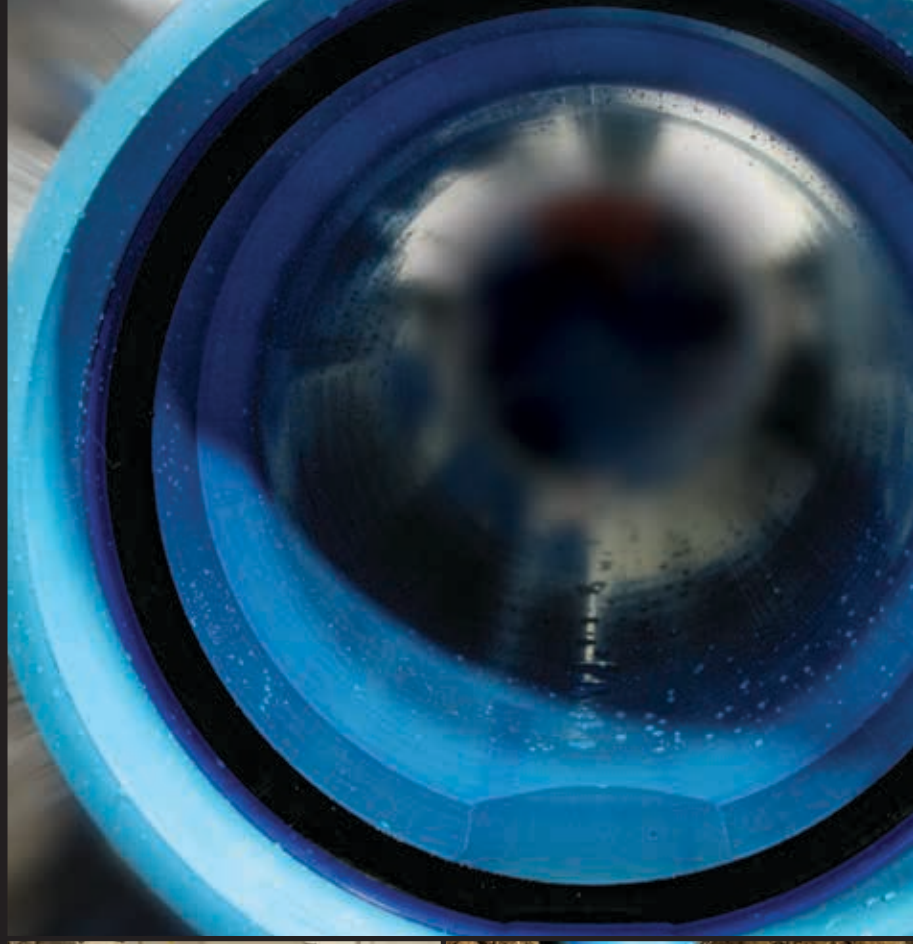
STRONG, TOUGH, FLEXIBLE PIPE



BIONAX®
PVCO PRESSURE PIPE

MUNICIPAL SYSTEMS

BIONAX® PVCO PRESSURE PIPE FOR WATER AND SEWAGE FORCEMAINS, TRANSMISSION AND DISTRIBUTION LINES

- 4" through 30" (100 to 750 mm)
- 165 & 235 psi pressure rating
- Standard CIOD sizes with the added benefit of larger internal diameters

IPEX by aliaxis

We build tough products for tough environments®

BIONAX®
PVCO PRESSURE PIPE

BENEFITS FOR DESIGNERS, INSTALLERS AND MUNICIPALITIES

LOW MAINTENANCE & PUMPING COSTS

Bionax's large interior diameters and smooth inner surface mean less friction, increased flow rates and lower pumping costs. In fact, Bionax retains its excellent hydraulic properties, keeping maintenance costs extremely low and saving energy throughout the system's life.

75% LIGHTER FOR EASIER, SAFER INSTALLATION

Bionax is 75% lighter than 12" (300 mm) ductile iron, making it significantly easier and safer to handle. Installation requires less equipment and a lot less time.

TIME SAVINGS & FLEXIBILITY

More versatility in terms of troubleshooting and in-field adjustments. Bionax saves municipal designers both time and trouble.

SIMPLER JOINING

Bionax uses easy-to-assemble gasketed joints, so no special training is required to join lengths together. The procedure is identical to that of C900 pipe.

CORROSION RESISTANCE

Third party studies from respected institutes confirm that Bionax is exceptionally corrosion resistant, unlike cast iron/ductile or concrete pressure pipes with pre-stressed steel wires that can degrade over time, leading to costly system failures. Like conventional PVC, Bionax is virtually corrosion-proof.

LOWEST CARBON FOOTPRINT

Bionax PVCO has the lowest carbon footprint of any municipal piping system, from the amount of energy used in its manufacture to its delivery to the jobsite.

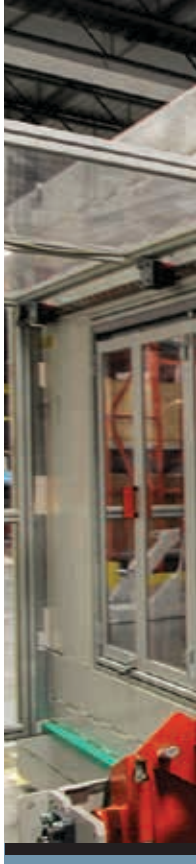
STRONG, TOUGH, AND FLEXIBLE FOR UNDERGROUND PRESSURE PIPING.

When IPEX first introduced Bionax PVCO pressure pipe in North America in 2008, it set a new standard for municipal water distribution. Since then, thousands of metres of Bionax have been laid in hundreds of installations and it is specified as a material of choice in many jurisdictions from coast to coast.

BIONAX®
PVCO PRESSURE PIPE

BEST MATERIAL TO INSTALL
IN SEISMICALLY-SENSITIVE AREAS

INCREASED RESISTANCE
TO CYCLIC FATIGUE



STRENGTH, TOUGHNESS & FLEXIBILITY

EXCEPTIONAL PIPE AND JOINT FLEXIBILITY

The molecular orientation of Bionax provides excellent pipe and joint flexibility. In fact, Bionax exceeds the 1% piping system strain requirement of the Japanese Water Works Association Seismic Design Standard by a factor of 1.7. The effectiveness of oriented pipe was challenged at Cornell University where independent tests were conducted. Upon completion, Bionax pipe was deemed the best material to install in seismically-sensitive areas.

70% HIGHER TENSILE STRENGTH THAN PVC

Because of its unique molecular orientation Bionax has 1.7X the circumferential tensile strength of conventional PVC (12,100 psi vs. 7,000 psi), permitting larger interior diameters for the same pressure rating.

LOWER SURGE PRESSURES

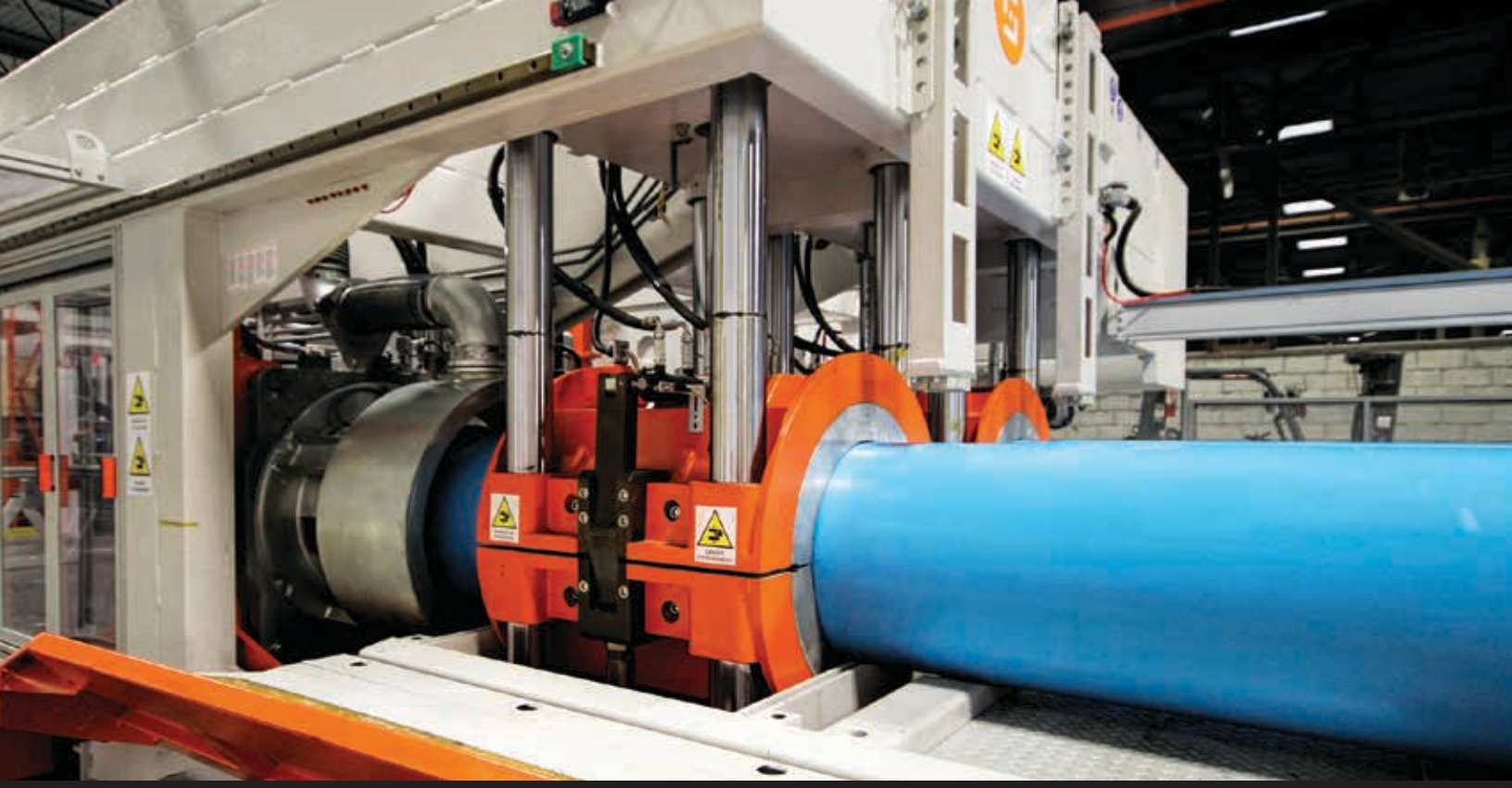
Outperforms ductile iron by generating over 3.5X lower surge pressures for identical flow conditions.

(i.e.: PVCO 6" PC235 @ 2.0 ft/s = 28.1 psi vs. DI 6" PC350 @ 2.0 ft/s = 109 psi).

BIONAX® APPLICATIONS

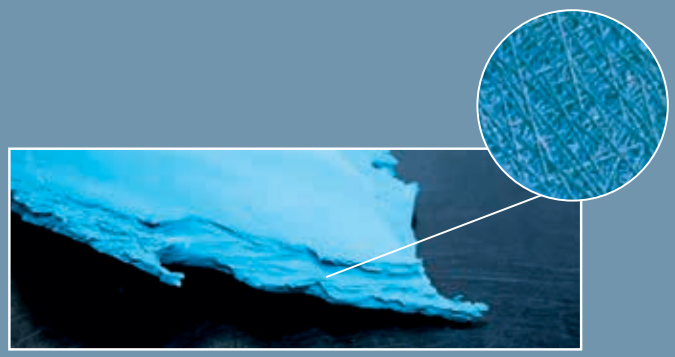
- ✓ WATER MAINS
- ✓ SEWAGE FORCE MAINS *
- ✓ GRAVITY SEWERS

* White Bionax Sewer Pressure Pipe

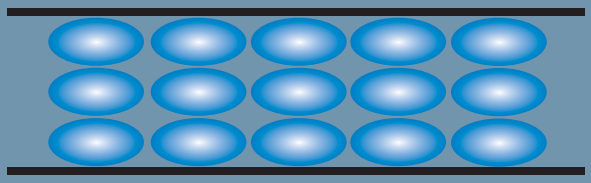


BIONAX® MOLECULAR ORIENTATION

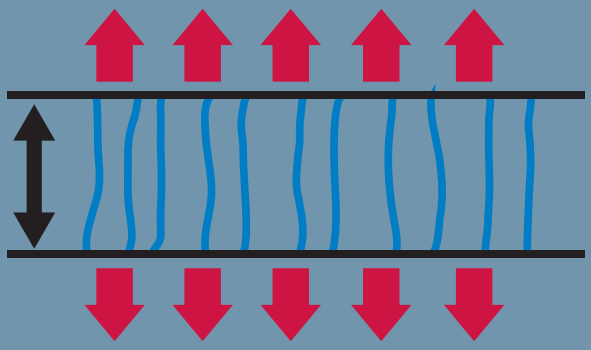
Due to molecular orientation during the manufacturing process, thin stratified layers are formed within the PVCO, resulting in higher impact strength even under extreme pressure.



As the PVC is stretched, so are the spherical molecules, allowing more of these elongated molecules to fit into a single layer than regular PVC. This gives the material a higher molecular density and makes it tougher.



Stretching creates a molecular orientation in which the molecules can be aligned in the direction of the expected load, resulting in superior force resistance.



BIONAX®
PVCO PRESSURE PIPE

PROUDLY MADE IN CANADA

LARGER INTERNAL DIAMETERS FOR INCREASED FLOW

BIONAX VS C900 (DR18)

With BIONAX you can increase the system's flow capacity due to larger inner diameters.

Nominal Pipe Size (in)	Internal Diameters: C900 (DR18) 235 PSI mm	C900 (DR18) 235 PSI in	BIONAX 235 PSI mm	BIONAX 235 PSI in	Increase in Flow Capacity
4	108.0	4.3	114.0	4.5	9.5%
6	155.0	6.1	163.0	6.4	10.1%
8	204.0	8.1	214.0	8.5	10.1%
10	250.0	9.9	263.0	10.4	10.4 %
12	297.0	11.7	313.0	12.3	10.5%
14	345.4	13.6	364.0	14.3	10.6%
16	392.9	15.5	414.0	16.3	10.6%
18	440.3	17.3	463.0	18.2	10.7%
20	487.6	19.2	513.0	20.2	10.7%
24	582.5	22.9	613.0	24.1	10.8%

AVAILABLE IN STANDARD CAST IRON OUTSIDE DIAMETER (CIOD) SIZES

PC165 psi / 1,135 kPa

Pipe Size inches	Pipe Size mm	OD inches	OD mm	Product Code	White Product Code
14	350	15.30	389	120022	
16	400	17.40	442	120023	120103
18	450	19.50	495	120024	120105
20	500	21.60	549	120010	
24	600	25.80	655	120011	
30	750	32.00	813	120012	

PC235 psi / 1,620 kPa

Pipe Size inches	Pipe Size mm	OD inches	OD mm	Product Code	White Product Code
4	100	4.80	122	118000	
6	150	6.90	175	118001	118201
8	200	9.05	230	118002	118202
10	250	11.10	282	118003	118203
12	300	13.20	335	118004	118204
14	350	15.30	389	120019	120101
16	400	17.40	442	120020	120102
18	450	19.50	495	120021	120104
20	500	21.60	549	120007	
24	600	25.80	655	120008	

Pressure ratings at 23°C / 73°F
Check with local sales rep for product line extensions

INTEGRATED TOTAL PVC SOLUTIONS

SEAMLESS END-TO-END SOLUTIONS

Whether the project is a new installation or a partial or complete replacement of existing piping, IPEX can be trusted to provide an end-to-end solution that meets the project specifications, integrates seamlessly, and is fully compatible with regular C900 and C907 fittings.

PEACE OF MIND

When dealing with IPEX, all the project details can be carried out with confidence: pipe, fittings, and engineering expertise. When a system is supplied by a single trusted source, the project can be completed with support for the Bionax system every step of the way, now and for decades to come.

CERTIFIED THIRD PARTY TESTED

Every length of Bionax shipped to your site has been hydro tested to stringent AWWA standards. Only IPEX is third party certified (by NSF) to AWWA C909, your assurance that Bionax will perform as well in field as it does in our labs. Bionax is also third party certified to CSA B137.3.1 standards, so it is truly certified tough.

SALES AND CUSTOMER SERVICE

IPEX Inc.
Toll Free: (866) 473-9462
ipexna.com

About IPEX by Aliaxis

As leading suppliers of thermoplastic piping systems, IPEX by Aliaxis provides our customers with some of the world's largest and most comprehensive product lines. All IPEX by Aliaxis 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 by Aliaxis products are:

- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- PE Electrofusion systems for gas and water
- Industrial process piping systems
- Electrical systems
- Telecommunications and utility piping systems
- Irrigation systems
- Industrial, plumbing and electrical cements
- PVC, CPVC, PP, ABS, PEX, FR-PVDF and PE pipe and fittings (1/4" to 48")

BIONAX®
PVCO PRESSURE PIPE

Bionax® is manufactured by IPEX Inc.
Bionax® is a trademark of IPEX Branding Inc.

This literature is published in good faith and is believed to be reliable. However, it does not represent and/or warrant in any manner the information and suggestions contained in this brochure. Data presented is the result of laboratory tests and field experience.

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

IPEX by aliaxis

BRMNBXIP211102R1C
© 2023 IPEX MN0030C