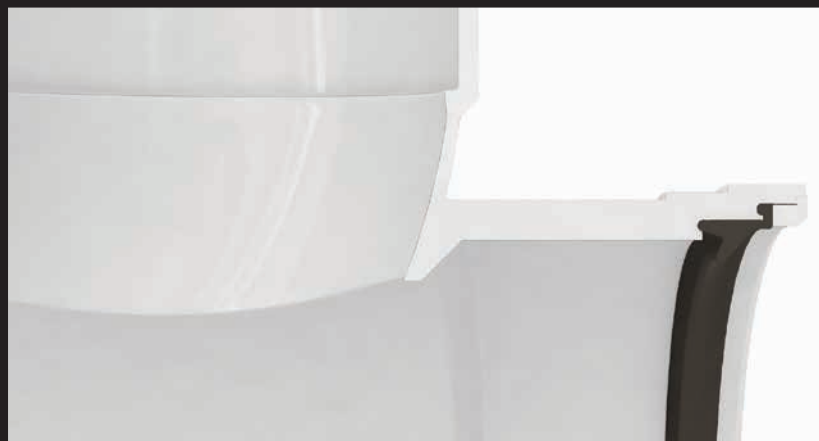


PVC GASKETED SEWER PIPING SYSTEMS



Ring-Tite®



MUNICIPAL SYSTEMS

PVC SEWER PIPING SYSTEM
MANUFACTURED TO CSA & ASTM
STANDARDS

• IPEX Ring-Tite® 4" – 60" (100mm – 1,500mm)



We build tough products for tough environments®

Ring-Tite®

4" – 60" (100mm – 1,500mm)



PERFORMANCE-PROVEN TOUGHNESS

Ring-Tite® piping systems are SDR35 and SDR28 sewer pipes and fittings manufactured to demanding ASTM, BNQ and CSA standards. Ring-Tite joints can withstand well in excess of both the ASTM and CSA requirements.

TIGHT JOINTS & LOWER TREATMENT COSTS

Eliminate infiltration and exfiltration. Ring-Tite's 50 psi capable joints easily outperform concrete and corrugated PE joints.

SUPERIOR FLOW CHARACTERISTICS

Because of the smooth inside wall of Ring-Tite, a Manning's coefficient of 0.009 can be used when designing systems using Ring-Tite pipe. This compares with Manning's coefficients of up to 0.023 for other materials like clay or concrete.

ABRASION RESISTANCE

Ring-Tite has been proven to be more abrasion resistant than other profile pipes, and has out-performed concrete pipe in testing at California State University.

SAMPLE SPECIFICATION

General

Main line sewers will be PVC SDR35 sewer pipe and shall be in compliance with ASTM D3034 or ASTM F679 and third party certified to CSA B182.2. Sewer laterals will be PVC SDR28 sewer pipe and shall be third party certified by CSA as above.

Joints

Sealing gaskets must meet the requirements of ASTM D3034 or ASTM F679, CSA B182.2. In addition, the pipe joints must be able to withstand a minimum hydrostatic pressure of 345 kPa (50 psi) without leakage.

Pipe Stiffness

The minimum ring stiffness shall be 320 kPa (46 psi) for SDR35 pipe and 625 kPa (90 psi) for SDR 28. This stiffness will be determined using the test methods prescribed by ASTM D3034 and ASTM F679.

Fittings

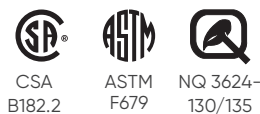
Injection-molded gasketed PVC fittings shall meet the requirements of ASTM 3034 and ASTM F1336 and shall be certified to CSA B182.1 or CSA B182.2. Fabricated fittings must conform to ASTM F1336 and CSA B182.2

CHEMICAL RESISTANCE

PVC is virtually immune to chemical attack from any type of sewage. Hydrogen Sulphide attack, which causes millions of dollars of damage to concrete and metal infrastructure, will not affect Ring-Tite.

STRESS CRACK RESISTANCE

While some HDPE pipes have been found to crack prematurely under load, Ring-Tite's tough PVC construction and superior formulation has been proven to be immune to these problems.



JOINT TIGHTNESS

Ring-Tite pipe joints have been third party tested to withstand a 345 kPa (50 psi) hydrostatic pressure. Injection molded fittings have also been laboratory tested to withstand a 345 kPa (50 psi) pressure in an undeflected straight alignment. This does not mean that installations should be tested to these pressures in the field, as these pressures could damage manholes, laterals or other appurtenances that are not tested to the same standards as the pipe and fittings. We recommend the testing procedures outlined in our Installation Guide, which is available upon request or can be downloaded from ipexna.com

Percent (%) Deflection of Ring-Tite (SDR 35 pipe)

| ASTM Embedment Material Classification | Manufactured Granular Angular CLASS 1 | Clean Sand & Gravel CLASS II | | Sand & Gravel with Fines CLASS III | | Silt & Clay CLASS IV |
|--|---------------------------------------|-------------------------------|---------------|------------------------------------|-------------|----------------------|
| | | Density (PROCTOR) AASHTO T-99 | 90% | 80% | 90% | 85% |
| E' kPa (psi) | 20,700 (3,000) | 13,800 (2,000) | 7,000 (1,000) | 7,000 (1,000) | 3,500 (500) | 2,760 (400) |

Height of Cover

| Height of Cover | | | | | | | |
|-----------------|------|-----|-----|-----|-----|------|------|
| m | ft | | | | | | |
| 1 | 3.3 | 0.3 | 0.5 | 1.0 | 1.0 | 1.7 | 2.1 |
| 2 | 6.6 | 0.4 | 0.5 | 1.0 | 1.0 | 1.8 | 2.2 |
| 3 | 9.8 | 0.4 | 0.6 | 1.2 | 1.2 | 2.2 | 2.6 |
| 4 | 13.1 | 0.6 | 0.8 | 1.6 | 1.6 | 2.9 | 3.5 |
| 5 | 16.4 | 0.7 | 1.1 | 2.0 | 2.0 | 3.7 | 4.4 |
| 6 | 19.7 | 0.9 | 1.3 | 2.4 | 2.4 | 4.4 | 5.3 |
| 7 | 23.0 | 1.0 | 1.5 | 2.8 | 2.8 | 5.1 | 6.1 |
| 8 | 26.3 | 1.2 | 1.7 | 3.2 | 3.2 | 5.9 | 7.0 |
| 9 | 29.5 | 1.3 | 1.9 | 3.6 | 3.6 | 6.6 | 7.9 |
| 10 | 32.8 | 1.4 | 2.1 | 4.0 | 4.0 | 7.3 | 8.8 |
| 15 | 49.2 | 2.2 | 3.2 | 6.0 | 6.0 | 11.0 | 13.1 |

■ Not Recommended

Dimensions

| SDR35 | | | | | | | | SDR28 | | | | | |
|-------|-------|---------|----------|---------------------|-------|---------|----------|---------|--------|---------------------|------|---------|--------|
| Size | | Avg. ID | | Min. Wall Thickness | | Avg. OD | | Avg. ID | | Min. Wall Thickness | | Avg. OD | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 4 | 100 | 3.97 | 100.94 | 0.12 | 3.06 | 4.21 | 107.06 | 3.91 | 99.42 | 0.15 | 3.82 | 4.21 | 107.06 |
| 5 | 135 | 5.32 | 135.08 | 0.16 | 4.09 | 5.64 | 143.26 | 5.24 | 133.02 | 0.20 | 5.12 | 5.64 | 143.26 |
| 6 | 150 | 5.92 | 150.29 | 0.18 | 4.55 | 6.28 | 159.39 | 5.83 | 148.01 | 0.22 | 5.69 | 6.28 | 159.39 |
| 8 | 200 | 7.92 | 201.16 | 0.24 | 6.10 | 8.40 | 213.36 | - | - | - | - | - | - |
| 10 | 250 | 9.90 | 251.46 | 0.30 | 7.62 | 10.50 | 266.70 | - | - | - | - | - | - |
| 12 | 300 | 11.79 | 299.36 | 0.36 | 9.07 | 12.50 | 317.50 | - | - | - | - | - | - |
| 15 | 375 | 14.43 | 366.42 | 0.44 | 11.10 | 15.30 | 388.62 | - | - | - | - | - | - |
| 18 | 450 | 17.63 | 447.87 | 0.53 | 13.57 | 18.70 | 475.01 | - | - | - | - | - | - |
| 21 | 525 | 20.79 | 527.99 | 0.63 | 16.00 | 22.05 | 559.99 | - | - | - | - | - | - |
| 24 | 600 | 23.39 | 594.00 | 0.71 | 18.00 | 24.80 | 630.00 | - | - | - | - | - | - |
| 27 | 675 | 26.36 | 669.42 | 0.80 | 20.29 | 27.95 | 710.00 | - | - | - | - | - | - |
| 30 | 750 | 30.17 | 766.36 | 0.91 | 23.22 | 32.00 | 812.80 | - | - | - | - | - | - |
| 36 | 900 | 36.11 | 917.22 | 1.09 | 27.79 | 38.30 | 972.80 | - | - | - | - | - | - |
| 42 | 1,050 | 41.95 | 1,065.72 | 1.27 | 32.29 | 44.50 | 1,130.30 | - | - | - | - | - | - |
| 48 | 1,200 | 47.89 | 1,216.56 | 1.45 | 36.87 | 50.79 | 1,290.30 | - | - | - | - | - | - |
| 54 | 1,350 | 54.27 | 1,378.49 | 1.64 | 41.77 | 57.55 | 1,462.00 | - | - | - | - | - | - |
| 60 | 1,500 | 58.08 | 1,475.48 | 1.76 | 44.71 | 61.61 | 1,564.90 | - | - | - | - | - | - |

Ring-Tite fittings are injection molded in most configurations up to 375mm (15") nominal diameter. Larger sizes are fabricated from sections of pipe.

SALES AND CUSTOMER SERVICE

Canadian Customers call IPEX Inc.
Toll Free: (866) 473-9462 (IPEX INC)
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:

- 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, PVCO, ABS, PEX, FR-PVDF, NFRPP, FRPP, HDPE, PVDF and PE pipe and fittings (1/2" to 60")

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

