MUNICIPAL

Gasketed Sewer Pipe

Storm and Sanitary Pipe for Use with Gasketed Sewer Fittings

Westlake Pipe & Fittings

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About Gasketed Sewer Pipe

Westlake Pipe & Fittings Gasketed Sewer Pipe with our Rieber gasket is an extremely durable pipe with a leak proof joint. The combination of chemical resistance, long term strength and high stiffness account for why PVC is the most popular pipe material for sanitary and storm sewer applications.

Gasketed Sewer pipe can service the following applications:

- gravity storm and sanitary lines
- gravity industrial lines
- private drain connections

Our Gasketed Sewer Pipe is available in Standard Dimension Ratios (SDR) 26, 28 and 35 in the following sizes: SDR 26 in 100mm - 450mm (4" - 18"), SDR28 in 100mm - 150mm (4" - 6"), SDR35 in 100mm - 675mm (4" - 27") and in 4.27 metre (14') lengths. The gasket is installed during the manufacturing process. Westlake Pipe & Fittings Municipal Solutions offers a complete line of fabricated and injection moulded fittings to complement our Gasketed Sewer Pipe.

Westlake Pipe & Fittings Gasketed Sewer Pipe shall be manufactured with a nominal size of 100mm to 675mm (4" - 27") and with Standard Dimension Ratios (SDR) 26, 28 or 35, and shall be certified to CSA B182.2 (PVC Sewer Pipe and Fittings (PSM Type) and conform to all the requirements of ASTM D3034 Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings and F679 Polyvinyl Chloride (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings.

Westlake Pipe & Fittings is recognized for its high quality products. Our state-of-the-art extrusion equipment and computerized material handling system ensure consistency. Our quality control testing guarantees that the pipe you install will outperform the application.

Installation

Westlake Pipe & Fittings Gasketed Sewer Pipe weighs a fraction of the weight of traditional pipe products, therefore handling and installation costs are reduced substantially. Our pipe can be easily cut in the field and the joint assembly can be handled in the trench without using heavy equipment.

Colour Coding

Westlake Pipe & Fittings SDR (26 and 35) pipe is colour coded green. Westlake Pipe & Fittings SDR28 Gasketed Sewer pipe is available in green and white. Fabricated fittings are green and injection moulded fittings are white.

Joining

Both bell and spigot shall be clean of all debris. Lubricant must only be applied to the spigot end of the pipe (do not lubricate the gasket). The pipes are then placed in straight alignment and the spigot is pushed into the bell to the insertion line marked on the pipe. Pipe assembly can be completed by hand using a bar and block, lever pullers or hydraulic jacks. Westlake Pipe & Fittings factory-installed gaskets eliminate the problems of rolling or fish mouthing. Care should be taken to avoid over insertion into the pipe bell beyond the spigot insertion line.

Lubricant

Westlake Pipe & Fittings Gasketed Sewer Pipe must be assembled with Westlake Pipe & Fittings non-toxic, water-soluble lubricant which is listed by the National Sanitation Foundation (NSF).

Fittings

Westlake Pipe & Fittings carries a complete line of fabricated and injection moulded fittings to complement our Gasketed Sewer Pipe. Westlake Pipe & Fittings fabricated and injection moulded fittings are third-party certified to CSA B182.2.

Fabricated Fittings

Fabricated fittings shall be manufactured with a nominal size of 100mm - 900mm (4" - 36") from SDR26 or SDR35 pipe and shall be third-party certified to CSA B182.2 and conform to the requirements of ASTM F1336 PolyvInyl Chloride (PVC) Gasketed Sewer Fittings. Injection moulded fittings both SDR26 and SDR35 shall be certified to CSA B182.2 Plastic Drain and Sewer Pipe and Pipe Fittings and conform to the requirements of ASTM D3034 and F679.

Injection Moulded Fittings

Gasketed sewer injection moulded fittings are light weight and easy to handle. They are available in 100mm - 300mm (4" - 12") diameters and have a Standard Dimension Ratio (SDR) of 26 or 35. Our injection moulded fittings are CSA certified to CSA B182.1 and/or B182.2 and meet the requirements of the ASTM D3034, F679 and F1336.

Benefits to Using Gasketed Sewer Pipe

There are many advantages for using our Gasketed Sewer Pipe: corrosion resistant, durable and cost effective.

Toughness and Durability

Gasketed Sewer Pipe is both tough and resilient, this pipe will not allow root penetration and will not be damaged by the impacts associated with normal field handling. Its resistance to abrasion, scouring and gouging is superior to that of other pipe materials. Gasketed Sewer Pipe is corrosion resistant and not affected by sewer gasses, chemicals and hydrogen sulphide acids normally found in domestic sewer effluent or legally discharged industrial fluids.

Smooth Interior

Gasketed Sewer Pipe has smooth interior walls with a Manning's coefficient "n" of 0.009. The resulting higher flow rates allow for the usage of smaller diameter pipe and flatter grades than would be possible with other pipe materials.

Abrasion

Based upon years of experience, PVC pipe has proven to have exceptional resistance to abrasion. Studies in Europe and North America have established PVC pipe's abrasion resistance. While the testing methods have varied substantially, the results have been consistent.

System Integrity

Gasketed Sewer Pipe, when properly installed, helps to eliminate infiltration and leakage associated with the sewer system. Gasketed Sewer Pipe joints are tested for joint tightness up to 345kPa (50psi) hydrostatic pressure. Our water tight joints help to eliminate costly extraneous flows entering the sewer system and contamination from leakage of the sewer systems.

Biological Attack

The performance of PVC pipe in severe environments has been studied since the 1950's. PVC pipe will not deteriorate or break down under biological attack from micro and macro-organisms. There has not been a single documented case in which buried PVC pipe products have suffered degradation or deterioration due to biological attack.

Product Quality

In Westlake Pipe & Fittings extrusion facilities, each operator is responsible for quality. Our operators check the wall thickness and outside diameter of every length of pipe produced. Every two hours, random samples are cut from the production line and sent to our quality control laboratory for testing in accordance with CSA and ASTM requirements. No pipe enters our yard without the seal of approval from our quality control team.

Certifications

Westlake Pipe & Fittings Gasketed Sewer Pipe proudly meets the following standards:

B182.2	D3034 F679	OPS 1841 OPSD 806.040	NQ 3624-130 NQ 3624-135

PVC Material

The PVC material used in the manufacture of our pipe meets the physical properties of PVC class 12364 or 12454 as specified in ASTM D1784.

Quality Control and Assurance

Westlake Pipe & Fittings Gasketed Sewer Pipe undergoes extensive testing and inspection in our manufacturing facilities. The following testing assures outstanding product quality.

Extrusion Quality Test

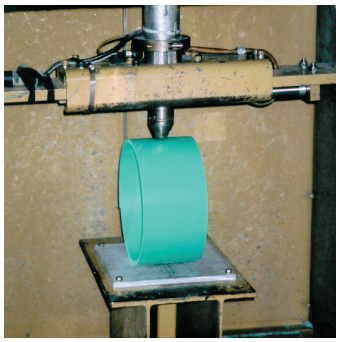
Specimens shall be tested in accordance with ASTM D2152. The pipe will not flake or disintegrate after being immersed in anhydrous acetone for 20 minutes.

Joint Tightness Test

Elastomeric gasket joints made with pipe and fittings or with bell end of pipe meet the requirements of ASTM D3212, except that the internal hydrostatic pressure shall be 100kPa (15psi).

Compression Test

Three specimens of the pipe, each about 50mm (2") long are flattened between parallel plates in a suitable press until the distance between the plates is 40% of the original outside diameter of the pipe. The rate of loading is uniform and the compression is completed within 2 to 5 minutes. Upon removal of the load, the specimens are examined for evidence of splitting, cracking or breaking. This test methodology is in accordance with CSA B182.2.



Impact Resistance Test

Samples of pipe to be tested for low temperature impact resistance are conditioned at 0°C for 16 hours. After conditioning, five samples are tested. There shall be no evidence of shattering, cracking or splitting of the wall when the pipe is tested in accordance to CSA B182.2.

Pipe Stiffness

The minimum pipe stiffness for SDR26 pipe shall be 800kPa (115psi), SDR28 pipe shall be 625kPa (90psi) and for SDR35 pipe 320kPa (46psi), when tested at 5% deflection in accordance with ASTM D2412.

Learn about our commitment to product innovation at westlakepipe.com.

Calculated Deflections (%) of Buried PVC Pipe for Prism and H20 Loads

SDR	Modulus of Soil Reaction (E'), psi	Height of Cover (ft)															
		2		6		110		14		18		22		26		30	
		Load Type															
		Prism	H2O	Prism	H2O	Prism	H2O	Prism	H2O	Prism	H2O	Prism	H2O	Prism	H2O	Prism	H2O
35	50	1.7	9.3	5.1	6.7	8.4	8.4	1.8	11.8	15.2	15.2	18.5	18.5	21.9	21.9	25.2	25.2
	200	0.9	4.8	2.6	3.5	4.4	4.4	6.1	6.1	7.9	7.9	9.6	9.6	11.4	11.4	13.1	13.1
	400	0.5	3.0	1.6	2.1	2.7	2.7	3.7	3.7	4.8	4.8	5.9	5.9	6.9	6.9	8.0	8.0
	1000	0.3	1.4	0.7	1.0	1.2	1.2	1.7	1.7	2.2	2.2	2.7	2.7	3.2	3.2	3.7	3.7
	2000	0.1	0.7	0.4	0.5	0.7	0.7	0.9	0.9	1.2	1.2	1.4	1.4	1.7	1.7	1.9	1.9
28	50	1.0	5.6	3.0	4.0	5.0	5.0	7.0	7.0	9.0	9.0	11.0	11.0	13.1	13.1	15.1	15.1
	200	0.7	3.6	1.9	2.6	3.2	3.2	4.5	4.5	5.8	5.8	7.1	7.1	8.4	8.4	9.7	9.7
	400	0.4	2.4	1.3	1.8	2.2	2.2	3.1	3.1	4.0	4.0	4.8	4.8	5.7	5.7	6.6	6.6
	1000	0.2	1.2	0.7	0.9	1.1	1.1	1.6	1.6	2.0	2.0	2.5	2.5	2.9	2.9	3.4	3.4
	2000	0.1	0.7	0.4	0.5	0.6	0.6	0.9	0.9	1.1	1.1	1.4	1.4	1.6	1.6	1.8	1.8
26	50	0.8	4.6	2.5	3.3	4.1	4.1	5.8	5.8	7.4	7.4	9.1	9.1	10.7	10.7	12.4	12.4
	200	0.6	3.1	1.7	2.3	2.8	2.8	4.0	4.0	5.1	5.1	6.3	6.3	7.4	7.4	8.5	8.5
	400	0.4	2.2	1.2	1.6	2.0	2.0	2.8	2.8	3.6	3.6	4.4	4.4	5.2	5.2	6.0	6.0
	1000	0.2	1.2	0.6	0.9	1.1	1.1	1.5	1.5	1.9	1.9	2.4	2.4	2.8	2.8	3.2	3.2
	2000	0.1	0.7	0.4	0.5	0.6	0.6	0.8	0.8	1.1	1.1	1.3	1.3	1.6	1.6	1.8	1.8

% Deflection is 7.5% or less, Burial Conditions are Acceptable.

% Deflection is more than 7.5%, Burial Conditions are Unacceptable.

Notes: For estimates of pipe deflection outside of the parameters shown above, contact Westlake Pipe & Fittings.

Pipe Deflection values in the above table are calculated using the Modified Iowa Formula and the following:

Bedding Constant, K = 0.1

Deflection Lag Factor, DL = 1.0

Soil Unit Weight for Earth Load = 120 lb/ft3

Dimensions				
Standard Dimension Ratio (SDR)	Nominal Size mm (in)	Average Inside Diameter, mm (in)	Average Wall Thickness, mm (in)	Average Outside Diameter
SDR28	100 (4)	99 (3.899)	4 (0.171)	107 (4.215)
	135 (5)	133 (5.128)	5 (0.211)	143 (5.640)
	150 (6)	147 (5.799)	6 (0.253)	159 (6.275)
SDR35	100 (4)	101 (3.957)	3 (0.129)	107 (4.215)
	135 (5)	135 (5.298)	4 (0.171)	143 (5.640)
	150 (6)	150 (5.893)	5 (0.191)	159 (6.275)
	200 (8)	201 (7.894)	6 (0.253)	213 (8.400)
	250 (10)	251 (9.866)	8 (0.317)	267 (10.500)
	300 (12)	298 (11.740)	10 (0.380)	318 (12.500)
	375 (15)	365 (14.378)	12 (0.461)	389 (15.300)
	450 (18)	446 (17.573)	14 (0.564)	475 (18.701)
	525 (21)	526 (20.713	17 (0.667)	560 (22.047)
	600 (24)	592 (23.303)	19 (0.750)	630 (24.803)
	675 (27)	667 (26.263)	21 (0.845)	710 (27.953)
SDR26	100 (4)	99 (3.873)	4 (0.171)	107 (4.215)
	150 (6)	147 (5.769	6 (0.253)	159 (6.275)
	200 (8)	195 (7.716)	9 (0.342)	213 (8.400)
	250 (10)	245 (9.652)	11 (0.424)	267 (10.500)
	300 (12)	292 (11.488)	13 (0.506)	318 (12.500)
	375 (15)	359 (14.392)	15 (0.604)	389 (15.300)
	450 (18)	437 (17.205)	19 (0.748)	475 (18.701)

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