

Vylon Pipe

PVC Large Diameter Closed Profile Gravity Sewer Pipe (ASTM F-1803, UNI-B-9)

Scope

This specification designates the requirements for polyvinyl chloride (PVC) pipe and fittings made to a controlled inside diameter in sizes 21" to 54" with an integral bell and elastomeric seal joints which meet the requirements of ASTM F-1803, closed profile.

Materials

Pipe and fittings shall be made from polyvinyl chloride compounds which comply with the requirements for a minimum cell classification of 12364 as defined by ASTM D-1784.

Dimensions

Pipe sizes, inside diameters and typical dimensions shall conform to those listed in Table 1. Outside diameter shall be constant along the length.

Joints

All pipe joints shall be of the bell and spigot type with elastomeric seals and conform to the requirements of ASTM D-3212. Gaskets shall be factory installed and chemically bonded to the bell end of the pipe. Gasket material shall conform to the requirements of ASTM F-477.

Fittings

All fittings shall be fabricated from pipe meeting the requirements of these standards. Fabricated miter joints shall be reinforced by fusion heat welding.

Physical Requirements

Pipe stiffness—minimum pipe stiffness shall be 46 psi when tested in accordance with ASTM D-2412.

Impact resistance—no visual cracking or splitting of the waterway wall shall be evidenced when tested in accordance with ASTM D-2444 with a 20 lb. weight, tup B, flat plate holder B to a level of 220 ft. lbs.

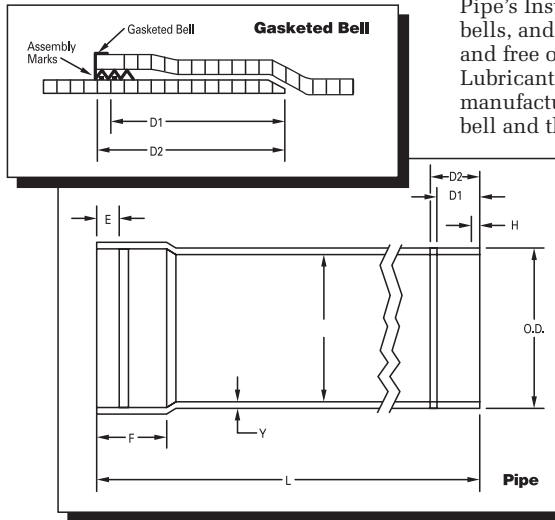
Fusion quality—there shall be no sign of flaking or disintegration when immersed in anhydrous acetone for 20 minutes as described in ASTM D-2152.

Ductility—there shall be no evidence of cracking or splitting when pipe is flattened in a circumferential orientation between two flat plates by sixty percent (60%) of the original inside diameter.

Air tightness—each length of pipe shall pass a factory 3.5 psi air test as described in ASTM F-1803.

Marking

Each pipe shall be identified with the name of manufacturer, nominal size, cell classification, ASTM designation F-1803, the pipe stiffness designation "PS-46" and manufacturer's date code.



Installation

Bedding, backfill and general installation requirements should comply with ASTM D-2321. Further details can be attained from the Uni-Bell Handbook of PVC pipe and Vylon Pipe's Installation Guide. Gasket, bells, and spigots shall be cleaned and free of dirt prior to assembly. Lubricants supplied by the pipe manufacturer shall be applied to the bell and the spigot surface up to the

assembly stop mark including the chamfered end. Spigots should be aligned with the bell and be pushed into place so that second home mark is just visible adjacent to the bell entry point.

Table 1. Vylon Pipe Diameter Dimensions

SIZE	NOMINAL O.D.	BELL O.D.	I.D.	MIN. INNER WALL THK.	Y MINIMUM PROFILE HEIGHT
21"	22.110	23.38	20.75	0.080	0.680
24"	25.115	27.63	23.50	0.100	0.770
27"	28.232	31.00	26.50	0.115	0.866
30"	31.415	34.38	29.50	0.125	0.965
36"	37.800	41.13	35.50	0.150	1.150
42"	44.200	48.50	41.50	0.180	1.350
48"	50.570	54.63	47.50	0.210	1.535
54"	56.960	60.99	53.50	0.250	1.730

Table 2. Vylon Pipe Joint Dimensions

SIZE	SPIGOT HOMING MARKS		E LIP MIN	F SOCKET DEPTH	H BEVEL LENGTH MIN	L LENGTH
	D1	D2				
21"	6.5	7.5	3.75	8.0	2.0	14'-9"
24"	6.5	7.5	3.75	8.0	2.0	14'-9"
27"	7.5	8.5	3.75	9.0	2.0	14'-10"
30"	7.5	8.5	3.75	9.0	2.0	14'-10"
36"	8.0	9.0	3.75	9.5	2.0	14'-10.5"
42"	8.5	9.5	3.75	9.75	2.0	14'-10.75"
48"	9.0	10.0	3.75	10.5	2.0	14'-11.5"
54"	9.5	10.5	3.75	11.0	2.5	15'-0"

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