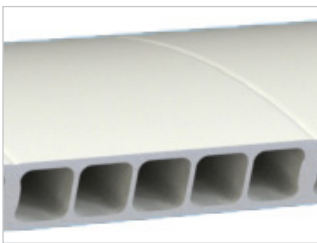


## **VYLON**<sup>®</sup> PIPE

Closed Profile PVC Pipe for Gravity  
Flow Sanitary Sewers

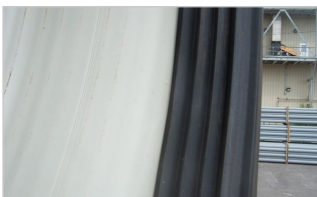


The first installation of Vylon Pipe occurred in 1987 for a direct bury gravity flow sewer. Since then, millions of feet have been successfully installed across the country. With its innovative I-beam construction and closed profile design, Vylon Pipe efficiently meets all the requirements published in ASTM F1803, including a minimum pipe stiffness of 46 psi.



### **UNIQUE DESIGN**

Without any loss of performance, Vylon pipe's pioneering, I-beam wall structure is significantly more material-efficient and cost effective than solid wall pipe alternatives. Vylon's unique four-finned gasket design assures leak free joints when properly installed. Proper installation is easy with Vylon's two assembly marks clearly shown and the exterior gasket remaining visible during assembly.



### **CONTINUOUS INNOVATION**

Since its introduction, a series of technical innovations have improved upon the initial design. Vylon Slipliner Pipe was introduced in 1992, which enables the rehabilitation of existing sewers during live flow conditions. In order to meet the growing demand for even stronger, higher stiffness sanitary sewer projects, Vylon direct bury piping is also available in pipe stiffnesses of 75 and 115 psi.

## VYLON® PIPE

PVC Closed Profile Gravity Sewer Pipe (ASTM F1803, PS46, PS75, PS115)

### 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 meets the requirements of ASTM F1803.

### MATERIAL REQUIREMENTS

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 D1784.

### STANDARD DIMENSIONS

Pipe sizes, inside diameters, and typical dimensions shall conform to those listed in Table 1.

### REQUIRED MARKING

Each pipe shall be identified with the name of manufacturer, nominal size, cell classification, ASTM designation F1803, the pipe stiffness, and manufacturer's production date code.

### LEAK-FREE JOINTS

All pipe joints shall be water-tight with elastomeric seals and conform to the requirements of ASTM D3212. Gaskets shall be factory installed and chemically bonded to the bell end of the pipe. Gasket material shall conform to the requirements of ASTM F477. Factory tapered spigot ends shall be made of PVC and shall be formed during the manufacturing process by heating the inner and/or outer wall and remolding. Spigot ends formed by using filler material, such as rubber, neoprene or other filler materials that are attached or glued to the inner wall, is not acceptable.

### PIPE STIFFNESS MINIMUMS

Minimum pipe stiffness shall be 46, 75 or 115 psi when tested in accordance with ASTM D2412.

### HIGH IMPACT RESISTANCE

Minimum pipe impact strength shall be 220 ft-lbs when tested in accordance with ASTM D2444. There can be no visual cracking or splitting of the waterway wall as a result of that impact load.

### HIGH TOLERANCE FOR DEFLECTION

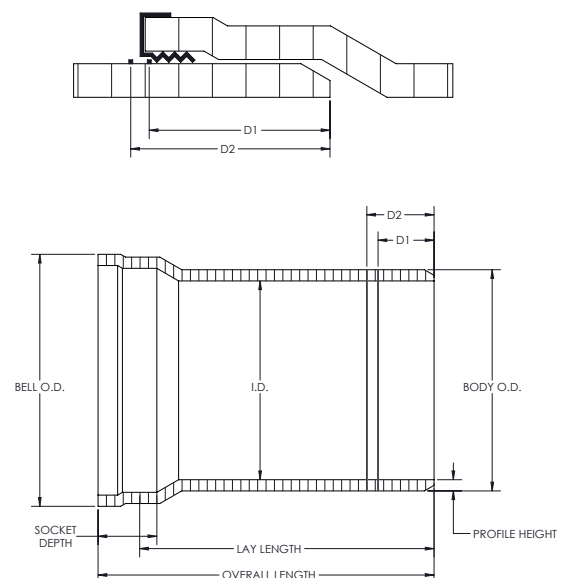
There shall be no evidence of cracking or splitting when the original pipe diameter is flattened sixty percent (60%) between two flat plates.

### REQUIRED TEST FOR AIR TIGHTNESS

At the factory, each length of Vylon pipe shall pass a 3.5 psi internal pressure air test per ASTM F1803.

### INSTALLATION REQUIREMENTS

Bedding, backfill and general installation shall follow ASTM D2321, the Vylon PVC Gravity Sewer Pipe's Installation Guide and Vylon Trench Detail. Gaskets, bells and spigots shall be cleaned and dirt-free prior to assembly. Lubricant supplied by the pipe manufacturer shall be applied to the gasket prior to joint assembly. Spigots shall be aligned with the bell and be pushed into place so that the second homing mark is just visible adjacent to the bell entry point.



**TABLE 1. VYLON PIPE DIAMETER DIMENSIONS**

NOMINAL SIZE (inches)	PIPE STIFFNESS	BODY O.D. (inches)	BELL O.D. (inches)	INSIDE DIAMETER (inches)	MIN. INNER WALL THK. (inches)	PROFILE HEIGHT (inches)
21"	PS46 / PS75	22.29	24.79	20.75	0.080	0.770
21"	PS115	22.56	25.28	20.75	0.080	0.905
24"	PS46 / PS75	25.24	27.95	23.50	0.100	0.870
24"	PS115	25.56	28.52	23.50	0.100	1.025
27"	PS46 / PS75	28.46	31.39	26.50	0.115	0.980
27"	PS115	28.81	32.04	26.50	0.115	1.155
30"	PS46 / PS75	31.69	34.84	29.50	0.125	1.095
30"	PS115	32.07	35.56	29.50	0.125	1.285
36"	PS46 / PS75	38.13	41.72	35.50	0.150	1.315
36"	PS115	38.59	42.60	35.50	0.150	1.545
42"	PS46 / PS75	44.58	48.62	41.50	0.180	1.540
42"	PS115	45.11	49.64	41.50	0.180	1.805
48"	PS46 / PS75	51.02	55.50	47.50	0.210	1.760
48"	PS115	51.63	56.68	47.50	0.210	2.065
54"	PS46 / PS75	57.47	62.40	53.50	0.225	1.985

**TABLE 2. VYLON PIPE JOINT DIMENSIONS**

NOMINAL SIZE (inches)	PIPE STIFFNESS	SPIGOT HOMING MARKS		SOCKET DEPTH (inches)	BEVEL LENGTH MIN. (inches)	OVERALL LENGTH* (inches)
		D1 (inches)	D2 (inches)			
21"	PS46/PS75/PS115	7.00	8.00	10.00	2.0	15'-7.25"
24"	PS46/PS75/PS115	7.00	8.00	10.00	2.0	15'-7.25"
27"	PS46/PS75/PS115	8.00	9.00	10.00	2.0	15'-8.25"
30"	PS46/PS75/PS115	8.25	9.25	10.00	2.0	15'-8.50"
36"	PS46/PS75/PS115	8.25	9.25	10.50	2.0	15'-8.50"
42"	PS46/PS75/PS115	8.25	9.25	10.75	2.0	15'-8.50"
48"	PS46/PS75/PS115	9.50	10.50	11.00	2.0	15'-9.75"
54"	PS46 / PS75	12.50	13.50	13.00	2.5	16'-0.75"

\* Lay lengths are 15' for all pipe sizes

Contact your regional Underground Solutions pipe representative for assistance.

858-218-3729 | 800-382-0862  
[www.aegion.com](http://www.aegion.com) | [www.vylonpipe.com](http://www.vylonpipe.com)

 **Underground Solutions**® | **VYLON PIPE**