

## APPLICATIONS

Pipeline Plastics PE4710 Industrial Pipe is a high performance polyethylene pipe designed for Raw Water, Process Water, Waste Water, Dredging, Slurry, Irrigation, Chemical and Corrosive Applications in rugged and demanding Industrial Applications such as Power Plants, Petrochemical and Mining.

## CONFORMANCE

- ASTM F714 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
- ASTM D3035 Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
- Cell Classification PE445574C per ASTM D3350
- Plastics Pipe Institute (PPI) TR-4 Listing as PE4710 (also meets PE3408 per D3350-02a)
- Hydrostatic Design Basis 1,600 psi @ 73°F (23°C) and 1,000 psi @ 140°F per ASTM D2837
- Color & UV Stabilizer: (C) Black with 2% min Carbon Black per ASTM D3350
- Heat fusion procedure according to ASTM F2620, and PPI TR-33 and TR-41
- Installation is recommended to follow PPI Handbook of Polyethylene Pipe, 2nd Ed.
- Leak testing should be performed according to ASTM F2164, "Standard Practice for Field Leak Testing of Polyethylene (PE) and Crosslinked Polyethylene (PEX) Pressure Piping Systems Using Hydrostatic Pressure." Appropriate safety considerations should always be followed.

Physical Properties	Nominal Value*	Test Method	Physical Properties	Nominal Value*	Test Method
Density	0.960 g/cm <sup>3</sup>	ASTM D1505	Elongation @ Break	>500 %	ASTM D638
Melt Index (MI) 190°C/2.16kg	0.07 g/10 min	ASTM D1238	Flexural Modulus	150,000 psi	ASTM D790
High Load Melt Index (190°C/21.6kg)	7 - 16 g/10 min	ASTM D1238	Brittleness Temperature	<-103 °F	ASTM D746
PENT	>500 hours	ASTM F1473	Hardness	62 Shore D	ASTM D2240
Tensile Stress @ Yield	3,500 psi	ASTM D638	Vicat Softening Temperature	256 °F	ASTM D1525
Tensile Stress @ Break	5,000 psi	ASTM D638	Thermal Expansion	1.0 x 10 <sup>-4</sup> in/in/°F	ASTM D696

\* Nominal values are typical results and are not guaranteed or intended to be used as a product specification or engineering values.

IPS		DR	7	9	11	13.5	17	21	26	35
Size	OD (in)	PR <sup>A</sup>	335 psi	250 psi	200 psi	160 psi	125 psi	100 psi	80 psi	63 psi
2"	2.375	Min Wall (in)	0.339	0.264	0.216					
		ID <sup>B</sup> (in)	1.656	1.816	1.917					
		Lb / Ft <sup>C</sup>	0.948	0.767	0.643					
3"	3.500	Min Wall (in)	0.500	0.389	0.318					
		ID <sup>B</sup> (in)	2.440	2.676	2.825					
		Lb / Ft <sup>C</sup>	2.058	1.663	1.394					
4"	4.500	Min Wall (in)	0.643	0.500	0.409	0.333				
		ID <sup>B</sup> (in)	3.137	3.440	3.633	3.793				
		Lb / Ft <sup>C</sup>	3.400	2.751	2.307	1.914				
6"	6.625	Min Wall (in)	0.946	0.736	0.602	0.491	0.390			
		ID <sup>B</sup> (in)	4.619	5.064	5.348	5.585	5.799			
		Lb / Ft <sup>C</sup>	7.373	5.961	4.994	4.151	3.354			
8"	8.625	Min Wall (in)	1.232	0.958	0.784	0.639	0.507	0.411	0.332	0.265
		ID <sup>B</sup> (in)	6.013	6.593	6.963	7.271	7.549	7.754	7.922	8.062
		Lb / Ft <sup>C</sup>	12.50	10.11	8.468	7.035	5.689	4.658	3.808	3.066
10"	10.75	Min Wall (in)	1.536	1.194	0.977	0.796	0.632	0.512	0.413	0.331
		ID <sup>B</sup> (in)	7.494	8.218	8.678	9.062	9.409	9.665	9.873	10.049
		Lb / Ft <sup>C</sup>	19.42	15.70	13.16	10.93	8.830	7.247	5.905	4.772
12"	12.75	Min Wall (in)	1.821	1.417	1.159	0.944	0.750	0.607	0.490	0.392
		ID <sup>B</sup> (in)	8.889	9.747	10.293	10.748	11.160	11.463	11.710	11.918
		Lb / Ft <sup>C</sup>	27.32	22.09	18.51	15.38	12.43	10.19	8.315	6.709
14"	14.00	Min Wall (in)	2.000	1.556	1.273	1.037	0.824	0.667	0.538	0.431
		ID <sup>B</sup> (in)	9.760	10.702	11.302	11.801	12.254	12.587	12.858	13.087
		Lb / Ft <sup>C</sup>	32.93	26.63	22.31	18.54	14.98	12.29	10.03	8.092
16"	16.00	Min Wall (in)	2.286	1.778	1.455	1.185	0.941	0.762	0.615	0.492
		ID <sup>B</sup> (in)	11.154	12.231	12.916	13.487	14.005	14.385	14.695	14.956
		Lb / Ft <sup>C</sup>	43.01	34.77	29.15	24.21	19.58	16.05	13.08	10.56
18"	18.00	Min Wall (in)	2.571	2.000	1.636	1.333	1.059	0.857	0.692	0.554
		ID <sup>B</sup> (in)	12.549	13.760	14.531	15.173	15.755	16.183	16.532	16.826
		Lb / Ft <sup>C</sup>	54.44	44.02	36.90	30.64	24.76	20.31	16.57	13.36
20"	20.00	Min Wall (in)	2.857	2.222	1.818	1.481	1.176	0.952	0.769	0.615
		ID <sup>B</sup> (in)	13.943	15.289	16.145	16.859	17.506	17.981	18.369	18.695
		Lb / Ft <sup>C</sup>	67.21	54.35	45.54	37.83	30.58	25.08	20.44	16.49
22"	22.00	Min Wall (in)	3.143	2.444	2.000	1.630	1.294	1.048	0.846	0.677
		ID <sup>B</sup> (in)	15.337	16.818	17.760	18.545	19.256	19.779	20.206	20.565
		Lb / Ft <sup>C</sup>	81.31	65.75	55.10	45.78	37.00	30.32	24.75	19.98
24"	24.00	Min Wall (in)	3.429	2.667	2.182	1.778	1.412	1.143	0.923	0.738
		ID <sup>B</sup> (in)	16.731	18.347	19.375	20.231	21.007	21.577	22.043	22.434
		Lb / Ft <sup>C</sup>	96.77	78.26	65.59	54.48	44.02	36.08	29.44	23.77
26"	26.00	Min Wall (in)		2.889	2.364	1.926	1.529	1.238	1.000	0.800
		ID <sup>B</sup> (in)		19.876	20.989	21.917	22.758	23.375	23.880	24.304
		Lb / Ft <sup>C</sup>		91.83	76.95	63.94	51.67	42.35	34.57	27.89
28"	28.00	Min Wall (in)		3.111	2.545	2.074	1.647	1.333	1.077	0.862
		ID <sup>B</sup> (in)		21.404	22.604	23.603	24.508	25.173	25.717	26.174
		Lb / Ft <sup>C</sup>		106.52	89.25	74.18	59.93	49.12	40.10	32.33
30"	30.00	Min Wall (in)		3.333	2.727	2.222	1.765	1.429	1.154	0.923
		ID <sup>B</sup> (in)		22.933	24.218	25.289	26.259	26.971	27.554	28.043
		Lb / Ft <sup>C</sup>		122.26	102.47	85.16	68.81	56.39	46.02	37.11
32"	32.00	Min Wall (in)			2.909	2.370	1.882	1.524	1.231	0.985
		ID <sup>B</sup> (in)			25.833	26.975	28.009	28.770	29.391	29.913
		Lb / Ft <sup>C</sup>			116.60	96.89	78.27	64.16	52.37	42.26
34"	34.00	Min Wall (in)			3.091	2.519	2.000	1.619	1.308	1.046
		ID <sup>B</sup> (in)			27.447	28.661	29.760	30.568	31.228	31.782
		Lb / Ft <sup>C</sup>			131.60	109.37	88.37	72.43	59.10	47.69
36"	36.00	Min Wall (in)			3.273	2.667	2.118	1.714	1.385	1.108
		ID <sup>B</sup> (in)			29.062	30.347	31.511	32.366	33.065	33.652
		Lb / Ft <sup>C</sup>			147.55	122.62	99.08	81.21	66.28	53.46
42"	42.00	Min Wall (in)				3.111	2.471	2.000	1.615	1.292
		ID <sup>B</sup> (in)				35.404	36.762	37.760	38.575	39.260
		Lb / Ft <sup>C</sup>				166.89	134.85	110.54	90.18	72.78
48"	48.00	Min Wall (in)					2.824	2.286	1.846	1.477
		ID <sup>B</sup> (in)					42.014	43.154	44.086	44.869
		Lb / Ft <sup>C</sup>					176.13	144.39	117.81	95.07
54"	54.00	Min Wall (in)					3.176	2.571	2.077	1.662
		ID <sup>B</sup> (in)					47.266	48.549	49.597	50.478
		Lb / Ft <sup>C</sup>					222.90	182.75	149.13	120.28
63"	63.00	Min Wall (in)						3.000	2.423	1.938
		ID <sup>B</sup> (in)						56.640	57.863	58.890
		Lb / Ft <sup>C</sup>						248.72	202.91	163.75
65"	65.00	Min Wall (in)							3.095	2.000
		ID <sup>B</sup> (in)							58.438	59.700
		Lb / Ft <sup>C</sup>							264.77	216.03

Note - These tables represent standard sizes. Other sizes are available.  
A - PR: Pressure Rating in pounds/sq. in. (psi) for ASTM F714 Water up to 80°F.  
B - ID: Inside Diameter may vary due to manufacturing tolerances.  
C - Wt. (lb/ft): Weight per foot in pounds may vary due to manufacturing tolerances.