

Table 1: PE 4710 IPS

Working Pressure Rating ² (psi) or Pressure Class ³		125		160		200		250	
Pipe Dimension Ratio		DR 17		DR 13.5		DR 11		DR 9	
Nominal Pipe Size	IPS OD (in)	Average ID (in)	Weight (lbs/ft)	Average ID (in)	Weight (lbs/ft)	Average ID (in)	Weight (lbs/ft)	Average ID (in)	Weight (lbs/ft)
4"	4.50	3.94	1.54	3.79	1.09	3.63	2.29	3.44	2.73
6"	6.63	5.80	3.33	5.59	4.12	5.35	4.97	5.07	5.93
8"	8.63	7.55	5.64	7.27	6.99	6.96	8.43	6.59	10.05
10"	10.75	9.41	8.76	9.06	10.85	8.68	13.07	8.22	15.61
12"	12.75	11.16	12.33	10.75	15.27	10.29	18.39	9.75	21.96
Allowable Total Pressure ⁴ During Recurring Surge ⁵ (psi)		187.5		240		300		375	
Allowable Total Pressure During Occasional Surge ⁶ (psi)		250		320		400		500	

Table 2: PE 4710 DIPS

Working Pressure Rating ² (psi) or Pressure Class ³		125		160		200		250	
Pipe Dimension Ratio		DR 17		DR 13.5		DR 11		DR 9	
Nominal Pipe Size	DIPS OD (in)	Average ID (in)	Weight (lbs/ft)	Average ID (in)	Weight (lbs/ft)	Average ID (in)	Weight (lbs/ft)	Average ID (in)	Weight (lbs/ft)
4"	4.8	4.20	1.75	4.05	2.17	3.88	2.60	3.67	3.11
6"	6.9	6.04	3.61	5.82	4.47	5.57	5.38	5.27	6.43
8"	9.05	7.92	6.21	7.63	7.69	7.31	9.26	6.92	11.07
10"	11.1	9.72	9.35	9.36	11.57	8.96	13.94	8.49	16.64
12"	13.2	11.56	13.21	11.13	16.37	10.66	19.71	10.09	23.54
Allowable Total Pressure ⁴ During Recurring Surge ⁵ (psi)		187.5		240		300		375	
Allowable Total Pressure During Occasional Surge ⁶ (psi)		250		320		400		500	

1 PE4710 pipe materials and Pressure Ratings are described in ASTM F714, ASTM D3035, and AWWA C901.

2 Working Pressure Rating is the Maximum Continuous Pressure Allowed assuming Recurring and Occasional Surge Allowances above are not exceeded per AWWA C906 and AWWA M55.

3 Pressure Class (PC) is the design capacity to resist working pressure up to 80F maximum service temperature including specified maximum allowances for recurring positive pressure surges above working pressure. NOTE: AWWA defines Pressure Class differently for different materials

4 Total Pressure = sum of Pumping Pressure and the Repetitive Transient Surge Pressure. PE Pipes have built-in Surge Allowance to Repetitive Transient Surge due to excellent fatigue resistance.

5 Recurring surge pressures (PRS) occur frequently and are inherent in the design and operation of the system (such as normal pump startup or shutdown, and normal valve opening or closure). WPR = 1.5 x PC x FT - PRS. Note that 1.5xPC is also the maximum test pressure per ASTM F2164.

6 Occasional surge pressures (POS) caused by emergency operations, usually the result of a malfunction (e.g. power failure, sudden valve closure, system component failure). WPR = 2 x PC x FT - POS

7 Data obtained from PE Alliance membership. Please consult pipe manufacturers for data specific to your project. Greater pipe sizes and DRs are also available.

Sources: http://www.performancepipe.com/en-us/Documents/PP%20401%20Pressure%20Rating_PE4710.pdf and <http://www.wlplastics.com/pdf/WL118%200712%20Pressure%20Rating.pdf>