Pipeline Elevate-RT™ PE4710 (PE-RT)

PIPELINE PLASTICS



Applications

Pipeline Elevate-RT™ PE4710 PERT Pipe is a high performance polyethylene pipe designed for up to 180°F applications such as Raw Water, Process Water, Waste Water, District Heating and Cooling, Oil & Gas Gathering, Chemical and Corrosive Applications in rugged and demanding Industrial Applications.
Pipeline Elevate-RT™ is manufactured using Dow Chemical INTREPID™ 2499 Bimodal Polyethylene Resin.

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
- ASTM F2619 Standard Specification for Polyethylene (PE) Line Pipe
- Cell Classification PE445574C per ASTM D3350
- Plastics Pipe Institute (PPI) TR-4 Listing as PE4710
- Hydrostatic Design Basis 1,600 psi @ 73°F (23°C) and 800 psi @ 180°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^3	ASTM D1505	Elongation @ Break	>500 %	ASTM D638
Melt Index (MI) 190°C/2.16kg	0.1 g/10 min	ASTM D1238	Flexural Modulus	150,000 psi	ASTM D790
High Load Melt Index (190°C/21.6kg)	7- 14 g/10 min	ASTM D1238	Brittleness Temperature	<-103 °F	ASTM D746
PENT	>10,000 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	4,500 psi	ASTM D638	Thermal Expansion	1.0 x 10^{-4} 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.

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IPS		DR	7	9	11	13.5	17	21	26	32.5
Size	OD (in)	PR[A]	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[B] (in)	1.656	1.816	1.917					
		Lb / Ft[C]	0.948	0.767	0.643					
3"	3.500	*Min Wall (in)*	0.500	0.389	0.318					
		ID[B] (in)	2.440	2.676	2.825					
		Lb / Ft[C]	2.058	1.663	1.394					
4"	4.500	*Min Wall (in)*	0.643	0.500	0.409	0.333				
		ID[B] (in)	3.137	3.440	3.633	3.793				
		Lb / Ft[C]	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[B] (in)	4.619	5.064	5.348	5.585	5.799			
		Lb / Ft[C]	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[B] (in)	6.013	6.593	6.963	7.271	7.549	7.754	7.922	8.062
		Lb / Ft[C]	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[B] (in)	7.494	8.218	8.678	9.062	9.409	9.665	9.873	10.049
		Lb / Ft[C]	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[B] (in)	8.889	9.747	10.293	10.748	11.160	11.463	11.710	11.918
		Lb / Ft[C]	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[B] (in)	9.760	10.702	11.302	11.801	12.254	12.587	12.858	13.087
		Lb / Ft[C]	32.93	26.63	22.31	18.54	14.98	12.29	10.03	8.092
16"	16.00	*Min Wall (in)*		1.778	1.455	1.185	0.941	0.762	0.615	0.492
		ID[B] (in)		12.231	12.916	13.487	14.005	14.385	14.695	14.956
		Lb / Ft[C]		34.77	29.15	24.21	19.58	16.05	13.08	10.56
18"	18.00	*Min Wall (in)*		2.000	1.636	1.333	1.059	0.857	0.692	0.554
		ID[B] (in)		13.760	14.531	15.173	15.755	16.183	16.532	16.826
		Lb / Ft[C]		44.02	36.90	30.64	24.76	20.31	16.57	13.36
20"	20.00	*Min Wall (in)*		2.222	1.818	1.481	1.176	0.952	0.769	0.615
		ID[B] (in)		15.289	16.145	16.859	17.506	17.981	18.369	18.695
		Lb / Ft[C]		54.35	45.54	37.83	30.58	25.08	20.44	16.49
22"	22.00	*Min Wall (in)*			2.000	1.630	1.294	1.048	0.846	0.677
		ID[B] (in)			17.760	18.545	19.256	19.779	20.206	20.565
		Lb / Ft[C]			55.10	45.78	37.00	30.32	24.75	19.98
24"	24.00	*Min Wall (in)*			2.182	1.778	1.412	1.143	0.923	0.738
		ID[B] (in)			19.375	20.231	21.007	21.577	22.043	22.434
		Lb / Ft[C]			65.59	54.48	44.02	36.08	29.44	23.77
26"	26.00	*Min Wall (in)*				1.926	1.529	1.238	1.000	0.800
		ID[B] (in)				21.917	22.758	23.375	23.880	24.304
		Lb / Ft[C]				63.94	51.67	42.35	34.57	27.89
28"	28.00	*Min Wall (in)*				2.074	1.647	1.333	1.077	0.862
		ID[B] (in)				23.603	24.508	25.173	25.717	26.174
		Lb / Ft[C]				74.18	59.93	49.12	40.10	32.33
30"	30.00	*Min Wall (in)*				2.222	1.765	1.429	1.154	0.923
		ID[B] (in)				25.289	26.259	26.971	27.554	28.043
		Lb / Ft[C]				85.16	68.81	56.39	46.02	37.11
32"	32.00	*Min Wall (in)*					1.882	1.524	1.231	0.985
		ID[B] (in)					28.009	28.770	29.391	29.913
		Lb / Ft[C]					78.27	64.16	52.37	42.26
34"	34.00	*Min Wall (in)*					2.000	1.619	1.308	1.046
		ID[B] (in)					29.760	30.568	31.228	31.782
		Lb / Ft[C]					88.37	72.43	59.10	47.69
36"	36.00	*Min Wall (in)*					2.118	1.714	1.385	1.108
		ID[B] (in)					31.511	32.366	33.065	33.652
		Lb / Ft[C]					99.08	81.21	66.28	53.46
42"	42.00	*Min Wall (in)*						2.000	1.615	1.292
		ID[B] (in)						37.760	38.575	39.260
		Lb / Ft[C]						110.54	90.18	72.78

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.