

PlatinumStripe® 1800 Series PE-RT Pipe & Fittings

PlatinumStripe® 1800 Series PE-RT High-Temperature, High Density Polyethylene (HDPE) Pipe & Fittings



PlatinumStripe® 1800 PE-RT significantly expands the operation window for polyethylene (PE) pipes with pressure ratings up to 180°F. PlatinumStripe® 1800 PE-RT is intended for high-temperature Industrial, mining, oil and gas gathering applications.

Complies with:

- ASTM D3350 Cell Class PE445574C
- ASTM D2837 HDB = 800 psi at 180°F
- ASTM F2619 HDPE Line Pipe
- API 15 LE Polyethylene Line Pipe
- ASTM F714 Polyethylene Pipe
- ASTM D3261 (Molded Fittings)
- ASTM F2206 (Fabricated Fittings)

Key Benefits of PlatinumStripe® 1800 PE-RT piping systems:

- Higher permissible operating temperatures compared to standard PE4710 products
- Allows continuous operation at temperatures from -49°F (-45°C) to 180°F (82°C)
- Intermittent operating temperatures up to 203°F (95°C) are possible for some applications.
- >20 times PE4710 requirements for stress crack resistance
- Allows use of native backfill material from trench (sandless installation) for shallow, non-traffic applications
- Follows same fusion parameters as standard PE4710 pipes
- Patented stabilizer system for high temperature oxidative environments with ASTM D3350 CC3 rating
- Full range of pipe sizes, pressure capabilities, molded and fabricated fittings

PlatinumStripe® 1800 PE-RT is identified with four platinum color stripes.

PlatinumStripe® 1800 PE-RT Pipe Material Physical Properties		
Property	Standard	Typical Value†
Material Designation	ASTM F714, ASTM F2619	PE 4710
Cell Classification	ASTM D3350	445574C (black)
Density [4]	ASTM D792	0.950 g/cc (natural)
Melt Index [4]	ASTM D1238	0.1 g/10 min
Flexural Modulus [5]	ASTM D790B	150,000 psi
Tensile Strength [5]	ASTM D638	>3500 psi
SCG (PENT) [7]	ASTM F1473	10,000 hours
HDB at 73°F (23°C) [4]	ASTM D2837	1600 psi
HDB at 180°F (82.2°C)		800 psi
Color [C]	ASTM D3350	Black

† This is not a product specification and does not guarantee or establish specific minimum or maximum values or manufacturing tolerance for material or piping products to be supplied. Values obtained from tests of specimens taken from piping product may vary from these typical values.

PlatinumStripe® 1800 Series PE-RT Pipe

Common Dimension Ratios for PlatinumStripe™ 1800 PE-RT

IPS		DR 7			DR 9			DR 11			DR 17			DR 21		
Pipe Size, in.	OD, in.	Min. Wall, in.	Avg. ID, in.	Wgt. lbs./ft.	Min. Wall, in.	Avg. ID, in.	Wgt. lbs./ft.	Min. Wall, in.	Avg. ID, in.	Wgt. lbs./ft.	Min. Wall, in.	Avg. ID, in.	Wgt. lbs./ft.	Min. Wall, in.	Avg. ID, in.	Wgt. lbs./ft.
2	2.375	0.339	1.656	0.95	0.264	1.816	0.77	0.216	1.917	0.64	0.140	2.079	0.43	0.113	2.135	0.35
3	3.50	0.500	2.440	2.06	0.389	2.676	1.66	0.318	2.825	1.39	0.206	3.064	0.94	0.167	3.147	0.77
4	4.50	0.643	3.137	3.40	0.500	3.440	2.75	0.409	3.633	2.31	0.265	3.939	1.55	0.214	4.046	1.27
6	6.625	0.946	4.619	7.37	0.736	5.064	5.96	0.602	5.348	5.00	0.390	5.799	3.36	0.315	5.956	2.75
8	8.625	1.232	6.013	12.50	0.958	6.593	10.11	0.784	6.963	8.47	0.507	7.549	5.69	0.411	7.754	4.66
10	10.75	1.536	7.494	19.42	1.194	8.218	15.70	0.977	8.678	13.16	0.632	9.409	8.83	0.512	9.665	7.24
12	12.75	1.821	8.889	27.31	1.417	9.747	22.08	1.159	10.293	18.51	0.750	11.160	12.43	0.607	11.463	10.19
14	14.00				1.556	10.702	26.63	1.273	11.302	22.32	0.824	12.254	14.98	0.667	12.587	12.28
16	16.00				1.778	12.231	34.78	1.455	12.916	29.15	0.941	14.005	19.57	0.762	14.385	16.04
18	18.00				2.000	13.760	44.02	1.636	14.531	36.89	1.059	15.755	24.77	0.857	16.183	20.30
20	20.00				2.222	15.289	54.34	1.818	16.145	45.54	1.176	17.506	30.58	0.952	17.981	25.07
22	22.00							2.000	17.760	55.10	1.294	19.256	37.00	1.048	19.779	30.33
24	24.00							2.182	19.375	65.58	1.412	21.007	44.03	1.143	21.577	36.10
26	26.00										1.529	22.758	51.67	1.238	23.375	42.36
28	28.00										1.647	24.508	59.93	1.333	25.173	49.13
30	30.00										1.765	26.259	68.80	1.429	26.971	56.40
32	32.00										1.882	28.009	78.28	1.524	28.770	64.17
34	34.00										2.000	29.760	88.37	1.619	30.568	72.44
36	36.00										2.118	31.511	99.07	1.714	32.366	81.21
42	42.00													2.000	37.760	110.54

Additional sizes and DR's may be available. Please contact Performance Pipe for further details.

Pipe weights are calculated in accordance with PPI TR-7. Average inside diameter is calculated using Nominal OD and Minimum wall plus 6% for use in estimating fluid flow. Actual ID will vary. When designing components to fit the pipe ID, refer to pipe dimensions and tolerances in the applicable pipe manufacturing specification. Additional sizes and DR available. Contact Performance Pipe or visit www.performancepipe.com

Design Pressures

Operating Temperature

Application	Dimensional Ratio	73°F	100°F	120°F	140°F	160°F	180°F
Water, Brine Alcohols, Glycols, and Dry Natural Gas (non 49CFR192 applications)	DR 7	333 psig	280 psig	244 psig	210 psig	187 psig	167 psig
	DR 9	250 psig	210 psig	183 psig	158 psig	141 psig	125 psig
	DR 11	200 psig	168 psig	146 psig	126 psig	112 psig	100 psig
	DR 13.5	160 psig	134 psig	117 psig	101 psig	90 psig	80 psig
	DR 17	125 psig	105 psig	91 psig	79 psig	70 psig	63 psig
	DR 21	100 psig	84 psig	73 psig	63 psig	56 psig	50 psig
2% or Greater Concentrations of Liquid Hydrocarbons or Other Solvating/Permeating Chemicals	DR 7	167 psig	140 psig	122 psig	105 psig	94 psig	84 psig
	DR 9	125 psig	105 psig	92 psig	79 psig	71 psig	63 psig
	DR 11	100 psig	84 psig	73 psig	63 psig	56 psig	50 psig
	DR 13.5	80 psig	67 psig	59 psig	51 psig	45 psig	40 psig
	DR 17	63 psig	53 psig	46 psig	40 psig	35 psig	32 psig
	DR 21	50 psig	42 psig	37 psig	32 psig	28 psig	25 psig

The above pressures are the maximum long-term pressure ratings for the applications shown. Different chemical and environmental use considerations may require use of additional design factors or additional service life considerations.