



WL Plastics PE4710 Specification

High Density Polyethylene for Water and Sewer Applications



A. PE 4710 Pipe

Produced from engineered High Density Polyethylene (HDPE) PE 4710 materials for water and sewer services for Iron Pipe Sizing (IPS) from 4" thru 54", and for Ductile Iron Pipe Sizes (DIPS) from 4" thru 36" all conform to all applicable AWWA, ASTM, CSA, API, FM, and NSF standards.

For specification and approval details regarding applicable regulations, sizing and performance criteria references go to: www.wlplastics.com > Engineering Info >

- WL 102 – IPS, Pressure Rating, Standard Dimension Ratios, weight/foot and ID's
- WL 104 – DIPS, Pressure Class and Rating, Standard Dimension Ratios, weight/foot and ID's
- WL 113 – Burial Guidelines
- WL 115 – PE 4710 Water Pipe
- WL 116 – Applicable Pipe Standards
- WL 118 – PE 4710 Pressure Rating
- WL 123 – High- Performance PE4710
- WL 128 – Material Codes
- WL 130 – Factory Mutual (FM) Fire Main Approvals
- NSF 14 and NSF 61 – National Sanitation Foundation Approvals
- ISO 9001: 2008-2018 Certificate

PE 4710 pipe can provide a leak free¹, corrosion resistant, excellent disinfectant (ORP)² and chemical resistance, compatible with existing systems and provides extended operating service life³ compared to existing piping materials. WL Plastics is certified and approved by ISO 9001 quality assurance systems. If required WL Plastics can provide Burial Guidelines, Field Procedures, MSDS, or even a Model Specification to provide current references and information regarding industry changes that apply to PE 4710 products (available upon request or on the website)

B. Pipe Material

PE 4710 pipe is produced from the highest rated HDPE pipe materials. This is a long lasting, fusible pipe. PE4710 pipe is a pressure rated product and listed under the Plastics Pipe Institutes (PPI) Technical Report Four (TR-4 @www.plasticpipe.org > PPI Publications > Technical Reports).

PE4710 Pipe meets or exceeds the ASTM D3350 cell classification of PE445574C/E, Type III, Grade PE47 (ref: WL115). PE 4710 is also classified under ASTM D1248⁴ as a Type III, Class D, Category 5, Grade E10 or E11.

PE4710 pipe produced at WL plastics is certified with the National Sanitation Foundation (NSF) for both NSF 14 and NSF 61 standards.

¹ Polyethylene pipe is the only product identified in AWWA C906 with "Zero" leak requirement

^{2,3} ORP = Oxidative Resistance Potential defined by ASTM D3350 and test method ASTM F1473. Also reference PPI Technical Report – Impact of Potable Water Disinfectants on PE Pipe.

⁴ ASTM 1248 is a Wire and Cable specification that is referenced in ASTM D3350 to classify materials.



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C. PE 4710 Pipe Advantages:

- Leak Free Piping
- Durable
- Fatigue Resistant
- Chemical Resistance
- UV protected
- Lateral Tap Locating
- Impact Resistant
- NO Biological Growth
- Environmentally friendly
- Flexible
- Surge resistant
- Butt/Saddle/Socket or Electro-Fusion Capable
- Excellent for Trenchless Piping System Installations

PE 4710 ASTM D3350 cell classification of PE445574C/E

	Property	Standard	Typical Value
Class	Cell Classification	ASTM D3350	445574C (Black)
4	Density	ASTM D1505	0.960 g/cc (Black)
4	Melt Index	ASTM D1238	0.1 g/10m
5	Flexural Modulus	ASTM D790	>110,000 <160,000 psi
5	Tensile Strength	ASTM D638	>3500 psi
7	SCG (PENT)	ASTM F1473	>500 hours
4	HDB @73F	ASTM D2837	1600 psi
C/E	Color; UV Stabilizer	ASTM D3350	Carbon Black/Color w/ UV Stabilizer

* Note: PPI TR-4 Hydrostatic Design Stress (HDS), Strength Design Basis (SDB), Pressure Design Basis (PDB) and Minimum Required Strength (MRS) Ratings for Thermoplastic Piping Materials or Pipe

D. Pipe Fusion:

It is recommended that HDPE pipe fusion in accordance to ASTM F2620, PPI TR-33, and pipe and fittings manufacturing recommendations (Ref: WL 101).

Mechanical joining procedures supplied by fittings manufacture(s). PE 4710 pipe is manufactured to ASTM D3035 which contains tighter OD tolerances than ASTM F714 for improved electro-fusion compatibilities. It also meets and exceeds ASTM F714 requirements.

E. Pipe Installation of HDPE Plastic Pipe:

Installations follow manufacturing recommendations and applicable to ASTM D2774, D2657, F2620, D2683, D3261, F1055, AWWA C901 or C906, AWWA M55, and/or WL 101 and WL113.

WL Plastics Corp. is a HDPE Pipe Manufacturer that manufacturer's high performance High Density Polyethylene (HDPE) pipe and related products for the oil, gas, mining, industrial and municipal water markets which is a long lasting pipe with a predicted service life >100 years. With U.S. and Canadian locations WL Plastics is one of the largest manufacturers of polyethylene pipe in North America.

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