WL129 PE4710 MATERIAL & GAS DISTRIBUTION SIZES

Typical Physical Properties for WL Plastics PE4710 Pipe Materials

- WL Plastics HDPE PE4710 gas pipe is manufactured from pressure rated black high density polyethylene compounds that meet or exceeds ASTM D3350 requirements and Cell Classification PE445574C. WL Plastics PE4710 compounds meet or exceed ASTM D3350 requirements and Cell Classification PE234373E and material code designations PE2708 and PE2406.
- WL Plastics HDPE PE4710 high density polyethylene pipe compounds are listed by PPI in TR-4 and are stress rated for pressure pipe with a PPI HDB rating of 1600 psi at 73°F and 1000 psi at 140°F.
- WL Plastics HDPE PE4710 exceeds PPI TR-3 and ASTM D3350 SCG resistance requirements per ASTM F1473 (PENT). WL Plastics PE4710 ductility is substantiated with greater than 438,000 hours (50 years) at 73°F (23°C) before the onset of SCG.
- WL Plastics HDPE PE4710 gas pipe is manufactured with co-extruded yellow stripes for service identification.
- WL Plastics HDPE PE4710 ASTM D2513 gas pipe is manufactured using no rework materials.

Physical Property	Test Method	Typical Value (1)
Cell classification (black compound)	ASTM D3350	PE445574C
Melt Index (190/2.16)	ASTM D1238	<0.1 g/10 min
High Load Melt Index(2)(190/21.6)	ASTM D1238	4 – 12 g/10 min
Density with 2% minimum carbon black (73°F/23°C)	ASTM D792	0.960 g/cm^3
Tensile strength at yield (2 in/min; 73°F/23°C)	ASTM D638	3500 < 4000 psi
Tensile elongation (2 in/min; 73°F/23°C)	ASTM D638	>500%
Flexural modulus (73°F/23°C)	ASTM D790	>150,000 psi
SCG Resistance, PENT (80°C, 2.4 MPa)	ASTM F1473	> 5000 h
Thermal stability	ASTM D3350	>428ºF (> 220°C)
Brittleness temperature	ASTM D746	<-103°F (<-75ºC)
Thermal expansion coefficient	ASTM D696	9 x 10^{-5} in/in/°F
HDB(3) at 73°F (23ºC)	ASTM D2837/PPI TR-3	1600 psi (11.0 MPa)
HDB(3) at 140°F (60ºC)	ASTM D2837/PPI TR-3	1000 psi (5.5 MPa)
RCP Resistance, Critical Pressure at 32ºF (0ºC)	ISO 13477	>174 psi (>1.2 MPa)
RCP Resistance, Critical Temp. at 72.5 psi (0.5 MPa)	ISO 13477	<2ºF (<-17ºC)

Contact WL Plastics Customer Service for availability. (1) Typical values determined from laboratory tests of samples of compounds (resins) prepared as plaque specimens in accordance with industry standard test methods. Values determined on samples prepared from pipe may vary. The typical values presented herein are for PE4710 polyethylene pipe compounds (resins) but do not constitute engineering properties for pipe. (2) Overall range of HLMI values for all compounds from all WL Plastics compound suppliers; HLMI variation for an individual compound will be well within the overall range. (3) Listed HDB and HDS ratings in accordance with ASTM D 2837 and PPI TR-3 are published in PPI TR-4 by the compound manufacturer (independent listing) and by WL Plastics (dependent listing). WL Plastics dependent listing compounds are identified by a compound code for the supplier: D (Dow); E (Lyondell Basell); S (Ineos).

SALES: wlsales@wlplastics.com ● TECHNICAL: wltechnical@wlplastics.com

WL129 PE4710 MATERIAL & GAS DISTRIBUTION SIZES

WL Plastics PE4710 Black HDPE Gas Pipe and Tubing Sizes

WL Plastics PE4710 black HDPE gas pipe is manufactured in accordance with ASTM D 2513 and DOT 49 CFR 192[6] for the underground distribution of natural gas, gaseous LPG, and yard gas.

IPS size[1]	Avg OD In.	DR MAOP[2]	9 125 psig	11 100 psig	IPS size[1]	Avg OD In.	DR MAOP[2]	9 125 psig	11 100 psig
1/2	0.840	min wall, in. lb/ft	0.093 0.094	0.076 0.079	8	8.625	min wall, in. lb/ft	0.958 9.988	0.784 8.359
3/4	1.050	min wall, in. lb/ft	0.117 0.148	0.096 0.123	10	10.750	min wall, in. lb/ft	1.194 15.515	0.977 12.983
1	1.315	min wall, in. lb/ft	0.146 0.232	0.120 0.195	12	12.750	min wall, in. lb/ft	1.417 21.837	1.160 18.267
1 1/4	1.660	min wall, in. lb/ft	0.184 0.369	0.151 0.310	14	14.000	min wall, in. lb/ft	NA[5] 	1.273 22.030
1 1/2	1.900	min wall, in. lb/ft	0.211 0.485	0.173 0.406	16	16.000	min wall, in. lb/ft	NA[5] 	1.455 28.777
2	2.375	min wall, in. lb/ft	0.264 0.758	0.216 0.634	18	18.000	min wall, in. lb/ft	NA[5] 	1.636 36.403
3	3.500	min wall, in. lb/ft	0.389 1.646	0.318 1.376	20	20.000	min wall, in. lb/ft	NA[5] 	1.818 44.947
4	4.500	min wall, in. lb/ft	0.500 2.720	0.409 2.275	22	22.000	min wall, in. lb/ft	NA[5] 	2.000 54.391
6	6.625	min wall, in. lb/ft	0.736 5.894	0.602 4.930	24	24.000	min wall, in. lb/ft	NA[5] 	2.182 64.735

CTS size[1]	Avg OD, in.			CTS size[1]	Avg OD, in.		
1/2	0.625	MAOP[2] min wall, in. lb/ft	100 psig 0.062 0.047	1	1.125	MAOP[2] min wall, in lb/ft	125 psig 0.121 0.165
1/2	0.625	MAOP[2] min wall, in lb/ft	125 psig .090 0.065	1	1.125	MAOP[2] min wall, in lb/ft	100 psig 0.101 0.141
3/4	0.875	MAOP[2] min wall, in. lb/ft	100 psig 0.090 0.096	1 1/4	1.375	MAOP[2] min wall, in lb/ft	100 psig 0.121 0.206

1. Standard dimensions and weights for IPS and CTS pipe and tubing. Special sizes and/or wall thicknesses may be available on special order. Contact WL Plastics Customer Service for information, pricing and availability.
2. Maximum allowable operating pressure (MAOP) ratings are for 100°F (38°C) temperatures and lower in accordance with US Federal Regulations, 49 CFR Part 192, §192.121 & §192.123. Contact WL Plastics Technical Service for elevated temperature operating pressure ratings above 100°F.
3. These products are intended for gas distribution. Contact WL Plastics Customer Service about gas gathering products.
4. For sizes greater than 12" pressure is limited to 100 psig per 49 CFR Part 192 §192.121.
5. See WL108 for standard coil/stick length and packaging dimensions. Special coil/stick length or packaging may be available. Contact WL Plastics Customer Service for information.
6. Effective March 6, 2015 gas distribution and jurisdictional gas gathering pipe will be manufactured using no rework material and will be stamped "GAS-NR" in the print line.

SALES: wlsales@wlplastics.com ● TECHNICAL: wltechnical@wlplastics.com