

WL129M – PE2708 Medium Density GAS DISTRIBUTION PIPING BROCHURE



WL Plastics offers high performance bimodal yellow striped high-density polyethylene (HDPE / PE4710) and solid yellow medium density polyethylene (MDPE / PE2708) pipe for distribution of natural or propane gas. WL Plastics gas pipe is manufactured from engineered polyethylene compounds that are listed in PPI TR-4 and offer a design life greater than 100 years when properly installed and operated. Our PE4710 pipe is stabilized against UV deterioration for 10 years or more with 2-3% carbon black content, and our PE2708 is stabilized against UV deterioration for a minimum of 3 years. Typical physical properties of resins used to make both PE4710 and PE2708 pipe are shown below in the Table.

WL Plastics gas distribution pipe is manufactured in compliance to ASTM D2513 and 49CFR192 with no rework (NR) material. NR is included in the ink jet print line along with the word “GAS” and other required information and the ASTM F2987 Tracking & Traceability bar code and alpha-numeric code. (See brochure titled “How to Identify WL Plastics Gas Distribution Pipe”).

Typical Physical Properties for WL Plastics Pipe Materials

Physical Property	Test Method	PE 4710 Typical Value ⁽¹⁾	PE 2708 Typical Value ⁽¹⁾
Cell classification (black compound)	ASTM D3350	PE445574C	PE234373E or PE234375E
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	20 g/10 min
Density with 2% minimum carbon black (73°F/23°C)	ASTM D792	0.960 g/cm ³	0.941 g/cm ³
Tensile strength at yield (2 in/min; 73°F/23°C)	ASTM D638	3500 < 4000 psi	2800 psi (19 MPa)
Tensile elongation (2 in/min; 73°F/23°C)	ASTM D638	>500%	800%
Flexural modulus (73°F/23°C)	ASTM D790	>150,000 psi	90,000 psi (620 MPa)
SCG Resistance, PENT (80°C, 2.4 MPa)	ASTM F1473	> 5000 h	> 2000 h
Thermal stability	ASTM D3350	>428°F (> 220°C)	>428°F (> 220°C)
Brittleness temperature	ASTM D746	<-103°F (<-75°C)	<-103°F (<-75°C)
HDB ⁽³⁾ at 73°F (23°C)	ASTM D2837/PPI TR-3	1600 psi (11.0 MPa)	1250 psi (8.6 MPa)
HDB ⁽³⁾ at 140°F (60°C)	ASTM D2837/PPI TR-3	1000 psi (5.5 MPa)	800 psi (5.5 MPa)
RCP Resistance, Critical Pressure at 32°F (0°C)	ISO 13477	>174 psi (>1.2 MPa)	---
RCP Resistance, Critical Temp. at 72.5 psi (0.5 MPa)	ISO 13477	<2°F (<-17°C)	---
RCP Resistance, Critical Pressure at 32°F (0°C)	ISO 13478	---	123 psi (8.5 bar)

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 HLMl values for all compounds from all WL Plastics compound suppliers; HLMl 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).

This publication is intended for use as a piping system guide. It should not be used in place of a professional engineer's judgment or advice and it is not intended as installation instructions. The information in this publication does not constitute a guarantee or warranty for piping installations and cannot be guaranteed because the conditions of use are beyond our control. The user of this information assumes all risk associated with its use. WL Plastics Corporation has made every reasonable effort to ensure accuracy, but the information in this publication may not be complete, especially for special or unusual applications. Changes to this publication may occur from time to time without notice. Contact WL Plastics Corporation to determine if you have the most current edition. Publication duplication permitted.

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Commitment to Quality

- WL Plastics gas distribution piping is manufactured with unmatched quality assurance and is listed to ISO 9001:2015 certified facilities.
- All WL Plastics manufacturing facilities are equipped with state of the art laboratory equipment for testing resin and pipe. Each Quality Assurance Laboratory is calibrated to A2LA standards annually.
- Resin quality is verified before unloading from railcars and is transported through a closed vacuum system equipped with elutriation and magnets
- Resin is mixed by state of the art equipment and dried at 120°F air to remove any moisture
- Gravimetric controlled extrusion lines with continuous in-line ultrasonic measurement and frequent quality assurance hand measurements ensure dimensional tolerances are met
- Well maintained and state of the art extrusion equipment ensures good mixing
- Wire mesh screen pack is used at the end the extruder before the pipe head to ensure contaminant free pipe
- Engineering staff are available to answer all technical questions. They maintain technical expertise by actively participating in the American Gas Association Piping Materials Committee and Gas Piping Technology Committee, Northeast Gas Association, Plastics Pipe Institute, American Society of Mechanical Engineers, American Petroleum Institute, and ASTM International

Size Availability & Packaging

- Sizes available in ½” CTS to 24” IPS in a variety of DR’s (see WL 102G for dimensions and pressure ratings).
- Special packaging available per customer requests (see WL108 for standard packaging & WL111 for unloading guidelines)

Joining

WL Plastics has conducted validation testing in accordance with 49CFR192.283 to prove that its pipe can be fused in accordance with PPI TR-33 (Generic Butt Fusion Joining Procedure) and ASTM F2620 to itself and other commercially available polyethylene pipe. WL Plastics joining procedure is outlined in WL101. All persons who make joints in polyethylene gas piping must be qualified under the operator’s written procedures per CFR 49, Part 192.285(a).

Squeeze-Off

WL Plastics polyethylene pipe has been tested per ASTM D2513 and proven that it can be squeezed per ASTM F1041 using equipment meeting ASTM F1563 to isolate a section of piping.



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Locations

WL Plastics has nine (9) manufacturing facilities across the USA. Gas distribution pipe is primarily made at the Titusville, PA and Elizabethtown, KY facilities although the Bowie, TX, and Mills (Casper), WY facilities are also equipped to make gas pipe.



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Lubbock, TX 79403
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F: 806-401-0934

Rapid City
3660 Dyess Avenue
Rapid City, SD 57701
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703 Gateway Blvd
Statesboro, GA 30458
P: 912-623-2300
F: 912-623-2310

Bowie, TX
1110 Old Wise Road
Bowie, TX 76230
P: 940-872-8300
F: 940-872-8304

Elizabethtown, KY
2151 West Park Road
Elizabethtown, KY 42701
P: 270-765-1020
F: 270-765-1030

Mills (Casper), WY
2075 N. Pyrite Road
Mills, WY 82644
P: 307-472-6000
F: 307-472-6200

Snyder, TX
2160 S. Business 84
Snyder, TX 76549
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Titusville, PA
221 S.Perry Street
Titusville, PA 16354
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