



HIGH-DENSITY
POLYETHYLENE
WATER AND SEWER

MEETS AWWA C901, AWWA C906,
ASTM D2239, ASTM D2737, ASTM D3035, F714



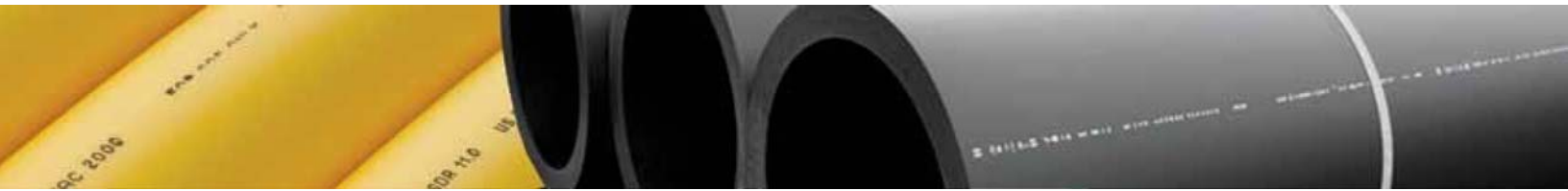
*Building essentials
for a better tomorrow™*



HIGH-DENSITY POLYETHYLENE WATER AND SEWER

Polyethylene Water and Sewer Pipe for Municipal
& Industrial Applications
Eagle Geo-Flo for geothermal applications

Meets AWWA C901/C906
ASTM D2239, ASTM D2737, ASTM D3035, F714



HIGH-DENSITY
POLYETHYLENE
WATER AND SEWER

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01

PRODUCT DESCRIPTION

HIGH-DENSITY POLYETHYLENE WATER AND SEWER PIPE

FOR MUNICIPAL AND INDUSTRIAL WATER AND SEWER PIPING SYSTEMS

RICH HISTORY

Thanks to the support of our loyal customers, and the dedication and hard work from our JM Eagle™ family members, JM Eagle™ continues to be the largest manufacturer of PVC pipe in the United States and in the world. JM Eagle™ was formed in 1982 following the purchase of eight PVC pipe manufacturing facilities from the Johns-Manville Corporation. Over the course of the years, we have expanded our operations through seventeen additional plants in Wharton, TX; Fontana, CA; Batchelor, LA; Meadville, PA; Adel, GA; Buchannon, WV; Columbia, MO; Cameron Park, CA; Hastings, NE; Perris, CA; Sunnyside, WA; Tacoma, WA; Visalia, CA, and now with the addition of three Polyethylene (PE) facilities in Kingman, AZ, Magnolia, AR and Tulsa, OK.

There are only a few pipe manufacturers in the world that produce both PVC and PE pipe, and we are proud to be one of them. With our modern PE pipe production facilities in North America, we are able to fulfill all of our customers' plastic pipe needs.



DESCRIPTION

JM Eagle™ manufactures High-Density Polyethylene (HDPE) water pressure pipe for municipal and industrial water transmission systems. This pipe is available for sizes ½"-63" in diameter. Our HDPE pipe is recognized in the industry for its zero leak rate, high performance, and long

life expectancy. They may be manufactured with color striping to identify their application, such as blue stripe for potable water, green stripe for sewer application, and purple stripe for reclaimed water.

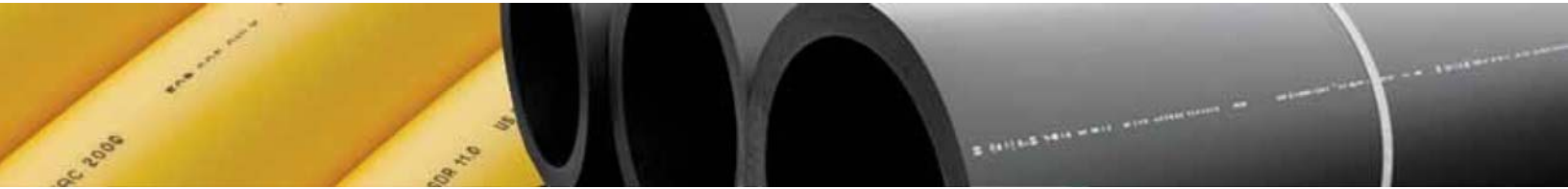
LONG LAYING LENGTHS

The standard laying length of HDPE pressure water pipe is 40/50 feet. Smaller size pipe 6" and under can be extruded at continuous coil lengths by request. Longer lengths provide convenience in installation and allow for significant cost savings in labor and equipment.

APPLICABLE SPECIFICATIONS

JM Eagle™ HDPE water pressure pipe is manufactured in accordance with AWWA C901/C906, ASTM D2239, ASTM D2737, ASTM D3035, ASTM F714 and ANSI/NSF 14/61 listed.





QUALITY CONTROL

JM Eagle™ takes great pride in the quality and workmanship of all of our products. JM Eagle™ quality control programs encompass three critical aspects of the manufacturing process: the incoming raw material, pipe production, and finished goods. Incoming material is visually inspected and tested to ensure the material meets all applicable requirements before its release for production. During production, the pipe will be visually examined for any cosmetic defect and pipe samples will be collected for physical verification and testing for compliance. The finished product is subjected to further visual inspection to ensure it has met all the appropriate specifications and packaging requirements. Without exception, JM Eagle™ pipe is constantly monitored throughout the entire manufacturing process to ensure that it is produced in accordance with all applicable specifications. The JM Eagle™ Quality Management System is ISO 9001:2000 registered. Copies of the registration certificates are available on our website at www.jmeagle.com.



CORROSION RESISTANCE

HDPE pipe has excellent corrosion resistance against electrolytic or galvanic corrosion or any known corrosive soil or water condition. You don't have to worry about tuberculation, or the need for costly lining, wrapping, coating or cathodic protection.

FLOW CAPACITY

JM Eagle™ polyethylene pipe has a smooth interior providing less drag and a lower tendency for turbulence at high flow. Its superior flow characteristic eliminates scaling and pitting to preserve its form for consistent flow throughout the pipe's entire service life. The C Factor is 150 and the Manning's flow coefficient is .009.



REDUCED INSTALLATION COST

HDPE is lightweight, flexible, and comes in long lengths, allowing for easier and convenient installation. Because of its flexible nature, it reduces the use of fittings. HDPE also allows for non-intrusive installation by offering technology such as directional boring, pipe bursting and slip lining.





PRODUCT DESCRIPTION

HIGH-DENSITY POLYETHYLENE WATER AND SEWER PIPE

(CONTINUED)

APPLICATIONS

HDPE GRAY SLIP LINING PIPE

JM Eagle™ manufactures gray slip lining polyethylene pipe for your rehabilitation and slip lining applications. This new, evolving technology will provide you with lower cost and alleviate problems with today's older and failing pipeline infrastructure. Slip lining is an excellent choice for replacing oversized corroded pipe with a smaller diameter pipe and greatly improved carrying capacity. This trenchless process makes it possible to perform extensive municipal water, sewer and industrial pipe repairs rapidly, while causing minimal disturbances. Slip lining saves both time and cost because the existing pipe support structures do not need to be replaced. JM Eagle™ HDPE slip lining pipe is manufactured in accordance with AWWA C906 and ASTM F714, and is available in both I.P.S. and D.I.P.S. in either solid gray color, or gray with a colored stripe (green, blue, or purple). Please refer to **Table 4** for pipe dimensions.



UAC GEO-FLO™ PIPE

USPoly UAC 3100 Geo-Flo™ pipe and fittings are designed to meet the requirements of geothermal applications. Geo-Flo™ pipe provides a cost effective, thermally efficient alternative to conventional heating and cooling systems. The pipe was engineered to last and is ideal for either vertical or horizontal heat pump systems.

APPLICATIONS

HIGH-DENSITY POLYETHYLENE WATER AND SEWER PIPE

PE 3408/3608/4710 JM EAGLE™ HDPE PRESSURE PIPE PRIMARY PROPERTIES

TABLE 1

PROPERTY	UNIT	TEST PROCEDURE	TYPICAL VALUE	TYPICAL VALUE
MATERIAL DESIGNATION	—	PPI-TR4	PE 3408/3608	PE 4710
CELL CLASSIFICATION	—	ASTM D3350	* 345464C	445574C
DENSITY	g/cm ³	ASTM D1505	0.955	0.959
MELT INDEX	g/10 minutes	ASTM D1238	< 0.15	< 0.15
FLEXURAL MODULUS	psi	ASTM D790	110,000 to < 160,000	110,000 to < 160,000
TENSILE STRENGTH	psi	ASTM D638	3,000 to < 3500	3500 to < 4000
SCG (PENT)	Hours	ASTM F1473	> 100	> 500
HDB @ 73.4°F (23°C)	psi	ASTM D2837	1600	1600
HDB @ 140°F (60°C)	psi	ASTM D2837	800	1000
COLOR; UV STABILIZER	—	—	Black with minimum 2% carbon black	Black with minimum 2% carbon black
BRITTLINESS TEMPERATURE	°F (°C)	ASTM D746	< -130	< -130
HARDNESS	Shore D	ASTM D2240	≥ 60	≥ 60

Note: Gray Pipe Cell Classification 345464E, and/or 445574E

The physical (or chemical) properties of JM Eagle™ products described herein represent typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice.

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.

APPLICATIONS

HIGH-DENSITY POLYETHYLENE WATER AND SEWER PIPE

(CONTINUED)

JM EAGLE™ HDPE MARKETS AND APPLICATIONS

TABLE 2

MARKET	APPLICATION	PRODUCT
MUNICIPAL/INDUSTRIAL	Underground Potable Water Distribution, Mining, Dredging, River/Stream/Lake Crossing, Highway Drainage, Highway Crossing, Oil Patch, Agriculture Water Distribution, Landfill	I.P.S./D.I.P.S.
DRAINAGE	Storm Water, Culverts, Highway/ Residential/Agricultural Water Collection	I.P.S./D.I.P.S.
SANITARY SEWER	Gravity Sewer Systems, Sewer Force Mains, Directional Bore	I.P.S./D.I.P.S. Green Stripe
WATER DISTRIBUTION	Potable Water Systems, Water Service Systems	I.P.S./D.I.P.S. Blue Stripe, C.T.S.
IRRIGATION	Underground Irrigations Systems, Agricultural Systems	I.P.S./S.I.D.R.
REHABILITATION	Slip Lining, Pipe Bursting	I.P.S./D.I.P.S. Gray Slip Liner
RECLAIMED WATER	Water Re-processing Systems	I.P.S./D.I.P.S. Purple Stripe
PERFORATED PIPE	Landfill Gas Collection, Waste Drainage Systems	60°, 90°, 120°, & 180° Perforated I.P.S./D.I.P.S.
MINING	Liquid Chemical Mining, Slurry and Tailing Lines, Mineral Extract System	I.P.S./D.I.P.S.
GEO-THERMAL HEATING/COOLING	Heating/Cooling System for home and business	I.P.S.

SURGE DESIGN

SURGE PRESSURES IN VARIOUS PRESSURE PIPE

Surge Pressure refers to the maximum hydraulic transient pressure increase (sometimes called “water hammer”) in excess of the operating pressure that is anticipated in the system as the result of sudden changes in velocity of the water column. Polyethylene pipe has excellent water hammer properties and is designed to withstand surge pressure. **Table 3** shows the PC ratings, surge allowance, and corresponding allowable sudden velocity change in flow velocity for standard dimension ratios (DR's). For recurrent surges, the allowance is 50% of the PC. For occasional surges, the allowance is 100% of the PC.

TABLE 3

DR	psi	RECURRING SURGE EVENTS		OCCASIONAL SURGE EVENTS	
		Surge Capacity (psi)	Corresponding Sudden Velocity Change (fps)	Surge Capacity (psi)	Corresponding Sudden Velocity Change (fps)
7.3	254	127.0	6.9	254.0	13.8
9	200	100.0	6.2	200.0	12.4
11	160	80.0	5.6	160.0	11.1
13.5	128	64.0	5.0	128.0	10.0
17	100	50.0	4.4	100.0	8.9
21	80	40.0	4.0	80.0	8.0
26	64	32.0	3.6	64.0	7.2
32.5	51	25.4	3.2	50.8	6.4

PRESSURE CLASS AND SERVICE TEMPERATURE

Pressure Class (PC) is the design capacity to resist working pressure up to 80°F (27°C) maximum service temperature, with specified maximum allowances for recurring positive pressure surges above working pressure. **Table 4** shows the temperature compensation multipliers for applications anticipating higher service temperatures.

TABLE 4

SERVICE TEMPERATURE

COMPENSATION MULTIPLIERS FOR MAXIMUM CONTINUOUSLY APPLIED SERVICE TEMPERATURE.

≤ 80 °F	≤ 90 °F	≤ 100 °F	≤ 110 °F	≤ 120 °F	≤ 130 °F	≤ 140 °F
1.00	0.90	0.78	0.75	0.63	0.60	0.50

Please note that the maximum service temperature is 140°F for pressure applications. For non-pressure applications, the maximum service temperature is limited to 176°F.



SHORT FORM SPECIFICATION

HIGH-DENSITY POLYETHYLENE WATER AND SEWER PIPE

SCOPE

This specification designates general requirements for ½" through 63" High-Density Polyethylene (HDPE) PE 3408/3608/4710 for the Municipal and Industrial Water and Sewer Distribution Systems.

MATERIALS

JM Eagle™ HDPE water pipe is manufactured with premium, highly engineered PE 3408/3608/4710 resin that provides maximum performance benefits to service all of today's municipal and industrial water needs. They are formulated with a minimum of 2% carbon black for maximum protection against UV rays for added assurance. Our PE 3408/3608/4710 HDPE material conforms to ASTM D3350 with the cell classification of 345464C/E or 445574C, and is listed with The Plastics Pipe Institute (PPI). Please contact JM Eagle's Polyethylene department for PE 100 pipe availability.



STANDARD LAYING LENGTHS

The standard laying length of HDPE pressure water pipe is 40/50 feet. Smaller size pipe 6" and under can be extruded at continuous coil lengths by request. Longer lengths provide convenience in installation and allow for significant cost savings in labor and equipment.

INSTALLATION DESIGN

HDPE pipe provides effortless installation utilizing the newest technology available today. Our pipe can be joined by various heat fusion methods (see installation guide) such as electrofusion, socket fusion, butt fusion and saddle fusion. Mechanical connections can also be applied to HDPE pipe. HDPE pipe can also operate in other advanced applications such as Pipeline Rehabilitation, Slip Lining and Horizontal and Directional Drilling.

IRON PIPE SIZE (I.P.S.)/DUCTILE IRON PIPE SIZE (D.I.P.S.) OUTER DIAMETER

JM Eagle™ HDPE pipe is available in both I.P.S. and D.I.P.S. sizes for your convenience and can be connected directly without the use of adaptors or complicated procedures.



APPLICATIONS

JM Eagle™ HDPE pipe is versatile and can be used in a wide range of applications covering all piping markets. Our pipe has been utilized in pressure water systems, sewer and wastewater, Geo-Thermal, mining, rehabilitation, and irrigation.



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

HDPE IRON PIPE SIZE (I.P.S.) PRESSURE PIPE

TABLE 4

ANSI/NSF-61, 14 LISTED

PE 4710		DR 7 (335 psi)			DR 9 (250 psi)			DR 11 (200 psi)		
PE 3408/3608		DR 7 (265 psi)			DR 9 (200 psi)			DR 11 (160 psi)		
PIPE SIZE	AVG. O.D.	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT
½	0.840	0.120	0.586	0.12	0.093	0.643	0.10	0.076	0.679	0.08
¾	1.050	0.150	0.732	0.18	0.117	0.802	0.15	0.095	0.849	0.12
1	1.315	0.188	0.916	0.29	0.146	1.005	0.23	0.120	1.061	0.20
1¼	1.660	0.237	1.158	0.46	0.184	1.270	0.37	0.151	1.340	0.31
1½	1.900	0.271	1.325	0.60	0.211	1.453	0.49	0.173	1.533	0.41
2	2.375	0.339	1.656	0.94	0.264	1.815	0.76	0.216	1.917	0.64
3	3.500	0.500	2.440	2.05	0.389	2.675	1.66	0.318	2.826	1.39
4	4.500	0.643	3.137	3.39	0.500	3.440	2.74	0.409	3.633	2.29
5⅜	5.375	0.768	3.747	3.75	0.597	4.109	4.11	0.489	4.338	4.34
5	5.563	0.795	3.878	5.17	0.618	4.253	4.18	0.506	4.490	3.51
6	6.625	0.946	4.619	7.33	0.736	5.065	5.93	0.602	5.349	4.97
7	7.125	0.976	5.056	8.20	0.792	5.446	6.86	0.648	5.751	5.75
8	8.625	1.232	6.013	12.43	0.958	6.594	10.05	0.784	6.963	8.43
10	10.750	1.536	7.494	19.32	1.194	8.219	15.61	0.977	8.679	13.09
12	12.750	1.821	8.889	27.16	1.417	9.746	21.97	1.159	10.293	18.41
14	14.000	2.000	9.760	32.76	1.556	10.107	26.50	1.273	11.301	22.20
16	16.000	2.286	11.154	42.79	1.778	12.231	34.60	1.455	12.915	29.00
18	18.000	2.571	12.549	54.14	2.000	13.760	43.79	1.636	14.532	36.69
20	20.000	2.857	13.943	66.85	2.222	15.289	54.05	1.818	16.146	45.30
22	22.000	3.143	15.337	80.89	2.444	16.819	65.40	2.000	17.76	54.82
24	24.000	3.429	16.732	96.27	2.667	18.346	77.85	2.182	19.374	65.24
26	26.000	—	—	—	2.889	19.875	91.36	2.364	20.988	76.57
28	28.000	—	—	—	3.111	21.405	105.95	2.545	22.605	88.78
30	30.000	—	—	—	3.333	22.934	121.62	2.727	24.219	101.92
32	32.000	—	—	—	—	—	—	2.909	25.833	115.97
34	34.000	—	—	—	—	—	—	3.091	27.447	130.93
36	36.000	—	—	—	—	—	—	3.273	29.061	146.80

I.D. : Inside Diameter
 O.D. : Outside Diameter
 T. : Wall Thickness

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

(CONTINUED)

HDPE IRON PIPE SIZE (I.P.S.) PRESSURE PIPE (continued)

TABLE 4

ANSI/NSF-61, 14 LISTED

PE 4710		DR 13.5 (160 psi)			DR 17 (125 psi)			DR 19 (112 psi)		
PE 3408/3608		DR 13.5 (128 psi)			DR 17 (100 psi)			DR 19 (90 psi)		
PIPE SIZE	AVG. O.D.	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT
½	0.840	—	—	—	—	—	—	—	—	—
¾	1.050	0.078	0.885	0.10	—	—	—	—	—	—
1	1.315	0.097	1.109	0.16	—	—	—	—	—	—
1¼	1.660	0.123	1.399	0.26	—	—	—	—	—	—
1½	1.900	0.141	1.601	0.34	—	—	—	—	—	—
2	2.375	0.176	2.002	0.53	0.140	2.078	0.43	—	—	—
3	3.500	0.259	2.951	1.15	0.206	3.063	0.93	0.184	3.110	0.84
4	4.500	0.333	3.794	1.90	0.265	3.938	1.54	0.237	3.998	1.39
5¾	5.375	0.398	4.531	4.53	0.316	4.705	2.20	0.283	4.775	1.98
5	5.563	0.412	4.690	2.91	0.327	4.870	2.35	0.293	4.942	2.12
6	6.625	0.491	5.584	4.13	0.390	5.798	3.34	0.349	5.885	3.01
7	7.125	0.528	6.006	4.78	0.419	6.237	3.86	0.375	6.330	3.48
8	8.625	0.639	7.270	7.00	0.507	7.550	5.65	0.454	7.663	5.10
10	10.750	0.796	9.062	10.87	0.632	9.410	8.87	0.566	9.550	7.92
12	12.750	0.944	10.749	15.29	0.750	11.160	12.36	0.671	11.327	11.14
14	14.000	1.037	11.802	18.45	0.824	12.253	14.91	0.737	12.438	13.43
16	16.000	1.185	13.488	24.09	0.941	14.005	19.46	0.842	14.215	17.54
18	18.000	1.333	15.174	30.48	1.059	15.755	24.64	0.947	15.992	22.20
20	20.000	1.481	16.860	37.63	1.176	17.507	30.41	1.053	17.768	27.41
22	22.000	1.630	18.544	45.56	1.294	19.257	36.80	1.158	19.545	33.16
24	24.000	1.778	20.231	54.21	1.412	21.007	43.81	1.263	21.322	39.47
26	26.000	1.926	21.917	63.62	1.529	22.759	51.39	1.368	23.100	46.32
28	28.000	2.074	23.603	73.78	1.647	24.508	59.62	1.474	24.875	53.72
30	30.000	2.222	25.289	84.69	1.765	26.258	68.45	1.579	26.653	61.66
32	32.000	2.370	26.976	96.35	1.882	28.010	77.86	1.684	28.430	70.16
34	34.000	2.519	28.660	108.81	2.000	29.760	87.91	1.790	30.205	79.20
36	36.000	2.667	30.346	121.98	2.118	31.510	98.57	1.895	31.983	88.80
42	42.000	—	—	—	2.471	36.761	134.16	2.211	37.314	120.86
48	48.000	—	—	—	2.824	42.013	175.23	2.526	42.644	157.86
54	54.000	—	—	—	3.177	47.265	221.71	2.842	47.975	199.79
63	63.000	—	—	—	—	—	—	—	—	—

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

(CONTINUED)

HDPE IRON PIPE SIZE (I.P.S.) PRESSURE PIPE (continued)

TABLE 4

ANSI/NSF-61, 14 LISTED

PE 4710		DR 21 (100 psi)			DR 26 (80 psi)			DR 32.5 (63 psi)		
PE 3408/3608		DR 21 (80 psi)			DR 26 (64 psi)			DR 32.5 (50 psi)		
PIPE SIZE	AVG. O.D.	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT
3	3.500	0.167	3.146	0.77	0.135	3.214	0.63	0.108	3.271	0.50
4	4.500	0.214	4.046	1.26	0.173	4.133	1.03	0.138	4.207	0.83
5 $\frac{1}{2}$	5.375	0.256	4.832	1.80	0.207	4.936	1.47	0.165	5.025	1.18
5	5.563	0.265	5.001	1.93	0.214	5.109	1.57	0.171	5.200	1.27
6	6.625	0.315	5.957	2.73	0.255	6.084	2.23	0.204	6.193	1.80
7	7.125	0.339	6.406	3.16	0.274	6.544	2.58	0.219	6.661	2.08
8	8.625	0.411	7.754	4.64	0.332	7.921	3.79	0.265	8.063	3.05
10	10.750	0.512	9.665	7.21	0.413	9.874	5.87	0.331	10.048	4.75
12	12.750	0.607	11.463	10.13	0.490	11.711	8.26	0.392	11.919	6.67
14	14.000	0.667	12.586	12.22	0.538	12.859	9.96	0.431	13.086	8.05
16	16.000	0.762	14.385	15.96	0.615	14.696	13.01	0.492	14.957	10.50
18	18.000	0.857	16.183	20.20	0.692	16.533	16.47	0.554	16.826	13.30
20	20.000	0.952	17.982	24.93	0.769	18.370	20.34	0.615	18.696	16.41
22	22.000	1.048	19.778	30.18	0.846	20.206	24.61	0.677	20.565	19.86
24	24.000	1.143	21.577	35.19	0.923	22.043	29.30	0.738	22.435	23.62
26	26.000	1.238	23.375	42.14	1.000	23.880	34.39	0.800	24.304	27.74
28	28.000	1.333	25.174	48.86	1.077	25.717	39.88	0.862	26.173	32.19
30	30.000	1.429	26.971	56.12	1.154	27.554	45.79	0.923	28.043	36.93
32	32.000	1.542	28.730	63.84	1.231	29.390	52.10	0.985	29.912	42.04
34	34.000	1.619	30.568	72.06	1.308	31.227	58.81	1.046	31.782	47.43
36	36.000	1.714	32.366	80.78	1.385	33.064	65.94	1.108	33.651	53.20
42	42.000	2.000	37.760	109.97	1.615	38.576	89.71	1.292	39.261	72.37
48	48.000	2.286	43.154	143.65	1.846	44.086	117.18	1.477	44.869	94.56
54	54.000	2.571	48.549	181.75	2.077	49.597	148.33	1.662	50.477	119.70
63	63.000	3.000	56.640	247.42	2.423	57.863	201.88	1.938	58.891	162.84

* For custom DR, perforated pipe, please contact JM Eagle™ PE sales at (800) 621-4404 for availability.

* All dimensions are in inches unless noted otherwise.

I.D. : Inside Diameter
 O.D. : Outside Diameter
 T. : Wall Thickness



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

JM EAGLE™ HDPE DUCTILE IRON PIPE SIZE (D.I.P.S.) PRESSURE PIPE

TABLE 5

ANSI/NSF-61, 14 LISTED

PE 4710		DR 7 (335 psi)			DR 9 (250 psi)			DR 11 (200 psi)		
PE 3408/3608		DR 7 (265 psi)			DR 9 (200 psi)			DR 11 (160 psi)		
PIPE SIZE	AVG. O.D.	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT
4	4.800	0.686	3.346	3.85	0.533	3.670	3.11	0.436	3.876	2.61
6	6.900	0.946	4.894	7.96	0.767	5.274	6.43	0.627	5.571	5.39
8	9.050	1.293	6.309	13.69	1.006	6.917	11.07	0.823	7.305	9.28
10	11.100	1.586	7.738	20.59	1.233	8.486	16.65	1.009	8.961	13.95
12	13.200	1.886	9.202	29.12	1.467	10.090	23.55	1.200	10.656	19.73
14	15.300	2.186	10.666	39.12	1.700	11.696	31.64	1.391	12.351	26.51
16	17.400	2.486	12.130	50.60	1.933	13.302	40.92	1.582	14.046	34.29
18	19.500	2.786	13.594	63.55	2.167	14.906	51.39	1.773	15.741	43.07
20	21.600	3.086	15.058	77.98	2.400	16.512	63.05	1.964	17.436	52.85
24	25.800	—	—	—	2.867	19.722	89.96	2.345	20.829	75.38
30	32.000	—	—	—	—	—	—	2.909	25.833	115.97
36	—	—	—	—	—	—	—	—	—	—
42	—	—	—	—	—	—	—	—	—	—
48	—	—	—	—	—	—	—	—	—	—
54	—	—	—	—	—	—	—	—	—	—

PE 4710		DR 13.5 (160 psi)			DR 17 (125 psi)			DR 19 (112 psi)		
PE 3408/3608		DR 13.5 (128 psi)			DR 17 (100 psi)			DR 19 (90 psi)		
PIPE SIZE	AVG. O.D.	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT
4	4.800	0.356	4.045	2.17	0.282	4.202	1.75	0.253	4.264	1.58
6	6.900	0.511	5.817	4.48	0.406	6.039	3.62	0.363	6.130	3.26
8	9.050	0.670	7.630	7.70	0.532	7.922	6.22	0.476	8.041	5.61
10	11.100	0.822	9.357	11.59	0.653	9.761	9.37	0.584	9.862	8.44
12	13.200	0.978	11.127	16.40	0.776	11.555	13.24	0.695	11.727	11.94
14	15.300	1.133	12.898	22.02	0.900	13.392	17.80	0.805	13.593	16.04
16	17.400	1.289	14.667	28.49	1.024	15.229	23.03	0.916	15.458	20.74
18	19.500	1.444	16.439	35.77	1.147	17.068	28.91	1.026	17.325	26.05
20	21.600	1.600	18.208	43.91	1.271	18.905	35.49	1.137	19.190	31.97
24	25.800	1.911	21.749	62.64	1.518	22.582	50.63	1.358	22.921	45.61
30	32.000	2.370	26.976	96.35	1.880	28.014	77.86	1.684	28.430	70.16
36	38.300	2.837	32.286	138.04	2.253	33.524	111.55	2.016	34.026	100.50
42	44.500	—	—	—	2.618	38.950	150.60	2.342	39.535	135.68
48	50.800	—	—	—	2.988	44.465	196.23	2.674	45.131	176.81
54	57.100	—	—	—	—	—	—	—	—	—

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

(CONTINUED)

JM EAGLE™ HDPE DUCTILE IRON PIPE SIZE (D.I.P.S.) PRESSURE PIPE (continued)

TABLE 5

ANSI/NSF-61, 14 LISTED

PE 4710		DR 21 (100 psi)			DR 26 (80 psi)			DR 32.5 (63 psi)		
PE 3408/3608		DR 21 (80 psi)			DR 26 (64 psi)			DR 32.5 (50 psi)		
PIPE SIZE	AVG. O.D.	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT
4	4.800	0.229	4.315	1.44	0.185	4.408	1.17	0.148	4.486	0.95
6	6.900	0.329	6.203	2.97	0.265	6.338	2.42	0.212	6.451	1.95
8	9.050	0.431	8.136	5.11	0.348	8.312	4.17	0.278	8.461	3.36
10	11.100	0.529	9.979	7.69	0.427	10.195	6.27	0.342	10.375	5.06
12	13.200	0.629	11.867	10.87	0.508	12.123	8.87	0.406	12.339	7.15
14	15.300	0.729	13.755	14.60	0.588	14.053	11.90	0.471	14.301	9.61
16	17.400	0.829	15.643	18.88	0.669	15.982	15.39	0.536	16.264	12.44
18	19.500	0.929	17.531	23.71	0.750	17.910	19.34	0.600	18.228	15.60
20	21.600	1.029	19.419	29.10	0.831	19.838	23.74	0.665	20.190	19.16
24	25.800	1.229	23.195	41.51	0.992	23.697	33.85	0.794	24.117	27.32
30	32.000	1.524	28.769	63.84	1.231	29.390	52.10	0.985	29.912	42.04
36	38.300	1.824	34.433	91.45	1.473	35.177	74.61	1.179	35.801	60.18
42	44.500	2.119	40.008	123.44	1.712	40.871	100.75	1.370	41.596	81.25
48	50.800	2.419	45.672	160.87	1.954	46.658	131.28	1.563	47.486	105.90
54	57.100	2.719	51.336	203.25	2.196	52.444	165.83	1.757	53.375	133.81

* For custom DR, perforated pipe, please contact JM Eagle™ PE sales at (800) 621-4404 for availability.

* All dimensions are in inches unless noted otherwise.

COPPER TUBING SIZES (C.T.S.) PRESSURE PIPE ASTM D2737

TABLE 6

ANSI/NSF-61, 14 LISTED

PE 3408/3608		DR 7 (265 psi)		DR 9 (200 psi)			DR 11 (160 psi)		
PIPE SIZE	AVG. O.D.	MIN. T.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT
½	0.625	0.090	0.07	0.069	0.479	0.05	0.062	0.494	0.05
¾	0.875	0.125	0.13	0.097	0.669	0.10	0.080	0.705	0.09
1	1.125	0.160	0.21	0.125	0.860	0.17	0.102	0.909	0.14
1¼	1.375	0.196	0.32	0.153	1.051	0.26	0.125	1.110	0.21
1½	1.625	0.232	0.44	0.181	1.241	0.36	0.148	1.311	0.30
2	2.125	0.304	0.76	0.236	1.625	0.61	0.193	1.716	0.51



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

S.I.D.R. PRESSURE PIPE ASTM D2239

TABLE 7

ANSI/NSF-61, 14 LISTED

PE 4710		DR 7 (335 psi)			DR 9 (250 psi)			DR 11.5 (190 psi)		
PE 3408/3608		DR 7 (200 psi)			DR 9 (160 psi)			DR 11.5 (125 psi)		
PIPE SIZE	AVG. I.D.	MIN. T.	AVG. O.D.	WEIGHT LB/FT	MIN. T.	AVG. O.D.	WEIGHT LB/FT	MIN. T.	AVG. I.D.	WEIGHT LB/FT
½	0.622	0.089	0.800	0.09	0.069	0.760	0.07	0.060	0.742	0.06
¾	0.824	0.118	1.060	0.15	0.092	1.008	0.12	0.072	0.968	0.09
1	1.049	0.150	1.349	0.25	0.117	1.283	0.19	0.091	1.231	0.14
1¼	1.380	0.197	1.774	0.43	0.153	1.686	0.33	0.120	1.620	0.25
1½	1.610	0.230	2.070	0.59	0.179	1.968	0.44	0.140	1.890	0.34
2	2.067	0.295	2.657	0.97	0.230	2.527	0.73	0.180	2.427	0.56
2½	2.469	—	—	—	—	—	—	0.215	2.899	0.80
3	3.068	—	—	—	—	—	—	0.267	3.602	1.23
4	4.026	—	—	—	—	—	—	0.350	4.726	2.12
6	6.065	—	—	—	—	—	—	0.527	7.119	4.81

PE 4710		DR 15 (144 psi)			DR 19 (112 psi)		
PE 3408/3608		DR 15 (100 psi)			DR 19 (80 psi)		
PIPE SIZE	AVG. I.D.	MIN. T.	AVG. O.D.	WEIGHT LB/FT	MIN. T.	AVG. O.D.	WEIGHT LB/FT
½	0.622	0.060	0.742	0.06	0.060	0.742	0.06
¾	0.824	0.060	0.944	0.07	0.060	0.944	0.07
1	1.049	0.070	1.189	0.11	0.060	1.169	0.09
1¼	1.380	0.092	1.564	0.19	0.073	1.526	0.15
1½	1.610	0.107	1.824	0.25	0.085	1.780	0.20
2	2.067	0.138	2.343	0.42	0.109	2.285	0.33
2½	2.469	0.165	2.799	0.60	0.130	2.729	0.47
3	3.068	0.205	3.478	0.93	0.161	3.390	0.72
4	4.026	0.268	4.562	1.59	0.212	4.450	1.24
6	6.065	0.404	6.873	3.62	0.319	6.703	2.82

I.D. : Inside Diameter
 O.D. : Outside Diameter
 T. : Wall Thickness

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

GEO-FLO HDPE GEOTHERMAL PIPE AND TUBING

Geo-flo HDPE Geothermal Pipe and tubing is produced to ASTM D3035 for smaller diameters and ASTM F714 for sizes 3" through 12".

TABLE 8

ANSI/NSF-61, 14 LISTED

NOMINAL PIPE SIZE (IN)	AVERAGE O.D. (IN)	APPROX. I.D. (IN)	MIN. WALL THICKNESS (IN)	APPROX. WEIGHT (LBS/FT)
HDPE SDR 7 - P.R. 265 psi				
¾	1.050	0.730	0.150	0.18
1	1.315	0.910	0.188	0.28
1¼	1.660	1.150	0.237	0.45
1½	1.900	1.320	0.271	0.59
2	2.375	1.650	0.339	0.92
HDPE SDR 9 - P.R. 200 psi				
¾	1.050	0.800	0.117	0.15
1	1.315	1.000	0.146	0.23
1¼	1.660	1.270	0.184	0.36
1½	1.900	1.450	0.211	0.48
2	2.375	1.810	0.264	0.75
3	3.500	2.670	0.389	1.62
4	4.500	3.450	0.500	2.67
6	6.625	5.030	0.736	5.79
8	8.625	6.593	0.958	10.05
10	10.750	8.218	1.194	15.61
12	12.750	9.747	1.417	21.97
HDPE SDR 11 - P.R. 160 psi				
¾	1.050	0.850	0.095	0.12
1	1.315	1.060	0.120	0.19
1¼	1.660	1.340	0.151	0.30
1½	1.900	1.530	0.173	0.40
2	2.375	1.910	0.216	0.62
3	3.500	2.820	0.318	1.35
4	4.500	3.640	0.409	2.24
6	6.625	5.360	0.602	4.85
8	8.625	6.960	0.784	8.42
10	10.750	8.680	0.977	13.09
12	12.750	10.290	1.159	18.41



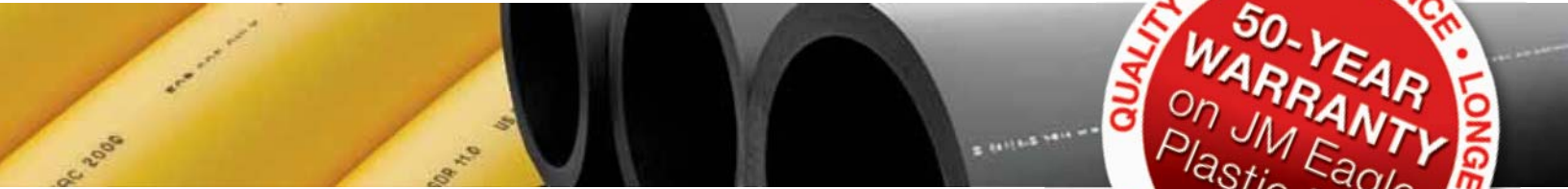
DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

(CONTINUED)

REFERENCE STANDARDS

ASTM D638	Standard Test Method for Tensile Properties of Plastics
ASTM D746	Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact
ASTM D790	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulation Materials
ASTM D1238	Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer
ASTM D1505	Standard Test Method for Density of Plastics by the Density-Gradient Technique
ASTM D2239	Standard Specification for Polyethylene (PE) Plastic Pipe (S.I.D.R.-PR) Based on Controlled Inside Diameter
ASTM D2657	Standard Practice for Heat Fusion Joining of Polyolefin Pipe and Fittings
ASTM D2737	Standard Specification for Polyethylene (PE) Plastic Tubing
ASTM D2774	Standard Practice for Underground Installation of Thermoplastic Pressure Piping
ASTM D2837	Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
ASTM D3035	Standard Specifications for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
ASTM D3350	Standard Specification for Polyethylene Plastic Pipe and Fittings Material
ASTM F412	Standard Terminology Relating to Plastic Piping Systems
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (S.D.R.-PR) Based on Outside Diameter
ASTM F1473	Standard Test Method for Notch Tensile to Measure the Resistance to Slow Crack Growth of Polyethylene Pipes and Resins
AWWA C901	Polyethylene (PE) Pressure Pipe and Tubing, ½ in. Through 3 in. For Water Service
AWWA C906	Polyethylene (PE) Pressure Pipe and Fittings, 4 in. Through 63 in., For Water Distribution and Transmission
NSF Standard 014	Plastics Piping System Components and Related Materials
NSF Standard 061	Drinking Water System Components - Health Effects



LIMITED WARRANTY

1. PERIODS AND SCOPE OF COVERAGE

JM Eagle™ warrants that the pipe products certified to the standards of the American Water Works Association (AWWA) for water distribution, transmission and force sewer mains including C900, C905, C909, C901 and C906 products manufactured by JM Eagle™ (each a “Product” and collectively, the “Products”)* are manufactured in accordance with the following AWWA, ASTM, ANSI/NSF, and UL standards as follows: (1) AWWA C900 and ASTM 1784 cell class 12454; Gaskets meet ASTM F477; Joints meet ASTM D3139; ANSI/NSF-61, UL 1285 for the C900, (2) AWWA C905 and ASTM 1784 cell class 12454; Gaskets meet ASTM F477; Joints meet ASTM D3139; ANSI/NSF-61, UL 1285 for C905, (3) AWWAC909 and UL 1285; Gaskets meet ASTM F477; Joints meet ASTM D3139 for C909 and (4) AWWA C901/906, ASTM D2239, ASTM D2737, ASTM D3035, F714, cell class per ASTM D3350, PPI listed material (TR-4) PE3408/3608 & PE4710, ASNI/NSF-14 for C901 and C906. JM Eagle™ warrants that each of these Products manufactured by JM Eagle™ leaves our plant free from defects in workmanship and materials. These Products as manufactured by JM Eagle™ are backed by our unprecedented fifty (50) year Limited Warranty. This Limited Warranty provides that Products manufactured by JM Eagle™ meet the above stated quality standards published by the AWWA, ASTM International (ASTM), American National Standards Institute/NSF International (ANSI/NSF), and Underwriters Laboratories (UL).

If any Product is determined within fifty (50) years from the date of invoice by JM Eagle™ to be defective because it failed to meet the above stated standards, JM Eagle™ will then provide replacement product of the same type, size and quantity of the product and pay for the costs directly related to its replacement*** or issue credits, offsets or a combination thereof for the wholesale purchase price of the defective product.

JM Eagle™ also warrants that the design of our Products are independently tested and/or certified by AWWA, NSF and UL to meet their respective standards and that our plants manufacturing the Products are already certified or in process of being certified to ISO 9001 certification** as part of our program to develop manufacturing processes that consistently produce high quality plastic pipe.

JM Eagle™ quality control programs encompass three critical aspects of the manufacturing process: the incoming raw material, pipe production, and the finished goods.

2. EXCLUSIONS FROM COVERAGE AND EXCLUSIVE REMEDY:

Products manufactured by JM Eagle™ are marked with JM Eagle, PW Eagle or US Poly stencil markings. This limited warranty excludes any Product not manufactured by JM Eagle™, even if it is sold by JM Eagle™, and also excludes defects or failures caused after shipment by:

- improper installation (including, without limitation, misalignment),
- use in improper applications or conditions or in conjunction with improper materials (including, without limitation, improper lubricants, pastes, solvents or sealants),
- contact with aggressive chemical agents, freezing or overheating of liquids in the Product, or unusual pressure surges or pulsation,
- vibration,
- temperature shocking,
- U.V. degradation,
- failure to adhere to JM Eagle™’s instructions concerning the proper handling, installation, testing and use of the Product,
- failure to adhere to applicable standards set forth by local laws, codes, or regulations and the applicable industry standards, or
- any other improper activities not listed above or damage caused by the fault or negligence of anyone other than JM Eagle™.



THE WARRANTIES IN THIS LIMITED WARRANTY ARE THE ONLY WARRANTIES APPLICABLE TO THE PRODUCTS. THERE ARE NO OTHER WARRANTIES, REPRESENTATIONS OR CONDITIONS OF ANY KIND, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, WITH RESPECT TO THE PRODUCTS SUPPLIED HEREUNDER INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED AND JM EAGLE™ SHALL NOT BE LIABLE IN THIS RESPECT NOTWITHSTANDING JM EAGLE'S™ ACTUAL KNOWLEDGE OF THE PRODUCT'S INTENDED USE OR ANY ADVICE OR REPRESENTATIONS THAT MAY HAVE BEEN RENDERED BY JM EAGLE™ CONCERNING THE DESIGN, MANUFACTURE, FABRICATION, SALE, USE, INSTALLATION OR PROVISION OF THE PRODUCTS. NO STATEMENT, CONDUCT OR DESCRIPTION BY JM EAGLE™ OR ITS REPRESENTATIVES, IN ADDITION TO OR BEYOND THIS LIMITED WARRANTY, SHALL CONSTITUTE A WARRANTY.

BUYER AGREES THAT ITS SOLE AND EXCLUSIVE REMEDY FOR BREACH OF THIS LIMITED WARRANTY, AND THE SOLE AND EXCLUSIVE OBLIGATION OF JM EAGLE™ IN RESPECT OF ANY CLAIMS FOR BREACH OF THIS LIMITED WARRANTY, SHALL BE (1) THE REPLACEMENT OF THE SAME TYPE, SIZE AND LIKE QUANTITY OF NON-DEFECTIVE PRODUCT, AT THE ORIGINAL POINT OF DELIVERY AND COSTS RELATED TO ITS REPLACEMENT***, OR (2) CREDITS, OFFSETS, OR A COMBINATION THEREOF, FOR THE WHOLESALE PURCHASE PRICE OF THE DEFECTIVE PRODUCT. IN NO EVENT SHALL JM EAGLE™ BE LIABLE FOR LOST PROFITS, LOSS OF GOODWILL, LOSS OF BUSINESS OPPORTUNITIES, DAMAGE TO REPUTATION, SPECIAL DAMAGES, INDIRECT DAMAGES, DELAY DAMAGES, PUNITIVE DAMAGES, EXEMPLARY DAMAGES, CONSEQUENTIAL DAMAGES OR INCIDENTAL DAMAGES.

3. REQUIREMENTS FOR MAKING CLAIMS:

Every claim for breach under this warranty shall be void unless it is made in writing to JM Eagle™ and postmarked within five business (5) days of the date the defect was discovered or in the exercise of ordinary care should have been discovered and, in any event, the claim must also be made within fifty (50) years of the date of the JM Eagle™ invoice. As noted above, Products manufactured by JM Eagle™ are marked with a JM Eagle, PW Eagle or US Polystencil. This limited warranty excludes any Product not manufactured by JM Eagle™, even if it is sold by JM Eagle™.

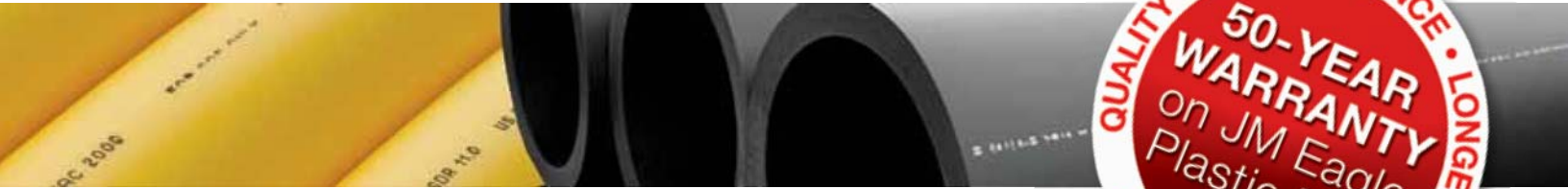
Any claim for breach of warranty must be sent to:

PRODUCT ASSURANCE DEPARTMENT
JM EAGLE
5200 W. CENTURY BOULEVARD
LOS ANGELES, CA, 90045

For questions regarding claims, the Product Assurance Department may be also contacted at 1-800-621-4404 or JMWebSupport1@jmeagle.com.

No claim under this limited warranty will be valid unless (1) proof of purchase with the date thereof as well as a description of the alleged defect in reasonable detail is presented to the satisfaction of JM Eagle™, (2) written permission and/or a Return Goods Authorization (RGA) is obtained from JM Eagle™, (3) JM Eagle™ is given a meaningful and reasonable opportunity to inspect the allegedly defective Product and its installation at the site and (4) at JM Eagle™'s request, representative samples of the allegedly defective Product are returned to JM Eagle™ in accordance with JM Eagle™'s instructions.

* Products covered by this Limited Warranty include similar PW Eagle and US Poly products manufactured by JM Eagle after July 1, 2007.
** JM Eagle's Conroe Texas plant in the process of obtaining ISO 9001 certification. The other plants are already certified to ISO 9001.
*** Replacement costs shall be reasonable and based on industry standard cost parameters such as those listed in the RS Means Assemblies Cost Data Book.



EXTENDED WARRANTY

NOTICE OF RETROACTIVE EXTENSION OF LIMITED WARRANTY

Pipe certified to the standards of the American Water Works Association (AWWA) for water distribution, transmission and force sewer mains including C900, C905, C909, C901 and C906 products manufactured by JM Eagle™ (hereinafter “Products”)* are now backed by our unprecedented fifty (50) year limited warranty. (See www.jmeagle.com for full details). JM Eagle™ is proud to announce that it is so confident in the quality of its products, that effective April 1, 2010, it will retroactively extend similar warranty protection for Product manufacturing defect failures. For any Products manufactured by JM Eagle™ and purchased from JM Eagle™ since December 1, 1982, JM Eagle™ will retroactively extend fifty (50) year warranty protection for any manufacturing defect that causes failure on or after April 1, 2010. As set forth in detail below, to be eligible for this retroactive extension, the Products need only have been manufactured by JM Eagle™, contain the original stencil markings, have been purchased since December 1, 1982, and failed on or after April 1, 2010. The fifty (50) year retroactive extended warranty will begin to run on the date of invoice for purchase from JM Eagle™ and will expire fifty (50) years from that date.

EXTENDED RETROACTIVE LIMITED WARRANTY

1. PERIODS AND SCOPE OF COVERAGE

JM Eagle™ warrants through this retroactive extension of Limited Warranty that its pipe products certified to the standards of the American Water Works Association for water distribution, transmission and force sewer mains including C900, C905, C909, C901 and C906 products manufactured by JM Eagle™ (each a “Product” and collectively, the “Products”)* were manufactured in accordance with any of the following AWWA, ASTM, ANSI/NSF, and UL standards then in existence as follows: (1) AWWA C900 and ASTM 1784 cell class 12454; Gaskets meet ASTM F477; Joints meet ASTM D3139; ANSI/NSF-61, UL 1285 for the C900, (2) AWWA C905 and ASTM 1784 cell class 12454; Gaskets meet ASTM F477; Joints meet ASTM D3139; ANSI/NSF-61, UL 1285 for C905, (3) AWWA C909 and UL 1285; Gaskets meet ASTM F477; Joints meet ASTM D3139 for C909 and (4) AWWA C901/906, ASTM D2239, ASTM D2737, ASTM D3035, F714, cell class per ASTM D3350, PPI listed material (TR-4) PE3408/3608 & PE4710, ANSI/NSF-14 for C901 and C906. JM Eagle™ warrants that each of these Products manufactured by JM Eagle™ left our plant free from defects in workmanship and materials. These Products as manufactured by JM Eagle™ are retroactively backed by our extended, unprecedented fifty (50) year Limited Warranty. This Limited Warranty provides that Products manufactured by JM Eagle™ met the applicable then-existing quality standards stated above and that are published by the AWWA, ASTM International (ASTM), American National Standards Institute/ NSF International (ANSI/NSF) and Underwriters Laboratories (UL).

If any Product fails after April 1, 2010 and is determined within fifty (50) years from the date of invoice by JM Eagle™ to be defective because it failed to meet the above stated standards, JM Eagle™ will then provide replacement product of the same type, size and quantity of the product and costs related to this replacement** or issue credits, offsets or a combination thereof for the wholesale purchase price of the defective product.

2. EXCLUSIONS FROM COVERAGE AND EXCLUSIVE REMEDY:

Products manufactured by JM Eagle™ are marked with JM Eagle, PW Eagle or US Poly stencil markings. This limited warranty excludes any Product not manufactured by JM Eagle™, even if it is sold by JM Eagle™, and also excludes defects or failures caused after shipment by:

- improper installation (including, without limitation, misalignment),
- use in improper applications or conditions or in conjunction with improper materials (including, without limitation, improper lubricants, pastes, solvents or sealants),
- contact with aggressive chemical agents, freezing or overheating of liquids in the Product, or unusual pressure surges or pulsation,

- vibration,
- temperature shocking,
- U.V. degradation,
- failure to adhere to JM Eagle™'s instructions concerning the proper handling, installation, testing and use of the Product,
- failure to adhere to applicable standards set forth by local laws, codes, or regulations and the applicable industry standards, or
- any other improper activities not listed above or damage caused by the fault or negligence of anyone other than JM Eagle™ .

THE WARRANTIES IN THIS LIMITED WARRANTY ARE THE ONLY WARRANTIES APPLICABLE TO THE PRODUCTS. THERE ARE NO OTHER WARRANTIES, REPRESENTATIONS OR CONDITIONS OF ANY KIND, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, WITH RESPECT TO THE PRODUCTS SUPPLIED HEREUNDER INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED AND JM EAGLE™ SHALL NOT BE LIABLE IN THIS RESPECT NOTWITHSTANDING JM EAGLE™'S ACTUAL KNOWLEDGE OF THE PRODUCT'S INTENDED USE OR ANY ADVICE OR REPRESENTATIONS THAT MAY HAVE BEEN RENDERED BY JM EAGLE™ CONCERNING THE DESIGN, MANUFACTURE, FABRICATION, SALE, USE, INSTALLATION OR PROVISION OF THE PRODUCTS. NO STATEMENT, CONDUCT OR DESCRIPTION BY JM EAGLE™ OR ITS REPRESENTATIVES, IN ADDITION TO OR BEYOND THIS LIMITED WARRANTY, SHALL CONSTITUTE A WARRANTY.

BUYER AGREES THAT ITS SOLE AND EXCLUSIVE REMEDY FOR BREACH OF THIS LIMITED WARRANTY, AND THE SOLE AND EXCLUSIVE OBLIGATION OF JM EAGLE™ IN RESPECT OF ANY CLAIMS FOR BREACH OF THIS LIMITED WARRANTY, SHALL BE, (1) THE REPLACEMENT OF THE SAME TYPE, SIZE AND LIKE QUANTITY OF NON-DEFECTIVE PRODUCT, AT THE ORIGINAL POINT OF DELIVERY, AND COSTS DIRECTLY RELATED TO THIS REPLACEMENT***, OR (2) CREDITS, OFFSETS, OR A COMBINATION THEREOF, FOR THE WHOLESALE PURCHASE PRICE OF THE DEFECTIVE PRODUCT. IN NO EVENT SHALL JM EAGLE™ BE LIABLE FOR LOST PROFITS, LOSS OF GOODWILL, LOSS OF BUSINESS OPPORTUNITIES, DAMAGE TO REPUTATION, SPECIAL DAMAGES, INDIRECT DAMAGES, DELAY DAMAGES, PUNITIVE DAMAGES, EXEMPLARY DAMAGES, CONSEQUENTIAL DAMAGES OR INCIDENTAL DAMAGES.

3. REQUIREMENTS FOR MAKING CLAIMS:

Every claim for breach under this warranty shall be void unless it is made in writing to JM Eagle™ and postmarked within five business (5) days of the date the defect was discovered or in the exercise of ordinary care should have been discovered and, in any event, the claim must also be made within fifty (50) years of the date of the JM Eagle™ invoice. As noted above, Products manufactured by JM Eagle™ are marked with JM Eagle™, PW Eagle or US Poly stencils. This limited warranty excludes any Product not manufactured by JM Eagle™, even if it is sold by JM Eagle™ .

Any claim for breach of warranty must be sent to:

PRODUCT ASSURANCE DEPARTMENT
JM EAGLE
5200 W. CENTURY BOULEVARD
LOS ANGELES, CA, 90045

For questions regarding claims, the Product Assurance Department may be also contacted at 1-800-621-4404 or JMWebSupport1@jmeagle.com.

No claim under this limited warranty will be valid unless (1) proof of purchase with the date thereof as well as a description of the alleged defect in reasonable detail is presented to the satisfaction of JM Eagle™, (2) written permission and/or a Return Goods Authorization (RGA) is obtained from JM Eagle™, (3) JM Eagle™ is given a meaningful and reasonable opportunity to inspect the allegedly defective Product and its installation at the site and (4) at JM Eagle™'s request, representative samples of the allegedly defective Product are returned to JM Eagle™ in accordance with JM Eagle™'s instructions.

* Products covered by this Limited Warranty include similar PW Eagle and US Poly products manufactured by JM Eagle after July 1, 2007.
 ** JM Eagle's Conroe Texas plant in the process of obtaining ISO 9001 certification. The other plants are already certified to ISO 9001.
 *** Replacement costs shall be reasonable and based on industry standard cost parameters such as those listed in the RS Means Assemblies Cost Data Book.



PLANT LOCATIONS

ADEL

2101 J-M Drive
Adel, Georgia 31620

BATCHELOR

2894 Marion Monk Road
Batchelor, Louisiana 70715

BUTNER

2602 West Lyon Station Road
Creedmoor, North Carolina 27522

CAMERON PARK

3500 Robin Lane
Cameron Park, California 95682

COLUMBIA

6500 North Brown Station Road
Columbia, Missouri 65202

CONROE

101 East Avenue M
Conroe, Texas 77301

FONTANA

10990 Hemlock Avenue
Fontana, California 92337

HASTINGS

146 North Maple Avenue
Hastings, Nebraska 68901

KINGMAN

4620 Olympic Way
Kingman, Arizona 86401

MAGNOLIA

2220 Duracrete Drive
Magnolia, Arkansas 71753

MCNARY

31240 Roxbury Road
Umatilla, Oregon 97882

MEADVILLE

15661 Delano Road
Cochranton, Pennsylvania 16314

PERRIS

23711 Rider Street
Perris, California 92570

PUEBLO

1742 E. Platteville Boulevard
Pueblo West, Colorado 81007

STOCKTON

1051 Sperry Road
Stockton, California 95206

SUNNYSIDE

1820 South First Street
Sunnyside, Washington 98944

TACOMA

2330 Port of Tacoma Road
Tacoma, Washington 98421

TULSA

4501 West 49th Street
Tulsa, Oklahoma 74107

VISALIA

8875 Avenue 304
Visalia, California 93291

WHARTON

10807 US 59 RD
Wharton, Texas 77488

WILTON

1314 W. Third Street
Wilton, Iowa 52778

MEXICO

PLASTICS TECHNOLOGY
DE MÉXICO S DE R.L. DE S.A.
Av. Montes Urales No. 8 y 10
Parque Industrial Opción, Carretera
57 Qro. -S.L.P. Km. 57.8
C.P. 37980 San José Iturbide,
Guanajuato México

** Our Mexico location is a joint
venture between JM Eagle™ and
Plastics Technology*

GLOBAL HEADQUARTERS

5200 West Century Boulevard
Los Angeles, California 90045

REGIONAL OFFICE

Nine Peach Tree Hill Road
Livingston, New Jersey 07039

J-M Manufacturing Co., Inc. and PW Eagle, Inc. are doing business as JM Eagle™.

JM Eagle

- THE LEADER IN PIPE INNOVATION
- THE HIGHEST LEVEL OF QUALITY
- THE LARGEST BREADTH OF PRODUCT
- THE WIDEST CAPACITY
- EXPRESS DELIVERY



PLANT LOCATIONS

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for a better tomorrow™*

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