INFRAPIPES

Gas Distribution MD

ASTM D2513

Gas MD

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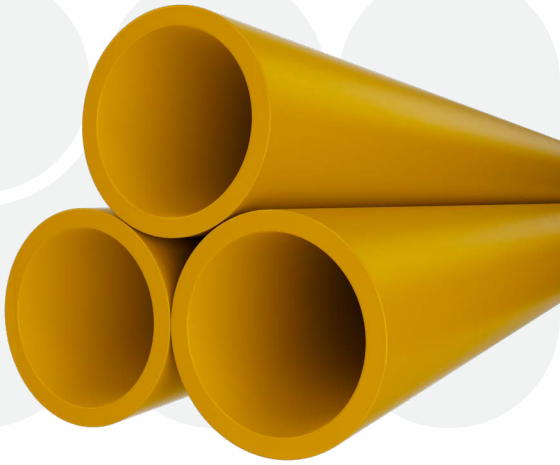

Polyethylene Pipe & Tubing for Natural Gas & LPG

Infra Pipes Solution's medium-density polyethylene gas pipe and tubing are produced with high-performance bimodal or unimodal polyethylene resins that surpass industry standards, ensuring superior resistance to environmental stress cracking and exceptional long-term stress rupture durability. It is manufactured and tested to meet or exceed the national standards for gas pressure pipe and tubing, including ASTM D2513 and the regulations in Part 192 of the Federal Gas Pipeline regulations.

MATERIAL PROPERTIES

Properties (2708)	ASTM Test Method	Unimodal: Nominal Values*	Bimodal: Nominal Values*
Density (Natural)	D1505	0.939 gm/cc	0.940 gm/cc
Density (Yellow)	D1505	0.940 gm/cc	0.944 gm/cc
Melt Index (190°C/2.16 kg)	D1238	0.20 g/10 min	> 0.28 g/10 min
Flow Rate (190°C/21.6 kg)	D1238	20 g/10 min	9.5 g/10 min
Tensile Strength @ Yield	D638	2800 psi	> 2600 psi
Ultimate Elongation	D638	> 800%	> 600%
Flexural Modulus (2% Secant)	D790	90000 psi	> 90000 psi
PENT	F1473	> 500 hrs	> 15000 hrs
Brittleness Temperature	D746	< -180 deg F	< -103 deg F
Hardness (Shore D)	D2240	62	64
Vicat Softening Temperature	D1525	248 deg F	248 deg F
Izod Impact Strength (Notched)	D256	6 ft-lbf/in	10 ft-lbf/in
Slow Crack Growth Resistance (SCGR) Notched Pipe Test @ 176 deg F	ISO 13479	> 5000 hr	> 3000 hr
Thermal Expansion Coefficient	D696	0.0001 in/in/deg F	0.0001 in/in/deg F
Resistance to Rapid Crack Propagation (Full Scale, PC @ 32°F)	ISO 13478	121 psi	> 560 psi
Resistance to Rapid Crack Propagation (S-4 Pc @ 32°F)	ISO 13477	33 psi	> 145 psi
Resistance to Rapid Crack Propagation (S-4 Tc @ 5bar)	ISO 13477	> 32 deg F	< 28 deg F
Cell Classification	D3350	234373E	234373E
Hydrostatic Design Basis (HDB) @ 73 deg F	D2837	1250 psi	1250 psi
Hydrostatic Design Basis (HDB) @ 140 deg F	D2837	1000 psi	1000 psi

*** Nominal values are indicated for reference only since compression molded tests specimens were used that may differ from actual pipe**

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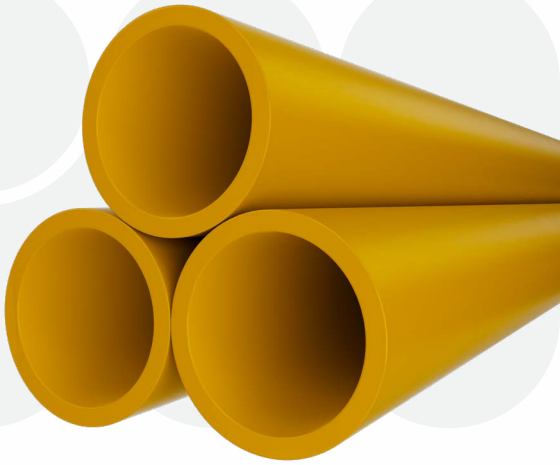

ASTM D2513_MD CTS PIPE DIMENSIONS					
	OD Max (in)	OD Min (in)	Max Wall (in)	Min Wall (in)	Avg Wt (lb/ft)
1/4 CTS	0.379	0.371	0.068	0.062	0.02
3/8 CTS	0.504	0.496	0.068	0.062	0.03
1/2 CTS	0.629	0.621	0.068	0.062	0.04
	0.629	0.621	0.099	0.090	0.06
	0.629	0.621	0.114	0.104	0.07
3/4 CTS	0.879	0.871	0.068	0.062	0.06
	0.879	0.871	0.085	0.077	0.08
	0.879	0.871	0.099	0.090	0.09
1 CTS	1.130	1.120	0.069	0.062	0.08
	1.130	1.120	0.101	0.090	0.12
	1.130	1.120	0.111	0.099	0.13
	1.130	1.120	0.113	0.101	0.13
	1.130	1.120	0.136	0.121	0.16
1 1/4 CTS	1.380	1.370	0.069	0.062	0.10
	1.380	1.370	0.101	0.090	0.15
	1.380	1.370	0.136	0.121	0.20
1 3/4 CTS	1.881	1.869	0.069	0.062	0.14

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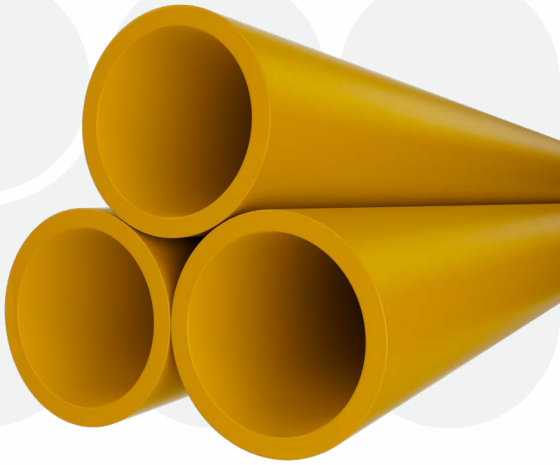

ASTM D2513_MD IPS PIPE DIMENSIONS						
	DR	OD Max (in)	OD Min (in)	Max Wall (in)	Min Wall (in)	Avg Wt (lb/ft)
1/2 IPS	9.3	0.844	0.836	0.101	0.090	0.09
	11	0.844	0.836	0.085	0.076	0.08
3/4 IPS	11	1.054	1.046	0.106	0.095	0.12
	D	1.054	1.046	0.101	0.090	0.12
1 IPS	9.33	1.317	1.307	0.157	0.140	0.22
	9.9	1.317	1.307	0.149	0.133	0.21
	11	1.317	1.307	0.134	0.120	0.19
	13.5	1.317	1.307	0.109	0.097	0.16
	D	1.317	1.307	0.101	0.090	0.15
1 1/4 IPS	6	1.665	1.655	0.310	0.277	0.52
	9.33	1.665	1.655	0.199	0.178	0.36
	10	1.665	1.655	0.186	0.166	0.34
	11	1.665	1.655	0.169	0.151	0.31
	13.5	1.665	1.655	0.138	0.123	0.26
	17	1.665	1.655	0.110	0.098	0.21
	D	1.665	1.655	0.101	0.090	0.19
1 1/2 IPS	11	1.906	1.894	0.194	0.173	0.41
	13.5	1.906	1.894	0.158	0.141	0.34
	17	1.906	1.894	0.125	0.112	0.27
	D	1.906	1.894	0.101	0.090	0.22
2 IPS	9.33	2.381	2.369	0.286	0.255	0.73
	11	2.381	2.369	0.242	0.216	0.63
	13.5	2.381	2.369	0.197	0.176	0.53
3 IPS	11	3.508	3.492	0.356	0.318	1.37
	11.5	3.508	3.492	0.340	0.304	1.32
	13.5	3.508	3.492	0.290	0.259	1.14
4 IPS	9.33	4.509	4.491	0.540	0.482	2.63
	11	4.509	4.491	0.458	0.409	2.27
	11.5	4.509	4.491	0.438	0.391	2.18
	13.5	4.509	4.491	0.373	0.333	1.89
	17	4.509	4.491	0.296	0.264	1.52

Note: 'D' is based on minimum acceptable wall thickness.

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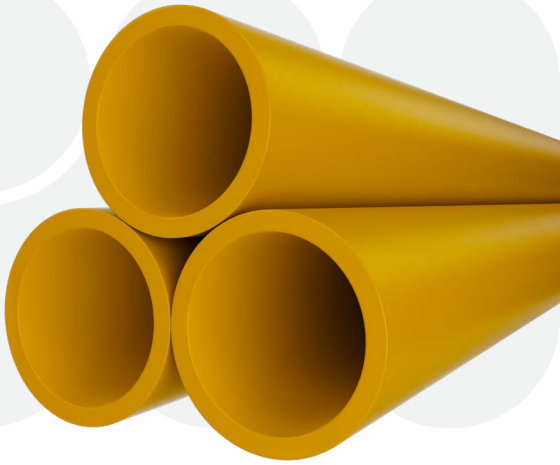

ASTM D2513_MD IPS PIPE DIMENSIONS (CONTINUED)						
	DR	OD Max (in)	OD Min (in)	Max Wall (in)	Min Wall (in)	Avg Wt (lb/ft)
6 IPS	11	6.636	6.614	0.674	0.602	4.92
	11.5	6.636	6.614	0.645	0.576	4.73
	13.5	6.636	6.614	0.550	0.491	4.09
	17	6.636	6.614	0.437	0.390	3.31
	21	6.636	6.614	0.354	0.316	2.71
8 IPS	11	8.638	8.612	0.879	0.785	8.35
	11.5	8.638	8.612	0.840	0.750	8.02
	13.5	8.638	8.612	0.716	0.639	6.93
	17	8.638	8.612	0.569	0.508	5.61
	21	8.638	8.612	0.459	0.410	4.58
10 IPS	11	10.765	10.735	1.095	0.978	12.97
	11.5	10.765	10.735	1.047	0.935	12.46
	13.5	10.765	10.735	0.893	0.797	10.78
	17	10.765	10.735	0.709	0.633	8.71
	21	10.765	10.735	0.572	0.511	7.12
12 IPS	11	12.767	12.733	1.299	1.160	18.24
	11.5	12.767	12.733	1.242	1.109	17.52
	13.5	12.767	12.733	1.058	0.945	15.15
	17	12.767	12.733	0.840	0.750	12.24
	21	12.767	12.733	0.681	0.608	10.05
14 IPS	11	14.063	13.937	1.426	1.273	21.99
	11.5	14.063	13.937	1.363	1.217	21.12
	13.5	14.063	13.937	1.161	1.037	18.26
	17	14.063	13.937	0.923	0.824	14.77
	21	14.063	13.937	0.747	0.667	12.10
16 IPS	11	16.072	15.928	1.630	1.455	28.72
	11.5	16.072	15.928	1.558	1.391	27.58
	13.5	16.072	15.928	1.327	1.185	23.85
	17	16.072	15.928	1.054	0.941	19.27
	21	16.072	15.928	0.853	0.762	15.80

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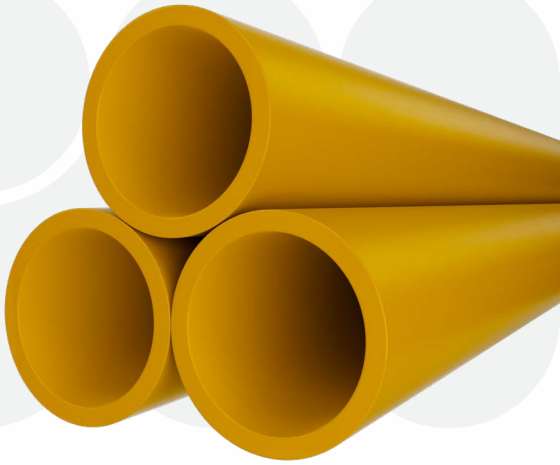


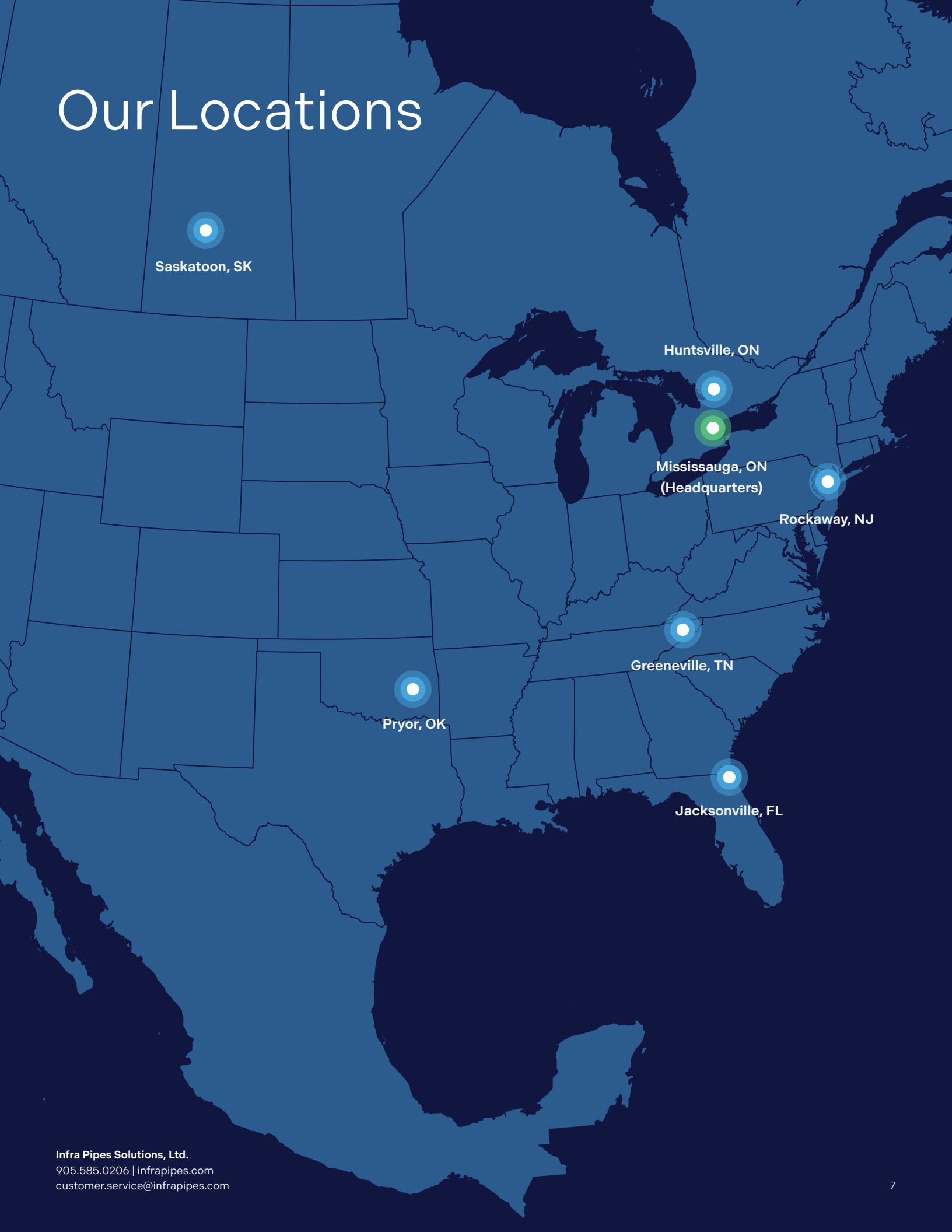
Pressure Ratings for PE 2708 Gas Pipe & Tubing

For Natural Gas - Design pressures and pressure limitations are defined in Part 192, Title 40 of the Code of Federal Regulations for the Department of Transportation of Natural and Other Gas Pipeline-Department of Transportation, Office of Pipeline Safety.

For LPG Service - Use Recommendation for Polyethylene Piping Systems for LPG and its major components, propane and butane gas, is published by the Plastic Pipe Institute (Technical Report PPI-TR22).

CAUTION: Polyethylene pipe or tubing should be used only in buried, underground applications. This product should never be used in aboveground applications where it is continuously exposed to Ultraviolet light.

Our Locations



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