

PolyPipe[®] GDY20 PE2406/PE2708 Gas Pipe

Yellow Medium Density Polyethylene (MDPE) for natural gas distribution is available in traditional uni-modal resins and new High Performance bi-modal resins for demanding applications.

Typical Printline: 4" IPS SDR 11.5 – POLYPIPE[®] GDY20 GAS – PE2406/PE2708 – CEE – ASTM D2513 – MANUFACTURING CODE

TYPICAL PHYSICAL PROPERTIES			
PROPERTY	ASTM TEST METHOD	*NOMINAL VALUES	
		Bi-Modal PE2708	Uni-Modal PE2708
Density, Natural	D1505	0.940 gm/cc	0.940 gm/cc
Density, Yellow	D1505	0.943 gm/cc	0.943 gm/cc
Melt Index (190°C/2.16 kg)	D1238	>0.15 gm/10 min.	0.20 gm/10 min.
Flow Rate (190°C/21.6 kg)	D1238	9.5 gm/10 min.	20 gm/10 min.
Tensile Strength @ Yield	D638	2,800 psi	2,800 psi
Ultimate Elongation	D638	>800%	>800%
Flexural Modulus – 2% Secant	D790	100,000 psi	100,000 psi
PENT	F1473	>15,000 hrs.	>1000 hrs.
Brittleness Temperature	D746	<-180°F	<-180°F
Hardness, Shore D	D2240	64	64
Vicat Softening Temperature	D1525	248°F	248°F
Izod Impact Strength (Notched)	D256	10 ft – lb _f /in	10 ft – lb _f /in
Volume Resistivity	D991	--	--
Thermal Expansion Coefficient	D696	1.0x10 ⁻⁴ in/in/°F	1.0x10 ⁻⁴ in/in/°F
Rapid Crack Propagation (RCP)			
Resistance to Rapid Crack Propagation, Full Scale, Pc @ 32°F (0°C)	ISO 13478	>560 psi	90 psi
Resistance to Rapid Crack Propagation, S-4 Pc @ 32°F (0°C)	ISO 13477	>145 psi	15 psi
Resistance to Rapid Crack Propagation, S-4 Tc @ 5bar	ISO 13477	<28°F	60°F
CELL CLASSIFICATION:	D3350	234373E	234373E
MATERIAL CLASSIFICATION:	D1248	Type II, Class B, Category 5	
PPI HYDROSTATIC DESIGN BASIS: (As listed in PPI TR-4)	D2837	1,250 psi @ 73.4°F	1,250 psi @ 73.4°F
		1,000 psi @ 140°F	1,000 psi @ 140°F

*Nominal values are intended to be guides only, and not as specification limit.

*Some of the data listed above was determined from compression molded test specimens: therefore may deviate from pipe specimens.

PolyPipe, Inc.

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PolyPipe[®] GDY20 PE2406/PE2708
Gas Pipe Data and Pressure Ratings – CTS & IPS

Nominal Pipe Size	DR	Design Pressure Rating* for Natural Gas, psig @ 73°F	Dimensions		Standard Length, ft	Weight, lbs/ft
			Average OD, inches	Min. Wall Thickness, inches		
CTS						
½"		100	0.625	0.090 ^{1,2}	1,000	0.065
1"		69	1.125	0.090	500	0.126
1"		77	1.125	0.099 ²	500	0.139
IPS						
½"	9.3	96	0.840	0.090	500	0.092
¾"	11 ^{1,2}	80	1.050	0.095	500	0.123
1"	11 ^{1,2}	80	1.315	0.120	500	0.193
1 ¼"	10 ¹	88	1.660	0.166	500	0.335
1 ¼"	11 ²	80	1.660	0.151	500	0.308
1 ½"	11 ^{1,2}	80	1.900	0.173	500	0.404
2"	11 ^{1,2}	80	2.375	0.216	250	0.631
2"	11 ^{1,2}	80	2.375	0.216	500	0.631
2"	11 ^{1,2}	80	2.375	0.216	1,500	0.631
3"	11	80	3.500	0.318	500	1.370
3"	11.5 ¹	76	3.500	0.304	500	1.317
3"	11 ²	80	3.500	0.318	40	1.370
3"	11.5 ¹	76	3.500	0.304	40	1.317
4"	11 ²	80	4.500	0.409	40	2.265
4"	11.5 ¹	76	4.500	0.391	40	2.176
4"	13.5 ¹	64	4.500	0.333	40	1.882
6"	11	80	6.625	0.602	40	4.909
6"	11.5 ¹	76	6.625	0.576	40	4.717
6"	13.5 ¹	64	6.625	0.491	40	4.079
8"	11	80	8.625	0.784	40	8.320
8"	11.5 ¹	76	8.625	0.750	40	7.995
8"	13.5 ¹	64	8.625	0.639	40	6.913
10"	11	80	10.750	0.977	40	12.924
10"	11.5	76	10.750	0.935	40	12.419
10"	13.5	64	10.750	0.796	40	10.739
12"	11	80	12.750	1.159	40	18.180
12"	11.5	76	12.750	1.109	40	17.471
12"	13.5	64	12.750	0.944	40	15.106

* Ratings are in accordance with DOT CFR 49, Part 192, §192.121 and §192.123.

* Effective July 14, 2004, the maximum design pressure was amended to 125 psig (reference §192.123a) when designed in accordance with §192.121 for nominal pipe sizes up through 12"IPS (§192.123e.3).

- Notes:
- All products are manufactured in accordance with ASTM D2513.
 - ¹Products tested and certified by IAPMO.
 - ²Products tested and certified by CSA.
 - Some sizes are special order. Call for availability on sizes or DR's not shown.
 - The above weights are calculated per PPI TR-7, using a density of 0.943.