

ENDOT INDUSTRIES

PIPE AND TUBING

TECHNICAL SPECIFICATIONS

ENDOT YELLOW GAS PIPE

Pipe and Tubing for Natural Gas and LPG

Endot PE-2406/2708 Yellow Polyethylene Gas Pipe and Tubing

Standard IPS Sizes Available

Nominal Size	Nominal O.D.	SDR	Minimum Wall	Weight 100 ft.	Part Number
1/2"	0.840"	9.33	.090"	9.2#	PGA 050 41 01 00 26
3/4"	1.050"	11	.095"	12.3#	PGA 075 41 01 00 20
1"	1.315"	11	.119"	19.1#	PGA 100 41 01 00 20
1-1/4"	1.660"	11	.151"	27.9#	PGA 125 41 01 00 20
1-1/4"	1.660"	10	.166"	33.0#	PGA 125 41 01 00 27
1-1/2"	1.900"	11	.173"	39.8#	PGA 150 41 01 00 20
2"	2.375"	11	.216"	62.0#	PGA 200 41 01 00 20
3"	3.500"	11	.316"	135.2#	PGA 300 41 01 00 20
4"	4.500"	11	.409"	220.0#	PGA 400 41 01 00 20
6"	6.625"	11	.602"	498.0#	PGA 600 48 01 00 20

Other SDR's Available Upon Request

Standard CTS Sizes Available

Nominal Size	Minimum Wall	Nominal O.D.	Weight 100 ft.	Part Number
1/2"	.090"	.625"	6.6#	PGA 050 41 01 00 36
3/4"	.090"	.875"	10.0#	PGA 075 41 01 00 36
1"	.090"	1.125"	12.7#	PGA 100 41 01 00 36
1"	.099"	1.125"	13.8#	PGA 100 41 01 00 33
1"	.101"	1.125"	14.3#	PGA 100 41 01 00 29
1-1/4"	.090"	1.375"	14.9#	PGA 125 41 01 00 36

CTS Tubing Is Available In Other Wall Thickness Ratings Upon Request

ENDOT INDUSTRIES, INC.

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ENDOT PE-2406/2407 Yellow Gas Pipe Pipe and Tubing for Natural Gas and LPG

Endot yellow polyethylene gas pipe and tubing is manufactured and tested to meet or exceed the national standards for gas pressure pipe and tubing including ASTM D-2513 and the regulations in Part 192 of the Federal Gas Pipeline regulations.

Endot's yellow gas pipe and tubing is manufactured using a high performance, bi-modal, medium density polyethylene resin which exceeds industry standards, and provides excellent environmental stress crack resistance and outstanding long term stress rupture performance.

MATERIAL PROPERTIES

Property	ASTM TEST	Typical Values
Cell classification, HDB	D 3350	234373 E
Density (natural Resin) g/cc	D 792	0.94
Melt index @190°C/2.16 kg, g/10 min.	D 1238	>0.15
Tensile strength @ Yield, psi (MPa)	D 638	> 2600 (> 18)
Elongation at break, %	D 638	> 600
Flexural modulus, psi (MPa)	D 790	> 90,000 (> 620)
Brittleness temperature, °F (°C)	D 746	< -103 (< -76)
Slow Crack Growth PENT, hours	F 1473	> 10,000
Hydrostatic design basis		
@ 73°F (23° C), psi (MPa)	D 2837	1,250 (8.6)
@ 140°F (60° C), psi (MPa)	D 2837	1,000 (6.9)
Thermal Stability, °F (°C)	D 3350	> 428 (> 220)

CONNECTIONS:

PE 2406/2708 polyethylene resin can be joined using mechanical connections or by heat fusion. All mechanical connections must be installed using the fittings manufacturer's guidelines and instructions. Fusion joints are to be made according to ASTM F2620, Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings.

Socket fusion connections are to be made using the following table and fittings manufacture's specific instructions:

SOCKET FUSION TIME CYCLES

Pipe Size	Heat Time (Seconds)	Holding Time (Seconds)
1/2" CTS	6 - 7	30
3/4" CTS	6 - 7	30
1" CTS	9 - 10	30
1-1/4" CTS	10 - 12	30
1/2" IPS	6 - 7	30
3/4" IPS	8 - 10	30
1" IPS	10 - 12	30
1-1/4" IPS	12 - 14	45
1-1/2" IPS	14 - 17	45
2" IPS	16 - 19	45

After and undisturbed cooling time of 3 minutes the Cold Ring Clamp can be removed.
Allow an additional 10 minutes of undisturbed cooling time before testing, backfilling or stressing the joint.

PRESSURE RATINGS FOR ENDOT YELLOW PE-2406 GAS PIPE AND 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. The pressure may not exceed 100 psig in natural gas distribution systems.

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-TR22-2013).

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