



MDPE for Gas Transmission

MDPE medium density polyethylene pipe is primarily used for medium-pressure gas and propane transmission. United Poly System's MDPE is flexible, durable and can be manufactured in long runs for point-to-point installation. MDPE is certified for underground use, but for exterior use only. United Poly System manufacturers MDPE in sizes from ¾ to 6 inches in SDR 11 and SDR 13.5. It is shipped in 40- or 50-ft sticks and is also available in coils.

- Flexible
- Extremely durable
- Low cost
- Manufactured in long runs for point-to-point installation
- Acceptable for all external, underground gas and propane use
- Same manufacturing process and equipment as standard HDPE pipe/conduit
- Resistant to slow crack growth (SCG) and rapid crack propagation (RCP)



Applications include:

- **Utility** Gas transfer from gas main to building or house meter
- **Residential Plumbing** Gas transfer from meter to other external uses (gas grill, pool heating, fire pit, external building, lighting, etc.). Not for indoor use.
- **Propane** Transmission for heating and other applications

Product Information:

- BARCODE to be included in print line per ASTM F2897
- Manufactured in accordance with ASTM D2513
- Meets ASTM D3350 material grade PE2708



MDPE D2513 Properties

Property	Nominal Value
Density, Natural	0.939 gm/cc
Density, Yellow	0.943 gm/cc
Melt Index (190°C/2.16 kg)	0.20 gm/10 min
Flow Rate (190°C/21.6 kg)	20 gm/10 min
Tensile Strength @ Yield	2,800 psi
Ultimate Elongation	>800%
Flexural Modulus, 2% Secant	100,000 psi
PENT	>1000 hr
Brittleness Temperature	<-180°F
Vicat Softening Temperature	248°F
Izod Impact Strength (Notched)	10 ft – lbf/in.
Thermal Expansion Coefficient	1.0 x 10 ⁻⁴ in./in./°F

These are nominal values and used as guidelines only.

This is not a product specification and does not indicate minimum or maximum operating values.

Design pressure rating for natural gas, psig at 73 F:

- 80 psi for SDR 13.5
- 100 psi for SDR 11

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

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 in. IPS (§ 192.123e.3).



MDPE D2513 Available Sizes

IPS SIZE	AVG. OD	Min. Wall	Weight (lb/ft)
¾ in. SDR 11	1.050	0.095	0.123
1 in. SDR 11	1.315	0.120	0.193
1¼ in. SDR 11	1.660	0.151	0.308
1½ in. SDR 11	1.900	0.173	0.404
2 in. SDR 11	2.375	0.216	0.631
3 in. SDR 11	3.500	0.318	1.370
4 in. SDR 11	4.500	0.409	2.265
6 in. SDR 11	6.625	0.602	4.909
4 in. SDR 13.5	4.500	0.333	1.882
6 in. SDR 13.5	6.625	0.491	4.079
½ in. CTS - 125 psig	0.625	0.090	0.065
1 in. CTS - 87 psig	1.125	0.900	0.126
1 in. CTS - 97 psig	1.125	0.099	0.139

These are nominal values and used as guidelines only.

This is not a product specification and does not indicate minimum or maximum operating values.