



High Density Polyethylene Pipe for Wind Farm Infrastructure

Wind-Line is a large-diameter conduit, typically used on wind farms for high-voltage transfer lines. Since wind farms typically cover sizable areas, large amounts of conduit are needed to protect the high-voltage lines transferring power from each turbine to the storage center. Wind-Line is available in 4-in. through 16-in. diameter sizes. Red color or a red stripe on the pipe is used to identify the product. Wind-Line is almost always shipped as sticks.

Wind-Line is part of United Poly Systems Earth-Line™ suite of products and is ideal for many renewable-related pipeline applications. United Poly Systems is committed to using sustainable material for a sustainable future.

- No corrosion when compared to copper pipe
- HDPE fusion joints are stronger than solder joints
- Lower cost Longer life span, 50 to 100 years
- Flexibility of HDPE pipe, compared to metal pipe, aids in installation
- More installation methods available for HDPE (open cut, directional drilling) compared to copper pipe
- Lengths available in 20-, 40- and 50 ft sticks

Product Information

Wind-Line can be installed in existing conduit or via plow, direct burial or HDD (horizontal directional drilling) methods.

The product is typically a solid red color and can be stiped for additional identification.

Wind-Line is manufactured in IPS (iron pipe size) from 2- to 26-inch diameter and DIPS (ductile iron pipe size) from 4- to 26-inch diameter.

The material requirements for Wind-Line meets or exceeds ASTM Standard D 3350 “Standard Specification for Polyethylene Plastic Pipe and Fittings Materials.” ASTM D 3350 defines physical properties of HDPE materials into ranges, or cell classes, so that each property can be defined within a range that is appropriate for the application.

Options

- Uniform straight internal ribs span the length of the pipe. Straight longitudinal internal ribbing is available for all pipes 2-in. and below.
- Pull tape is offered in several tensile strengths. United Poly Systems standard pull tape is 1130 lb strength. Other options include strengths from 200 to 2500 lb.
- Color and stripe options are offered to customize the product to customer needs. United Poly Systems offers orange, blue, black, red, gray, white, green, yellow, terracotta, violet, brown, lilac and custom colors upon customer's request.
- Lengths available in 20-, 40- and 50-ft sticks.

Print Line Information

The duct product is sequentially marked and identified along its outer length in contrasting color.

The print interval is every 2 ft and includes the following:

- **MANUFACTURER'S NAME:** United Poly Systems PRODUCT SIZE/SDR
- **PRODUCTION CODE** Date, Location, Period SPECIFICATION
- **LENGTH OF CONDUIT** (in feet)

Custom print lines are available and may include customer name, project name, application and lighting bolt.



High Density Polyethylene conduit material specifications according to ASTM F2160

Property	Range or Minimum Requirement	Units	Test Method	Test Method
Density	0.941 - 0.955	g / cc	3	ASTM D 792 or 1505
Melt Index	< 0.25 - 0.40	g / 10 minutes	3 or 4	ASTM D 1238
Flexural Modulus	110,000 - 160,000	psi	4 or 5	ASTM D 790
Tensile Strength	3000- 4000	psi	4 or 5	ASTM D 639
Environmental Stress Crack Resistance	F20 > 192	Hours (condition C)	3 or 4	ASTM D 1693
HDB	Not Defined		0, 1, 2, 3 or 4	ASTM D 2837

These are nominal values and used as guidelines only.
This is not a product specification and does not indicate minimum or maximum operating values.