



Materials

The material requirements for PE conduit shall be classified in accordance with ASTM Standard D 3350 “Standard Specification for Polyethylene Plastic Pipe and Fittings Materials”. ASTM D 3350 defines important 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. For HDPE conduit according to ASTM F 2160, the polyethylene material is defined as noted below:

Property	Range or Minimum Requirement	Units	Cell Class	Test Method
Density	0.941-0.955	g/cc	3	ASTM D 792 or 1505
Melt Index ^a	<0.25-0.40	g/10 minutes	3or4	ASTM D 1238
Flexural Modulus	110,000-160,000	Psi	4or5	ASTM D 790
Tensile Strength	3000-4000	Psi	4or5	ASTM D 638
Environmental Stress Crack Resistance ^b	F20>192	Hours (condition C)	3or4	ASTM D 1693
HDB	Not Defined		0,1,2,3,or 4	ASTM D2837

^a A melt index of up to 0.55 g/10 minutes is allowable provided that all other material requirements are met.

^b A ESCR, condition B, 10% Igepal of F10 >96 hours is allowable provided that all other material requirements are met.

SDR 11 - ASTM D3035 / ASTM F2160

Nom. Size	Avg. OD	Min. Wall	Avg. ID	Wt. (lb/ft)	Pull Tensile Safe lbs.
PE3408/3608 PSI 160 PE4710 PSI 200					
3/4"	1.050	0.095	0.849	0.120	328
1"	1.315	0.120	1.061	0.200	496
1-1/4"	1.660	0.151	1.358	0.310	787
1-1/2"	1.900	0.173	1.554	0.400	1,032
2"	2.375	0.216	1.917	0.640	1,612
2-1/2"	2.875	0.262	2.351	0.930	2,366
3"	3.500	0.318	2.826	1.390	3,497
4"	4.500	0.409	3.633	2.290	5,782
5"	5.563	0.506	4.490	3.510	8,843
6"	6.625	0.602	5.349	4.970	12,530