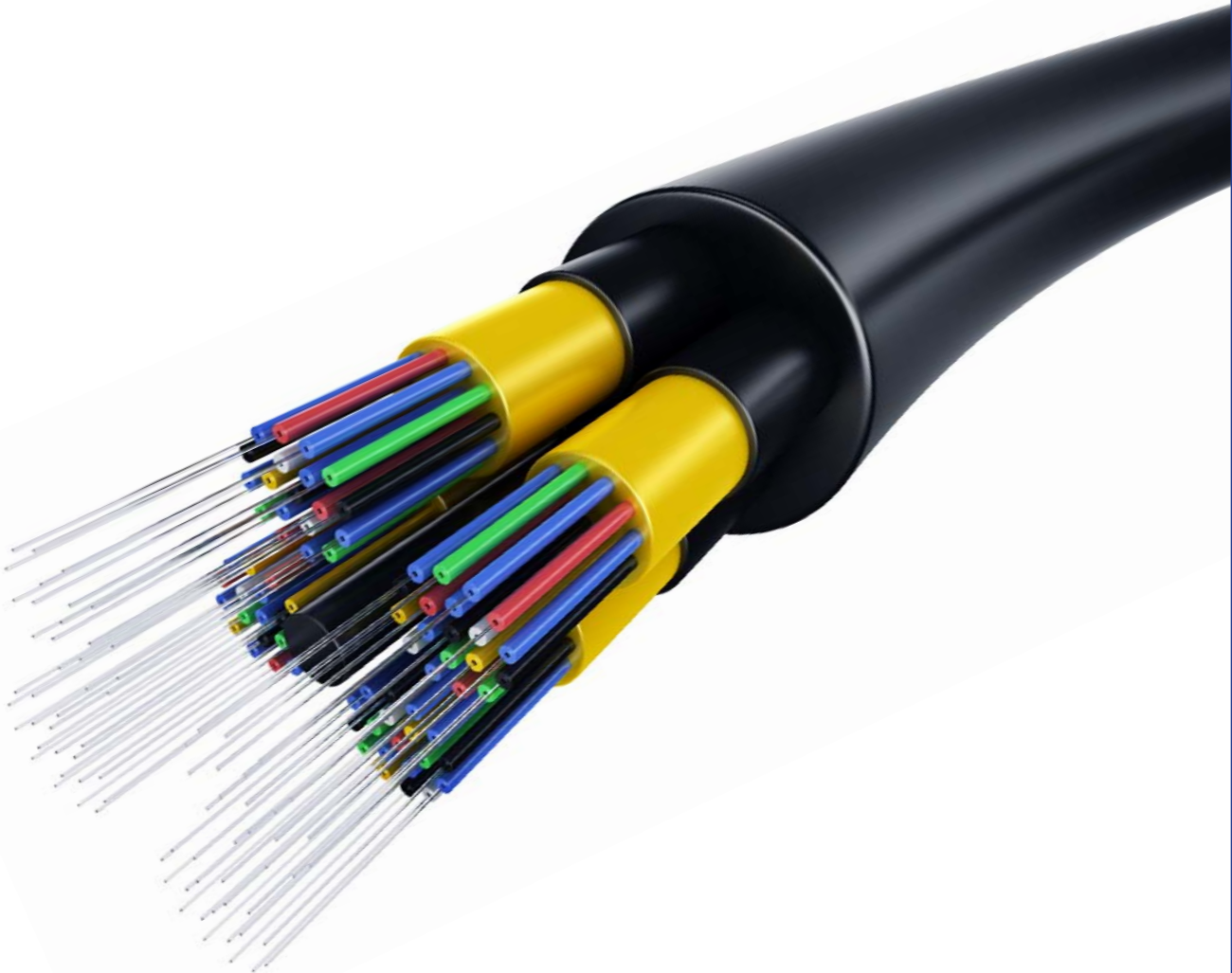


# FOUR STAR INDUSTRIES

P.O. Box 400 | Allendale, SC 29810 | [www.fourstarind.com](http://www.fourstarind.com)



# Our Mission

Four Star Industries provides our customers the most competitively priced, quality conduit with the best service in the industry.

## About Us

Four Star Industries, LLC manufactures and distributes Polyethylene (HDPE) conduit for telecommunication and electrical energy infrastructure products and systems. The Four Star Industries product line provides premium protection as well as fast, safe and economical installation of communications and power cables for a wide variety of industries and markets.

HDPE duct, due to its flexibility, is easily installed, requiring only minimal labor. The product is highly chemically resistant, has a long life expectancy and is not susceptible to rust, rot or electrolysis. Polyethylene is color coded according to product type, which assists in the identification of stocked products. We offer the customer the option of shrink-wrapping our products to insure proper UV protection until installation.

Four Star Industries can also provide special "coil" lengths. These "coils" are used in the field utilizing an industry standard manually loaded coil container.

Four Star Industries is committed to producing products in a safe atmosphere for the employees. Our products have no impact on the environment.

Four Star Industries takes customer satisfaction to a world class level.



P.O. Box 400 | Allendale, SC 29810 |

Phone: (803) 584-4620

Fax: (803) 584-4622

[www.fourstarind.com](http://www.fourstarind.com)



## Our Products

Four Star Industries manufactures High Density Polyethylene Pipe (HDPE), Inner-duct and Conduit used to protect and encapsulate various wire and cables for the fiber optics, electrical, power, telecommunication and CATV markets.

Four Star Industries offers a wide range of products 1/2" through 6" in a variety of colors and striping combinations. We also offer options for pre-lubrication, pre-installed pull tape (or string) and CIC (cable pre-installed in the conduit).

Additionally, we supply the following accessory items:

- A wide range of couplers for joining HDPE inner-duct and conduit in sizes 1" to 6"
- Lubricants (cable installation chemicals) designed to match the weight and type of cable to be placed in the duct.
- Duct cutting tools

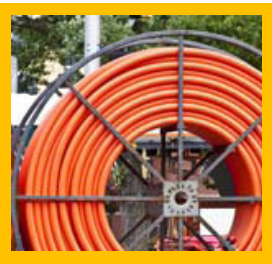
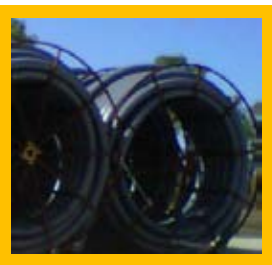
Four Star provides its customers with the best quality and service for pipe and conduit products. We focus on customer needs and will not build in any unneeded costs that do not provide customer value.

Our products are proudly made in our Allendale, South Carolina facility. The duct is provided on reels assembled at our facility to provide our customers with the most aesthetically pleasing, user-friendly reels in the industry. We have a flexible manufacturing structure to make sure we can quickly adapt to customer needs and provide the best service on short notice.



# SDR, Schedule 40 and Schedule 80 Specifications

The following tables represent the dimensional specifications for ASTM D3035, ASTM F714, and ASTM F2160 for OD controlled inner-duct.



Size	Weight/LF (lbs)	Pipe Dimensions			
		OD	ID	Wall	
<b>1/2"</b>	1/2" SDR 11	0.085	0.840	0.667	0.076
	1/2" SDR 13.5	0.072	0.840	0.696	0.062
<b>3/4"</b>	3/4" SDR 7	0.182	1.050	0.750	0.150
	3/4" SDR 9	0.152	1.050	0.797	0.117
	3/4" SDR 11	0.130	1.050	0.839	0.095
	3/4" SDR 13.5	0.110	1.050	0.874	0.078
	3/4" SDR 15.5	0.098	1.050	0.895	0.068
	3/4" SDR 17	0.092	1.050	0.906	0.062
	Schedule 40	0.148	1.050	0.804	0.130
	Schedule 80	0.189	1.050	0.722	0.154
<b>1"</b>	1" SDR 7	0.286	1.315	0.939	0.188
	1" SDR 9	0.235	1.315	1.003	0.146
	1" SDR 11	0.200	1.315	1.051	0.120
	1" SDR 13.5	0.169	1.315	1.100	0.097
	1" SDR 15.5	0.151	1.315	1.147	0.084
	1" SDR 17	0.139	1.315	1.140	0.077
	Schedule 40	0.218	1.315	1.029	0.133
	Schedule 80	0.278	1.315	0.936	0.179
<b>1 1/4"</b>	1 1/4" SDR 7	0.454	1.660	1.186	0.237
	1 1/4" SDR 9	0.372	1.660	1.270	0.184
	1 1/4" SDR 11	0.314	1.660	1.338	0.151
	1 1/4" SDR 13.5	0.264	1.660	1.394	0.123
	1 1/4" SDR 15.5	0.235	1.660	1.426	0.107
	1 1/4" SDR 17	0.217	1.660	1.445	0.090
	Schedule 40	0.295	1.660	1.360	0.140
	Schedule 80	0.384	1.660	1.255	0.191
<b>1 1/2"</b>	1 1/2" SDR 7	0.595	1.900	1.358	0.271
	1 1/2" SDR 9	0.488	1.900	1.452	0.211
	1 1/2" SDR 11	0.409	1.900	1.534	0.173
	1 1/2" SDR 13.5	0.343	1.900	1.599	0.141
	1 1/2" SDR 15.5	0.305	1.900	1.635	0.123
	1 1/2" SDR 17	0.282	1.900	1.656	0.112
	Schedule 40	0.352	1.900	1.590	0.145
	Schedule 80	0.465	1.900	1.476	0.200
<b>2"</b>	2" SDR 9	0.762	2.375	1.816	0.264
	2" SDR 11	0.639	2.375	1.917	0.216
	2" SDR 13.5	0.531	2.375	2.002	0.176
	2" SDR 15.5	0.469	2.375	2.049	0.153
	2" SDR 17	0.433	2.375	2.095	0.140
	Schedule 40	0.472	2.375	2.047	0.154
	Schedule 80	0.644	2.375	1.913	0.218
	<b>2 1/2"</b>	2 1/2" SDR 9	1.117	2.875	2.198
2 1/2" SDR 11		0.936	2.875	2.321	0.261
2 1/2" SDR 13.5		0.778	2.875	2.424	0.213
Schedule 40		0.744	2.875	2.445	0.203
Schedule 80		0.983	2.875	2.290	0.276
<b>3"</b>	3" SDR 9	1.655	3.500	2.676	0.390
	3" SDR 11	1.370	3.500	2.825	0.318
	3" SDR 13.5	1.153	3.500	2.951	0.259
	3" SDR 15.5	1.105	3.500	3.021	0.226
	Schedule 40	-	-	-	-
Schedule 80	1.316	3.500	2.864	0.300	
<b>4"</b>	4" SDR 9	2.737	4.500	3.44	0.500
	4" SDR 11	2.293	4.500	3.633	0.409
	4" SDR 13.5	1.906	4.500	3.794	0.333
	4" SDR 15.5	1.678	4.500	3.885	0.290
	Schedule 40	1.387	4.500	3.998	0.237
Schedule 80	1.924	4.500	3.786	0.337	
<b>5"</b>	5" SDR 11	3.505	5.562	4.49	0.506
	5" SDR 13.5	2.912	5.562	4.689	0.412
	5" SDR 15.5	2.563	5.562	4.801	0.359
	Schedule 40	1.904	5.562	5.009	0.258
Schedule 80	2.671	5.562	4.768	0.375	
<b>6"</b>	6" SDR 11	4.971	6.625	5.348	0.602
	6" SDR 13.5	4.130	6.625	5.585	0.491
	Schedule 40	2.444	6.625	6.031	0.280
Schedule 80	3.674	6.625	5.709	0.432	

## Reel Capacity Chart

ASTM F- 2160 - O.D. Controlled				
SDR	Nominal Size (inches)	72 x 41	84 x 41	96 x 41
11, 13.5, 15.5 Schd 40 & 80	3/4"	9500'	12500'	19000'
11, 13.5, 15.5 Schd 40 & 80	1"	6000'	8500'	11500'
11, 13.5, 15.5 Schd 40 & 80	1 1/4"	4000'	5400'	7500'
11, 13.5, 15.5 Schd 40 & 80	1 1/2"	3000'	4000'	5500'
11, 13.5, 15.5 Schd 40 & 80	2"	1900'	2500'	3500'

## Radius and Safe Working Loads

Size	OD	Bend Radius		Safe Working Loads						
		Supported	Unsupported	SDR 9	SDR 11	SDR 13.5	SDR 17	SDR 17	Sch 40	Sch 80
1/2"	0.840	8	11	525	440	365	295	295	601	768
3/4"	1.050	9	14	821	687	570	460	460	798	1,040
1"	1.315	12	17	1,288	1,078	894	722	722	1,340	1,533
1-1/4"	1.660	15	22	2,052	1,717	1,425	1,150	1,150	1,604	2,116
1-1/2"	1.900	17	25	2,688	2,249	1,867	1,507	1,507	1,919	2,564
2"	2.375	21	32	4,200	3,515	2,917	2,355	2,355	2,579	3,545
2-1/2"	2.875	26	38	6,155	5,151	4,274	3,450	3,450	4,090	5,409
3"	3.500	32	47	9,122	7,633	6,335	5,114	5,114	5,348	7,238
4"	4.500	41	60	15,080	12,618	10,472	8,453	8,453	7,618	10,578
5"	5.563	50	75	23,045	19,284	16,004	12,918	12,918	10,320	14,669
6"	6.625	60	89	32,684	27,349	22,697	18,321	18,321	13,395	20,172
8"	8.625	78	116	55,397	46,355	38,470	31,053	31,053	20,158	N/A

## Material Requirements

Cell	Properties	Requirements	Test Method
3	Density	≥0.940-0.947	ASTM D 792 or 1505
3	Melt Flow Index (190/2.160)	≤0.4-0.15 g/10 minutes max	ASTM D 1238
5	Flexural Modulus	110,000 to 160,000 psi	ASTM D 790
4	Tensile Strength at Yield	3000 - 3500 psi	ASTM D 638
3 or 4	Environmental Stress Crack Resistance	Condition B, F10 Max, 10% Igepal, p6 hrs, minimum	ASTM D 1693
0	Hydrostatic Design Basis	Not Pressure Rated	ASTM D 2837
-	Brittleness Temperature	-75 degrees C	ASTM D 746
-	Elongation	400% minimum	ASTM D 638
C	Class C	Minimum 2% Carbon Black	ASTM D 3350
E	Class E	Colored with UV Stabilizer	ASTM D 3350