

Polyethylene Material

Polyethylene is a thermoplastic polyolefin material generated from the polymerization of Ethylene. As a highly crystalline non-polar thermoplastic with excellent chemical resistance to most household and industrial chemical it provides an excellent base for pipe production. It is formulated with a minimum of %2 carbon black for maximum protection against UV rays. The raw material for polyethylene pipe and fittings Co. products is mainly supplied by original and reliable local and international sources based on the quality control management.



Application Areas

SP&F HDPE system is recognized in the industry for its zero leak rate, high performance, and long life expectancy. These unique features make SP&F polyethylene pipe and fittings the best option for various application like:

- Municipal and industrial water transmission systems
- Potable water distribution (3 layer pipe)
- Pressure water system
- Sewer piping system
- Natural gas distribution
- Irrigation and landscaping
- Electrical ducting
- Optical fiber or telecommunication distribution
- Fire Mains
- Trenchless Technologies

Advantage of polyethylene pipe

- Long Life
- High flexibility
- High Corrosion Resistance
- High Toughness
- High Fatigue Resistant
- High Impact Resistant
- Leak Proof
- Chemical Resistant
- Lightweight
- Low cost installation
- Easy maintenance and repair
- Easy installation
- Smooth internal surface leading to Low friction loss
- UV Resistant
- Environmentally Friendly



Water supply

SP&F manufacturing water supply pipes in range of 16 mm to 500 mm in diameter, with pressure of up to 40 bar (According to INSO 14427-2, ISO 4427, DIN8074). HDPE pipe is used for both new water main installations and to rehabilitate deteriorated piping systems made from other materials. It can accept repetitive pressure surges that far exceed the static pressure rating of the pipe. HDPE pipe is easy to handle and is available in long lengths that cut down on jointing time. Thermal fusion on site reduces installation time and ensures leak proof joints that eliminate infiltration and exfiltration problems. SP&F Pipe is well suited for dynamic soils and areas prone to earthquake.

TEXONIR POLYETHYLENE COMPANY

Wall thickness of pipes with PE80 and PE100 materials According to INSO 14427-2

S.F	SDR	41	33	26	21	17	13.6	11	9	7.4	6
1.25	PE80	3.2	4.0	5.0	6.0	8.0	10.0	12.5	16.0	20.0	25.0
	PE100	4.0	5.0	6.0	8.0	10.0	12.5	16.0	20.0	25.0	...
1.60	PE80	2.5	3.1	4.0	5.0	6.2	7.9	10.0	12.5	15.6	20.0
	PE100	3.1	3.9	5.0	6.2	7.8	9.9	12.5	15.6	19.5	25.0
D (mm)	S (mm)	S (mm)	S (mm)	S (mm)	S (mm)	S (mm)	S (mm)	S (mm)	S (mm)	S (mm)	S (mm)
16	...	...	...	...	...	...	...	...	2.0	2.3	3.0
20	...	...	...	...	...	...	...	2.0	2.3	3.0	3.4
25	...	...	...	...	...	...	2.0	2.3	3.0	3.5	4.2
32	...	...	...	...	...	2.0	2.4	3.0	3.6	4.4	5.4
40	...	...	1.8	2.0	2.4	3.0	3.7	4.5	5.5	6.7	8.3
50	...	1.8	2.0	2.4	3.0	3.7	4.6	5.6	6.9	8.3	10.5
63	1.8	2.0	2.5	3	3.8	4.7	5.8	7.1	8.6	10.5	12.5
75	2.0	2.3	2.9	3.6	4.5	5.6	6.8	8.4	10.3	12.5	15.0
90	2.2	2.8	3.5	4.3	5.4	6.7	8.2	10.1	12.3	15.0	18.3
110	2.7	3.4	4.2	5.3	6.6	8.1	10.0	12.3	15.1	18.3	20.8
125	3.1	3.9	4.8	6.0	7.4	9.2	11.4	14.0	17.1	20.8	23.3
140	3.5	4.3	5.4	6.7	8.3	10.3	12.7	15.7	19.2	23.3	26.6
160	4.0	4.9	6.2	7.7	9.5	11.8	14.6	17.9	21.9	26.6	29.9
180	4.4	5.5	6.9	8.6	10.7	13.3	16.4	20.1	24.6	29.9	33.2
200	4.9	6.2	7.7	9.6	11.9	14.7	18.2	22.4	27.4	33.2	37.4
225	5.5	6.9	8.6	10.8	13.4	16.6	20.5	25.2	30.8	37.4	41.5
250	6.2	7.7	9.6	11.9	14.8	18.4	22.7	27.9	34.2	41.5	46.5
280	6.9	8.6	10.7	13.4	16.6	20.6	25.4	31.3	38.3	46.5	52.3
315	7.7	9.7	12.1	15.0	18.7	23.2	28.6	35.2	43.1	52.3	59.0
355	8.7	10.9	13.6	16.9	21.1	26.1	32.2	39.7	48.5	59.0	66.5
400	9.8	12.3	15.3	19.1	23.7	29.4	36.3	44.7	54.7	66.5	...
450	11.0	13.8	17.2	21.5	26.7	33.1	40.9	50.3	61.5	...	...
500	12.3	15.3	19.1	23.9	29.7	36.8	45.4	55.8	68.3	...	...
560	13.7	17.2	21.4	26.7	33.2	41.2	50.8	62.5	...	...	...
630	15.4	19.3	24.1	30.0	37.4	46.3	57.2	70.3	...	...	...
710	17.4	21.8	27.2	33.9	42.1	52.2	64.5	79.3	...	...	...
800	19.6	24.5	30.6	38.1	47.4	58.8	72.6	89.3	...	...	...
900	22.0	27.6	34.4	42.9	53.3	66.1	81.7	...	...	...	...
1000	24.5	30.6	38.2	47.7	59.3	73.4	90.8	...	...	...	...
1200	29.4	36.7	45.9	57.2	71.1	88.2	...	...	...	...	...

Natural gas

SP&F manufacturing Gas pipes in range of 16mm to 500 mm in diameter, with SDR (standard dimension ratio) from SDR9 to SDR26. All gas pipes are according to ISO4437 or EN1555. The polyethylene material used for gas pipelines is either a specialized PE80 or PE100 grades.

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Wall thickness of pipes with PE80 and PE100 materials According to INSO 11233

SDR	26	21	17	13.6	11	9
D (mm)	S (mm)	S (mm)	S (mm)	S (mm)	S (mm)	S (mm)
16	---	---	---	---	3.0	3.0
20	---	---	---	---	3.0	3.0
25	---	---	---	3.0	3.0	3.0
32	---	---	3.0	3.0	3.0	3.6
40	---	3.0	3.0	3.0	3.7	4.5
50	3.0	3.0	3.0	3.7	4.6	5.6
63	3.0	3.0	3.8	4.7	5.8	7.1
75	3.0	3.6	4.5	5.6	6.8	8.4
90	3.5	4.3	5.4	6.7	8.2	10.1
110	4.2	5.3	6.6	8.1	10.0	12.3
125	4.8	6.0	7.4	9.2	11.4	14.0
140	5.4	6.7	8.3	10.3	12.7	15.7
160	6.2	7.7	9.5	11.8	14.6	17.9
180	6.9	8.6	10.7	13.3	16.4	20.1
200	7.7	9.6	11.9	14.7	18.2	22.4
225	8.6	10.8	13.4	16.6	20.5	25.2
250	9.6	11.9	14.8	18.4	22.7	27.9
280	10.7	13.4	16.6	20.6	25.4	31.3
315	12.1	15.0	18.7	23.2	28.6	35.2
355	13.6	16.9	21.1	26.1	32.2	39.7
400	15.3	19.1	23.7	29.4	36.3	44.7
450	17.2	21.5	26.7	33.1	40.9	50.3
500	19.1	23.9	29.7	36.8	45.4	55.8
560	21.4	26.7	33.2	41.2	50.8	62.5
630	21.4	30.0	37.4	46.3	57.2	70.3

Irrigation

Drip irrigation is the most widely used for irrigation area. Drip irrigation the crops based on its exact water demand by using irrigation product system. The irrigation products are lateral pipes, drip lines, drippers, bubbler, drip arrows and etc... .Drip irrigation will carry water or liquid fertilizer drop by drop into the soil near the roots of crops accurately. SP&F manufacturing irrigation pipes in range of 12 mm to 32 mm in diameter, with pressure of up to 8 Bar (According to INSO 7607, ISO 8779).

TEXONIR POLYETHYLENE COMPANY

Wall thickness of irrigation pipes with PE32 and PE40 materials According to INSO 7607

S.F	SDR	26	21	17	13.6	11	9
1.25	PE32	-	2.5 bar	3.2 bar	4.0 bar	5.0 bar	6.0 bar
	PE40	2.5 bar	3.2 bar	4.0 bar	5.0 bar	6.0 bar	8.0 bar
	D(mm)	S(mm)	S(mm)	S(mm)	S(mm)	S(mm)	S(mm)
	12	---	---	---	---	1.1	1.4
	16	---	---	1.0	1.2	1.5	1.8
	20	---	1.0	1.2	1.5	1.9	2.3
	25	1.0	1.2	1.5	1.9	2.3	2.8
	32	1.3	1.6	1.9	2.4	2.9	3.6

Multilayer pipe

Multilayer Pipe (MLP) systems provide solutions to practical problems and offer maximum security in installation and jointing at minimum additional cost. Combining the best materials to meet specific loading conditions in the structure and Special Properties (Anti rodent pipe), they provide protection and long term durability. MLP solutions enable the installer and system designer to reduce the overall cost of the project for a modest increase in pipe cost, and bring additional safety to the installation. The cost of the pipe is usually only a small proportion of the project cost, whereas digging and reinstatement costs are much higher. Our manufacturing company is producing two and three layer polyethylene pipes in different colors for different applications (blue for water supply, yellow for Natural gas, red for Electrical ducting and Brown for green space irrigation pipe). These products have been produced by the newest technology.



Quality control

Our laboratory is set with machines and equipment's purchased from the reliable German company (IPT Company). SP&F HDPE pipes and fittings are subject to strict quality control programs that monitors three critical aspects of the manufacturing process: the incoming raw material, pipe production, and finished good. Incoming raw material is tested to ensure that it meets all standard requirements before being released for production.

During production, pipes and fittings will be physically tested to ensure that its dimensional, mechanical and physical characteristics are in full compliance with the requirements of the standards they are produced to. The finished produced is subjected to further testing (according to INSO 14427, ISO4427, ISO4437, EN1555, ISO 8779, ISO9261) to insure that it has met all the applicable specifications and requirements.