

uponor

Sclairpipe®

VERSATILE HIGH DENSITY
POLYETHYLENE PIPE



Sclairpipe

Sclairpipe® high density polyethylene (HDPE) pipe represents the latest advances in both material and manufacturing techniques. Since 1968, Sclairpipe has been proven in a

wide range of municipal and industrial piping applications. It has been used extensively in the municipal market for gravity sewers, sewage forcemains, and pressure water systems. Uponor

Infra has special expertise in marine installations of Sclairpipe, including river and lake crossings; and river, lake and deep ocean intakes and outfalls.

Lighter. Stronger. Chemical Resistant.

Sclairpipe is a tough, lightweight, solid wall pipe with a smooth internal surface. Available in various diameters from 4" to 48" it can handle internal pressures of up to 380 psi (PE 4710). It is a well suited alternative to copper, PVC, ductile iron and concrete pipe in a variety of applications.

Sclairpipe weighs approximately 1/10 that of a similar sized concrete pipe. Handling requires a minimum of heavy equipment and Sclairpipe can easily be assembled on ice or through wet marshy areas. It will not corrode, tuberculate or support biological growth, making it the material of

choice in harsh environments. Sclairpipe is inert to salt water and to chemicals likely to be present in sanitary sewage effluent.

Sclairpipe has a smooth ID and maintains its flow capability over time - Hazen Williams C Factor remains 150, even after years of use.

Easier to Transport and Install. Leak Proof.

Sclairpipe is much easier to handle and install than heavier, rigid concrete pipe, offering potential cost savings during the construction process. It is

structurally designed to withstand impact, especially in cold weather installations when other pipes are prone to cracks and breaks. Sclairpipe will float

even when full of water. For marine applications long lengths of pipe can be assembled on shore and then floated into position.





Thermal butt fusion provides an economical and fast method of delivering a complete, long, continuous length of pipe. Thermal fusion eliminates potential leak points every 8-20 feet commonly found with gasketed (or bell or spigot) pipe materials. The fused joints provide a continuous leak proof

system that eliminates the risk of joint leakage due to ground shifting. Fused joints are fully restrained and as such may reduce or eliminate the need for expensive thrust blocks. With Sclairpipe infiltration and exfiltration problems are eliminated.

Sclairpipe Advantages

- Leak Proof
- Corrosion Resistant
- Chemical Resistant
- Long Life
- Fatigue Resistant
- Impact Resistant
- Lightweight
- Flexible
- UV Resistant
- Environmentally Friendly

Cost Effective. Permanent.

Sclairpipe offers distinct advantages. It can be cold bent to a radius as small as 25 times the pipe's nominal pipe diameter, and the installed bend radius can be as small as 50 times the nominal pipe diameter. Sclairpipe, installed on a radius, eliminates many of the fittings that would be required for directional changes when using

other pipe materials. In addition, the flexibility of Sclairpipe allows it to adapt to uneven ground, unconsolidated river bottoms and excavated underwater trenches without the need for expensive foundations or minor degree elbows. It is well suited for dynamic soils and areas prone to earthquake.

Sclairpipe is cost effective in both the short and long term. The fact that it is lightweight makes it easier to transport and install. It is leak proof and fatigue resistant means there will be years of maintenance free use. The Plastics Pipe Institute estimates the service life for HDPE pipe to conservatively be 50-100 years.

Proven performance in a wide range of applications

Since its development in 1955, large diameter HDPE pipe has been successfully used in many installations worldwide. In North America, Sclairpipe high density polyethylene pipe was first introduced in 1968. Since then it

has been installed for river, lake and salt water crossings, municipal and industrial fresh and salt water intakes and effluent outfalls. Sclairpipe has also been used extensively for pipeline repair and rehabilitation.

Some popular applications of Sclairpipe include:

- Potable Water Distribution
- Pressure Water Systems
- Sewage Systems
- Water Mains
- Sliplining
- Fire Mains
- Directional Drilling
- Trenchless Technologies
- Slurry Pipe
- Mining
- Marine Pipelines & Crossings
- Deep Water Intakes
- Deep Water Outfalls
- Irrigation Lines
- Biofilters
- Gas Gathering



Potable Water

Sclairpipe 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. Sclairpipe 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 leakproof joints that eliminate infiltration and exfiltration problems. Sclairpipe is well suited for dynamic soils and areas prone to earthquake.



Sewage Systems

After more than 35 years of use in municipal and industrial sewer applications, Sclairpipe has proven to be a reliable, cost effective, long-term solution for sewer and wastewater systems. It offers resistance to corrosion and chemicals with durability and strength that rigid concrete, PVC or ductile iron pipes can't duplicate. Lightweight Sclairpipe is easy-to-install, extremely flexible and does not corrode or tuberculate over time.



Industry

Long-term reliable piping solutions are always in demand by industry. Sclairpipe offers resistance to corrosion, abrasion and chemicals resulting in a durable, strong and cost-effective installation.



Mining

Sclairpipe solid wall HDPE pipe is commonly used in mining applications for tailings disposal and water management including: river water diversion, reclamation lines, culvert, sewer and sub-drainage systems and slurry pipe. It is lightweight, flexible, durable and abrasion resistant. It is virtually leak proof, and can withstand corrosive chemicals, acids or salts commonly found in mines. Sclairpipe combines strength and durability in above ground applications and is UV resistant.



Irrigation

Sclairpipe is a cost effective solution for irrigation and agricultural drainage applications such as river and canal diversion, agricultural irrigation systems and pipelines, and water conservation. It is lightweight, flexible and leak proof, resistant to corrosion and salt water, and joints can be heat-fused on site for ease of installation. A Sclairpipe irrigation system will withstand the test of time.



Heating & Cooling

Sclairpipe has proven to be a strong, leak proof and chemically inert solution for district cooling applications including dual-purpose projects providing cooling and potable water. It can be assembled on shore in a continuous flexible length, floated on the water's surface and then sunk by a controlled process. The pipe can also be manufactured in specific lengths and connected on site by flanges with the aid of marine divers. Sclairpipe's resistance to both corrosion and zebra mussel fouling makes it an ideal solution.



Choose the size that's right for you

Sclairpipe is available in standard Dimensional Ratio's (DR's), in sizes ranging from 4" to 48" in diameter. Sclairpipe is available in PE 3608 and PE 4710. With the higher allowable stress rating of PE 4710, the pipe wall can be thinner for the same pressure

rating (higher DR).

The Dimensional Ratio relates the minimum wall thickness of the pipe to its outside diameter, and is important to define the pressure rating of a particular pipe. The maximum continuous operating pressure stated is

based on the allowable hydrostatic design stress of each specific material (per ASTM D3350 and PPI's TR-3), and the pipe wall thickness (DR), at a service temperature of 73.4°F.

Uponor, Sclairpipe Product Range, IPS Size, PE3608

Nominal Pipe Size	PE3608			DR32.5 (50 psi)			DR26 (64 psi)			DR21 (80 psi)		
	Minimum Outside Diameter (inches)	Maximum Outside Diameter (inches)	Average Outside Diameter (inches)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)
4	4.48	4.52	4.50	4.21	0.138	0.83	4.13	0.173	1.03	4.05	0.214	1.26
5	5.54	5.59	5.56	5.20	0.171	1.27	5.11	0.214	1.57	5.00	0.265	1.93
6	6.60	6.65	6.63	6.19	0.204	1.80	6.08	0.255	2.23	5.96	0.315	2.73
7	7.09	7.16	7.13	6.66	0.219	2.08	6.54	0.274	2.58	6.41	0.339	3.16
8	8.59	8.66	8.63	8.06	0.265	3.05	7.92	0.332	3.78	7.75	0.411	4.63
10	10.70	10.80	10.75	10.05	0.331	4.74	9.87	0.413	5.87	9.66	0.512	7.19
12	12.69	12.81	12.75	11.92	0.392	6.66	11.71	0.490	8.26	11.46	0.607	10.12
13	13.31	13.44	13.38	12.50	0.412	7.33	12.28	0.514	9.09	12.02	0.637	11.14
14	13.94	14.06	14.00	13.09	0.431	8.03	12.86	0.538	9.95	12.59	0.667	12.20
16	15.93	16.07	16.00	14.96	0.492	10.49	14.70	0.615	13.00	14.38	0.762	15.94
18	17.92	18.08	18.00	16.83	0.554	13.28	16.53	0.692	16.46	16.18	0.857	20.17
20	19.91	20.09	20.00	18.70	0.615	16.39	18.37	0.769	20.32	17.98	0.952	24.90
22	21.90	22.10	22.00	20.56	0.677	19.83	20.21	0.846	24.58	19.78	1.048	30.13
24	23.89	24.11	24.00	22.43	0.738	23.60	22.04	0.923	29.25	21.58	1.143	35.85
26	25.88	26.12	26.00	24.30	0.800	27.70	23.88	1.000	34.33	23.38	1.238	42.08
28	27.87	28.13	28.00	26.17	0.862	32.13	25.72	1.077	39.82	25.17	1.333	48.80
30	29.87	30.14	30.00	28.04	0.923	36.88	27.55	1.154	45.71	26.97	1.429	56.02
32	31.86	32.14	32.00	29.91	0.985	41.96	29.39	1.231	52.01	28.77	1.524	63.74
36	35.84	36.16	36.00	33.65	1.108	53.11	33.06	1.385	65.82	32.37	1.714	80.67
40	39.82	40.18	40.00	37.39	1.231	65.56	36.74	1.538	81.26	35.96	1.905	99.59
42	41.81	42.19	42.00	39.26	1.292	72.28	38.58	1.615	89.59	37.76	2.000	109.80
48	47.78	48.22	48.00	44.87	1.477	94.41	44.09	1.846	117.02	43.15	2.286	143.42

Pipe dimensions are in accordance with ASTM F714 and AWWA C906

Pressure Ratings are for water at 73.4 deg F.

Some of the pipe sizes and DR's above are available only on request. Check with your representative for availability.

Other dimensions and DR's not listed may be available upon special request.

All dimensions are in inches unless otherwise noted.

Weights are calculated by the methodology established in PPI's TR-7 and are applicable to PE 3608.

The standard stocked length of Sclairpipe pipe is 50 feet, in sizes above 4" in diameter with longer lengths available on request.

Please visit our web site (www.uponor.ca) and use our online design tools to determine the pipe size best suited to your specific application.

DR17 (100 psi)			DR13.5 (128 psi)			DR11 (160 psi)			DR9 (200 psi)			DR7.3 (254 psi)		
Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)
3.94	0.265	1.54	3.79	0.333	1.90	3.63	0.409	2.29	3.44	0.500	2.73	3.19	0.616	3.26
4.87	0.327	2.35	4.69	0.412	2.91	4.49	0.506	3.50	4.25	0.618	4.18	3.95	0.762	4.99
5.80	0.390	3.33	5.58	0.491	4.12	5.35	0.602	4.96	5.06	0.736	5.92	4.70	0.908	7.08
6.24	0.419	3.85	6.01	0.528	4.77	5.75	0.648	5.74	5.45	0.792	6.85	5.06	0.976	8.18
7.55	0.507	5.65	7.27	0.639	6.99	6.96	0.784	8.41	6.59	0.958	10.04	6.12	1.182	11.99
9.41	0.632	8.77	9.06	0.796	10.86	8.68	0.977	13.07	8.22	1.194	15.59	7.63	1.473	18.63
11.16	0.750	12.34	10.75	0.944	15.28	10.29	1.159	18.38	9.75	1.417	21.94	9.05	1.747	26.21
11.71	0.787	13.58	11.27	0.991	16.81	10.80	1.216	20.23	10.22	1.486	24.14	9.49	1.832	28.84
12.25	0.824	14.88	11.80	1.037	18.42	11.30	1.273	22.17	10.70	1.556	26.45	9.93	1.918	31.60
14.00	0.941	19.44	13.49	1.185	24.06	12.92	1.455	28.95	12.23	1.778	34.55	11.35	2.192	41.27
15.76	1.059	24.60	15.17	1.333	30.45	14.53	1.636	36.64	13.76	2.000	43.72	12.77	2.466	52.23
17.51	1.176	30.37	16.86	1.481	37.59	16.15	1.818	45.24	15.29	2.222	53.98	14.19	2.740	64.48
19.26	1.294	36.75	18.55	1.630	45.48	17.76	2.000	54.74	16.82	2.444	65.31	15.61	3.014	78.02
21.01	1.412	43.74	20.23	1.778	54.13	19.37	2.182	65.14	18.35	2.667	77.73	17.03	3.288	92.85
22.76	1.529	51.33	21.92	1.926	63.52	20.99	2.364	76.45	19.88	2.889	91.22	18.45	3.562	108.97
24.51	1.647	59.53	23.60	2.074	73.67	22.60	2.545	88.66	21.40	3.111	105.80	19.87	3.836	126.38
26.26	1.765	68.34	25.29	2.222	84.57	24.22	2.727	101.78	22.93	3.333	121.45			
28.01	1.882	77.75	26.97	2.370	96.22	25.83	2.909	115.80	24.46	3.556	138.19			
31.51	2.118	98.41	30.35	2.667	121.78	29.06	3.273	146.57						
35.01	2.353	121.49	33.72	2.963	150.35	32.29	3.636	180.95						
36.76	2.471	133.94	35.40	3.111	165.76	33.91	3.818	199.49						
42.01	2.824	174.94	40.46	3.556	216.50									

Sclair IPS Cut Sheet_PE3608_r201407

- All dimensions are in inches unless otherwise specified.
- Pressure ratings are based on load durations of 50 years at a service temperature of 73.4F. The HDS (pipe wall allowable stress) for PE 3608 and PE 4710 are 800 psi and 1,000 psi respectively.
- Dimensions and tolerances per ASTM F714. Pipe weights calculated using PPI TR-7 using PE3608 density of 0.953 gm/cc and 0.958 gm/cc for PE4710 materials.
- The ASTM D3350 cell classifications conform to the requirements of the applicable pipe specification (ASTM F714, AWWA C906, etc.).
- Contact Uponor Infra for sizes, DR's and DIPS offering not shown.

Uponor, Sclairpipe Product Range, IPS Size, PE4710

Nominal Pipe Size	PE4710			DR32.5 (64 psi)			DR26 (80 psi)			DR21 (100 psi)		
	Minimum Outside Diameter (inches)	Maximum Outside Diameter (inches)	Average Outside Diameter (inches)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)
4	4.48	4.52	4.50	4.21	0.138	0.840	4.13	0.173	1.030	4.05	0.214	1.27
5	5.54	5.59	5.56	5.20	0.171	1.280	5.11	0.214	1.580	5.00	0.265	1.94
6	6.60	6.65	6.63	6.19	0.204	1.81	6.08	0.255	2.24	5.96	0.315	2.75
7	7.09	7.16	7.13	6.66	0.219	2.09	6.54	0.274	2.59	6.41	0.339	3.18
8	8.59	8.66	8.63	8.06	0.265	3.07	7.92	0.332	3.80	7.75	0.411	4.66
10	10.70	10.80	10.75	10.05	0.331	4.77	9.87	0.413	5.91	9.66	0.512	7.24
12	12.69	12.81	12.75	11.92	0.392	6.70	11.71	0.490	8.31	11.46	0.607	10.18
13	13.31	13.44	13.38	12.50	0.412	7.38	12.28	0.514	9.14	12.02	0.637	11.21
14	13.94	14.06	14.00	13.09	0.431	8.08	12.86	0.538	10.02	12.59	0.667	12.28
16	15.93	16.07	16.00	14.96	0.492	10.56	14.70	0.615	13.08	14.38	0.762	16.04
18	17.92	18.08	18.00	16.83	0.554	13.36	16.53	0.692	16.56	16.18	0.857	20.29
20	19.91	20.09	20.00	18.70	0.615	16.49	18.37	0.769	20.44	17.98	0.952	25.06
22	21.90	22.10	22.00	20.56	0.677	19.96	20.21	0.846	24.74	19.78	1.048	30.32
24	23.89	24.11	24.00	22.43	0.738	23.75	22.04	0.923	29.44	21.58	1.143	36.08
26	25.88	26.12	26.00	24.30	0.800	27.87	23.88	1.000	34.55	23.38	1.238	42.34
28	27.87	28.13	28.00	26.17	0.862	32.33	25.72	1.077	40.07	25.17	1.333	49.11
30	29.87	30.14	30.00	28.04	0.923	37.11	27.55	1.154	46.00	26.97	1.429	56.37
32	31.86	32.14	32.00	29.91	0.985	42.22	29.39	1.231	52.34	28.77	1.524	64.14
36	35.84	36.16	36.00	33.65	1.108	53.44	33.06	1.385	66.24	32.37	1.714	81.18
40	39.82	40.18	40.00	37.39	1.231	65.98	36.74	1.538	81.77	35.96	1.905	100.22
42	41.81	42.19	42.00	39.26	1.292	72.74	38.58	1.615	90.16	37.76	2.000	110.49
48	47.78	48.22	48.00	44.87	1.477	95.01	44.09	1.846	117.76	43.15	2.286	144.32

Pipe dimensions are in accordance with ASTM F714 and AWWA C906
 Pressure Ratings are for water at 73.4 deg F.
 Some of the pipe sizes and DR's above are available only on request. Check with your representative for availability.
 Other dimensions and DR's not listed may be available upon special request.
 All dimensions are in inches unless otherwise noted.
 Weights are calculated by the methodology established in PPI's TR-7 and are applicable to PE4710

Product innovation and quality assurance

For 50 years Uponor Infra has been a leader in the design, development, manufacture and support of polyethylene piping systems. Uponor Infra's experienced engineers can offer design and engineering assistance, assuring you of a dependable piping system designed to meet your needs. Visit our website (www.uponor.ca) and see how our innovative online calculator can assist you. Extensive R&D in the early 1960's led us to produce 16" diameter polyethylene pipe at a time when many considered large diameter polyethylene pipes a

technical impossibility. Today Uponor Infra produces solid wall Sclairpipe in sizes up to 48".

All Uponor Infra products are manufactured from special, high strength resins with complete quality control maintained from raw material to finished pipe product. Uponor Infra was the first North American manufacturer of polyethylene pipe and fittings to have its Quality Management System registered to the ISO 9001:2008 level.

Our strict manufacturing specifications are verified daily,

using precise dimensional controls and accelerated long term hydrostatic testing. A continuous quality control process assures you of long-term pipe performance. We certify that the pipe resin used to extrude Sclairpipe has a minimum cell classification of PE 345464C or PE445474C respectively, when classified in accordance with ASTM D3350. Sclairpipe's material classification is based on PPI's (Plastic Pipe Institute) method of determining and validating the Long-Term Hydrostatic Stress (LTHS) of polyethylene pipe.

DR17 (125 psi)			DR13.5 (160 psi)			DR11 (200 psi)			DR9 (250 psi)			DR7.3 (317 psi)		
Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)	Average Inside Diameter (inches)	Minimum Wall Thickness (inches)	Average Weight (lbs/ft)
3.94	0.265	1.55	3.79	0.333	1.91	3.63	0.409	2.30	3.44	0.500	2.75	3.19	0.616	3.28
4.87	0.327	2.36	4.69	0.412	2.93	4.49	0.506	3.52	4.25	0.618	4.20	3.95	0.762	5.02
5.80	0.390	3.35	5.58	0.491	4.15	5.35	0.602	4.99	5.06	0.736	5.96	4.70	0.908	7.12
6.24	0.419	3.88	6.01	0.528	4.80	5.75	0.648	5.78	5.45	0.792	6.89	5.06	0.976	8.23
7.55	0.507	5.68	7.27	0.639	7.03	6.96	0.784	8.47	6.59	0.958	10.10	6.12	1.182	12.07
9.41	0.632	8.83	9.06	0.796	10.93	8.68	0.977	13.15	8.22	1.194	15.69	7.63	1.473	18.75
11.16	0.750	12.42	10.75	0.944	15.37	10.29	1.159	18.50	9.75	1.417	22.08	9.05	1.747	26.37
11.71	0.787	13.67	11.27	0.991	16.92	10.80	1.216	20.36	10.22	1.486	24.29	9.49	1.832	29.02
12.25	0.824	14.98	11.80	1.037	18.53	11.30	1.273	22.31	10.70	1.556	26.62	9.93	1.918	31.79
14.00	0.941	19.56	13.49	1.185	24.21	12.92	1.455	29.13	12.23	1.778	34.76	11.35	2.192	41.53
15.76	1.059	24.76	15.17	1.333	30.64	14.53	1.636	36.87	13.76	2.000	44.00	12.77	2.466	52.56
17.51	1.176	30.56	16.86	1.481	37.82	16.15	1.818	45.52	15.29	2.222	54.32	14.19	2.740	64.89
19.26	1.294	36.98	18.55	1.630	45.77	17.76	2.000	55.08	16.82	2.444	65.72	15.61	3.014	78.51
21.01	1.412	44.01	20.23	1.778	54.47	19.37	2.182	65.55	18.35	2.667	78.22	17.03	3.288	93.44
22.76	1.529	51.65	21.92	1.926	63.92	20.99	2.364	76.93	19.88	2.889	91.80			
24.51	1.647	59.90	23.60	2.074	74.13	22.60	2.545	89.22	21.40	3.111	106.46			
26.26	1.765	68.77	25.29	2.222	85.10	24.22	2.727	102.42	22.93	3.333	122.22			
28.01	1.882	78.24	26.97	2.370	96.83	25.83	2.909	116.53						
31.51	2.118	99.02	30.35	2.667	122.55	29.06	3.273	147.49						
35.01	2.353	122.25	33.72	2.963	151.29									
36.76	2.471	134.78	35.40	3.111	166.80									
42.01	2.824	176.04												

Uponor_Sclair_IPS_PE4710_r201407

Innovative joining methods and equipment

Scclairpipe piping systems can be assembled by heat fusion (butt, electrofusion, socket and saddle fusion), flanged connections, compression couplings and various mechanical couplings. The superior performance of Scclairpipe results from the combination of pipe and fittings designed to work together as a complete system. A full range of pressure rated fittings is available to suit any application.

The most popular method of joining Scclairpipe is thermal butt fusion. This fast and economical technique permits the quick assembly of long continuous lengths and the joining of fittings to the pipe. The fused joints are as reliable and strong as the pipe itself, fully restrained, providing continuous leak proof systems.

Ordering & shipping information

Uponor Infra welcomes your inquiries for non-standard sizes, lengths and pressure ratings of Sclairpipe pipe.

We can meet most special packaging requirements and provide custom pipe fittings. Please contact your local Uponor Infra representative or visit our web site.

The charts below outline standard shipment sizes for straight length and coiled pipe.



Standard Shipments - Straight Lengths

IPS PIPE				
PIPE SIZE	AVG OD	BUNDLE QTY	TRUCK LOAD QTY	CONTAINER QTY
4"	4.50	38	380	480
5"	5.563	23	276	320
6"	6.625	20	200	208
7"	7.125	17	136	180
8"	8.625	14	112	120
10"	10.750	11	66	80
12"	12.750	4	56	52
13"	13.375	42		48
14"	14.000	42		42
16"	16.000	30		30
18"	18.000	25		25
20"	20.000	20		20
22"	22.000	16		16
24"	24.000	16		14
26"	26.000	9		9
28"	28.000	9		9
30"	30.000	9		9
800mm	31.594	9		9
32"	32.000	9*		8
36"	36.000	4		6
1000mm	39.469	4		4
42"	42.000	4		4
1200mm	47.382	4		3
48"	48.000	4*		3

Notes:

* Bunks required

** Drop deck trailer - maximum 42' length
Pipe lengths range from 40 to 50 feet in size



Scclairpipe general specifications & material standards

Pipe and Fittings

REFERENCE SPECIFICATIONS

- ASTM F714: Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR). Based on outside diameter.
- CSA B137.1: Polyethylene Pipe, Tubing and Fittings for Cold Water Pressure Services.
- ASTM D3350: Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.
- AWWA C901: Polyethylene (PE) Pressure Pipe and Tubing, 1/2 in. Through 3 in. for Water Service.
- ASTM D3035: Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR). Based on Controlled Outside Diameter
- ISO 9001:2008: Model for Quality Assurance in Production and Installation.
- AWWA C906: Standard for Polyethylene (PE) Pressure Pipe and Fittings 4 in. Through 63 in., for Water Distribution.NSF 14, 61

MATERIAL

The pipe shall be made from polyethylene resin compound with a minimum cell classification of PE 345464C for PE 3608 materials and PE445474C for PE 4710 materials in accordance with ASTM D3350. This material shall have a Long Term Hydrostatic Strength of 1600 psi when tested and analyzed by ASTM D2837, and shall be a Plastic Pipe Institute (PPI) TR4 listed compound. The raw material shall contain a minimum of 2%, well dispersed, carbon black. Additives, which can be conclusively proven not to be detrimental to the pipe may also be used, provided that the pipe produced meets the requirements of this standard. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification and from the same raw material supplier. Compliance with the requirements of this paragraph shall be certified in writing by the pipe supplier, upon request. Manufacturer's Quality System shall be certified by an appropriate independent body to meet the requirements of the ISO 9001:2008 Quality Management Program.

PIPE DESIGN

The pipe shall be designed in accordance with the relationships of the ISO-modified formula (see ASTM F714).

$$P = \frac{2S}{(D^{\circ}/t) - 1}$$

- where, **S** = Hydrostatic Design Stress (psi)
P = Design Pressure Rating (psi)
D[°] = OD_{avg} for IPS Pipe
OD_{min} for ISO Pipe
t = Minimum Wall Thickness
D[°]/t = Dimension Ratio

The design pressure rating P shall be derived using the formula above, expressed in pounds per square inch. The Hydrostatic Design Stress for PE 3608 materials is 800 psi and for the PE4710 materials is 1000 psi. The pipe dimensions shall be as specified in manufacturer's literature.

MARKING

- The following shall be continuously printed on the pipe or spaced at intervals not exceeding 5 feet:
- Name and/or trademark of the pipe manufacturer.
 - Nominal pipe size.
 - Dimension ratio.
- The letters PE followed by the polyethylene grade per ASTM D3350, followed by the Hydrostatic Design stress in 100's of psi e.g. PE 3608.
- Manufacturing Standard Reference e.g. ASTM F 714
- A production code from which the date and place of manufacture can be determined.

JOINING METHODS

Whenever possible, polyethylene pipe should be joined by the method of thermal butt fusion as outlined in ASTM F2620, Standard Practice for Heat Fusion Joining of PE Pipe and Fittings. Butt fusion joining of pipe and fittings shall be performed in accordance with the procedures recommended by the manufacturer. The temperature of the heater plate should be between 400°F and 450°F. Follow the recommendations of ASTM F2620 regarding interfacial pressures for pipe wall thickness less than or equal to 1.5". Follow the manufacturer's recommendations regarding interfacial pressures for pipe walls thicker than 1.5".

Polyethylene pipe may be connected to fittings or other piping systems by means of a flanged assembly consisting of a polyethylene flange adapter or stub end, and a metal backup ring that has a bolting pattern meeting the dimensional requirements of Class 150, ANSI B16.1/B16.5 in sizes up through 24", and meeting Class 150 Series A, ANSI B16.47 or AWWA C207 Class B for larger sizes. Follow the manufacturer's recommendations regarding bolting techniques and the use of gaskets. Pipe or fittings may be joined by butt fusion only by technicians who have been trained and qualified in the use of the equipment.

GENERAL REQUIREMENTS

The pipe manufacturer shall provide, upon request, an outline of quality control procedures performed on polyethylene system components.

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