

ONSHORE PIPE SPECIFICATIONS

US CUSTOMARY UNITS

MAOP/ANSI Class	750psi ANSI 300			1,000psi ANSI 400			1,500psi ANSI 600					2,250psi ANSI 900				3,000psi ANSI 1200		
	3	4	6	3	4	6	2	3	4	6	8	2	3	4	6	2	3	4
Nominal Size (in)																		
Reel Length (ft)	4,561	2,920	1,148	4,561	2,920	1,148	6,578	3,904	2,247	1,050	574	4,462	2,887	1,805	886	4,298	2,444	1,362

Dimensions

Pipe Inside Diameter (in)	2.821	3.669	5.604	2.821	3.669	5.604	1.939	2.821	3.669	5.604	7.625	1.939	2.821	3.669	5.604	1.939	2.821	3.669
Pipe Outside Diameter (in)	3.650	4.576	6.931	3.650	4.608	7.011	2.689	3.682	4.688	7.083	9.381	2.801	3.762	4.760	7.211	2.873	3.834	4.888
Storage Bend Radius, SBR (ft)	2.7	3.4	5.2	2.7	3.4	5.2	2.0	2.7	3.5	5.3	7.0	2.1	2.8	3.6	5.4	2.1	2.9	3.6
Operating Bend Radius, OBR (ft)	2.7	3.4	5.2	2.7	3.4	5.2	2.0	2.7	3.5	5.3	7.0	2.1	2.8	3.6	5.4	2.1	2.9	3.6

Weights

Weight Empty in Air (lb/ft)	3.3	4.6	9.2	3.3	5.1	11.9	2.3	3.9	6.9	14.2	24.9	3.4	5.4	8.5	18.3	4.4	6.3	10.8
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Pressures

Factory Test Pressure (psi)	975	975	975	1,300	1,300	1,300	1,950	1,950	1,950	1,950	1,950	2,925	2,925	2,925	2,925	3,900	3,900	3,900
Burst Pressure (psi)	2,613	2,304	1,789	2,613	2,525	2,647	3,622	3,162	3,719	3,301	3,397	5,690	5,117	4,849	4,500	7,491	6,000	6,143

Absolute Roughness, ϵ (ft)	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06
Relative Roughness, ϵ/D	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06
Hazen-Williams Coefficient, C	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150

Thermal Properties

Maximum Temperature (°F)	140	140	140	140	140	140	140	140	140	140	140°	140	140	140	140	140	140	140
OHTC, U (based on ID) BTU/hr-ft ² °F	5.76	5.08	3.39	5.76	5.10	3.41	6.73	5.78	5.13	3.42	3.00	6.85	5.83	5.15	3.44	6.93	5.87	5.20

Mechanical Properties

Bending Stiffness, EI (lb-ft ²)	2,770	6,314	33,063	2,770	6,387	33,668	919	2,816	6,590	34,260	93,776	1,016	2,950	6,803	35,464	1,100	3,089	7,265
Spooling Tension (lb)	373	541	1,236	373	540	1,230	228	373	538	1,226	1,914	233	374	539	1,225	239	377	546
Maximum Installation Tension (lb)	7,000	8,000	15,000	8,000	11,000	20,000	3,800	8,000	11,400	20,000	35,000	10,500	9,000	12,000	30,000	10,500	14,000	22,000

ONSHORE PIPE SPECIFICATIONS

METRIC

MAOP/ANSI Class	50 bar ANSI 300			70 bar ANSI 400			100 bar ANSI 600					155 bar ANSI 900				200 bar ANSI 1200		
Nominal Size (in)	3	4	6	3	4	6	2	3	4	6	8	2	3	4	6	2	3	4
Reel Length (m)	1,390	890	350	1,390	890	350	2,005	1,190	685	320	175	1,360	880	550	270	1,310	745	415

Dimensions

Pipe Inside Diameter (mm)	71.7	93.2	142.3	71.7	93.2	142.3	49.3	71.7	93.2	142.3	193.7	49.3	71.7	93.2	142.3	49.3	71.7	93.2
Pipe Outside Diameter (mm)	92.7	116.2	176.1	92.7	117.1	178.1	68.3	93.5	119.1	179.9	238.3	71.1	95.5	120.9	183.2	73.0	97.4	124.2
Storage Bend Radius, SBR (m)	0.83	1.04	1.58	0.83	1.05	1.59	0.61	0.84	1.07	1.61	2.13	0.64	0.86	1.08	1.64	.65	0.87	1.11
Operating Bend Radius, OBR (m)	0.83	1.04	1.58	0.83	1.05	1.59	0.61	0.84	1.07	1.61	2.13	0.64	0.86	1.08	1.64	.65	0.87	1.11

Weights

Weight Empty in Air (kg/m)	5.0	6.9	13.7	5.0	7.6	17.8	3.4	5.7	10.3	21.1	37.1	5.0	8.0	12.6	27.3	6.5	9.4	16.1
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Pressures

Factory Test Pressure (MPa)	6.72	6.72	6.72	8.96	8.96	8.96	13.44	13.44	13.44	13.44	13.44	20.17	20.17	20.17	20.17	26.89	26.89	26.89
Burst Pressure (MPa)	18.02	15.89	12.33	18.02	17.41	18.25	24.97	21.80	25.64	22.76	23.42	39.23	35.28	33.43	31.03	51.65	41.37	42.36

Flow Properties

Absolute Roughness, ϵ (m)	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06
Relative Roughness, ϵ/D	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06
Hazen-Williams Coefficient, C	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150

Thermal Properties

Maximum Temperature (°C)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
OHTC, U (based on ID) W/m ² °C	32.70	28.86	19.26	32.70	28.93	19.34	38.19	32.81	29.11	19.40	17.02	38.91	33.09	29.26	19.52	39.35	33.34	29.53

Mechanical Properties

Bending Stiffness, EI (N-m ²)	1,145	2,609	13,664	1,145	2,639	13,914	380	1,164	2,724	14,158	38,753	420	1,219	2,811	14,656	455	1,276	3,002
Spooling Tension (kN)	1.7	2.4	5.5	1.7	2.4	5.5	1.0	1.7	2.4	5.5	8.5	1.0	1.7	2.4	5.4	1.1	1.7	2.4
Maximum Installation Tension (kN)	31.1	35.6	66.7	35.6	48.9	89.0	16.9	35.6	50.7	89.0	155.7	46.7	40.0	53.4	133.4	46.7	62.3	97.9