

CHEMICAL ANALYSIS

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Specification	C%	Min %	P % Max	S % Max	Si %	Cr %	Cu % Max	Mo %	Ni % Max	Va % Max	Tensile Strength	Yield Stress	Elongation in	Hardness		
											Mpa	MPa	50 mm MIN Transverse			
1	ASTM A53/A	0.25 MAX	0.95 MAX	0.050	0.060	-	-	-	-	-	331 MIN	-	207 MIN	36	-	
2	ASTMA53/B	0.30MAX	1.20MAX	0.050	0.060	-	-	-	-	-	413 MIN	-	240 MIN	29.5	-	
3	ASTM A106/A	0.25 MAX	0.27-0.93	0.025	0.025	0.10 MIN	0.40 MAX	0.40	0.15 MAX	0.40	0.08	330 MIN	-	205 MIN	25/20	-
4	ASTM A106/B	0.30 MAX	0.29-1.06	0.025	0.025	0.10 MIN	0.40 MAX	0.40	0.15 MAX	0.40	0.08	415 MIN	-	240 MIN	16.5/12.0	-
5	ASTM A106/C	0.35 MAX	0.29-1.06	0.025	0.025	0.10 MIN	0.40 MAX	0.40	0.15 MAX	0.40	0.08	485 MIN	-	275 MIN	16.5/12.0	-
6	ASTM A179	0.06-0.18	0.27-0.63	0.048	0.048	-	-	-	-	-	-	325 MIN	-	180 MIN	35.0	72 HRB MAX
7	ASTM A192	0.06-0.18	0.27-0.63	0.048	0.058	0.25 MAX	-	-	-	-	-	325 MIX	-	180 MIN	35.0	77 HRB MAX
8	ASTM A209/T1	0.10-0.20	0.30-0.80	0.045	0.045	0.10-0.50	-	-	0.44-0.65	-	-	380 MIN	-	205 MIN	30/22	80 HRB MAX
9	ASTM A209/T1A	0.15-0.25	0.30-0.80	0.045	0.045	0.10-0.50	-	-	0.44-0.65	-	-	365 MIN	-	195 MIN	30/22	81 HRB MAX
10	ASTM A209/T1B	0.14 MAX	0.30-0.80	0.045	0.045	0.10-0.50	-	-	0.44-0.65	-	-	415 MIN	-	220 MIN	30/22	77 HRB MAX
11	ASTM A210/A-1	0.27 MAX	5	0.048	0.058	0.10 MIN	-	-	-	-	-	415 MIN	-	255 MIN	30/22	79 HRB MAX
12	ASTM A210/C	0.35 MAX	0.29-1.06	0.048	0.058	0.10 MIN	-	-	-	-	-	485 MIN	-	275 MIN	30/22	89 HRB MAX
13	ASTM A213/T2	0.10-0.20	0.30-0.61	0.045	0.045	0.10-0.30	0.50-0.81	-	0.44-0.65	-	-	415 MIN	-	205 MIN	30/22	85 HRB MAX
14	ASTM A213/T5	0.15 MAX	0.30-0.60	0.030	0.030	0.50 MAX	4.00-6.00	-	0.45-0.65	-	-	415 MIN	-	205 MIN	30/22	85 HRB MAX
15	ASTM A213/11	0.15 MAX	0.30-0.60	0.030	0.030	0.50-1.00	1.00-1.50	-	0.45-0.65	-	-	415 MIN	-	205 MIN	30/22	85 HRB MAX
16	ASTM A213/T12	0.15 MAX	0.30-0.61	0.045	0.045	0.50 MAX	0.80-1.25	-	0.45-0.65	-	-	415 MIN	-	205 MIN	30/22	85 HRB MAX
17	ASTM A213/T-22	0.15 MAX	0.30-0.60	0.030	0.030	0.50 MAX	1.90-2.60	-	0.87-1.13	-	-	415 MIN	-	205 MIN	30/22	85 HRB MAX
18	ASTM A333/1	0.30MAX	0.40-1.06	0.025	0.060	-	-	-	-	-	-	380 MIN	J14	205 MIN	25/20	-
19	ASTM A333/6	0.30MAX	0.29-1.06	0.025	0.060	0.10 MIN	-	-	-	-	-	415 MIN	J14	240 MIN	16.5/12.0	-
20	ASTM A334/1	0.30MAX	0.40-1.06	0.025	0.025	-	-	-	-	-	-	380 MIN	J14	205 MIN	35/28	85 HRB MAX
21	ASTM A334/6	0.30MAX	0.29-1.06	0.025	0.025	0.10 MIN	-	-	-	-	-	415 MIN	J14	240 MIN	30/22	90 HRB MAX
22	ASTM A355/P1	0.10-0.20	0.30-0.80	0.025	0.025	0.10-0.50	-	-	0.44-0.65	-	-	380 MIN	-	205 MIN	20	-
23	ASTM A355/P2	0.10-0.20	0.30-0.61	0.025	0.025	0.10-0.30	0.50-0.81	-	0.44-0.65	-	-	380 MIN	-	205 MIN	20	-
24	ASTM A355/P5	0.15 MAX	0.30-0.60	0.025	0.025	0.50 MAX	4.00-6.00	-	0.45-0.65	-	-	415 MIN	-	205 MIN	20	-
25	ASTM A355/P11	0.15 MAX	0.30-0.60	0.025	0.025	0.50-1.00	1.00-1.50	-	0.44-0.65	-	-	415 MIN	-	205 MIN	20	-
26	ASTM A355/P12	0.15 MAX	0.30-0.61	0.025	0.025	0.50 MAX	0.80-1.25	-	0.44-0.65	-	-	415 MIN	-	205 MIN	20	-
27	ASTM A355/P22	0.15 MAX	0.30-0.61	0.025	0.025	0.50 MAX	1.90-2.60	-	0.87-1.13	-	-	415 MIN	-	205 MIN	20	-
28	BS/3059/1/33	0.15 MAX	0.30-0.70	0.050	0.050	-	-	-	-	-	-	324-441	-	186 MIN	25	-
29	BS/3059/2/33	0.15 MAX	0.40-0.70	0.050	0.050	0.10-0.35	-	-	-	-	-	324-441	-	186 MIN	21	-
30	BS/3059/2/45	0.12-0.18	0.90-1.20	0.040	0.035	0.10-0.35	-	-	-	-	-	441-560	-	245 MIN	22	-
31	BS/3059/1/620	0.10-0.15	0.40-0.70	0.040	0.040	0.10-0.35	0.70-0.10	-	0.45-0.65	-	-	441-618	-	235 MIN	22	-
32	DIN/17175/ST 35.8	0.17 MAX	0.40 MIN	0.040	0.040	0.35 MAX	-	-	-	-	-	340-441	-	235 MIN	25	-
33	DIN/ 17175/ST 45.8	0.22 MAX	0.45 MIN	0.040	0.040	0.10-0.35	-	-	-	-	-	441-540	-	255 MIN	25	-
34	DIN/17175/15MO3	0.12-0.20	0.50-0.80	0.040	0.040	0.15-0.35	-	-	0.25-0.35	-	-	441-540	-	284 MIN	21	-
35	DIN/17175/13CRM044	0.10-0.18	0.40-0.70	0.040	0.040	0.15-0.35	0.70-1.00	-	0.40-0.50	-	-	441-570	-	294 MIN	22	-
36	SAE52100	0.98-1.10	0.20-0.45	0.025	0.025	0.10-0.35	1.30-1.60	-	0.10 MIN	-	-	-	-	-	-	-

DIMENSIONS & WEIGHT

Nominal Pipe Size (mm/inch)	OD (mm)	Wall Thickness											
		Kgs. / Meter											
		Sch. 20	Sch. 30	STD	Sch. 40	XS	Sch. 60	Sch. 80	Sch. 100	Sch. 120	Sch. 140	Sch. 160	XXS
15 / 1/2"	21.30	-	-	W.thick-weight- 1.27	2.77	3.73	-	3.73	-	-	-	4.78	7.47
20 / 3/4"	26.70	-	-	2.87	2.87	3.91	-	3.91	-	-	-	5.56	7.82
25 / 1"	33.40	-	-	3.38	3.38	4.55	-	4.55	-	-	-	6.35	9.09
32 / 1 1/4"	42.20	-	-	3.56	3.56	4.85	-	4.85	-	-	-	6.35	9.70
40 / 1 1/2"	48.30	-	-	4.05	4.05	5.42	-	5.42	-	-	-	7.14	10.15
50 / 2"	60.30	-	-	5.44	5.44	7.48	-	7.48	-	-	-	11.12	13.44
65 / 2 1/2"	73.00	-	-	8.64	8.64	11.41	-	11.41	-	-	-	14.92	20.4
80 / 3"	88.90	-	-	11.30	11.30	15.28	-	15.28	-	-	-	21.35	27.69
90 / 3 1/2"	101.60	-	-	13.57	13.57	18.64	-	18.64	-	-	-	-	-
100 / 4"	114.30	-	-	16.08	16.08	22.33	-	22.33	-	11.13	-	13.49	17.12
125 / 5"	141.30	-	-	21.77	21.77	30.98	-	30.98	-	12.70	-	15.88	19.05
150 / 6"	168.30	-	-	28.27	28.27	42.58	-	42.58	-	14.27	-	18.26	21.95
200 / 8"	219.10	6.35	7.04	8.18	8.18	12.70	10.31	12.70	15.09	18.26	20.62	23.01	22.23
250 / 10"	273.00	6.35	7.80	9.27	9.27	12.70	12.70	15.09	18.26	21.44	25.40	28.58	25.40
300 / 12"	323.80	6.35	8.38	9.53	10.31	12.70	14.27	17.48	21.44	25.40	28.58	33.32	25.40
350 / 14"	355.60	7.92	9.53	9.53	11.13	12.70	15.09	19.05	23.83	27.79	31.75	35.71	-
400 / 16"	406.40	7.92	9.53	9.53	12.70	12.70	16.66	21.44	26.19	30.96	36.53	40.49	-
450 / 18"	457.20	7.92	11.13	9.53	14.27	12.70	19.05	23.83	29.36	34.93	39.67	45.24	-
500 / 20"	508.00	9.53	12.70	9.53	15.09	12.70	20.62	26.19	32.54	38.10	44.45	50.01	-
550 / 22"	558.80	9.53	12.70	9.53	-	12.70	22.23	28.58	34.99	41.28	47.63	53.98	-
600 / 24"	609.60	9.53	14.27	9.53	17.48	12.70	24.61	30.96	38.89	46.02	52.37	59.54	-