

ASTM - A53 Grade A & B

Dimensions, weights (masses) per unit Length, and Test pressures for plain end pipe

DN Designator	Specified wall, thickness in (mm)	Nominal, weight (mass) per Unit length, Plain end, lb/(kg/m ²)	Weight Class	Schedule No.	Test Pressure PSI (kpa.)	
					Grade A	Grade B
350	5.33	46.04	...	...	540 (3700)	630 (4300)
	5.56	47.99	...	...	560 (3900)	660 (4500)
	6.35	54.69	...	10	640 (4400)	750 (5200)
	7.14	61.35	...	...	720 (5000)	840 (5800)
	7.92	67.90	...	20	800 (5500)	940 (6500)
	8.74	74.76	...	...	880 (6100)	1030 (7100)
	9.52	81.25	STD	30	960 (6600)	1120 (7700)
	11.13	94.55	...	40	1130 (7800)	1310 (9000)
	11.91	100.94	...	...	1210 (8300)	1410 (9700)
	12.70	107.39	XS	...	1290 (8900)	1500 (10 300)
400	5.56	54.96	...	...	490 (3400)	570 (3900)
	6.35	62.64	...	10	560 (3900)	660 (4500)
	7.14	70.30	...	...	630 (4300)	740 (5100)
	7.92	77.83	...	20	700 (4800)	820 (5700)
	8.74	85.71	...	...	770 (5300)	900 (6200)
	9.52	93.17	STD	30	840 (5800)	980 (6800)
	11.13	108.49	...	...	990 (6800)	1150 (7900)
	11.91	115.86	...	...	1060 (7300)	1230 (8500)
	12.70	123.30	XS	40	1120 (7700)	1310 (9000)

Tolerance - Pipe Size : DN : +/-1% Thickness : -12.5% (max) Weight : +/-10%



Technical Specification of Pipes conforming to ASTM A53 Grade A & B

NPS Designator in inch	DN Designator in mm	Size (OD) in mm	Schedule	Thickness (mm)	Mass of Plain end Pipe (Kg/mtr)	Hydro Test Pressure (MPa)	
						Grade A	Grade B
½	15	21.3	40	2.77	1.27	4.8	4.8
	20	26.7	40	2.87	1.69	4.8	4.8
1	25	33.4	40	3.38	2.50	4.8	4.8
1	32	42.2	40	3.56	3.39	8.3	9
1 ½	40	48.3	40	3.68	4.05	8.3	9
2	50	60.3	40	3.91	5.44	15.9	17.2
2 ½	65	73.0	40	5.16	8.63	17.2	17.2
3	80	88.9	40	5.49	11.29	15.3	17.2
3 ½	90	101.6	40	5.74	13.57	14.0	16.3
4	100	114.3	40	6.02	16.07	13.1	15.2
5	125	141.3	40	6.55	21.77	11.5	13.4
6	150	168.3	40	7.11	28.26	10.5	12.3
8	200	219.1	40	8.18	42.55	9.2	10.8
10	250	273.1	20	6.35	41.75	5.8	6.8
10	250	273.1	40	9.27	60.29	8.4	9.9
12	300	323.9	20	6.35	49.71	4.9	5.7
12	300	323.9	30	8.38	65.18	6.4	7.5
12	300	323.9	STD	9.52	73.78	7.3	8.5
12	300	323.9	40	10.31	79.7	7.9	9.2

Tolerances

Outside diameter :

Pipe size upto and including DN40 ±0.4mm

Pipe size DN 50 or larger ± 1 %

Thickness : - 12.5 %

Weight : ± 10 %

Galvanizing (as per ASTM A-90)

Mass of Zn coating (Min.):

490 g/m2 (70 µ app.)

Mass of Zinc coating (Avg.):

550 g/m2 (79 µ app.)

Mechanical Properties

Grade A Grade B

Y.S (Mpa) Min. - 205 240

T.S. (Mpa)Min. - 330 415

Elong.(%)Min. - As per ASTM A53

Chemical Properties (Max %)

Grade	C%	Mn%	P%	S%	Cu%	Ni%	Cr%	Mo%	V%
A	0.25	0.95	0.05	0.045	0.5	0.4	0.4	0.15	0.08
B	0.30	1.20	0.05	0.045	0.5	0.4	0.4	0.15	0.08

JINDAL-HISSAR MANUFACTURES PIPE AS PER ASTM A53 SIZE ½" to 12", BOTH BLACK & GI, UL LISTED LICENCE NO. 3PPPA