



# TECHNICAL DATA OF PIPES CONFORMING TO ASTM A-53 GR. A & B SCH.40

NSE Designator	DN Designator	Outside Diameter		Wall Thickness		Mass of Plain End Pipes		Test Pressure	
		inch	mm	inch	mm	Kg/Mtr	lb/ft	Grade A Mpa	Grade B Mpa
½	15	0.840	21.3	0.109	2.77	1.27	0.83	4.8	4.8
¾	20	1.050	26.7	0.113	2.87	1.69	1.13	4.8	4.8
1	25	1.315	33.4	0.133	3.38	2.50	1.68	4.8	4.8
1 ¼	32	1.660	42.2	0.140	3.56	3.39	2.27	8.3	9.0
1 ½	40	1.900	48.3	0.145	3.68	4.05	2.72	8.3	9.0
2	50	2.375	60.3	0.154	3.91	5.44	3.66	15.9	17.2
2 ½	65	2.875	73.0	0.203	5.16	8.63	5.80	17.2	17.2
3	80	3.500	88.9	0.216	5.49	11.29	7.58	15.3	17.2
3 ½	90	4.000	101.6	0.226	5.74	13.57	9.12	14.0	16.3
4	100	4.500	114.3	0.237	6.02	16.07	10.80	13.1	15.2
5	125	5.563	141.3	0.258	6.55	21.77	14.63	11.5	13.4
6	150	6.625	168.3	0.280	7.11	28.26	18.99	10.5	12.3
8	200	8.625	219.1	0.322	8.18	42.55	28.58	9.2	10.8
10	250	10.750	273.0	0.365	9.27	60.29	40.52	8.4	9.9
12	300	12.750	323.8	0.406	10.31	79.70	53.57	7.9	9.2
14	350	14.00	355.6	0.438	11.13	94.55	63.50	7.8	9.0
16	400	16.00	406.4	0.500	12.7	123.30	82.85	7.7	9.0

#### Tolerances

Outside Diameter Pipe Size up to & including DN 40 +/- 0.4 mm  
Pipe Size DN 50 or Larger +/- 1%

Thickness -12.5% (max)

Weight +/- 10%

#### Testing

Online NDT For Pipes NPS 2 (DN 50) or larger  
Weld seam of each pipe shall be tested by Eddy Current Test

Bend Test For pipes up to & including DN 50  
Bending angle 90°  
Bending radius 12 times to the OD of Tube (no crack in body & weld)

Flattening For pipes over DN 50  
1. Flatten up to 2/3 of OD for ductility of weld  
2. Flatten up to 1/3 of OD for ductility of steel  
3. Full Flattening for testing of lamination

#### Mechanical Properties

	Grade A	Grade B
Yield Strength	205 Mpa (Min)	240 Mpa (Min)
Tensile Strength	330 Mpa (Min)	415 Mpa (Min)
Elongation	As per ASTM A-53	

#### Chemical Properties

#### Composition, Max, %

	Carbon	Manganese	Phosphorus	Sulphur	Copper	Nickel	Chromium	Molybdenum	Vanadium
Grade A	0.25	0.05	0.95	0.045	0.50	0.40	0.40	0.15	0.08
Grade B	0.30	0.05	1.20	0.045	0.50	0.40	0.40	0.15	0.08

Cu + N + Cr + Mb + V < 1%

#### Galvanizing

Minimum 0.490 Kg/Sq. Mtr.

Average 0.550 Kg/Sq. Mtr.

