

Schedule 40s

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•What is Schedule 40s

The “s” in SCH 40S pipe generally stands for stainless steel. However, when the letter “s” appears in the specification number, it generally indicates that the pipe specification is specifically designed for stainless steel piping. It is generally used in food processing and pharmaceutical equipment. It has a thinner wall thickness, but a high chromium content. For example, in the NPS 2-inch specification, the wall thickness of SCH 40S is 2.77 mm, while SCH 40 is 3.91 mm. This not only reduces the deadweight, but also ensures its corrosion performance.

•Size of Schedule 40s

Nominal size [inches]	Outside diameter [inches]	Outside diameter [mm]	Wall thickness [inches]	Wall thickness [mm]	Weight [lb/ft]	Weight [kg/m]
1/2" NPS15	0.84	21.3	0.109	2.77	0.85	1.27
3/4" NPS20	1.05	26.7	0.113	2.87	1.14	1.7
1" NPS25	1.32	33.4	0.133	3.38	1.69	2.52
1 1/4" NPS32	1.66	42.2	0.14	3.56	2.29	3.41
1 1/2" NPS40	1.9	48.3	0.145	3.68	2.74	4.08

2" NPS50	2.375	60.3	0.154	3.91	3.68	5.47
2 1/2" NPS65	2.875	73	0.203	5.16	5.84	8.69
3" NPS80	3.5	88.9	0.216	5.49	7.64	11.36
3 1/2"	4	101.6	0.226	5.74	9.18	13.66
4" NPS100	4.5	114.3	0.237	6.02	10.87	16.18
5" NPS125	5.563	141.3	0.258	6.55	14.72	21.91
6" NPS150	6.625	168.3	0.28	7.11	19.11	28.44
8" NPS200	8.625	219.1	0.322	8.18	28.77	42.82
10" NPS250	10.75	273.1	0.365	9.27	40.79	60.7
12" NPS300	12.75	323.9	0.375	9.53	49.91	74.28

•Pressure of Schedule 40s

Maximum Allowable Pressure(psi)(kPa)		
NPS (in)	Outside Diameter (in) (mm)	Schedule 40s
1/4	0.54	7985
	13.7	55057
1/2	0.84	6358
	21.3	43838
3/4	1.05	5273
	26.7	36357
1	1.315	4956
	33.4	34172
1 1/4	1.66	4133
	42.2	28497
1 1/2	1.9	3739
	48.3	25780
2	2.375	3177
	60.3	21905
2 1/2	2.875	3460
	73	23857
3	3.5	3024
	88.9	20850

3 1/2	4	2769
	102	19092
4	4.5	2581
	114	17796
5	5.563	2273
	141	15672
6	6.625	2071
	168	14280
8	8.625	1829
	219	12611
10	10.75	1664
	273	11473
12	12.75	1441
	324	9936
14	14	1313
	356	9053
16	16	1148
	406	7915
18	18	1021
	457	7040
20	20	919
	508	6337
22	22	835
	559	5757
24	24	766
	610	5282
30	30	613
	762	4227
32	32	574
	813	3958
34	34	540
	864	3723
36	36	510
	914	3516
42	42	438
	1067	3020

●Application of Schedule 40s

- Food-grade liquid transport (e.g. beer fermentation tank piping) ·
- Transportation of high-purity chemicals (surface $Ra \leq 0.8\mu\text{m}$ required).
- Desalination equipment for coastal areas.