

ALLOY 302 STAINLESS STEEL

STAINLESS STEEL

ASTM:	UNS: S30200
Ω/cir. mil. ft.: 433	Weight/Density: .286 lbs/in ² (7.9 g/cm ³)
Chemical Composition %: Ni 8-10%, C .15% max, Cr 17-19%, Si 1%, Mn 2%, P .045%, S .03%	
Coeff. of Lin. Expansion, X 10⁻⁶: 17.8 (20-500°C) Specific Heat: .118 cal./gm @ 20°C	
Conductivity: 16 w/mK	Specific Gravity: 7.86
Temp. Coeff. of Resistance: .00085	Elongation: 20-40%
Melting Point: ~1,420°C (~2,590°F)	Yield Point: 20,000-40,000 PSI
Max Operating Temp: ~1,700°C (~925°F)	Soft Tensile: 80,000-110,000 PSI

Diameter			Resistance @ 68° F/20° C Ω/ft	Sq. in./Ω 68°F	Weight Lb./1000 ft	Ω/lb.	Ft/Lb.	Cross sectional area (in ²)
B&S	Inches	Mm						
13	0.072	1.83	0.084	32.50	14.0	5.98	71.59	0.00407
14	0.064	1.63	0.106	22.82	11.1	9.57	90.49	0.00322
15	0.057	1.45	0.133	16.12	8.79	15.2	113.8	0.00256
16	0.051	1.29	0.166	11.55	6.97	23.9	143.5	0.00203
17	0.045	1.15	0.214	7.934	5.53	38.7	181.0	0.00161
18	0.04	1.02	0.271	5.572	4.32	62.6	231.3	0.00126
19	0.036	0.912	0.334	4.062	3.50	95.4	285.7	0.00102
20	0.032	0.812	0.423	2.853	2.76	153.2	362.4	0.000804
21	0.0285	0.723	0.533	2.015	2.19	243.5	456.7	0.000638
22	0.0253	0.644	0.676	1.410	1.74	388.8	574.7	0.000507
23	0.0226	0.573	0.848	1.005	1.38	616.0	726.6	0.000401
24	0.0201	0.51	1.072	0.707	1.08	994.5	927.9	0.000314
25	0.0179	0.455	1.351	0.499	0.872	1,550	1,147	0.000254
26	0.0159	0.405	1.713	0.350	0.683	2,508	1,464	0.000199
27	0.0142	0.361	2.147	0.249	0.542	3,960	1,844	0.000158
28	0.0126	0.321	2.727	0.174	0.429	6,358	2,331	0.000125
29	0.0113	0.286	3.391	0.126	0.343	9,881	2,914	0.000100
30	0.01	0.255	4.330	0.087	0.269	16,072	3,712	0.0000785
31	0.0089	0.227	5.466	0.061	0.215	25,444	4,655	0.0000626
32	0.008	0.202	6.766	0.045	0.170	39,745	5,875	0.0000496
33	0.0071	0.18	8.590	0.031	0.135	63,523	7,395	0.0000394
34	0.0063	0.16	10.91	0.022	0.107	101,884	9,339	0.0000312
35	0.0056	0.143	13.81	0.015	0.0848	162,880	11,797	0.0000247
36	0.005	0.127	17.32	0.0109	0.0673	257,481	14,866	0.0000196
37	0.0045	0.113	21.38	0.0079	0.0522	409,894	19,169	0.0000152
38	0.004	0.101	27.06	0.0056	0.0432	625,821	23,125	0.0000126
39	0.0035	0.09	35.35	0.0037	0.0336	1,052,015	29,763	0.00000979
40	0.0031	0.08	45.06	0.0026	0.0267	1,685,310	37,404	0.00000779
41	0.00275	0.07	57.26	0.0018	0.0211	2,708,286	47,301	0.00000616
42	0.0025	0.063	69.28	0.00136	0.0167	4,145,068	59,831	0.00000487
43	0.00225	0.057	85.53	0.00099	0.0130	6,558,311	76,678	0.00000380
44	0.0020	0.051	108.25	0.00070	0.0108	10,045,024	92,795	0.00000314
45	0.00175	0.044	141.39	0.00047	0.0083	16,953,456	119,908	0.00000243
46	0.0015	0.038	192.44	0.00029	0.0069	27,897,292	144,963	0.00000201
47	0.0014	0.036	220.92	0.00024	0.0053	41,798,801	189,205	0.00000154
48	0.0013	0.033	256.21	0.00019	0.0042	61,697,639	240,806	0.00000121

ALLOY 304 STAINLESS STEEL

STAINLESS STEEL

ASTM:	UNS: S30400
Ω/cir. mil. ft.: 433	Weight/Density: .289 lbs/in ² (7.9 g/cm ³)
Chemical Composition %: Ni 8-10.5%, C .08% max, Cr 18-20%, Si 1% max, Mn 2% max	
Coeff. of Lin. Expansion, X 10⁻⁶: 17.8 (20-500°C) Specific Heat: .120 cal./gm @ 20°C	
Conductivity: 16 w/mK	Specific Gravity: 7.9
Temp. Coeff. of Resistance: .00085	Elongation: 20-40%
Melting Point: ~1,450°C (~2,650°F)	Yield Point: 20,000-40,000 PSI
Max Operating Temp: ~600°C (~1,110°F)	Soft Tensile: 80,000-110,000 PSI

Diameter			Resistance @ 68° F/20° C Ω/ft	Sq. in./Ω 68°F	Weight Lb./1000 ft	Ω/lb.	Ft/Lb.	Cross sectional area (in ²)
B&S	Inches	Mm						
13	0.072	1.83	0.084	32.50	14.1	5.92	70.85	0.00407
14	0.064	1.63	0.106	22.82	11.2	9.47	89.55	0.00322
15	0.057	1.45	0.133	16.12	8.88	15.0	112.6	0.00256
16	0.051	1.29	0.166	11.55	7.04	23.6	142.0	0.00203
17	0.045	1.15	0.214	7.934	5.58	38.3	179.1	0.00161
18	0.04	1.02	0.271	5.572	4.37	61.9	228.8	0.00126
19	0.036	0.912	0.334	4.062	3.54	94.5	282.7	0.00102
20	0.032	0.812	0.423	2.853	2.79	151.7	358.6	0.000804
21	0.0285	0.723	0.533	2.015	2.21	240.9	452.0	0.000638
22	0.0253	0.644	0.676	1.410	1.76	384.7	568.7	0.000507
23	0.0226	0.573	0.848	1.005	1.39	609.6	719.1	0.000401
24	0.0201	0.51	1.072	0.707	1.09	984.2	918.3	0.000314
25	0.0179	0.455	1.351	0.499	0.881	1,534	1,135	0.000254
26	0.0159	0.405	1.713	0.350	0.690	2,482	1,449	0.000199
27	0.0142	0.361	2.147	0.249	0.548	3,919	1,825	0.000158
28	0.0126	0.321	2.727	0.174	0.434	6,292	2,307	0.000125
29	0.0113	0.286	3.391	0.126	0.347	9,778	2,884	0.000100
30	0.01	0.255	4.330	0.087	0.272	15,905	3,673	0.0000785
31	0.0089	0.227	5.466	0.061	0.217	25,180	4,606	0.0000626
32	0.008	0.202	6.766	0.045	0.172	39,332	5,814	0.0000496
33	0.0071	0.18	8.590	0.031	0.137	62,863	7,319	0.0000394
34	0.0063	0.16	10.91	0.022	0.108	100,826	9,242	0.0000312
35	0.0056	0.143	13.81	0.015	0.0857	161,189	11,674	0.0000247
36	0.005	0.127	17.32	0.0109	0.0680	254,808	14,712	0.0000196
37	0.0045	0.113	21.38	0.0079	0.0527	405,639	18,970	0.0000152
38	0.004	0.101	27.06	0.0056	0.0437	619,325	22,885	0.0000126
39	0.0035	0.09	35.35	0.0037	0.0340	1,041,094	29,454	0.00000979
40	0.0031	0.08	45.06	0.0026	0.0270	1,667,815	37,015	0.00000779
41	0.00275	0.07	57.26	0.0018	0.0214	2,680,172	46,810	0.00000616
42	0.0025	0.063	69.28	0.00136	0.0169	4,102,039	59,210	0.00000487
43	0.00225	0.057	85.53	0.00099	0.0132	6,490,231	75,882	0.00000380
44	0.0020	0.051	108.25	0.00070	0.0109	9,940,750	91,831	0.00000314
45	0.00175	0.044	141.39	0.00047	0.0084	16,777,469	118,663	0.00000243
46	0.0015	0.038	192.44	0.00029	0.0070	27,607,700	143,458	0.00000201
47	0.0014	0.036	220.92	0.00024	0.0053	41,364,903	187,241	0.00000154
48	0.0013	0.033	256.21	0.00019	0.0042	61,057,179	238,306	0.00000121

ALLOY 304L STAINLESS STEEL

STAINLESS STEEL

ASTM:	UNS: S30403
Ω/cir. mil. ft.: 433	Weight/Density: .289 lbs/in ² (7.9 g/cm ³)
Chemical Composition %: Ni 8-12%, C .03% max, Cr 18-20%, Si 1%, Mn 2%, P .045%, S .03%	
Coeff. of Lin. Expansion, X 10⁻⁶: 17.8 (20-500°C) Specific Heat: .120 cal./gm @ 20°C	
Conductivity: 16 w/mK	Specific Gravity: 7.9
Temp. Coeff. of Resistance: .00085	Elongation: 20-40%
Melting Point: ~1,450°C (~2,650°F)	Yield Point: 20,000-40,000 PSI
Max Operating Temp: ~925°C (~1,700°F)	Soft Tensile: 80,000-110,000 PSI

Diameter			Resistance @ 68° F/20° C Ω/ft	Sq. in./Ω 68°F	Weight Lb./1000 ft	Ω/lb.	Ft/Lb.	Cross sectional area (in ²)
B&S	Inches	Mm						
13	0.072	1.83	0.084	32.50	14.2	5.90	70.60	0.00407
14	0.064	1.63	0.106	22.82	11.2	9.43	89.24	0.00322
15	0.057	1.45	0.133	16.12	8.91	15.0	112.2	0.00256
16	0.051	1.29	0.166	11.55	7.06	23.6	141.6	0.00203
17	0.045	1.15	0.214	7.934	5.60	38.2	178.5	0.00161
18	0.04	1.02	0.271	5.572	4.38	61.7	228.1	0.00126
19	0.036	0.912	0.334	4.062	3.55	94.1	281.7	0.00102
20	0.032	0.812	0.423	2.853	2.80	151.1	357.4	0.000804
21	0.0285	0.723	0.533	2.015	2.22	240.1	450.4	0.000638
22	0.0253	0.644	0.676	1.410	1.76	383.4	566.8	0.000507
23	0.0226	0.573	0.848	1.005	1.40	607.5	716.6	0.000401
24	0.0201	0.51	1.072	0.707	1.09	980.8	915.1	0.000314
25	0.0179	0.455	1.351	0.499	0.884	1,529	1,131	0.000254
26	0.0159	0.405	1.713	0.350	0.693	2,473	1,444	0.000199
27	0.0142	0.361	2.147	0.249	0.550	3,905	1,819	0.000158
28	0.0126	0.321	2.727	0.174	0.435	6,270	2,299	0.000125
29	0.0113	0.286	3.391	0.126	0.348	9,744	2,874	0.000100
30	0.01	0.255	4.330	0.087	0.273	15,850	3,661	0.0000785
31	0.0089	0.227	5.466	0.061	0.218	25,093	4,590	0.0000626
32	0.008	0.202	6.766	0.045	0.173	39,196	5,793	0.0000496
33	0.0071	0.18	8.590	0.031	0.137	62,646	7,293	0.0000394
34	0.0063	0.16	10.91	0.022	0.109	100,478	9,210	0.0000312
35	0.0056	0.143	13.81	0.015	0.0860	160,633	11,634	0.0000247
36	0.005	0.127	17.32	0.0109	0.0682	253,929	14,661	0.0000196
37	0.0045	0.113	21.38	0.0079	0.0529	404,241	18,905	0.0000152
38	0.004	0.101	27.06	0.0056	0.0438	617,189	22,806	0.0000126
39	0.0035	0.09	35.35	0.0037	0.0341	1,037,504	29,352	0.00000979
40	0.0031	0.08	45.06	0.0026	0.0271	1,662,064	36,888	0.00000779
41	0.00275	0.07	57.26	0.0018	0.0214	2,670,930	46,649	0.00000616
42	0.0025	0.063	69.28	0.00136	0.0169	4,087,894	59,005	0.00000487
43	0.00225	0.057	85.53	0.00099	0.0132	6,467,851	75,620	0.00000380
44	0.0020	0.051	108.25	0.00070	0.0109	9,906,472	91,515	0.00000314
45	0.00175	0.044	141.39	0.00047	0.0085	16,719,615	118,254	0.00000243
46	0.0015	0.038	192.44	0.00029	0.0070	27,512,501	142,963	0.00000201
47	0.0014	0.036	220.92	0.00024	0.0054	41,222,266	186,595	0.00000154
48	0.0013	0.033	256.21	0.00019	0.0042	60,846,637	237,485	0.00000121

ALLOY 305 STAINLESS STEEL

STAINLESS STEEL

ASTM: A240

UNS: S30500

Ω/cir. mil. ft.: 433

Weight/Density: .290 lbs/in² (7.99 g/cm³)

Chemical Composition %: C .12% max, Mg 2% max, P .045% max, S .03% max, Si 1% max, Cr 17-19%, Ni 10-13%, Balance Iron

Coeff. of Lin. Expansion, X 10⁻⁶: 10.4 (0-649°C) Specific Heat: .120 cal./gm @ 20°C

Conductivity: 16.2 w/mK

Specific Gravity: 7.99

Temp. Coeff. of Resistance: .00085

Elongation: 40-70%

Melting Point: ~1,410°C (~2,570°F)

Yield Point: 25,000-45,000 PSI

Max Operating Temp: ~460°C (~860°F)

Soft Tensile: 70,000-100,000 PSI

Diameter			Resistance @ 68° F/20° C Ω/ft	Sq. in./Ω 68°F	Weight Lb./1000 ft	Ω/lb.	Ft/Lb.	Cross sectional area (in ²)
B&S	Inches	Mm						
13	0.072	1.83	0.084	32.50	14.2	5.90	70.60	0.00407
14	0.064	1.63	0.106	22.82	11.2	9.43	89.24	0.00322
15	0.057	1.45	0.133	16.12	8.9	15.0	112.2	0.00256
16	0.051	1.29	0.166	11.55	7.1	23.6	141.6	0.00203
17	0.045	1.15	0.214	7.934	5.6	38.2	178.5	0.00161
18	0.04	1.02	0.271	5.572	4.4	61.7	228.1	0.00126
19	0.036	0.912	0.334	4.062	3.5	94.1	281.7	0.00102
20	0.032	0.812	0.423	2.853	2.8	151.1	357.4	0.000804
21	0.0285	0.723	0.533	2.015	2.2	240.1	450.4	0.000638
22	0.0253	0.644	0.676	1.410	1.8	383.4	566.8	0.000507
23	0.0226	0.573	0.848	1.005	1.4	607.5	716.6	0.000401
24	0.0201	0.51	1.072	0.707	1.1	980.8	915.1	0.000314
25	0.0179	0.455	1.351	0.499	0.9	1,529	1,131	0.000254
26	0.0159	0.405	1.713	0.350	0.7	2,473	1,444	0.000199
27	0.0142	0.361	2.147	0.249	0.5	3,905	1,819	0.000158
28	0.0126	0.321	2.727	0.174	0.4	6,270	2,299	0.000125
29	0.0113	0.286	3.391	0.126	0.3	9,744	2,874	0.000100
30	0.01	0.255	4.330	0.087	0.3	15,850	3,661	0.0000785
31	0.0089	0.227	5.466	0.061	0.2	25,093	4,590	0.0000626
32	0.008	0.202	6.766	0.045	0.2	39,196	5,793	0.0000496
33	0.0071	0.18	8.590	0.031	0.1	62,646	7,293	0.0000394
34	0.0063	0.16	10.91	0.022	0.1	100,478	9,210	0.0000312
35	0.0056	0.143	13.81	0.015	0.1	160,633	11,634	0.0000247
36	0.005	0.127	17.32	0.0109	0.1	253,929	14,661	0.0000196
37	0.0045	0.113	21.38	0.0079	0.1	404,241	18,905	0.0000152
38	0.004	0.101	27.06	0.0056	0.0	617,189	22,806	0.0000126
39	0.0035	0.09	35.35	0.0037	0.0	1,037,504	29,352	0.00000979
40	0.0031	0.08	45.06	0.0026	0.0	1,662,064	36,888	0.00000779
41	0.00275	0.07	57.26	0.0018	0.0	2,670,930	46,649	0.00000616
42	0.0025	0.063	69.28	0.00136	0.0	4,087,894	59,005	0.00000487
43	0.00225	0.057	85.53	0.00099	0.0	6,467,851	75,620	0.00000380
44	0.0020	0.051	108.25	0.00070	0.0	9,906,472	91,515	0.00000314
45	0.00175	0.044	141.39	0.00047	0.0	16,719,615	118,254	0.00000243
46	0.0015	0.038	192.44	0.00029	0.0	27,512,501	142,963	0.00000201
47	0.0014	0.036	220.92	0.00024	0.0	41,222,266	186,595	0.00000154
48	0.0013	0.033	256.21	0.00019	0.0	60,846,637	237,485	0.00000121

ALLOY 316 STAINLESS STEEL

STAINLESS STEEL

ASTM: *UNS: S31600*
 Ω /cir. mil. ft.: 430 ***Weight/Density:*** .284 lbs/in² (7.97 g/cm³)
Chemical Composition %: Fe, <.03C, 16-18.5Cr, 10-14Ni, 2-3Mo, <2Mn, <1Si, <.045P, <.03S
Coeff. of Lin. Expansion, X 10⁻⁶: 29.7 (20-500°C) ***Specific Heat:*** .101 cal./gm @ 20°C
Conductivity: 15 w/mK ***Specific Gravity:*** 7.97
Temp. Coeff. of Resistance: .00122 ***Elongation:*** 30-51%
Melting Point: ~1,660°C (~2,530°F) ***Yield Point:*** 20,000-40,000 PSI
Max Operating Temp: ~1,110°C (~1,540°F) ***Soft Tensile:*** 70,000-90,000 PSI

Diameter			Resistance @ 68° F/20° C Ω /ft	Sq. in./ Ω 68°F	Weight Lb./1000 ft	Ω /lb.	Ft/Lb.	Cross sectional area (in ²)
B&S	Inches	Mm						
13	0.072	1.83	0.083	32.72	13.9	5.98	72.10	0.00407
14	0.064	1.63	0.105	22.98	11.0	9.57	91.13	0.00322
15	0.057	1.45	0.132	16.24	8.7	15.2	114.6	0.00256
16	0.051	1.29	0.165	11.63	6.9	23.9	144.5	0.00203
17	0.045	1.15	0.212	7.989	5.5	38.7	182.3	0.00161
18	0.04	1.02	0.269	5.611	4.3	62.6	232.9	0.00126
19	0.036	0.912	0.332	4.090	3.5	95.4	287.7	0.00102
20	0.032	0.812	0.420	2.873	2.7	153.3	365.0	0.000804
21	0.0285	0.723	0.529	2.030	2.2	243.5	459.9	0.000638
22	0.0253	0.644	0.672	1.420	1.7	388.8	578.8	0.000507
23	0.0226	0.573	0.842	1.012	1.4	616.0	731.7	0.000401
24	0.0201	0.51	1.064	0.712	1.1	994.6	934.5	0.000314
25	0.0179	0.455	1.342	0.503	0.9	1,550	1,155	0.000254
26	0.0159	0.405	1.701	0.352	0.7	2,508	1,475	0.000199
27	0.0142	0.361	2.133	0.251	0.5	3,960	1,857	0.000158
28	0.0126	0.321	2.708	0.175	0.4	6,358	2,347	0.000125
29	0.0113	0.286	3.368	0.127	0.3	9,881	2,934	0.000100
30	0.01	0.255	4.300	0.088	0.3	16,073	3,738	0.0000785
31	0.0089	0.227	5.429	0.062	0.2	25,446	4,687	0.0000626
32	0.008	0.202	6.719	0.045	0.2	39,747	5,916	0.0000496
33	0.0071	0.18	8.530	0.031	0.1	63,527	7,447	0.0000394
34	0.0063	0.16	10.834	0.022	0.1	101,890	9,405	0.0000312
35	0.0056	0.143	13.712	0.015	0.1	162,891	11,880	0.0000247
36	0.005	0.127	17.200	0.0110	0.1	257,497	14,971	0.0000196
37	0.0045	0.113	21.235	0.0080	0.1	409,921	19,304	0.0000152
38	0.004	0.101	26.875	0.0056	0.0	625,862	23,288	0.0000126
39	0.0035	0.09	35.102	0.0038	0.0	1,052,083	29,972	0.00000979
40	0.0031	0.08	44.745	0.0026	0.0	1,685,420	37,667	0.00000779
41	0.00275	0.07	56.860	0.0018	0.0	2,708,462	47,634	0.00000616
42	0.0025	0.063	68.800	0.00137	0.0	4,145,337	60,252	0.00000487
43	0.00225	0.057	84.938	0.00100	0.0	6,558,737	77,218	0.00000380
44	0.0020	0.051	107.500	0.00070	0.0	10,045,677	93,448	0.00000314
45	0.00175	0.044	140.408	0.00047	0.0	16,954,559	120,752	0.00000243
46	0.0015	0.038	191.111	0.00030	0.0	27,899,106	145,984	0.00000201
47	0.0014	0.036	219.388	0.00024	0.0	41,801,520	190,537	0.00000154
48	0.0013	0.033	254.438	0.00019	0.0	61,701,652	242,502	0.00000121

ALLOY 316L STAINLESS STEEL

STAINLESS STEEL

ASTM:	UNS: S31603
Ω/cir. mil. ft.: 67	Weight/Density: .289 lbs/in ² (7.9 g/cm ³)
<i>Chemical Composition %: Ni 10-14%, C .03% max, Cr 16-18%, Mn 2%, P .045%, S .03%, Si 1%, Mo 2-3%</i>	
Coeff. of Lin. Expansion, X 10⁻⁶: 16.5 (100°C), 18.2 (500°C), 19.5 (1,000°C)	
Conductivity: 14.6 w/mK	Specific Heat: .108 cal./gm @ 20°C
Temp. Coeff. of Resistance:	Specific Gravity: 7.9
Melting Point: ~1,400°C (~2,550°F)	Elongation: 20-40%
Max Operating Temp: ~925°C (~1,700°F)	Yield Point: 20,000-40,000 PSI
Soft Tensile: 85,000-115,000 PSI	

Diameter			Resistance @ 68° F/20° C Ω/ft	Sq. in./Ω 68°F	Weight Lb./1000 ft	Ω/lb.	Ft/Lb.	Cross sectional area (in ²)
B&S	Inches	Mm						
13	0.072	1.83	0.086	31.62	14.1	6.08	70.85	0.00407
14	0.064	1.63	0.109	22.21	11.2	9.73	89.55	0.00322
15	0.057	1.45	0.137	15.69	8.88	15.4	112.6	0.00256
16	0.051	1.29	0.171	11.24	7.04	24.3	142.0	0.00203
17	0.045	1.15	0.220	7.720	5.58	39.4	179.1	0.00161
18	0.04	1.02	0.278	5.422	4.37	63.6	228.8	0.00126
19	0.036	0.912	0.343	3.953	3.54	97.1	282.7	0.00102
20	0.032	0.812	0.435	2.776	2.79	155.9	358.6	0.000804
21	0.0285	0.723	0.548	1.961	2.21	247.6	452.0	0.000638
22	0.0253	0.644	0.695	1.372	1.76	395.4	568.7	0.000507
23	0.0226	0.573	0.871	0.978	1.39	626.5	719.1	0.000401
24	0.0201	0.51	1.101	0.688	1.09	1,011	918.3	0.000314
25	0.0179	0.455	1.389	0.486	0.881	1,577	1,135	0.000254
26	0.0159	0.405	1.760	0.341	0.690	2,551	1,449	0.000199
27	0.0142	0.361	2.207	0.243	0.548	4,028	1,825	0.000158
28	0.0126	0.321	2.803	0.169	0.434	6,466	2,307	0.000125
29	0.0113	0.286	3.485	0.122	0.347	10,049	2,884	0.000100
30	0.01	0.255	4.450	0.085	0.272	16,346	3,673	0.0000785
31	0.0089	0.227	5.618	0.060	0.217	25,878	4,606	0.0000626
32	0.008	0.202	6.953	0.043	0.172	40,422	5,814	0.0000496
33	0.0071	0.18	8.828	0.030	0.137	64,605	7,319	0.0000394
34	0.0063	0.16	11.21	0.021	0.108	103,620	9,242	0.0000312
35	0.0056	0.143	14.19	0.015	0.0857	165,656	11,674	0.0000247
36	0.005	0.127	17.80	0.0106	0.0680	261,869	14,712	0.0000196
37	0.0045	0.113	21.98	0.0077	0.0527	416,881	18,970	0.0000152
38	0.004	0.101	27.81	0.0054	0.0437	636,488	22,885	0.0000126
39	0.0035	0.09	36.33	0.0036	0.0340	1,069,947	29,454	0.00000979
40	0.0031	0.08	46.31	0.0025	0.0270	1,714,037	37,015	0.00000779
41	0.00275	0.07	58.84	0.0018	0.0214	2,754,450	46,810	0.00000616
42	0.0025	0.063	71.20	0.00132	0.0169	4,215,722	59,210	0.00000487
43	0.00225	0.057	87.90	0.00096	0.0132	6,670,099	75,882	0.00000380
44	0.0020	0.051	111.25	0.00068	0.0109	10,216,245	91,831	0.00000314
45	0.00175	0.044	145.31	0.00045	0.0084	17,242,433	118,663	0.00000243
46	0.0015	0.038	197.78	0.00029	0.0070	28,372,810	143,458	0.00000201
47	0.0014	0.036	227.04	0.00023	0.0053	42,511,275	187,241	0.00000154
48	0.0013	0.033	263.31	0.00019	0.0042	62,749,294	238,306	0.00000121

ALLOY 430 STAINLESS STEEL

STAINLESS STEEL

ASTM:	UNS: S43000
Ω/cir. mil. ft.: 360	Weight/Density: .282 lbs/in ² (7.8 g/cm ³)
Chemical Composition %: Cr 16-18%, C .12% max, Si 1% max, Mn 1% max, Fe - Balance	
Coeff. of Lin. Expansion, X 10⁻⁶: 10.4 (100°C), 11.0 (300°C), 11.2 (500°C), 11.9 (800°C)	
Conductivity: 24 w/mK	Specific Heat: .11 cal./gm @ 20°C
Temp. Coeff. of Resistance:	Specific Gravity: 7.65
Melting Point: ~1,510°C (~2,750°F)	Elongation: 15-30%
Max Operating Temp: ~815°C (~1,500°F)	Yield Point: 40,000-60,000 PSI
Soft Tensile: 64,000-79,000 PSI	

Diameter			Resistance @ 68° F/20° C Ω/ft	Sq. in./Ω 68°F	Weight Lb./1000 ft	Ω/lb.	Ft/Lb.	Cross sectional area (in ²)
B&S	Inches	Mm						
13	0.072	1.83	0.069	39.09	13.8	5.04	72.61	0.00407
14	0.064	1.63	0.088	27.45	10.9	8.07	91.77	0.00322
15	0.057	1.45	0.111	19.39	8.66	12.79	115.4	0.00256
16	0.051	1.29	0.138	13.89	6.87	20.15	145.6	0.00203
17	0.045	1.15	0.178	9.543	5.45	32.63	183.5	0.00161
18	0.04	1.02	0.225	6.702	4.26	52.77	234.5	0.00126
19	0.036	0.912	0.278	4.886	3.45	80.48	289.7	0.00102
20	0.032	0.812	0.352	3.431	2.72	129.2	367.5	0.000804
21	0.0285	0.723	0.443	2.424	2.16	205.3	463.2	0.000638
22	0.0253	0.644	0.562	1.696	1.72	327.8	582.9	0.000507
23	0.0226	0.573	0.705	1.209	1.36	519.4	736.9	0.000401
24	0.0201	0.51	0.891	0.850	1.06	838.6	941.1	0.000314
25	0.0179	0.455	1.124	0.601	0.860	1,307	1,163	0.000254
26	0.0159	0.405	1.424	0.421	0.673	2,115	1,485	0.000199
27	0.0142	0.361	1.785	0.300	0.535	3,339	1,870	0.000158
28	0.0126	0.321	2.268	0.209	0.423	5,361	2,364	0.000125
29	0.0113	0.286	2.819	0.151	0.338	8,331	2,955	0.000100
30	0.01	0.255	3.600	0.105	0.266	13,552	3,764	0.0000785
31	0.0089	0.227	4.545	0.074	0.212	21,454	4,721	0.0000626
32	0.0077	0.202	6.072	0.048	0.168	36,175	5,958	0.0000496
33	0.0071	0.18	7.141	0.037	0.133	53,562	7,500	0.0000394
34	0.0063	0.16	9.070	0.026	0.106	85,909	9,471	0.0000312
35	0.0056	0.143	11.48	0.018	0.0836	137,341	11,964	0.0000247
36	0.005	0.127	14.40	0.0131	0.0663	217,108	15,077	0.0000196
37	0.0045	0.113	17.78	0.0095	0.0514	345,624	19,441	0.0000152
38	0.004	0.101	22.50	0.0067	0.0426	527,693	23,453	0.0000126
39	0.0035	0.09	29.39	0.0045	0.0331	887,061	30,185	0.00000979
40	0.0031	0.08	37.46	0.0031	0.0264	1,421,056	37,934	0.00000779
41	0.00275	0.07	47.60	0.0022	0.0208	2,283,632	47,972	0.00000616
42	0.0025	0.063	57.60	0.00164	0.0165	3,495,129	60,679	0.00000487
43	0.00225	0.057	71.11	0.00119	0.0129	5,529,979	77,765	0.00000380
44	0.0020	0.051	90.00	0.00084	0.0106	8,469,982	94,111	0.00000314
45	0.00175	0.044	117.55	0.00056	0.0082	14,295,185	121,608	0.00000243
46	0.0015	0.038	160.00	0.00035	0.0068	23,523,047	147,019	0.00000201
47	0.0014	0.036	183.67	0.00029	0.0052	35,244,825	191,888	0.00000154
48	0.0013	0.033	213.02	0.00023	0.0041	52,023,560	244,222	0.00000121