PRECISION WIRE TECHNOLOGIES

6320 Highview Drive, Fort Wayne, IN 46818
Phone: (260) 490-6477 Fax: (260) 490-8437
Website: http://www.precisionwiretech.com

Alloy 302 Stainless Steel

ASTM: ***UNS:*** *S30200*

Ω/cir. mil. ft.: *433* ***Weight/Density:*** *.286 lbs/in² (7.9 g/cm³)*

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 @ 68º F/20º C	Sq. in./Ω	Weight	Ω/lb.	Ft/Lb.	Cross sectional
B&S	Inches	Mm	Ω/ft	68°F	Lb./1000 ft			area (in^2)
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