



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

Alloy 872 Resistance

ASTM: B603-1	DIN: 17470	UNS: K92500
Ω/cir. mil. ft.: 872	Weight/Density: .256 lbs/in ² (7.1 g/cm ³)	
Chemical Composition %: Cr 20-24%, Al 5-6%, Fe - Balance		
Coeff. of Lin. Expansion, X 10⁻⁶: 11 (200°C), 12 (400°C), 13 (600°C), 14 (800°C), 15 (1,000°C)		
Conductivity: 12.5 w/mK	Specific Heat: .110 cal./gm @ 20°C	
Temp. Coeff. of Resistance: .00002	Specific Gravity: 7.10	
Melting Point: ~1,500°C (~2,730°F)	Elongation: 20-40%	
Max Operating Temp: ~1,350°C (~2,462°F)	Yield Point: 62,000-92,000 PSI	
Soft Tensile: 86,000-110,000 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	0.169	16.08	12.5	13.5	79.98	0.00407
14	0.064	1.63	0.214	14.67	9.91	21.4	100.8	0.00322
15	0.057	1.45	0.269	10.36	7.87	34.0	127.1	0.00256
16	0.051	1.29	0.336	7.380	6.24	54.1	160.3	0.00203
17	0.045	1.15	0.432	5.125	4.95	86.1	202.2	0.00161
18	0.04	1.02	0.547	3.600	3.92	136.9	255.0	0.00126
19	0.036	0.912	0.675	2.598	3.11	217.6	321.4	0.00102
20	0.032	0.812	0.854	1.829	2.47	346.1	405.5	0.000804
21	0.0285	0.723	1.077	1.292	1.96	549.9	511.1	0.000638
22	0.0253	0.644	1.367	0.904	1.55	874.0	644.1	0.000507
23	0.0226	0.573	1.713	0.645	1.23	1,391	812.7	0.000401
24	0.0201	0.51	2.166	0.454	0.977	2,211	1,024	0.000314
25	0.0179	0.455	2.731	0.320	0.774	3,517	1,292	0.000254
26	0.0159	0.405	3.461	0.225	0.614	5,591	1,629	0.000199
27	0.0142	0.361	4.339	0.160	0.487	8,881	2,053	0.000158
28	0.0126	0.321	5.511	0.112	0.386	14,110	2,591	0.000125
29	0.0113	0.286	6.853	0.081	0.306	22,460	3,265	0.000100
30	0.01	0.255	8.750	0.056	0.242	36,100	4,139	0.0000785
31	0.0089	0.227	11.05	0.039	0.193	56,800	5,195	0.0000626
32	0.008	0.202	13.67	0.029	0.153	90,400	6,551	0.0000496
33	0.0071	0.18	17.36	0.020	0.121	143,900	8,267	0.0000394
34	0.0063	0.16	22.05	0.014	0.096	228,400	10,420	0.0000312
35	0.0056	0.143	27.90	0.010	0.0762	363,200	13,130	0.0000247
36	0.005	0.127	35.00	0.0070	0.0604	577,700	16,560	0.0000196
37	0.0045	0.113	43.21	0.0051	0.0479	918,100	20,880	0.0000152
38	0.004	0.101	54.69	0.0036	0.0380	1,461,000	26,340	0.0000126
39	0.0035	0.09	71.43	0.0024	0.0301	2,322,000	33,210	0.00000979
40	0.0031	0.08	91.05	0.0017	0.0239	3,692,000	41,870	0.00000779
41	0.00275	0.07	115.70	0.0012	0.0187	5,896,000	52,830	0.00000616
42	0.0025	0.063	140.00	0.00087	0.0151	9,336,000	66,240	0.00000487
43	0.00225	0.057	172.84	0.00064	0.0117	15,350,000	85,550	0.00000380
44	0.0020	0.051	218.75	0.00045	0.0097	23,300,000	103,500	0.00000314
45	0.00175	0.044	285.71	0.00030	0.0075	38,274,054	133,959	0.00000243
46	0.0015	0.038	388.89	0.00019	0.0062	62,980,814	161,951	0.00000201
47	0.0014	0.036	446.43	0.00015	0.0047	94,364,806	211,377	0.00000154
48	0.0013	0.033	517.75	0.00012	0.0037	139,288,341	269,025	0.00000121