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Alloy 710 Resistance Heating

ASTM:	UNS: N06008
Ω/cir. mil. ft.: 710	Weight/Density: .293 lbs/in² (8.1 g/cm³)
Chemical Composition %: Ni 70% nom., Cr 30% nom.	
Coeff. of Lin. Expansion, X 10⁻⁶: 13.7 (250°C), 14.6 (500°C), 15.8 (750°C), 17.1 (1,000°C)	
Conductivity: 14 w/mK	Specific Heat: .110 cal./gm @ 20°C
Temp. Coeff. of Resistance: .00009	Specific Gravity: 8.11
Melting Point: ~1,380°C (~2,515°F)	Elongation: 15-30%
Max Operating Temp: ~1,250°C (~2,280°F)	Yield Point: 55,000-75,000 PSI
Soft Tensile: 125,000-145,000 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	0.137	19.87	14.3	9.55	69.70	0.00407
14	0.064	1.63	0.173	13.95	11.3	15.3	88.33	0.00322
15	0.057	1.45	0.219	9.887	9.00	24.3	111.1	0.00256
16	0.051	1.29	0.273	6.967	7.12	38.3	140.4	0.00203
17	0.045	1.15	0.351	4.934	5.66	61.9	176.7	0.00161
18	0.04	1.02	0.444	3.474	4.48	99.1	223.2	0.00126
19	0.036	0.912	0.548	2.458	3.55	154.2	281.5	0.00102
20	0.032	0.812	0.693	1.737	2.83	245.0	353.3	0.000804
21	0.0285	0.723	0.874	1.229	2.24	389.4	445.5	0.000638
22	0.0253	0.644	1.109	0.860	1.77	627.9	566.1	0.000507
23	0.0226	0.573	1.390	0.614	1.41	989.1	711.5	0.000401
24	0.0201	0.51	1.757	0.432	1.11	1,579	898.8	0.000314
25	0.0179	0.455	2.216	0.305	0.884	2,506	1,131	0.000254
26	0.0159	0.405	2.808	0.213	0.698	4,024	1,433	0.000199
27	0.0142	0.361	3.521	0.152	0.556	6,329	1,798	0.000158
28	0.0126	0.321	4.472	0.106	0.438	10,205	2,282	0.000125
29	0.0113	0.286	5.560	0.077	0.352	15,781	2,838	0.000100
30	0.01	0.255	7.100	0.053	0.276	25,705	3,620	0.0000785
31	0.0089	0.227	8.964	0.037	0.219	41,000	4,574	0.0000626
32	0.008	0.202	11.09	0.027	0.177	62,799	5,661	0.0000496
33	0.0071	0.18	14.08	0.019	0.140	100,915	7,165	0.0000394
34	0.0063	0.16	17.89	0.013	0.109	163,648	9,148	0.0000312
35	0.0056	0.143	22.64	0.009	0.0866	261,522	11,551	0.0000247
36	0.005	0.127	28.40	0.0066	0.0690	411,575	14,492	0.0000196
37	0.0045	0.113	35.06	0.0048	0.0559	626,944	17,881	0.0000152
38	0.004	0.101	44.38	0.0034	0.0441	1,005,889	22,668	0.0000126
39	0.0035	0.09	57.96	0.0023	0.0338	1,716,312	29,612	0.00000979
40	0.0031	0.08	73.88	0.0016	0.0265	2,783,019	37,669	0.00000779
41	0.00275	0.07	93.88	0.0012	0.0217	4,333,015	46,153	0.00000616
42	0.0025	0.063	113.60	0.00083	0.0173	6,575,901	57,886	0.00000487
43	0.00225	0.057	140.25	0.00057	0.0134	10,488,731	74,788	0.00000380
44	0.0020	0.051	177.50	0.00043	0.0110	16,094,226	90,672	0.00000314
45	0.00175	0.044	231.84	0.00029	0.0085	27,116,169	116,962	0.00000243
46	0.0015	0.038	315.56	0.00022	0.0071	44,656,784	141,518	0.00000201
47	0.0014	0.036	362.24	0.00015	0.0054	66,995,047	184,944	0.00000154
48	0.0013	0.033	420.12	0.00010	0.0042	98,953,821	235,538	0.00000121