



## Resistance Wire

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**TEMPCO** stocks a large amount of resistance wire that is required in our own manufacturing. We have made this inventory available to you for use in applications such as industrial heating, kilns, process heating and small-scale manufacturing.

The resistance wire is offered both in round wire and ribbon.

**Type A:** Wire only 2190°F (1200°C)

**Type C:** Wire 2100°F (1150°C) Ribbon 2100°F (1150°C)

**Type D:** Wire only 2370°F (1300°C)

### "A" Wire (Kanthal Nikrothal 80 or Equivalent)

**Composition:** 80% Nickel, 20% Chromium

**Specific Resistance:** 655 Ohms / circ. mil foot @ 68°F / 20°C

**Maximum continuous**

**operating temperature:** 2190°F / 1200°C  
(element temperature in air)

**Melting Point:** 1400°C / 2550°F

**Density:** (lbs/in<sup>3</sup>): 0.300

**Specific Gravity:** 8.41

**Resistance Tolerance:** 8 ga. through 23 ga. ±3%, 24 ga. through 36 ga. ±5%, 37 ga. through 43 ga. ±8%



**Note:** To obtain the working temperature resistance, multiply the factor by the room temperature resistance.

<b>Temp. °F</b>	68	212	392	752	1112	1292	1472	1652	1832	2012	2192
<b>Temp. °C</b>	20	100	200	400	600	700	800	900	1000	1100	1200
<b>Factor</b>	1.00	1.01	1.02	1.04	1.05	1.04	1.04	1.04	1.05	1.05	1.06

(These figures are given as a basis for engineering calculations and represent average material as supplied.)

Part Number	Gauge (AWG)	Diameter	Resistance at 68°F/20°C ohms/ft.	Weight lb./1000 ft.	Length ft./lb.	Nominal Spool Weight	Standard Spool Size Code
RES-101-142	8	0.129	0.0397	46.7	21.4	24	—
RES-101-132	9	0.114	0.0501	37	27	24	—
RES-101-131	12	0.0808	0.100	18.5	54.1	24	—
RES-101-102	17	0.0453	0.320	5.8	172.4	6	D
RES-101-130	18	0.0403	0.404	4.59	217.9	10	D
RES-101-103	19	0.0359	0.509	3.64	274.7	9	D
RES-101-104	20	0.0320	0.640	2.9	344.8	10	D
RES-101-105	21	0.0285	0.807	2.3	434.8	8	D
RES-101-106	22	0.0253	1.02	1.81	552.5	9	D
RES-101-107	23	0.0226	1.28	1.44	694.4	5	C
RES-101-108	24	0.0201	1.62	1.14	877.2	10	D
RES-101-109	25	0.0179	2.05	0.906	1104	5	C
RES-101-110	26	0.0159	2.59	0.715	1399	2	F
RES-101-111	27	0.0142	3.25	0.57	1754	2	F
RES-101-112	28	0.0126	4.13	0.449	2227	3.5	F
RES-101-113	29	0.0113	5.13	0.361	2770	3.5	F
RES-101-114	30	0.0100	6.56	0.283	3534	2.25	F
RES-101-115	31	0.00890	8.28	0.224	4465	2.25	F
RES-101-116	32	0.00800	10.20	0.181	5525	2.5	F
RES-101-117	33	0.00710	13.00	0.143	6993	1.75	F
RES-101-118	34	0.00630	16.50	0.112	8929	2	B
RES-101-119	35	0.00560	20.90	0.0887	11,274	1	A
RES-101-120	36	0.00500	26.20	0.0707	14,144	1	A
RES-101-121	37	0.00450	32.40	0.0573	17,452	1	A
RES-101-122	38	0.00400	41.00	0.0452	22,124	1	A
RES-101-123	39	0.00350	53.50	0.0346	28,901	1	A
RES-101-124	40	0.00310	68.20	0.0272	36,765	1	A
RES-101-125	41	0.00280	83.60	0.0222	45,045	0.5	A
RES-101-126	42	0.00250	105.00	0.0177	56,497	0.3	A
RES-101-127	43	0.00220	135.00	0.0137	72,993	0.35	A



*All Items Available from Stock*

### Cross Reference Chart

Kanthal	Hoskins	Driver-Harris	Carpenter	Rescal	Calfine Wire	Harrison	Thyssen Krup VDM	MWS Wire	Jelliff	Molecu
Nikrothal 60	Chromel C	Nichrome	Tophet C	Resistohm 60	Stablohm 675	HAI-NiCr 60	Cronifer II	MWS-675	Alloy C	Electroloy
Nikrothal 80	Chromel A	Nichrome V	Tophet A	Resistohm 80	Stablohm 650	Nichrome V	Cronix 80	MWS-650	Alloy A	Protoloy
Kanthal D	Alloy 815	—	Alchrome DK	Resistohm 135	Stablohm 812	Alferon 901	Aluchrom 5	—	—	—