

## FeCrAl Electric Resistance Heating Alloy



FeCrAl (0Cr21Al4) attains low temperature coefficient of electric resistivity. It is used to produce large amount of heat in the commercial heating operations. It offers superior resistance to oxidation and corrosion at the high temperatures. It prevents scaling and embrittlement of material and provides long term performance in the rigorous corrosive conditions at the elevated temperatures up to 1250oC.

### FeCrAl high temperature resistance heating alloy chemical composition

Elements	1Cr13Al4	0Cr25Al5	0Cr21Al6	0Cr23Al5	1Cr20Al3	0Cr21Al6Nb	0Cr27Al7Mo2
Chromium	12 to 15	23 to 26	19 to 22	20.5 to 23.5	18 to 21	21 to 23	26.5 to 27.8
Aluminum	4 to 6	4.5 to 6.5	5 to 7	4.2 to 5.3	3 to 4.2	5 to 7	6 to 7
Rhenium	Suitable	Suitable	Suitable	Suitable	Suitable	Suitable	Suitable
Iron	Rem.	Rem.	Rem.	Rem.	Rem.	Rem.	Rem.
						Niobium – 0.5 %	Molybdenum 1.8 to 2.2 %

### Physical Properties

Elements	1Cr13Al4	0Cr25Al5	0Cr21Al6	0Cr23Al5	1Cr20Al3	0Cr21Al6Nb	0Cr27Al7Mo2
Highest application temperature	950 oC	1250 oC	1250 oC	1250 oC	1100 oC	1350 oC	1400 oC
Resistivity at 20°C (micro ohm-meter)	1.25 micro ohm-meter	1.42 micro ohm-meter	1.42 micro ohm-meter	1.35 micro ohm-meter	1.23 micro ohm-meter	1.45 micro ohm-meter	1.53 micro ohm-meter
Density (gram/cm <sup>3</sup> )	7.40 gram/cm <sup>3</sup>	7.10 gram/cm <sup>3</sup>	7.16 gram/cm <sup>3</sup>	7.25 gram/cm <sup>3</sup>	7.35 gram/cm <sup>3</sup>	7.10 gram/cm <sup>3</sup>	7.10 gram/cm <sup>3</sup>
Thermal conductivity(KJ/m·h·°C)	52.7	46.1	63.2	60.2	46.9	46.1	45.2
Coefficient of lines expansion( ×10 <sup>-6</sup> per oC)	15.4 ×10 <sup>-6</sup> per oC	16.0 ×10 <sup>-6</sup> per oC	14.7 ×10 <sup>-6</sup> per oC	15.0 ×10 <sup>-6</sup> per oC	13.5 ×10 <sup>-6</sup> per oC	16.0 ×10 <sup>-6</sup> per oC	16.0 ×10 <sup>-6</sup> per oC
Melting temperature (°C)	1450	1500	1500	1500	1500	1510	1520
Tensile strength (N/mm <sup>2</sup> )	580 to 680	630 to 780	630 to 780	630 to 780	600 to 700	650 to 800	680 to 830
Elongation (%) at cracking	Above 16	Above 12	Above 10				
Reduction of area (%)	65 to 75 %	60 to 75 %	65 to 75 %				
Bending frequency (F/R)	Above 5						
Hardness(H.B.)	200 to 260						
Regular application		Above	Above	Above	Above	Above	Above

### Corrosion Resistance

1. Due to absence of nickel, FeCrAl alloys offer good performance in the sulfur conditions.

2. It is not preferred for using in the nitriding conditions because the preparation of chromium and aluminum nitrides reduce the corrosion resistance rapidly.
3. Water steam slow down the functionality of alloy as it produces iron oxide from 1000oC.
4. In the nitrogen atmospheres, functional temperature should be controlled up to 950oC. However adequate life time at high temperature can be obtained but preoxidation as well as periodic reoxidation occur.
5. In the presence of hydrogen, the operation temperature should be controlled from 1300oC to 1400oC.
6. In endothermic/exothermic conditions, application temperature should be up to 1100oC to 1150oC.

In vacuum conditions, temperature up to 1000oC is recommended, however the limit is lowered quickly on the base of vacuum levels.

### Electric resistivity

Diameter	Cross Sectional Area	FeCrAl 1Cr13Al4			FeCrAl 0Cr25Al5			FeCrAl 0Cr21Al6		
		Resistivity ( $\mu\Omega \cdot m$ )			Resistivity( $\mu\Omega \cdot m$ )			Resistivity( $\mu\Omega \cdot m$ )		
		Resistance at 20°C	Length	Weight	Resistance at 20oC	Length	Weight	Resistance at 20oC	Length	Weight
0.10 mm	0.0079 mm <sup>2</sup>	158.2 $\Omega/m$	17207 m/kg	0.0000582 kg/m	181 $\Omega/m$	17936 m/kg	0.0000560 kg/m	180.7 $\Omega/m$	17906 m/kg	0.0000560 kg/m
0.12 mm	0.0112 mm <sup>2</sup>	111 $\Omega/m$	11948 m/kg	0.000084 kg/m	126 $\Omega/m$	12455 m/kg	0.000081 kg/m	125.7 $\Omega/m$	12361 m/kg	0.0000810 kg/m
0.15 mm	0.0178 mm <sup>2</sup>	71 $\Omega/m$	7648 m/kg	0.00013 kg/m	80.5 $\Omega/m$	7972 m/kg	0.000130 kg/m	80.1 $\Omega/m$	7892 m/kg	0.000129 kg/m
0.17 mm	0.023 mm <sup>2</sup>	55 $\Omega/m$	5955 m/kg	0.00017 kg/m	63 $\Omega/m$	6207 m/kg	0.000162 kg/m	63 $\Omega/m$	6154 m/kg	0.000164 kg/m
0.19 mm	0.028 mm <sup>2</sup>	44.2 $\Omega/m$	4767 m/kg	0.000211 kg/m	50.2 $\Omega/m$	4961 m/kg	0.000202 kg/m	50.2 $\Omega/m$	4919 m/kg	0.000204 kg/m
0.21 mm	0.035 mm <sup>2</sup>	36.2 $\Omega/m$	3902 m/kg	0.00026 kg/m	41.1 $\Omega/m$	4067 m/kg	0.0002 kg/m	41.1 $\Omega/m$	4038 m/kg	0.000249 kg/m
0.25 mm	0.05 mm <sup>2</sup>	26 $\Omega/m$	2754 m/kg	0.000362 kg/m	29 $\Omega/m$	2872 m/kg	0.000351 kg/m	29 $\Omega/m$	2845 m/kg	0.000353 kg/m
0.27 mm	0.06 mm <sup>2</sup>	22 $\Omega/m$	2361 m/kg	0.000425 kg/m	25 $\Omega/m$	2462 m/kg	0.000410 kg/m	25 $\Omega/m$	2438 m/kg	0.000411 kg/m
0.29 mm	0.07 mm <sup>2</sup>	19 $\Omega/m$	2047 m/kg	0.00049 kg/m	26 $\Omega/m$	2132 m/kg	0.000470 kg/m	21.6 $\Omega/m$	2114 m/kg	0.000475 kg/m
0.31 mm	0.076 mm <sup>2</sup>	17 $\Omega/m$	1791 m/kg	0.00056 kg/m	19 $\Omega/m$	1868 m/kg	0.000540 kg/m	18.9 $\Omega/m$	1850 m/kg	0.000542 kg/m
0.35 mm	0.0963 mm <sup>2</sup>	13.1 $\Omega/m$	1401 m/kg	0.00072 kg/m	15 $\Omega/m$	1466 m/kg	0.000682 kg/m	15 $\Omega/m$	1453 m/kg	0.000690 kg/m
0.40 mm	0.126 mm <sup>2</sup>	10 $\Omega/m$	1076 m/kg	0.000931 kg/m	11.4 $\Omega/m$	1123 m/kg	0.000893 kg/m	11.4 $\Omega/m$	1112 m/kg	0.000901 kg/m
0.45 mm	0.16 mm <sup>2</sup>	7.9 $\Omega/m$	851 m/kg	0.001178 kg/m	8.92 $\Omega/m$	888 m/kg	0.001130 kg/m	8.94 $\Omega/m$	880 m/kg	0.001140 kg/m
0.50 mm	0.1965 mm <sup>2</sup>	6.4 $\Omega/m$	689 m/kg	0.001451 kg/m	7.25 $\Omega/m$	719 m/kg	0.001395 kg/m	7.24 $\Omega/m$	712 m/kg	0.001407 kg/m
0.60 mm	0.284 mm <sup>2</sup>	4.5 $\Omega/m$	481 m/kg	0.002091 kg/m	5.04 $\Omega/m$	498 m/kg	0.00202 kg/m	5.03 $\Omega/m$	495 m/kg	0.002028 kg/m

Diameter	Cross Sectional Area	FeCrAl 1Cr13Al4			FeCrAl 0Cr25Al5			FeCrAl 0Cr21Al6		
		Resistivity ( $\mu\Omega \cdot m$ )			Resistivity( $\mu\Omega \cdot m$ )			Resistivity( $\mu\Omega \cdot m$ )		
		Resistance at 20°C	Length	Weight	Resistance at 20oC	Length	Weight	Resistance at 20oC	Length	Weight
	mm2		m/kg	kg/m		m/kg	kg/m		m/kg	kg/m
0.70 mm	0.383 mm2	3.3 $\Omega/m$	352 m/kg	0.002849 kg/m	3.7 $\Omega/m$	368 m/kg	0.00278 kg/m	3.70 $\Omega/m$	363 m/kg	0.002752 kg/m
0.80 mm	0.504 mm2	2.5 $\Omega/m$	268 m/kg	0.003721 kg/m	3 $\Omega/m$	282 m/kg	0.00360 kg/m	2.84 $\Omega/m$	279 m/kg	0.003602 kg/m
0.90 mm	0.64 mm2	2 $\Omega/m$	213 m/kg	0.004709 kg/m	2.24 $\Omega/m$	224 m/kg	0.00453 kg/m	2.24 $\Omega/m$	221 m/kg	0.004555 kg/m
1.00 mm	0.79 mm2	1.6 $\Omega/m$	173 m/kg	0.005813 kg/m	1.81 $\Omega/m$	179.7 m/kg	0.00560 kg/m	1.809 $\Omega/m$	178 m/kg	0.005621 kg/m
1.20 mm	1.132 mm2	1.21 $\Omega/m$	118 m/kg	0.008368 kg/m	1.26 $\Omega/m$	124.7 m/kg	0.00804 kg/m	1.260 $\Omega/m$	123.6 m/kg	0.008099 kg/m
1.40 mm	1.54 mm2	0.82 $\Omega/m$	87.9 m/kg	0.00114 kg/m	0.93 $\Omega/m$	91.7 m/kg	0.01095 kg/m	0.923 $\Omega/m$	90.9 m/kg	0.01101 kg/n
1.60 mm	3.02 mm2	0.63 $\Omega/m$	68 m/kg	0.0149 kg/m	0.71 $\Omega/m$	70.2 m/kg	0.0143 kg/m	0.707 $\Omega/m$	69.6 m/kg	0.01440 kg/n
1.80 mm	2.55 mm2	0.5 $\Omega/m$	53.2 m/kg	0.01882 kg/m	0.56 $\Omega/m$	55.7 m/kg	0.01804 kg/m	0.5560 $\Omega/m$	55 m/kg	0.01820 kg/n
2.00 mm	3.15 mm2	0.4 $\Omega/m$	43.1 m/kg	0.0233 kg/m	0.453 $\Omega/m$	44.9 m/kg	0.0224 kg/m	0.453 $\Omega/m$	44.8 m/kg	0.02249 kg/n
2.20 mm	3.81 mm2	0.33 $\Omega/m$	36 m/kg	0.02812 kg/m	0.376 $\Omega/m$	37.1 m/kg	0.0271 kg/m	0.375 $\Omega/m$	37 m/kg	0.02721 kg/n
2.50 mm	4.92 mm2	0.26 $\Omega/m$	28 m/kg	0.03633 kg/m	0.29 $\Omega/m$	28.8 m/kg	0.0352 kg/m	0.290 $\Omega/m$	28.6 m/kg	0.03518 kg/n
2.80 mm	6.17 mm2	0.21 $\Omega/m$	21.8 m/kg	0.0456 kg/m	0.24 $\Omega/m$	22.9 m/kg	0.0445 kg/m	0.232 $\Omega/m$	22.8 m/kg	0.04412 kg/m
3.00 mm	7.08 mm2	0.177 $\Omega/m$	19.2 m/kg	0.05232 kg/m	0.21 $\Omega/m$	19.94 m/kg	0.0504 kg/m	0.202 $\Omega/m$	19.9 m/kg	0.05063 kg/n
3.50 mm	9.63 mm2	0.13 $\Omega/m$	14.1 m/kg	0.07121 kg/m	0.15 $\Omega/m$	14.66 m/kg	0.0685 kg/m	0.1477 $\Omega/m$	14.7 m/kg	0.06889 kg/n
4.00 mm	12.58 mm2	0.0996 $\Omega/m$	10.8 m/kg	0.09288 kg/m	0.1131 $\Omega/m$	11.23 m/kg	0.0894 kg/m	0.1131 $\Omega/m$	11.2 m/kg	0.09001 kg/n
4.50 mm	15.91 mm2	0.079 $\Omega/m$	8.51 m/kg	0.1178 kg/m	0.0894 $\Omega/m$	8.88 m/kg	0.1131 kg/m	0.0894 $\Omega/m$	8.80 m/kg	0.1139 kg/m
5.00 mm	19.64 mm2	0.064 $\Omega/m$	6.9 m/kg	0.1454 kg/m	0.0724 $\Omega/m$	7.19 m/kg	0.1396 kg/m	0.0724 $\Omega/m$	7.12 m/kg	0.1407 kg/m
5.50 mm	23.81 mm2	0.053 $\Omega/m$	5.7 m/kg	0.176 kg/m	0.06 $\Omega/m$	5.94 m/kg	0.1692 kg/m	0.0599 $\Omega/m$	5.88 m/kg	0.1706 kg/m
6.00 mm	28.31 mm2	0.0443 $\Omega/m$	4.8 m/kg	0.2093 kg/m	0.051 $\Omega/m$	4.99 m/kg	0.203 kg/m	0.0503 $\Omega/m$	4.99 m/kg	0.2027 kg/m
6.50 mm	33.21 mm2	0.038 $\Omega/m$	4.1 m/kg	0.246 kg/m	0.043 $\Omega/m$	4.26 m/kg	0.240 kg/m	0.0429 $\Omega/m$	4.23 m/kg	0.2378 kg/m
7.00 mm	38.51 mm2	0.033 $\Omega/m$	3.52 m/kg	0.285 kg/m	0.037 $\Omega/m$	3.68 m/kg	0.276 kg/m	0.0370 $\Omega/m$	3.65 m/kg	0.2758 kg/m

Diameter	Cross Sectional Area	0Cr23Al5		1Cr20Al3	
		Resistivity micro-ohm • m		Resistivity micro-ohm • m	

		Resistance at 20°C	Length	Weight	Resistance at 20°C	Length	Weight
0.10 mm	0.0079 mm <sup>2</sup>	173.2 Ω/m	17683 m/kg	0.000057 kg/m	159 Ω/m	17454 m/kg	0.0000574 kg/m
0.12 mm	0.0114 mm <sup>2</sup>	119.6 Ω/m	12206 m/kg	0.000082 kg/m	111 Ω/m	12035 m/kg	0.0000832 kg/m
0.15 mm	0.0178 mm <sup>2</sup>	76.5 Ω/m	7793 m/kg	0.00013 kg/m	70 Ω/m	7694 m/kg	0.000131 kg/m
0.17 mm	0.0228 mm <sup>2</sup>	59.6 Ω/m	6076 m/kg	0.00017 kg/m	54.5 Ω/m	5990 m/kg	0.000170 kg/m
0.19 mm	0.0285 mm <sup>2</sup>	48 Ω/m	4854 m/kg	0.00021 kg/m	43.7 Ω/m	4787 m/kg	0.000210 kg/m
0.21 mm	0.0347 mm <sup>2</sup>	36 Ω/m	3986 m/kg	0.00028 kg/m	36 Ω/m	3939 m/kg	0.000256 kg/m
0.25 mm	0.0492 mm <sup>2</sup>	28 Ω/m	2809 m/kg	0.00036 kg/m	25.6 Ω/m	2772 m/kg	0.000362 kg/m
0.27 mm	0.0574 mm <sup>2</sup>	22 Ω/m	2407 m/kg	0.00045 kg/m	21.8 Ω/m	2377 m/kg	0.000422 kg/m
0.29 mm	0.0662 mm <sup>2</sup>	19.2 Ω/m	2087 m/kg	0.00052 kg/m	19 Ω/m	2060 m/kg	0.000487 kg/m
0.31 mm	0.0756 mm <sup>2</sup>	17 Ω/m	1827 m/kg	0.000582 kg/m	16.9 Ω/m	1804 m/kg	0.000556 kg/m
0.35 mm	0.0963 mm <sup>2</sup>	14.1 Ω/m	1434 m/kg	0.000698 kg/m	15 Ω/m	1416 m/kg	0.000708 kg/m
0.40 mm	0.1258 mm <sup>2</sup>	10.8 Ω/m	1097 m/kg	0.000912 kg/m	10 Ω/m	1084 m/kg	0.000925 kg/m
0.45 mm	0.16 mm <sup>2</sup>	8.5 Ω/m	867 m/kg	0.0012 kg/m	7.78 Ω/m	857 m/kg	0.00118 kg/m
0.50 mm	0.197 mm <sup>2</sup>	7 Ω/m	703 m/kg	0.00143 kg/m	6.4 Ω/m	696 m/kg	0.00146 kg/m
0.60 mm	0.284 mm <sup>2</sup>	4.8 Ω/m	496 m/kg	0.0021 kg/m	4.51 Ω/m	482 m/kg	0.00209 kg/m
0.70 mm	0.39 mm <sup>2</sup>	3.6 Ω/m	358 m/kg	0.0028 kg/m	3.23 Ω/m	355 m/kg	0.00286 kg/m
0.80 mm	0.51 mm <sup>2</sup>	2.7 Ω/m	274 m/kg	0.0037 kg/m	2.8 Ω/m	272 m/kg	0.003700 kg/m
0.90 mm	0.64 mm <sup>2</sup>	2.3 Ω/m	217 m/kg	0.00462 kg/m	2 Ω/m	214 m/kg	0.004680 kg/m
1.00 mm	0.79 mm <sup>2</sup>	1.8 Ω/m	176 m/kg	0.0057 kg/m	1.8 Ω/m	175 m/kg	0.005775 kg/m
1.20 mm	1.132 mm <sup>2</sup>	1.2 Ω/m	122 m/kg	0.00821 kg/m	1.3 Ω/m	123 m/kg	0.008315 kg/m
1.40 mm	1.54 mm <sup>2</sup>	0.88 Ω/m	89.6 m/kg	0.01117 kg/m	1 Ω/m	88.6 m/kg	0.01132 kg/m
1.60 mm	3.02 mm <sup>2</sup>	0.7 Ω/m	68.6 m/kg	0.01458 kg/m	0.65 Ω/m	67.8 m/kg	0.01478 kg/m
1.80 mm	2.55 mm <sup>2</sup>	0.533 Ω/m	54.3 m/kg	0.01843 kg/m	0.51 Ω/m	53.57 m/kg	0.01868 kg/m
2.00 mm	3.15 mm <sup>2</sup>	0.431 Ω/m	43.9 m/kg	0.02278 kg/m	0.44 Ω/m	43.34 m/kg	0.02309 kg/m
2.20 mm	3.81 mm <sup>2</sup>	0.356 Ω/m	36.3 m/kg	0.02756 kg/m	0.35 Ω/m	35.81 m/kg	0.02796 kg/m
2.50 mm	4.92 mm <sup>2</sup>	0.276 Ω/m	28.1 m/kg	0.0385 kg/m	0.32 Ω/m	27.72 m/kg	0.03620 kg/m
3.00 mm	7.08 mm <sup>2</sup>	0.192 Ω/m	19.5 m/kg	0.0513 kg/m	0.1743 Ω/m	19.3 m/kg	0.05201 kg/m
3.50 mm	9.63 mm <sup>2</sup>	0.141 Ω/m	14.3 m/kg	0.0698 kg/m	0.130 Ω/m	14.15 m/kg	0.07072 kg/m
4.00 mm	12.6 mm <sup>2</sup>	0.11 Ω/m	11.0 m/kg	0.09114 kg/m	0.1 Ω/m	10.83 m/kg	0.09240 kg/m
4.50 mm	15.91 mm <sup>2</sup>	0.085 Ω/m	8.67 m/kg	0.1154 kg/m	0.078 Ω/m	8.60 m/kg	0.1170 kg/m
5.00 mm	19.62 mm <sup>2</sup>	0.069 Ω/m	7.03 m/kg	0.1424 kg/m	0.063 Ω/m	7 m/kg	0.1444 kg/m
5.50 mm	23.81 mm <sup>2</sup>	0.0569 Ω/m	5.80 m/kg	0.173 kg/m	0.054 Ω/m	5.81 m/kg	0.1750 kg/m
6.00 mm	28.31 mm <sup>2</sup>	0.0478 Ω/m	4.88 m/kg	0.2051 kg/m	0.046 Ω/m	4.86 m/kg	0.2081 kg/m
6.50 mm	33.21 mm <sup>2</sup>	0.041 Ω/m	4.15 m/kg	0.241 kg/m	0.06 Ω/m	4.11 m/kg	0.2442 kg/m
7.00 mm	38.51 mm <sup>2</sup>	0.0352 Ω/m	3.58 m/kg	0.2792 kg/m	0.033 Ω/m	3.55 m/kg	0.2831 kg/m
Diameter (mm)	Cross Sectional Area(mm <sup>2</sup> )	<b>0Cr21Al6Nb</b>			<b>0Cr27Al7Mo2</b>		
		Resistivity (μΩ • m 1.45±0.07)			Resistivity (μΩ • m 1.53±0.07)		
		Resistance (20°C Ω/m)	Length (m/kg)	Weight (kg/m)	Resistance (20°C Ω/m)	Length (m/kg)	Weight (kg/m)
0.10 mm	0.008 mm <sup>2</sup>	184.7 Ω/m	17933 m/kg	0.000056 kg/m	194.8 Ω/m	17934 m/kg	0.0000560 kg/m
0.12 mm	0.0112 mm <sup>2</sup>	128.3 Ω/m	12453 m/kg	0.0000804 kg/m	135.5 Ω/m	12454 m/kg	0.0000804 kg/m
0.15 mm	0.018 mm <sup>2</sup>	82.2 Ω/m	7970 m/kg	0.000126 kg/m	80.8 Ω/m	7971 m/kg	0.000126 kg/m
0.17 mm	0.023 mm <sup>2</sup>	63.8 Ω/m	6205 m/kg	0.000163 kg/m	67.6 Ω/m	6206 m/kg	0.000161 kg/m
0.19 mm	0.029 mm <sup>2</sup>	51.2 Ω/m	4968 m/kg	0.000202 kg/m	54.2 Ω/m	4969 m/kg	0.000202 kg/m
0.21 mm	0.035 mm <sup>2</sup>	41.8 Ω/m	4066 m/kg	0.00025 kg/m	44.4 Ω/m	4067 m/kg	0.000248 kg/m
0.25 mm	0.0492 mm <sup>2</sup>	29.6 Ω/m	2870 m/kg	0.00035 kg/m	31.4 Ω/m	2871 m/kg	0.000350 kg/m
0.27 mm	0.0574 mm <sup>2</sup>	25.1 Ω/m	2460 m/kg	0.00041 kg/m	26.9 Ω/m	2461 m/kg	0.000409 kg/m
0.29 mm	0.0662 mm <sup>2</sup>	22.1 Ω/m	2131 m/kg	0.00047 kg/m	23.4 Ω/m	2132 m/kg	0.000470 kg/m
0.31 mm	0.0756 mm <sup>2</sup>	19.3 Ω/m	1866 m/kg	0.00054 kg/m	20.6 Ω/m	1867 m/kg	0.000537 kg/m

Diameter	Cross Sectional Area	0Cr23Al5			1Cr20Al3		
		Resistivity micro-ohm • m			Resistivity micro-ohm • m		
		Resistance at 20°C	Length	Weight	Resistance at 20°C	Length	Weight
0.35 mm	0.0963 mm <sup>2</sup>	15.2 Ω/m	1464 m/kg	0.000684 kg/m	16.1 Ω/m	1465 m/kg	0.000690 kg/m
0.40 mm	0.1258 mm <sup>2</sup>	11.5 Ω/m	1121 m/kg	0.000893 kg/m	12.3 Ω/m	1122 m/kg	0.000900 kg/m
0.45 mm	0.1591 mm <sup>2</sup>	9.13 Ω/m	886 m/kg	0.00113 kg/m	9.64 Ω/m	887 m/kg	0.001130 kg/m
0.50 mm	0.1962 mm <sup>2</sup>	7.4 Ω/m	717 m/kg	0.001395 kg/m	7.9 Ω/m	718 m/kg	0.001395 kg/m
0.60 mm	0.284 mm <sup>2</sup>	5.15 Ω/m	498 m/kg	0.00202 kg/m	5.43 Ω/m	499 m/kg	0.00202 kg/m
0.70 mm	0.39 mm <sup>2</sup>	3.8 Ω/m	366 m/kg	0.00274 kg/m	4.2 Ω/m	367 m/kg	0.00274 kg/m
0.80 mm	0.51 mm <sup>2</sup>	2.9 Ω/m	280 m/kg	0.0036 kg/m	3.06 Ω/m	281 m/kg	0.00358 kg/m
0.90 mm	0.64 mm <sup>2</sup>	2.3 Ω/m	221 m/kg	0.00453 kg/m	2.43 Ω/m	222 m/kg	0.00453 kg/m
1.00 mm	0.79 mm <sup>2</sup>	1.9 Ω/m	179.5 m/kg	0.0056 kg/m	1.97 Ω/m	180 m/kg	0.00560 kg/m
1.20 mm	1.132 mm <sup>2</sup>	1.3 Ω/m	124.5 m/kg	0.0081 kg/m	1.37 Ω/m	125 m/kg	0.00804 kg/m
1.40 mm	1.54 mm <sup>2</sup>	0.95 Ω/m	91.5 m/kg	0.01094 kg/m	0.996 Ω/m	92 m/kg	0.01100 kg/m
1.60 mm	3.02 mm <sup>2</sup>	0.73 Ω/m	70.1 m/kg	0.0143 kg/m	0.77 Ω/m	70.2 m/kg	0.01430 kg/m
1.80 mm	2.55 mm <sup>2</sup>	0.571 Ω/m	55.5 m/kg	0.01804 kg/m	0.601 Ω/m	55.6 m/kg	0.01804 kg/m
2.00 mm	3.15 mm <sup>2</sup>	0.463 Ω/m	44.8 m/kg	0.023 kg/m	0.49 Ω/m	44.9 m/kg	0.02300 kg/m
2.20 mm	3.81 mm <sup>2</sup>	0.382 Ω/m	37.0 m/kg	0.0271 kg/m	0.41 Ω/m	37.1 m/kg	0.02701 kg/m
2.50 mm	4.92 mm <sup>2</sup>	0.3 Ω/m	28.7 m/kg	0.035 kg/m	0.32 Ω/m	28.8 m/kg	0.03500 kg/m
3.00 mm	7.08 mm <sup>2</sup>	0.21 Ω/m	19.92 m/kg	0.051 kg/m	0.22 Ω/m	19.93 m/kg	0.051 kg/m
3.50 mm	9.63 mm <sup>2</sup>	0.1511 Ω/m	14.64 m/kg	0.0684 kg/m	0.17 Ω/m	14.65 m/kg	0.0684 kg/m
4.00 mm	12.58 mm <sup>2</sup>	0.1152 Ω/m	11.21 m/kg	0.0893 kg/m	0.123 Ω/m	11.22 m/kg	0.0893 kg/m
4.50 mm	15.91 mm <sup>2</sup>	0.0913 Ω/m	8.86 m/kg	0.1128 kg/m	0.097 Ω/m	8.87 m/kg	0.1130 kg/m
5.00 mm	19.64 mm <sup>2</sup>	0.0739 Ω/m	7.17 m/kg	0.1395 kg/m	0.08 Ω/m	7.18 m/kg	0.1395 kg/m
5.50 mm	23.81 mm <sup>2</sup>	0.0611 Ω/m	5.92 m/kg	0.1691 kg/m	0.065 Ω/m	5.93 m/kg	0.1691 kg/m
6.00 mm	28.31 mm <sup>2</sup>	0.0512 Ω/m	4.98 m/kg	0.202 kg/m	0.055 Ω/m	4.99 m/kg	0.202 kg/m
6.50 mm	33.21 mm <sup>2</sup>	0.044 Ω/m	4.24 m/kg	0.24 kg/m	0.0461 Ω/m	4.25 m/kg	0.237 kg/m
7.00 mm	38.51 mm <sup>2</sup>	0.038 Ω/m	3.66 m/kg	0.274 kg/m	0.0398 Ω/m	3.67 m/kg	0.274 kg/m

### Available Forms

Wire, Mesh, Rod, Strip, Bar, Foil