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NBS HANDBOOK 109

Aluminum Wire Tables

U.S. DEPARTMENT OF COMMERCE

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[2] Part of the Center for Radiation Research.
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Aluminum Wire Tables

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Foreword

The electrical distribution system in this country is increasing in both size and capacity. Paralleling the growth of the system is an ever-increasing use of aluminum transmission lines. To meet the need of the engineering profession for reliable design information, NBS and the Aluminum Association have prepared these aluminum wire tables.

Data are presented on the conductivities and resistivities of both solid and stranded wires of various sizes and composition, together with a variety of other data of interest to the designer. Values are expressed in both U.S. Customary and International System (SI) Units.

Aluminum Wire Tables is a companion publication to NBS Handbook 100, Copper Wire Tables, which has been for many years the standard reference used in computing the behavior of transmission lines and devices that use copper wire.

This publication is part of the continuing NBS efforts to provide reliable information needed by the Nation's scientists and engineers.

Lewis M. Branscomb, *Director*

Abstract

This handbook of aluminum wire tables is a companion publication to NBS Handbook 100, Copper Wire Tables, a review of which is contained in Part I, Sections 1 and 2. Data are presented on the conductivities and resistivities of both solid and stranded wires of various sizes and composition, together with a variety of other data of interest to the designer of electrical equipment and installations. Values are expressed in both U.S. Customary and International System (SI) Units. Wire sizes involved are based on and restricted to those manufactured and typically used in the United States. American Wire Gage sizes are used for the smaller range of conductors from 56 gage through 4/0. Larger conductors are sized on the basis of circular mil area. The alloy compositions included in these tables are EC–0 (annealed), EC–H19, 5005–H19, and 6201–T81; values are given over a temperature range of 0 to 100 °C.

Key words: Aluminum conductor; aluminum wire cables; conversion factors; electrical conductivity; electrical conductor; electrical resistivity; standard values; temperature coefficient.

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ALUMINUM WIRE TABLES

Introduction

Use of aluminum as an electrical conductor began prior to 1900, and its growth has paralleled that of the electric power industry. During the first half of the 1900's, the predominant usage was for industrial and power station bus and overhead transmission conductors. Subsequent expansion of use in other areas, such as distribution, building wire, power cable, communication cables, and utilization items such as magnet wire, has made it desirable to present design information to the engineering profession. Accordingly, wire tables have been prepared for The Aluminum Association with Dr. D. L. Feucht, of Carnegie-Mellon University, serving as consultant.

In developing these data, it was necessary to select the conductor sizes which were appropriate and the nominal conductivity which should be used, etc. A brief explanation of some of these choices follows.

Metric Units

Data in these wire tables are presented both in U.S. Customary (English) Units and in parallel International System (SI) Units in view of worldwide trend to the latter unit system. This is in accord with the current practices of the USA Standards Institute (USASI), and U.S. National Bureau of Standards (NBS), the Institute of Electrical and Electronics Engineers (IEEE), and the American Society for Testing and Materials (ASTM), and with the Recommendations of the International Electrotechnical Commission (IEC).

Conductivity

The accepted measure of conductivity is the International Annealed Copper Standard (IACS) which is discussed in the National Bureau of Standards Handbook 100, and is expressed in volume resistivity as 10.371 ohms-circular mil/ft. at 20 °C. The conductivity of aluminum alloys commonly used for electrical conductor is customarily expressed as a percentage of IACS.

Highest purity annealed aluminum has a conductivity of 65 percent IACS, but the practical combination of available purity, fabrication, strength requirements, etc., results in lower conductivity for commercial products. These tables are based on the following conductivities which conform with American Society for Testing and Materials (ASTM) Specification values.

Alloy	Conductivity percent IACS	Resistivity @ 20 °C in ohms-cmil/ft.
EC-0 (annealed)	61.8	16.782
EC-H19	61.0	17.002
5005-H19	53.5	19.385
6201-T81	52.5	19.754

Size Selection

There is an extremely great variety of conductor sizes available to the designer in aluminum conductors. The wire tables have been prepared using the sizes which have gained general acceptance and popularity.

American Wire Gage sizes are used for the smaller range of conductors from 56 gage through 4/0. The derivation and practical advantages of this set of sizes are explained in National Bureau of Standards Handbook 100, Part I, Sections 1 and 2.

Large-size conductors of all types are typically described by their cross-sectional area in circular mils. ACSR (Aluminum Conductor, Steel Reinforced) and stranded aluminum conductors with EC-H19 alloy strands have traditionally been sized on the basis of dc conductivity approximately equivalent to that of certain circular mil hard drawn copper sizes. For example, cables using EC-H19 alloy strands having a total area of 795,000 cmil have a resistance per unit length very close to that of a 500,000-cmil copper conductor.

The introduction of 5005-H19 and 6201-T81 alloy conductors has usually been on the basis of matching the diameter of already popular conductors.

The resulting circular-mil sizes are, therefore, those which have been commercially introduced and accepted. The tables for conductors of these alloys, therefore, show a mixture of even circular-mil sizes and the sizes which result from diameter equivalency of ACSR.

In all cases, sizes involved are based on the conductors which are manufactured and used typically in the United States. Although metric values are shown for all these conductors in accord with internationally recognized units, conductor sizes which are primarily European in origin have not been included.

Conductor Design and Selection

The two major criteria for conductor selection are conductance (or ampacity) and strength (or strength-to-weight ratio). Conductance usually determines the nominal size of the conductor while strength determines the stranding and, to a lesser extent, the material.

The traditional conductor for high-strength applications is ACSR (Aluminum Conductor, Steel Reinforced). Various strength-to-weight ratios can be obtained by varying the ratio of steel to aluminum. Where corrosion is a consideration, the core can be either aluminized or aluminum clad. The aluminum-clad core has the further advantage of adding conductance.

A second concept of high-strength conductor utilizes high-strength aluminum alloy to replace the steel in an ACSR. This conductor, ACAR (Aluminum Conductor, Alloy Reinforced), can be obtained in strength-to-weight ratios varying from that for an all 6201-T81 alloy conductor to an all EC-H19 conductor. ACAR conductor is lighter than an ACSR with the same strength-to-weight ratio and, as one metal, has good corrosion resistance. The conductance is better than an ACSR of the same diameter.

A medium-strength conductor can be obtained using 5005-H19 alloy alone or in combination with EC or other alloys.

Alloy EC-H19 conductor with the highest conductance for a given weight or diameter is often used where strength requirements are not high.

Mechanical Data

There is a great deal of additional information regarding the application of aluminum conductors for tensional application such as overhead spans, which is specialized in nature. Much of this information is available from The Aluminum Association or from manufacturers of the product involved. These data can supplement the basic physical property data and computations contained in the wire tables for specific engineering requirements.

Data Development for the Aluminum Wire Tables

Table 1.—This table lists various standard values of resistance, constant-mass temperature coefficient of resistance, and density of aluminum wire at various temperatures. The fundamental values used in these calculations are those at 20° Celsius and were supplied by The Aluminum Association. The values may also be found in various ASTM standards dealing with aluminum wire.

The values for both English and metric volume resistivities are calculated from the equation $\rho_T = \rho_{20}\ [1 + \alpha_{20}\ (T - 20)]$, where ρ_T = volume resistivity at temperature T, expressed in degrees Celsius, ρ_{20} = value of ρ at 20 °C. α_{20} = value of temperature coefficient of resistance at 20 °C in reciprocal degrees Celsius.

The values for the constant-mass temperature coefficient of resistivity, α, are calculated from the equation

$$\alpha_T = \frac{1.}{1/\alpha_{20} + (T - 20)}$$

where α_T = value of α at temperature T expressed in degrees Celsius, α_{20} = value of α at 20 °C.

The mass density of the aluminum alloys considered is the same to four significant figures. The volume coefficient of thermal expansion is insignificant over the range of temperature considered.

Table 2.—Factors are given in this table for computing numerical values of resistivity in any of the usual sets of units when its value is known in another set. Numerical values of percentage conductivity are not reduced to decimal fractions. For example, the numerical value for 98.3 percent conductivity is used as 98.3 not 0.983 in the conversions.

Tables 3 and 13.—The tables give complete data for type EC-0 and EC-H19 aluminum wire on relations of length, mass and resistance at 20 °C. The fundamental constants used in calculating the data are those given in Table 1. The wire diameters appropriate to the American Wire Gage were

derived from the ASTM Handbook and are not calculated by the computer from the usual formula.

The data are calculated using the following formulas, where the symbols are:

ρ_{20} = volume resistivity at 20 °C in ohm-cir mil/ft
d = wire diameter at 20 °C for round wire in mils
A_{in} = cross-sectional area at 20 °C in square inches
D = density in lb/in^3

$$A_{in} = (\pi d^2 \times 10^{-6})/4$$
$$A_{c.m.} = A_{in}/(7.853982 \times 10^{-7})$$
$$[\text{ohm/1000 ft}] = (\rho_{20} \times 10^3)/A_{c.m.}$$
$$[\text{ft/ohm}] = 10^3/[\text{ohm/1000 ft}]$$
$$[\text{lb/1000 ft}] = D \times A_{in} \times 12 \times 10^3$$
$$[\text{ft/lb}] = 10^3/[\text{lb/1000 ft}]$$
$$[\text{ohm/lb}] = [\text{ohm/1000 ft}]/[\text{lb/1000 ft}]$$
$$[\text{lb/ohm}] = 1/[\text{ohm/lb}]$$

The computer program uses these formulas and the constants from Table 1 to calculate the data for each wire size to seven significant figures. Prior to printing the output data, the computer rounds each value to four significant figures.

Tables 4–7 and 14–17.—These tables give values of various constants for EC–0 and EC–H19 wire versus temperature over the range from 0 °C to 100 °C for each wire size. The changes in the value of the mass per unit length and length per unit mass are not included in the calculations because they exhibit negligible change with temperature over the range considered.

The values are calculated using the constant-mass temperature coefficients of resistance at 20 °C given in Table 1. The coefficient is that appropriate to the changes in value for a piece of wire, the physical dimensions of which are fixed at 20 °C and which is subsequently measured at various other temperatures. This corresponds to measuring the resistance of a sample where length is known at 20 °C and where the potential terminals are permanently attached to the wire. Similarly, this corresponds to measurement of the resistance of a coil of wire at various temperatures where no measurements are made of either the length or the diameter but the weight may be measured. In contrast, the values may be calculated for a piece of wire which has the stated dimensions at all temperatures. This requires using the constant-volume temperature coefficient of the resistance.

The following formulas are used for computation, where the symbols used are the same as identified previously:

$$[\text{ohm/1000 ft}]_T = [(\rho_{20} \times 10^3)/A_{c.m.}] \times [1 + \alpha_{20}(T - 20)]$$
$$[\text{ft/ohm}]_T = 10^3/[\text{ohm/1000 ft}]_T$$
$$[\text{ohm/lb}]_T = [\text{ohm/1000 ft}]_T/[D \times A_{in} \times 12 \times 10^3]$$
$$[\text{lb/ohm}]_T = 1/[\text{ohm/lb}]_T$$

As in the tables above, all calculations are made to seven figures by the computer and rounded to four significant figures prior to output printing.

Tables 8 and 18.—These tables are similar to Tables 3 and 13 except that the values are given in metric units for each wire size at 20 °C. For reference, the values of diameter in millimeters and cross-sectional area in square millimeters are also included for each wire size.

The values are not simply the values of Tables 3 and 13 converted to metric units but are calculated directly from the metric constants of Table 1 and the wire diameters in mils. The formulas used are as follows where the constants are:

D = mass density at 20 °C in g/cm^3
d_{mil} = wire diameter in mils at 20 °C
d_{mm} = wire diameter in millimeters at 20 °C
A_{mm} = cross-sectional area in square millimeters
ρ_{20} = volume resistivity at 20 °C in ohm-mm^2 per meter

$$d_{mm} = d_{mil} \times 25.40005 \times 10^{-3}$$
$$A_{mm} = \pi d_{mm}^2/4$$
$$[\text{ohm/km}] = (\rho_{20} \times 10^3)/A_{mm}$$
$$[\text{m/ohm}] = 10^3/[\text{ohm/km}]$$
$$[\text{kg/km}] = D \times A_{mm}$$
$$[\text{m/g}] = 1/[\text{kg/km}]$$
$$[\text{ohm/kg}] = [\text{ohm/km}] \times [\text{m/g}]$$
$$[\text{g/ohm}] = 10^3/[\text{ohm/kg}]$$

As above, calculations are made to seven figure accuracy and each value subsequently rounded to four significant figures.

Tables 9–12 and 19–22.—These tables give various values for EC–0 and EC–H19 wire in metric units for several temperatures over the range from 0 °C to 100 °C. The values of diameter in millimeters and cross-sectional area in square millimeters are also included for each wire size.

The values are calculated using the metric constants from Table 1 and the wire diameters in mils. The formulas are as follows where the symbols are the same as those given in the discussion of Tables 8 and 18.

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$$[\text{ohm/km}]_T = [(\rho_{20} \times 10^3)/A_{\text{mm}}] \times [1 + \alpha_{20}(T - 20)]$$

$$[\text{m/ohm}]_T = 10^3/[\text{ohm/km}]_T$$

$$[\text{ohm/kg}]_T = [\text{ohm/km}]_T/(D \times A_{\text{mm}})$$

$$[\text{g/ohm}]_T = 10^3/[\text{ohm/kg}]_T$$

As before the calculations are carried out with seven figure precision and the values are rounded to four significant figures before printing.

Tables 23–30.—These tables present values of resistance and mass per unit length at 20 °C for stranded aluminum wire cables. Cables made from four different types of aluminum, EC–0, EC–H19, 5005–H19, and 6201–T81, have been included.

When increased flexibility in a conductor is desired, a stranded cable is normally used, particularly where conductors of large cross-section are concerned. Stranded cables consist of many small wires in parallel twisted together. The data in these tables refer to the "concentric lay" type of stranding since it is the most commonly used. Concentric lay conductors are described in detail in ASTM B–231.

The tables presented here include four stranding classes, AA, A, B, and C for the EC–0 and EC–H19 cables. For the 5005–H19 and 6201–T81 cables only the AA and A classes are included.

Various special situations arise in calculating data for stranded conductors. The outside diameter of every conductor has been calculated using an input to the computer program only the number and diameter of the strands. The cable diameter for a 7 wire cable is just 3 times the strand diameter, for a cable of 19 wires it is 5 times the strand diameter, etc. The program derives the appropriate factor for each cable which is then multiplied by the strand diameter to obtain the outside diameter.

In calculating the resistance and mass per unit length of the cables the effect of the twisting of the wires and the geometry of the cable itself must be considered. Stranding factors used for these tables are found in Table IV of ASTM B–231.

In calculating the resistance and mass per unit length for a particular nominal size, the area might be taken as the nominal area for each cable. Alternatively, the exact area of each stranding class could be calculated and the results averaged. For these tables, however, it was found convenient to calculate the area used in the formulas by using the data for the number and diameter of strands associated with the least flexible strand class within a particular size. For example, in Table 23, the values for 2,000,000 cmil cable are based on the exact area to 7 figures of the Class A stranding. To the extent that the areas of different strandings of the same nominal size are equivalent, the values of resistance and mass per unit length apply to all the strand classes.

The fundamental constants used in calculating the values in English units are found in Table 1. The formulas used are presented below, where the symbols used are:

ρ_{20} = resistivity in ohm-cir mil/ft

D = density in lb/in^3

$A_{\text{c.m.}}$ = area in cir mil

$$[\text{ohm/1000 ft}] = [\rho_{20} \times 10^3/A_{\text{c.m.}}] \times \text{correction factor for twist}$$

$$[\text{lb/1000 ft}] = [D \times A_{\text{c.m.}} \times 7.853982 \times 10^{-7} \times 12 \times 10^3] \times \text{correction factor for twist}$$

A correction factor for twist of 2 percent is entered as 1.02, of 3 percent as 1.03, etc.

The fundamental constants used in calculating the values in metric units are from Table 1. The outside diameter of each cable is calculated by converting strand diameter in mils to the diameter in millimeters. The area is then calculated by using the strand diameter in millimeters to 7 significant figures and the number of wires. The formulas used are presented below, where the symbols are:

ρ_{20} = resistivity in ohm-mm^2/m

D = density in g/cm^3

A_{mm} = area in mm^2

$$[\text{ohm/km}] = [(\rho_{20} \times 10^3)/A_{\text{mm}}] \times \text{correction factor for twist}$$

$$[\text{kg/km}] = [D \times A_{\text{mm}}] \times \text{correction factor for twist}$$

The computer makes all computations using the formulas and constants specified above to seven figure precision. All values are rounded to four figures prior to being printed out.

TABLE 1 – Various Standard Values for Resistivity, Temperature Coefficient and Density of Al Wire

Temp °C	Alloy and Temper			
	EC–0 61.8%	EC–H19 61%	5005–H19 53.5%	6201–T81 52.5%
	Resistivity in ohm–cir mil per foot			
0	15.413	15.632	18.016	18.383
15	16.440	16.659	19.043	19.411
20	16.782	17.002	19.385	19.754
25	17.124	17.345	19.727	20.097
30	17.467	17.687	20.069	20.440
	Resistivity in ohm-mm^2 per meter			
0	0.025622	0.025986	0.029951	0.030561
15	0.027329	0.027695	0.031657	0.032270
20	0.027898	0.028264	0.032226	0.032840
25	0.028467	0.028834	0.032795	0.033410
30	0.029036	0.029403	0.033364	0.033980
	Temperature Coefficient of Resistance per °C			
0	0.00444	0.00438	0.00380	0.00373
15	0.00416	0.00411	0.00359	0.00353
20	0.00408	0.00403	0.00353	0.00347
25	0.00400	0.00395	0.00347	0.00341
30	0.00392	0.00387	0.00341	0.00335
	Density at 20 C (1)			
Grams/cm^3	2.703	2.703	2.703	2.703
Lbs/in^3	0.09765	0.09765	0.09765	0.09765

(1) For the purposes of electrical calculations, ASTM standards have adopted the densities used in the calculation of these tables. The standards are:

Alloy:	*Standard*
EC	B262
5005	B396
6201	B398

For greater precision, where required, the density of 5005 and 6201 alloy may be adjusted. (5005, 2.697; and 6201, 2.691.)

TABLE 2—Conversion Table for Electrical Resistivities

Given values at 20 °C in	To obtain values in—						
	Ohm g/m² multiply by	Ohm lb/mi² multiply by	Ohm mm²/m multiply by	Microhm-cm multiply by	Microhm-in multiply by	Ohm-cir mil/ft multiply by	Percent conductivity divide into
Ohm g/m²	.....	5709.8	0.36996	36.996	14.566	222.55	4.6600
Ohm lb/mi²	0.00017514	.....	.000064795	0.0064795	0.0025510	0.038976	26,609
Ohm mm²/m	2.7030	15,434	.....	100	39.371	601.53	1.7241
Microhm-cm	0.02703	154.34	.01	.....	.39371	6.0153	172.41
Microhm-in	0.068656	392.01	.0254	2.54	.....	15.279	67.879
Ohm-cir mil/ft	0.0044935	25.657	.0016624	0.16624	.065451	.....	1037.1
Percent conductivity	Divide into 4.6600	Divide into 26,609	Divide into 1.7241	Divide into 172.41	Divide into 67.879	Divide into 1037.1	

TABLE 3 – Wire Table, Solid Aluminum, EC–0 – Data at 20 °C – English Units

Diameter		Cross section		Ohms per 1000 feet	Feet per ohm	Pounds per 1000 feet	Feet per pound	Ohms per pound	Pounds per ohm
AWG	Mils	Circular mils	Square inch						
500,000	707.10	500000.	.3927	0.03356	29790.	460.2	2.173	.00007294	13710.
450,000	670.80	450000.	.3534	0.03730	26810.	414.1	2.415	.00009006	11100.
400,000	632.50	400100.	.3142	0.04195	23840.	368.2	2.716	.0001139	8777.
350,000	591.60	350000.	.2749	0.04795	20860.	322.1	3.105	.0001489	6718.
300,000	547.70	300000.	.2356	0.05594	17870.	276.1	3.622	.0002026	4935.
250,000	500.00	250000.	.1963	0.06713	14900.	230.1	4.346	.0002918	3428.
0000	460.00	211600.	.1662	0.07931	12610.	194.7	5.135	.0004073	2455.
000	409.60	167800.	.1318	0.1000	9997.	154.4	6.476	.0006478	1544.
00	364.80	133100.	.1045	0.1261	7930.	122.5	8.165	.001030	971.2
0	324.90	105600.	.08291	0.1590	6290.	97.15	10.29	.001636	611.1
1	289.30	83690.	.06573	0.2005	4987.	77.03	12.98	.002603	384.1
2	257.60	66360.	.05212	0.2529	3954.	61.07	16.37	.004141	241.5
3	229.40	52620.	.04133	0.3189	3136.	48.43	20.65	.006585	151.9
4	204.30	41740.	.03278	0.4021	2487.	38.41	26.03	.01047	95.54
5	181.90	33090.	.02599	0.5072	1972.	30.45	32.84	.01666	60.04
6	162.00	26240.	.02061	0.6395	1564.	24.15	41.40	.02648	37.77
7	144.30	20820.	.01635	0.8060	1241.	19.16	52.18	.04206	23.78
8	128.50	16510.	.01297	1.0160	983.9	15.20	65.80	.06688	14.95
9	114.40	13090.	.01028	1.282	779.8	12.04	83.02	0.1065	9.393
10	101.90	10380.	.008155	1.616	618.7	9.556	104.6	0.1691	5.913
11	90.70	8226.	.006461	2.040	490.2	7.571	132.1	0.2694	3.711
12	80.80	6529.	.005128	2.571	389.0	6.008	166.4	0.4278	2.337
13	72.00	5184.	.004072	3.237	308.9	4.771	209.6	0.6785	1.474
14	64.10	4109.	.003227	4.084	244.8	3.781	264.4	1.080	0.9258
15	57.10	3260.	.002561	5.147	194.3	3.001	333.3	1.715	0.5830
16	50.80	2581.	.002027	6.503	153.8	2.375	421.0	2.738	0.3652
17	45.30	2052.	.001612	8.178	122.3	1.889	529.5	4.330	0.2309
18	40.30	1624.	.001276	10.33	96.78	1.495	669.0	6.913	0.1447
19	35.90	1289.	.001012	13.02	76.80	1.186	843.1	10.98	0.09109
20	32.00	1024.	.0008042	16.39	61.02	0.9424	1061.	17.39	0.05750
21	28.50	812.2	.0006379	20.66	48.40	0.7475	1338.	27.64	0.03618
22	25.30	640.1	.0005027	26.22	38.14	0.5891	1698.	44.51	0.02247
23	22.60	510.8	.0004011	32.86	30.43	0.4701	2127.	69.90	0.01431
24	20.10	404.0	.0003173	41.54	24.07	0.3718	2689.	111.7	0.008951
25	17.90	320.4	.0002516	52.38	19.09	0.2949	3391.	177.6	0.005630
26	15.90	252.8	.0001986	66.38	15.06	0.2327	4298.	285.3	0.003505
27	14.20	201.6	.0001584	83.23	12.02	0.1856	5389.	448.5	0.002230
28	12.60	158.8	.0001247	105.7	9.460	0.1461	6844.	723.5	0.001382
29	11.30	127.7	.0001003	131.4	7.609	0.1175	8509.	1118.	0.0008942
30	10.00	100.00	.00007854	167.8	5.959	0.09203	10870.	1823.	0.0005484
31	8.90	79.21	.00006221	211.9	4.720	0.07290	13720.	2906.	0.0003441
32	8.00	64.00	.00005027	262.2	3.814	0.05890	16980.	4452.	0.0002246
33	7.10	50.41	.00003959	332.9	3.004	0.04639	21550.	7176.	0.0001394
34	6.30	39.69	.00003117	422.8	2.365	0.03653	27380.	11580.	0.00008639
35	5.60	31.36	.00002463	535.1	1.869	0.02886	34650.	18540.	0.00005393
36	5.00	25.00	.00001963	671.3	1.490	0.02301	43460.	29180.	0.00003428
37	4.50	20.25	.00001590	828.7	1.207	0.01864	53660.	44470.	0.00002249
38	4.00	16.00	.00001257	1049.	0.9534	0.01473	67910.	71230.	0.00001404

TABLE 3—Wire Table, Solid Aluminum, EC–0—Data at 20 °C—English Units—Continued

Diameter		Cross section		Ohms per 1000 feet	Feet per ohm	Pounds per 1000 feet	Feet per pound	Ohms per pound	Pounds per ohm
AWG	Mils	Circular mils	Square inch						
39	3.50	12.25	.000009621	1370.	0.7299	0.01127	88700.	121500.	.000008229
40	3.10	9.610	.000007548	1746.	0.5726	0.008844	113100.	197400.	.000005065
41	2.80	7.840	.000006158	2141.	0.4672	0.007215	138600.	296700.	.000003371
42	2.50	6.250	.000004909	2685.	0.3724	0.005752	173900.	466800.	.000002142
43	2.20	4.840	.000003801	3467.	0.2884	0.004454	224500.	778400.	.000001285
44	2.00	4.000	.000003142	4195.	0.2384	0.003681	271600.	1140000.	.0000008774
45	1.76	3.098	.000002433	5418.	0.1846	0.002851	350800.	1900000.	.0000005262
46	1.57	2.465	.000001936	6808.	0.1469	0.002269	440800.	3001000.	.0000003332
47	1.40	1.960	.000001539	8562.	0.1168	0.001804	554400.	4747000.	.0000002107
48	1.24	1.538	.000001208	10910.	0.09162	0.001415	706700.	7713000.	.0000001297
49	1.11	1.232	.0000009677	13620.	0.07342	0.001134	881900.	12010000.	.00000008325
50	0.99	0.9801	.0000007698	17120.	0.05840	0.0009020	1109000.	18980000.	.00000005268
51	0.88	0.7744	.0000006082	21670.	0.04614	0.0007127	1403000.	30410000.	.00000003289
52	0.78	0.6084	.0000004778	27580.	0.03625	0.0005599	1786000.	49260000.	.00000002030
53	0.70	0.4900	.0000003848	34250.	0.02920	0.0004510	2217000.	75950000.	.00000001317
54	0.62	0.3844	.0000003019	43660.	0.02291	0.0003538	2827000.	123400000.	.000000008103
55	0.55	0.3025	.0000002376	55480.	0.01803	0.0002784	3592000.	193300000.	.000000005018
56	0.49	0.2401	.0000001886	69900.	0.01431	0.0002210	4525000.	316300000.	.000000003161

TABLE 4—Wire Table, Solid Aluminum, EC–0—Ohms per 1000 ft

Gage	Diameter in mils	Cross section at 20 °C		Ohms per 1000 feet at temperature of—					
		Circular mils	Square inch	0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	707.10	500000.	0.3927	0.03083	0.03356	0.03425	0.03767	0.04110	0.04452
450,000	670.80	450000.	0.3534	0.03425	0.03730	0.03806	0.04186	0.04566	0.04947
400,000	632.50	400100.	0.3142	0.03853	0.04195	0.04280	0.04708	0.05136	0.05564
350,000	591.60	350000.	0.2749	0.04404	0.04795	0.04893	0.05382	0.05871	0.06360
300,000	547.70	300000.	0.2356	0.05138	0.05594	0.05709	0.06279	0.06850	0.07420
250,000	500.00	250000.	0.1963	0.06165	0.06713	0.06850	0.07534	0.08219	0.08904
0000	460.00	211600.	0.1662	0.07284	0.07931	0.08093	0.08902	0.09711	0.1052
000	409.60	167800.	0.1318	0.09187	0.1000	0.1021	0.1123	0.1225	0.1327
00	364.80	133100.	0.1045	0.1158	0.1261	0.1287	0.1415	0.1544	0.1673
0	324.90	105600.	0.08291	0.1460	0.1590	0.1622	0.1784	0.1947	0.2109
1	289.30	83690.	0.06573	0.1842	0.2005	0.2046	0.2251	0.2455	0.2660
2	257.60	66360.	0.05212	0.2323	0.2529	0.2581	0.2839	0.3097	0.3354
3	229.40	52620.	0.04133	0.2929	0.3189	0.3254	0.3579	0.3905	0.4230
4	204.30	41740.	0.03278	0.3693	0.4021	0.4103	0.4513	0.4923	0.5333
5	181.90	33090.	0.02599	0.4658	0.5072	0.5175	0.5693	0.6210	0.6727
6	162.00	26240.	0.02061	0.5873	0.6395	0.6525	0.7177	0.7830	0.8482
7	144.30	20820.	0.01635	0.7402	0.8060	0.8224	0.9046	0.9868	1.069
8	128.50	16510.	0.01297	0.9334	1.016	1.0370	1.141	1.244	1.348
9	114.40	13090.	0.01028	1.178	1.282	1.308	1.439	1.570	1.701
10	101.90	10380.	0.008155	1.484	1.616	1.649	1.814	1.979	2.144
11	90.70	8226.	0.006461	1.874	2.040	2.082	2.290	2.498	2.706
12	80.80	6529.	0.005128	2.361	2.571	2.623	2.885	3.147	3.410
13	72.00	5184.	0.004072	2.973	3.237	3.303	3.634	3.964	4.294
14	64.10	4109.	0.003227	3.751	4.084	4.168	4.584	5.001	5.418
15	57.10	3260.	0.002561	4.727	5.147	5.252	5.777	6.302	6.827
16	50.80	2581.	0.002027	5.972	6.503	6.636	7.299	7.962	8.626
17	45.30	2052.	0.001612	7.511	8.178	8.345	9.179	10.01	10.85
18	40.30	1624.	0.001276	9.49	10.33	10.54	11.60	12.65	13.71
19	35.90	1289.	0.001012	11.96	13.02	13.29	14.62	15.94	17.27
20	32.00	1024.	0.0008042	15.05	16.39	16.72	18.39	20.07	21.74
21	28.50	812.2	0.0006379	18.98	20.66	21.08	23.19	25.30	27.40
22	25.30	640.1	0.0005027	24.08	26.22	26.75	29.43	32.1	34.78
23	22.60	510.8	0.0004011	30.18	32.86	33.53	36.88	40.23	43.58
24	20.10	404.0	0.0003173	38.15	41.54	42.39	46.62	50.86	55.10
25	17.90	320.1	0.0002516	48.10	52.38	53.45	58.79	64.13	69.47
26	15.90	252.8	0.0001986	60.97	66.38	67.74	74.51	81.28	88.05
27	14.20	201.6	0.0001584	76.44	83.23	84.93	93.41	101.9	110.4
28	12.60	158.8	0.0001247	97.08	105.7	107.9	118.6	129.4	140.2
29	11.30	127.7	0.0001003	120.7	131.4	134.1	147.5	160.9	174.3
30	10.00	100.0	0.00007854	154.1	167.8	171.2	188.4	205.5	222.6
31	8.90	79.21	0.00006221	194.6	211.9	216.2	237.8	259.4	281.0
32	8.00	64.00	0.00005027	240.8	262.2	267.6	294.3	321.1	347.8
33	7.10	50.41	0.00003959	305.7	332.9	339.7	373.7	407.6	441.6
34	6.30	39.69	0.00003117	388.3	422.8	431.5	474.6	517.7	560.8
35	5.60	31.36	0.00002463	491.5	535.1	546.1	600.6	655.2	709.8
36	5.00	25.00	0.00001963	616.5	671.3	685.0	753.4	821.9	890.4
37	4.50	20.25	0.00001590	761.1	828.7	845.6	930.2	1015.	1099.
38	4.00	16.00	0.00001257	963.3	1049.	1070.	1177.	1284.	1391.

TABLE 4—Wire Table, Solid Aluminum, EC–0—Ohms per 1000 ft —Continued

Gage	Diameter in mils	Cross section at 20 °C		Ohms per 1000 feet at temperature of—					
		Circular mils	Square inch	0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	3.50	12.25	0.000009621	1258.	1370.	1398.	1538.	1677.	1817.
40	3.10	9.610	0.000007548	1604.	1746.	1782.	1960.	2138.	2316.
41	2.80	7.840	0.000006158	1966.	2141.	2184.	2403.	2621.	2839.
42	2.50	6.250	0.000004909	2466.	2685.	2740.	3014.	3288.	3562.
43	2.20	4.840	0.000003801	3184.	3467.	3538.	3892.	4245.	4599.
44	2.00	4.000	0.000003142	3853.	4195.	4281.	4709.	5137.	5565.
45	1.76	3.098	0.000002433	4976.	5418.	5528.	6081.	6633.	7186.
46	1.57	2.465	0.000001936	6253.	6808.	6947.	7642.	8336.	9031.
47	1.40	1.960	0.000001539	7864.	8562.	8737.	9610.	10480.	11360.
48	1.24	1.538	0.000001208	10020.	10910.	11140.	12250.	13360.	14480.
49	1.11	1.232	0.0000009677	12510.	13620.	13900.	15290.	16680.	18070.
50	0.99	0.9801	0.0000007698	15730.	17120.	17470.	19220.	20970.	22710.
51	0.88	0.7744	0.0000006082	19900.	21670.	22110.	24320.	26530.	28740.
52	0.78	0.6084	0.0000004778	25330.	27580.	28150.	30960.	33770.	36590.
53	0.70	0.4900	0.0000003848	31450.	34250.	34950.	38440.	41930.	45430.
54	0.62	0.3844	0.0000003019	40100.	43660.	44550.	49000.	53450.	57910.
55	0.55	0.3025	0.0000002376	50950.	55480.	56610.	62270.	67930.	73590.
56	0.49	0.2401	0.0000001886	64190.	69900.	71320.	78450.	85580.	92710.

TABLE 5—Wire Table, Solid Aluminum, EC–0—Feet per Ohm

Gage	Diameter in mils	Pounds per 1000 feet at 20 °C	Feet per pound at 20 °C	Feet per ohm at—					
				0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	707.10	460.2	2.173	32440.	29790.	29200.	26540.	24330.	22460.
450,000	670.80	414.1	2.415	29200.	26810.	26280.	23890.	21900.	20210.
400,000	632.50	368.2	2.716	25960.	23840.	23360.	21240.	19470.	17970.
350,000	591.60	322.1	3.105	22710.	20860.	20440.	18580.	17030.	15720.
300,000	547.70	276.1	3.622	19460.	17870.	17520.	15930.	14600.	13480.
250,000	500.00	230.1	4.346	16220.	14900.	14600.	13270.	12170.	11230.
0000	460.00	194.7	5.135	13730.	12610.	12360.	11230.	10300.	9506.
000	409.60	154.4	6.476	10890.	9997.	9797.	8907.	8165.	7537.
00	364.80	122.5	8.165	8634.	7930.	7771.	7065.	6477.	5978.
0	324.90	97.15	10.290	6849.	6290.	6164.	5604.	5137.	4742.
1	289.30	77.03	12.980	5430.	4987.	4887.	4443.	4073.	3760.
2	257.60	61.07	16.370	4305.	3954.	3875.	3523.	3229.	2981.
3	229.40	48.43	20.650	3414.	3136.	3073.	2794.	2561.	2364.
4	204.30	38.41	26.030	2708.	2487.	2437.	2216.	2031.	1875.
5	181.90	30.45	32.840	2147.	1972.	1932.	1757.	1610.	1486.
6	162.00	24.15	41.400	1703.	1564.	1533.	1393.	1277.	1179.
7	144.30	19.16	52.180	1351.	1241.	1216.	1105.	1013.	935.4
8	128.50	15.20	65.800	1071.	983.9	964.3	876.6	803.6	741.8
9	114.40	12.04	83.020	849.1	779.8	764.3	694.8	636.9	587.9
10	101.90	9.556	104.6	673.7	618.7	606.4	551.3	505.3	466.5
11	90.70	7.571	132.1	533.8	490.2	480.4	436.7	400.4	369.6
12	80.80	6.008	166.4	423.6	389.0	381.2	346.6	317.7	293.3
13	72.00	4.771	209.6	336.3	308.9	302.7	275.2	252.3	232.9
14	64.10	3.781	264.4	266.6	244.8	239.9	218.1	200.0	184.6
15	57.10	3.001	333.3	211.5	194.3	190.4	173.1	158.7	146.5
16	50.80	2.375	421.0	167.4	153.8	150.7	137.0	125.6	115.9
17	45.30	1.889	529.5	133.1	122.3	119.8	108.9	99.87	92.19
18	40.30	1.495	669.0	105.4	96.78	94.84	86.22	79.04	72.96
19	35.90	1.186	843.1	83.62	76.80	75.26	68.42	62.72	57.90
20	32.00	0.9424	1061.	66.44	61.02	59.80	54.36	49.83	46.00
21	28.50	0.7475	1338.	52.70	48.40	47.43	43.12	39.53	36.49
22	25.30	0.5891	1698.	41.53	38.14	37.38	33.98	31.15	28.76
23	22.60	0.4701	2127.	33.14	30.43	29.83	27.12	24.86	22.95
24	20.10	0.3718	2689.	26.21	24.07	23.59	21.45	19.66	18.15
25	17.90	0.2949	3391.	20.79	19.09	18.71	17.01	15.59	14.39
26	15.90	0.2327	4298.	16.40	15.06	14.76	13.42	12.30	11.36
27	14.20	0.1856	5389.	13.08	12.02	11.78	10.70	9.813	9.059
28	12.60	0.1461	6844.	10.30	9.46	9.271	8.428	7.726	7.132
29	11.30	0.1175	8509.	8.285	7.609	7.457	6.779	6.214	5.736
30	10.00	0.09203	10870.	6.488	5.959	5.840	5.309	4.867	4.492
31	8.90	0.07290	13720.	5.139	4.720	4.626	4.205	3.855	3.558
32	8.00	0.05890	16980.	4.152	3.814	3.737	3.398	3.115	2.875
33	7.10	0.04639	21550.	3.271	3.004	2.944	2.676	2.453	2.265
34	6.30	0.03653	27380.	2.575	2.365	2.318	2.107	1.932	1.783
35	5.60	0.02886	34650.	2.035	1.869	1.831	1.665	1.526	1.409
36	5.00	0.02301	43460.	1.622	1.490	1.460	1.327	1.217	1.123
37	4.50	0.01864	53660.	1.314	1.207	1.183	1.075	0.9855	0.9097
38	4.00	0.01473	67910.	1.038	0.9534	0.9343	0.8494	0.7787	0.7188

TABLE 5—Wire Table, Solid Aluminum, EC-0—Feet per Ohm—Continued

Gage	Diameter in mils	Pounds per 1000 feet at 20 °C	Feet per pound at 20 °C	Feet per ohm at—					
				0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	3.50	0.01127	88700.	0.7948	0.7299	0.7154	0.6503	0.5962	0.5503
40	3.10	0.008844	113100.	0.6235	0.5726	0.5612	0.5102	0.4677	0.4317
41	2.80	0.007215	138600.	0.5087	0.4672	0.4578	0.4162	0.3815	0.3522
42	2.50	0.005752	173900.	0.4055	0.3724	0.3650	0.3318	0.3042	0.2808
43	2.20	0.004454	224500.	0.3140	0.2884	0.2826	0.2570	0.2355	0.2174
44	2.00	0.003681	271600.	0.2595	0.2384	0.2336	0.2124	0.1947	0.1797
45	1.76	0.002851	350800.	0.2010	0.1846	0.1809	0.1645	0.1508	0.1392
46	1.57	0.002269	440800.	0.1599	0.1469	0.1439	0.1309	0.1200	0.1107
47	1.40	0.001804	554400.	0.1272	0.1168	0.1145	0.1041	0.09539	0.08805
48	1.24	0.001415	706700.	0.09971	0.09162	0.08979	0.08163	0.07483	0.06908
49	1.11	0.001134	881900.	0.07994	0.07342	0.07195	0.06541	0.05996	0.05535
50	0.99	0.0009020	1109000.	0.06359	0.05840	0.05723	0.05203	0.04770	0.04403
51	0.88	0.0007127	1403000.	0.05024	0.04614	0.04522	0.04111	0.03769	0.03479
52	0.78	0.0005599	1786000.	0.03947	0.03625	0.03553	0.03230	0.02961	0.02733
53	0.70	0.0004510	2217000.	0.03179	0.02920	0.02861	0.02601	0.02385	0.02201
54	0.62	0.0003538	2827000.	0.02494	0.02291	0.02245	0.02041	0.01871	0.01727
55	0.55	0.0002784	3592000.	0.01963	0.01803	0.01766	0.01606	0.01472	0.01359
56	0.49	0.0002210	4525000.	0.01558	0.01431	0.01402	0.01275	0.01168	0.01079

TABLE 6—Wire Table, Solid Aluminum, EC–0—Ohms per Pound

Gage	Diameter at 20 °C (mils)	Ohms per pound at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	707.10	0.00006699	.00007294	.00007443	.00008187	.00008931	.00009675
450,000	670.80	0.00008271	.00009006	.00009190	.0001011	.0001103	.0001195
400,000	632.50	0.0001046	.0001139	.0001163	.0001279	.0001395	.0001511
350,000	591.60	0.0001367	.0001489	.0001519	.0001671	.0001823	.0001975
300,000	547.70	0.0001861	.0002026	.0002068	.0002274	.0002481	.0002688
250,000	500.00	0.0002679	.0002918	.0002977	.0003275	.0003572	.0003870
0000	460.00	0.0003740	.0004073	.0004156	.0004571	.0004986	.0005402
000	409.60	0.0005950	.0006478	.0006610	.0007271	.0007932	.0008593
00	364.80	0.0009456	.001030	.001051	.001156	.001261	.001366
0	324.90	0.001503	.001636	.001670	.001837	.002004	.002171
1	289.30	0.002391	.002603	.002656	.002922	.003187	.003453
2	257.60	0.003803	.004141	.004226	.004648	.005070	.005493
3	229.40	0.006047	.006585	.006719	.007391	.008062	.008734
4	204.30	0.009613	.01047	.01068	.01175	.01282	.01388
5	181.90	0.01530	.01666	.01700	.01869	.02039	.02209
6	162.00	0.02431	.02648	.02702	.02972	.03242	.03512
7	144.30	0.03862	.04206	.04291	.04720	.05149	.05578
8	128.50	0.06142	.06688	.06824	.07506	.08189	.08871
9	114.40	0.09778	.1065	.1086	.1195	.1304	.1412
10	101.90	0.1553	.1691	.1726	.1898	.2071	.2243
11	90.70	0.2475	.2694	.2749	.3024	.3299	.3574
12	80.80	0.3929	.4278	.4365	.4802	.5238	.5675
13	72.00	0.6232	.6785	.6924	.7616	.8308	.9000
14	64.10	0.9920	1.080	1.102	1.212	1.322	1.433
15	57.10	1.575	1.715	1.750	1.925	2.100	2.275
16	50.80	2.515	2.738	2.794	3.073	3.353	3.632
17	45.30	3.977	4.330	4.419	4.860	5.302	5.744
18	40.30	6.349	6.913	7.054	7.759	8.465	9.170
19	35.90	10.08	10.98	11.20	12.32	13.44	14.56
20	32.00	15.97	17.39	17.74	19.52	21.29	23.07
21	28.50	25.38	27.64	28.20	31.02	33.84	36.66
22	25.30	40.87	44.51	45.41	49.95	54.49	59.03
23	22.60	64.19	69.90	71.32	78.45	85.58	92.71
24	20.10	102.6	111.7	114.0	125.4	136.8	148.2
25	17.90	163.0	177.6	181.2	199.4	217.5	235.6
26	15.90	262.0	285.3	291.0	320.2	349.3	378.4
27	14.20	411.9	448.5	457.6	503.4	549.1	594.9
28	12.60	664.4	723.5	738.2	812.	885.8	959.6
29	11.30	1027.	1118.	1141.	1255.	1369.	1483.
30	10.00	1675.	1823.	1861.	2047.	2233.	2419.
31	8.90	2669.	2906.	2966.	3262.	3558.	3855.
32	8.00	4089.	4452.	4543.	4997.	5451.	5905.
33	7.10	6590.	7176.	7322.	8054.	8786.	9518.
34	6.30	10630.	11580.	11810.	12990.	14170.	15350.
35	5.60	17030.	18540.	18920.	20810.	22700.	24590.
36	5.00	26790.	29180.	29770.	32750.	35720.	38700.
37	4.50	40840.	44470.	45380.	49910.	54450.	58980.
38	4.00	65420.	71230.	72680.	79950.	87210.	94480.

TABLE 6—Wire Table, Solid Aluminum, EC–0—Ohms per Pound—Continued

Gage	Diameter at 20 °C (mils)	Ohms per pound at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	3.50	111600.	121500.	124000.	136400.	148800.	161200.
40	3.10	181300.	197400.	201500.	221600.	241800.	261900.
41	2.80	272500.	296700.	302700.	333000.	363200.	393500.
42	2.50	428700.	466800.	476300.	523900.	571600.	619200.
43	2.20	714900.	778400.	794300.	873700.	953100.	1032000.
44	2.00	1047000.	1140000.	1163000.	1279000.	1395000.	1512000.
45	1.76	1745000.	1900000.	1939000.	2133000.	2327000.	2521000.
46	1.57	2756000.	3001000.	3062000.	3369000.	3675000.	3981000.
47	1.40	4359000.	4747000.	4843000.	5328000.	5812000.	6296000.
48	1.24	7083000.	7713000.	7870000.	8657000.	9444000.	10230000.
49	1.11	11030000.	12010000.	12260000.	13480000.	14710000.	15930000.
50	0.99	17430000.	18980000.	19370000.	21310000.	23240000.	25180000.
51	0.88	27930000.	30410000.	31030000.	34130000.	37230000.	40330000.
52	0.78	45240000.	49260000.	50270000.	55290000.	60320000.	65340000.
53	0.70	69750000.	75950000.	77500000.	85240000.	92990000.	100700000.
54	0.62	113300000.	123400000.	125900000.	138500000.	151100000.	163700000.
55	0.55	183000000.	199300000.	203300000.	223700000.	244000000.	264300000.
56	0.49	290500000.	316300000.	322800000.	355000000.	387300000.	419600000.

TABLE 7—Wire Table, Solid Aluminum, EC–0—Pounds per Ohm

Gage	Diameter at 20 °C (mils)	Pounds per ohm at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	707.10	14930.	13710.	13440.	12210.	11200.	10340.
450,000	670.80	12090.	11100.	10880.	9893.	9069.	8371.
400,000	632.50	9557.	8777.	8601.	7820.	7168.	6617.
350,000	591.60	7314.	6718.	6583.	5985.	5486.	5065.
300,000	547.70	5373.	4935.	4836.	4397.	4030.	3720.
250,000	500.00	3732.	3428.	3359.	3054.	2799.	2584.
0000	460.00	2674.	2455.	2406.	2188.	2005.	1851.
000	409.60	1681.	1544.	1513.	1375.	1261.	1164.
00	364.80	1058.	971.2	951.8	865.3	793.2	732.2
0	324.90	665.4	611.1	598.9	544.4	499.1	460.7
1	289.30	418.3	384.1	376.5	342.3	313.7	289.6
2	257.60	262.9	241.5	236.7	215.1	197.2	182.1
3	229.40	165.4	151.9	148.8	135.3	124.0	114.5
4	204.30	104.0	95.54	93.63	85.12	78.03	72.03
5	181.90	65.37	60.04	58.84	53.49	49.04	45.26
6	162.00	41.13	37.77	37.02	33.65	30.85	28.48
7	144.30	25.89	23.78	23.30	21.18	19.42	17.93
8	128.50	16.28	14.95	14.65	13.32	12.21	11.27
9	114.40	10.23	9.393	9.205	8.369	7.672	7.082
10	101.90	6.438	5.913	5.795	5.268	4.829	4.458
11	90.70	4.041	3.711	3.637	3.307	3.031	2.798
12	80.80	2.545	2.337	2.291	2.083	1.909	1.762
13	72.00	1.605	1.474	1.444	1.313	1.204	1.111
14	64.10	1.008	0.9258	0.9073	0.8249	0.7562	0.6980
15	57.10	0.6348	0.5830	0.5713	0.5194	0.4761	0.4395
16	50.80	0.3977	0.3652	0.3579	0.3254	0.2983	0.2753
17	45.30	0.2515	0.2309	0.2263	0.2058	0.1886	0.1741
18	40.30	0.1575	0.1447	0.1418	0.1289	0.1181	0.1091
19	35.90	0.09918	0.09109	0.08927	0.08116	0.07440	0.06868
20	32.00	0.06261	0.05750	0.05635	0.05123	0.04697	0.04335
21	28.50	0.03940	0.03618	0.03546	0.03224	0.02955	0.02728
22	25.30	0.02447	0.02247	0.02202	0.02002	0.01835	0.01694
23	22.60	0.01558	0.01431	0.01402	0.01275	0.01168	0.01079
24	20.10	0.009747	0.008951	0.008772	0.007975	0.007311	0.006749
25	17.90	0.006130	0.005630	0.005517	0.005016	0.004598	0.004245
26	15.90	0.003816	0.003505	0.003435	0.003123	0.002863	0.002642
27	14.20	0.002428	0.002230	0.002185	0.001987	0.001821	0.001681
28	12.60	0.001505	0.001382	0.001355	0.001231	0.001129	0.001042
29	11.30	0.0009736	0.0008942	0.0008763	0.0007966	0.0007303	0.0006741
30	10.00	0.0005971	0.0005484	0.0005374	0.0004886	0.0004479	0.0004135
31	8.90	0.0003747	0.0003441	0.0003372	0.0003066	0.0002810	0.0002594
32	8.00	0.0002446	0.0002246	0.0002201	0.0002001	0.0001835	0.0001694
33	7.10	0.0001517	0.0001394	0.0001366	0.0001242	0.0001138	0.0001051
34	6.30	0.00009407	0.00008639	0.00008466	0.00007697	0.00007056	0.00006513
35	5.60	0.00005872	0.00005393	0.00005285	0.00004805	0.00004405	0.00004066
36	5.00	0.00003732	0.00003428	0.00003359	0.00003054	0.00002799	0.00002584
37	4.50	0.00002449	0.00002249	0.00002204	0.00002004	0.00001837	0.00001695
38	4.00	0.00001529	0.00001404	0.00001376	0.00001251	0.00001147	0.00001058

TABLE 7—Wire Table, Solid Aluminum, EC–0—Pounds per Ohm—Continued

Gage	Diameter at 20 °C (mils)	Pounds per ohm at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	3.50	0.000008961	0.000008229	0.000008065	0.000007332	0.000006721	0.000006204
40	3.10	0.000005515	0.000005065	0.000004963	0.000004512	0.000004136	0.000003818
41	2.80	0.000003670	0.000003371	0.000003303	0.000003003	0.000002753	0.000002541
42	2.50	0.000002333	0.000002142	0.000002099	0.000001909	0.000001750	0.000001615
43	2.20	0.000001399	0.000001285	0.000001259	0.000001145	0.000001049	0.0000009685
44	2.00	0.0000009554	0.0000008774	0.0000008599	0.0000007818	0.0000007166	0.0000006615
45	1.76	0.0000005730	0.0000005262	0.0000005157	0.0000004688	0.0000004298	0.0000003967
46	1.57	0.0000003628	0.0000003332	0.0000003265	0.0000002969	0.0000002721	0.0000002512
47	1.40	0.0000002294	0.0000002107	0.0000002065	0.0000001877	0.0000001721	0.0000001588
48	1.24	0.0000001412	0.0000001297	0.0000001271	0.0000001155	0.0000001059	0.00000009775
49	1.11	0.00000009065	0.00000008325	0.00000008159	0.00000007417	0.00000006799	0.00000006276
50	0.99	0.00000005736	0.00000005268	0.00000005163	0.00000004693	0.00000004302	0.00000003972
51	0.88	0.00000003581	0.00000003289	0.00000003223	0.00000002930	0.00000002686	0.00000002479
52	0.78	0.00000002210	0.00000002030	0.00000001989	0.00000001809	0.00000001658	0.00000001530
53	0.70	0.00000001434	0.00000001317	0.00000001290	0.00000001173	0.00000001075	0.000000009927
54	0.62	0.000000008823	0.000000008103	0.000000007941	0.000000007220	0.000000006618	0.000000006109
55	0.55	0.000000005464	0.000000005018	0.000000004918	0.000000004471	0.000000004099	0.000000003783
56	0.49	0.000000003442	0.000000003161	0.000000003098	0.000000002817	0.000000002582	0.000000002383

TABLE 8—Wire Table, Solid Aluminum, EC–0—Data at 20 °C—Metric Units

Gage	Diameter (mm)	Area (sq mm)	Ohms per kilometer	Meters per ohm	Kilograms per kilometer	Meters per gram	Ohms per kilogram	Grams per ohm
500,000	17.960	253.3	0.1101	9081.	684.8	0.001460	0.0001608	6219000.
450,000	17.040	228.0	0.1224	8173.	616.3	0.001623	0.0001985	5037000.
400,000	16.070	202.7	0.1376	7266.	547.9	0.001825	0.0002512	3981000.
350,000	15.030	177.3	0.1573	6357.	479.4	0.002086	0.0003282	3047000.
300,000	13.910	152.0	0.1835	5448.	410.9	0.002434	0.0004467	2239000.
250,000	12.700	126.7	0.2202	4541.	342.4	0.002920	0.0006432	1555000.
0000	11.680	107.2	0.2602	3843.	289.8	0.003450	0.0008978	1114000.
000	10.400	85.01	0.3282	3047.	229.8	0.004352	0.001428	700200.
00	9.2660	67.43	0.4137	2417.	182.3	0.005486	0.002270	440600.
0	8.2520	53.49	0.5216	1917.	144.6	0.006917	0.003608	277200.
1	7.3480	42.41	0.6578	1520.	114.6	0.008724	0.005739	174300.
2	6.5430	33.62	0.8297	1205.	90.89	0.01100	0.009129	109500.
3	5.8270	26.67	1.046	955.8	72.08	0.01387	0.01452	68890.
4	5.1890	21.15	1.319	758.1	57.17	0.01749	0.02307	43340.
5	4.6200	16.77	1.664	601.0	45.32	0.02207	0.03672	27230.
6	4.1150	13.30	2.098	476.7	35.94	0.02782	0.05836	17130.
7	3.6650	10.55	2.644	378.2	28.52	0.03506	0.09271	10790.
8	3.2640	8.367	3.334	299.9	22.62	0.04422	0.1474	6783.
9	2.9060	6.631	4.207	237.7	17.92	0.05579	0.2347	4261.
10	2.5880	5.261	5.302	188.6	14.22	0.07031	0.3728	2682.
11	2.3040	4.168	6.693	149.4	11.27	0.08875	0.5940	1684.
12	2.0520	3.308	8.433	118.6	8.942	0.1118	0.9431	1060.
13	1.8290	2.627	10.62	94.16	7.100	0.1408	1.496	668.5
14	1.6280	2.082	13.40	74.63	5.628	0.1777	2.381	420.0
15	1.4500	1.652	16.89	59.22	4.466	0.2239	3.782	264.4
16	1.2900	1.308	21.33	46.87	3.535	0.2829	6.036	165.7
17	1.1510	1.040	26.83	37.27	2.811	0.3558	9.546	104.8
18	1.0240	0.8229	33.90	29.50	2.224	0.4496	15.24	65.62
19	0.9119	0.6531	42.72	23.41	1.765	0.5665	24.20	41.32
20	0.8128	0.5189	53.77	18.60	1.403	0.7130	38.34	26.08
21	0.7239	0.4116	67.78	14.75	1.112	0.8989	60.93	16.41
22	0.6426	0.3243	86.01	11.63	0.8767	1.141	98.11	10.19
23	0.5740	0.2588	107.8	9.277	0.6996	1.429	154.1	6.490
24	0.5105	0.2047	136.3	7.338	0.5533	1.807	246.3	4.060
25	0.4547	0.1624	171.8	5.820	0.4388	2.279	391.6	2.554
26	0.4039	0.1281	217.8	4.592	0.3463	2.888	629.0	1.590
27	0.3607	0.1022	273.0	3.662	0.2762	3.621	988.7	1.011
28	0.3200	0.08045	346.8	2.884	0.2174	4.599	1595.	0.6270
29	0.2870	0.06470	431.2	2.319	0.1749	5.718	2465.	0.4056
30	0.2540	0.05067	550.6	1.816	0.1370	7.301	4020.	0.2488
31	0.2261	0.04014	695.0	1.439	0.1085	9.218	6407.	0.1561
32	0.2032	0.03243	860.3	1.162	0.08766	11.41	9814.	0.1019
33	0.1803	0.02554	1092.	0.9156	0.06904	14.48	15820.	0.06322
34	0.1600	0.02011	1387.	0.7209	0.05436	18.40	25520.	0.03919
35	0.1422	0.01589	1756.	0.5696	0.04295	23.28	40880.	0.02446
36	0.1270	0.01267	2202.	0.4541	0.03424	29.20	64320.	0.01555
37	0.1143	0.01026	2719.	0.3678	0.02774	36.06	98030.	0.01020
38	0.1016	0.008107	3441.	0.2906	0.02191	45.63	157000.	0.006368

TABLE 8—Wire Table, Solid Aluminum, EC-0—Data at 20 °C—Metric Units—Continued

Gage	Diameter (mm)	Area (sq mm)	Ohms per kilometer	Meters per ohm	Kilograms per kilometer	Meters per gram	Ohms per kilogram	Grams per ohm
39	0.08890	0.006207	4494.	0.2225	0.01678	59.60	267900.	0.003733
40	0.07874	0.004869	5729.	0.1745	0.01316	75.98	435300.	0.002297
41	0.07112	0.003973	7023.	0.1424	0.01074	93.13	654000.	0.001529
42	0.06350	0.003167	8809.	0.1135	0.008560	116.8	1029000.	0.0009717
43	0.05588	0.002452	11380.	0.08791	0.006629	150.9	1716000.	0.0005827
44	0.05080	0.002027	13760.	0.07265	0.005479	182.5	2512000.	0.0003980
45	0.04470	0.001570	17770.	0.05626	0.004243	235.7	4189000.	0.0002387
46	0.03988	0.001249	22340.	0.04477	0.003376	296.2	6616000.	0.0001511
47	0.03556	0.0009931	28090.	0.03560	0.002684	372.5	10460000.	0.00009557
48	0.03150	0.0007791	35810.	0.02793	0.002106	474.8	17000000.	0.00005881
49	0.02819	0.0006243	44690.	0.02238	0.001688	592.6	26480000.	0.00003776
50	0.02515	0.0004966	56180.	0.01780	0.001342	744.9	41850000.	0.00002390
51	0.02235	0.0003924	71100.	0.01407	0.001061	942.8	67030000.	0.00001492
52	0.01981	0.0003083	90500.	0.01105	0.0008333	1200.	108600000.	0.000009208
53	0.01778	0.0002483	112400.	0.008900	0.0006711	1490.	167400000.	0.000005973
54	0.01575	0.0001948	143200.	0.006982	0.0005265	1899.	272000000.	0.000003676
55	0.01397	0.0001533	182000.	0.005494	0.0004143	2414.	439300000.	0.000002276
56	0.01245	0.0001217	229300.	0.004361	0.0003288	3041.	697300000.	0.000001434

TABLE 9—Wire Table, Solid Aluminum, EC–0—Ohms per Kilometer

Gage	Diameter at 20 °C (mm)	Area at 20 °C (sq mm)	Ohms per kilometer at—					
			0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	17.960	253.3	0.1011	0.1101	0.1124	.1236	.1348	.1461
450,000	17.040	228.0	0.1124	0.1224	0.1249	.1373	.1498	.1623
400,000	16.070	202.7	0.1264	0.1376	0.1404	.1545	.1685	.1825
350,000	15.030	177.3	0.1445	0.1573	0.1605	.1766	.1926	.2087
300,000	13.910	152.0	0.1686	0.1835	0.1873	.2060	.2247	.2434
250,000	12.700	126.7	0.2023	0.2202	0.2247	.2472	.2696	.2921
0000	11.680	107.2	0.2390	0.2602	0.2655	.2920	.3186	.3451
000	10.400	85.01	0.3014	0.3282	0.3349	.3683	.4018	.4353
00	9.2660	67.43	0.3800	0.4137	0.4222	.4644	.5066	.5488
0	8.2520	53.49	0.4790	0.5216	0.5322	.5854	.6386	.6918
1	7.3480	42.41	0.6042	0.6578	0.6713	.7384	.8055	.8726
2	6.5430	33.62	0.7620	0.8297	0.8466	.9313	1.016	1.101
3	5.8270	26.67	0.9609	1.046	1.068	1.174	1.281	1.388
4	5.1890	21.15	1.211	1.319	1.346	1.481	1.615	1.750
5	4.6200	16.77	1.528	1.664	1.698	1.868	2.037	2.207
6	4.1150	13.30	1.927	2.098	2.141	2.355	2.569	2.783
7	3.6650	10.55	2.428	2.644	2.698	2.968	3.237	3.507
8	3.2640	8.367	3.062	3.334	3.402	3.742	4.083	4.423
9	2.9060	6.631	3.864	4.207	4.293	4.722	5.151	5.580
10	2.5880	5.261	4.870	5.302	5.410	5.951	6.492	7.033
11	2.3040	4.168	6.147	6.693	6.829	7.512	8.195	8.877
12	2.0520	3.308	7.745	8.433	8.605	9.465	10.33	11.19
13	1.8920	2.627	9.754	10.62	10.84	11.92	13.00	14.09
14	1.6280	2.082	12.31	13.40	13.67	15.04	16.41	17.77
15	1.4500	1.652	15.51	16.89	17.23	18.95	20.68	22.40
16	1.2900	1.308	19.59	21.33	21.77	23.95	26.12	28.30
17	1.1510	1.040	24.64	26.83	27.38	30.11	32.85	35.59
18	1.0240	0.8229	31.13	33.90	34.59	38.05	41.51	44.97
19	0.9119	0.6531	39.23	42.72	43.59	47.95	52.31	56.66
20	0.8128	0.5189	49.38	53.77	54.86	60.35	65.83	71.32
21	0.7239	0.4116	62.25	67.78	69.17	76.08	82.99	89.91
22	0.6426	0.3243	79.00	86.01	87.77	95.54	105.3	114.1
23	0.5740	0.2588	99.00	107.8	110.0	121.0	132.0	143.0
24	0.5105	0.2047	125.2	136.3	139.1	153.0	166.9	180.8
25	0.4547	0.1624	157.8	171.8	175.3	192.9	210.4	227.9
26	0.4039	0.1281	200.0	217.8	222.2	244.4	266.7	288.9
27	0.3607	0.1022	250.8	273.0	278.6	306.5	334.3	362.2
28	0.3200	0.08045	318.5	346.8	353.9	389.2	424.6	460.0
29	0.2870	0.06470	396.0	431.2	440.0	484.0	527.9	571.9
30	0.2540	0.05067	505.6	550.6	561.8	618.0	674.1	730.3
31	0.2261	0.04014	638.4	695.1	709.3	780.2	851.1	922.
32	0.2032	0.03243	790.1	860.3	877.8	965.6	1053.	1141.
33	0.1803	0.02554	1003.	1092.	1114.	1226.	1337.	1449.
34	0.1600	0.02011	1274.	1387.	1415.	1557.	1698.	1840.
35	0.1422	0.01589	1612.	1756.	1791.	1971.	2150.	2329.
36	0.1270	0.01267	2023.	2202.	2247.	2472.	2696.	2921.
37	0.1143	0.01026	2497.	2719.	2774.	3052.	3329.	3606.
38	0.1016	0.08107	3160.	3441.	3511.	3862.	4213.	4564.
39	0.08890	0.006207	4128.	4494.	4586.	5045.	5503.	5961.
40	0.07874	0.004869	5262.	5729.	5845.	6430.	7015.	7599.
41	0.07112	0.003973	6450.	7023.	7166.	7882.	8598.	9315.
42	0.06350	0.003167	8090.	8809.	8989.	9887.	10790.	11680.
43	0.05588	0.002452	10450.	11380.	11610.	12770.	13930.	15090.
44	0.05080	0.002027	12640.	13760.	14050.	15450.	16850.	18260.
45	0.04470	0.001570	16320.	17770.	18140.	19950.	21760.	23580.
46	0.03988	0.001249	20510.	22340.	22790.	25070.	27350.	29630.
47	0.03556	0.0009931	25800.	28090.	28660.	31530.	34390.	37260.
48	0.03150	0.0007791	32890.	35810.	36540.	40190.	43840.	47490.
49	0.02819	0.0006243	41040.	44690.	45600.	50160.	54710.	59270.
50	0.02515	0.0004966	51590.	56180.	57320.	63050.	68780.	74510.
51	0.02235	0.0003924	65300.	71100.	72550.	79800.	87050.	94300.
52	0.01981	0.0003083	83110.	90500.	92340.	101600.	110800.	120000.
53	0.01778	0.0002483	103200.	112400.	114700.	126100.	137600.	149000.
54	0.01575	0.0001948	131500.	143200.	146200.	160800.	175400.	190000.
55	0.01397	0.0001533	167200.	182000.	185700.	204300.	222800.	241400.
56	0.01245	0.0001217	210600.	229300.	234000.	257400.	280800.	304200.

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TABLE 10—Wire Table, Solid Aluminum, EC–0—Meters per Ohm

Gage	Diameter at 20 °C (mm)	Kilograms per kilometer at 20 °C	Meters per gram at 20 °C	Meters per ohm at—					
				0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	17.960	684.8	0.001460	9888.	9081.	8900.	8091.	7417.	6847.
450,000	17.040	616.3	0.001623	8899.	8173.	8009.	7282.	6675.	6162.
400,000	16.070	547.9	0.001825	7912.	7266.	7121.	6474.	5934.	5478.
350,000	15.030	479.4	0.002086	6922.	6357.	6230.	5664.	5192.	4793.
300,000	13.910	410.9	0.002434	5933.	5448.	5340.	4854.	4450.	4108.
250,000	12.700	342.4	0.002920	4944.	4541.	4450.	4046.	3709.	3423.
0000	11.680	289.8	0.003450	4185.	3843.	3766.	3424.	3139.	2898.
000	10.400	229.8	0.004352	3318.	3047.	2986.	2715.	2489.	2297.
00	9.2660	182.3	0.005486	2632.	2417.	2369.	2154.	1974.	1822.
0	8.2520	144.6	0.006917	2088.	1917.	1879.	1708.	1566.	1445.
1	7.3480	114.6	0.008724	1655.	1520.	1490.	1354.	1242.	1146.
2	6.5430	90.89	0.01100	1312.	1205.	1181.	1074.	984.4	908.7
3	5.8270	72.08	0.01387	1041.	955.8	936.7	851.6	780.6	720.6
4	5.1890	57.17	0.01749	825.5	758.1	742.9	675.4	619.2	571.5
5	4.6200	45.32	0.02207	654.4	601.0	589.0	535.4	490.8	453.1
6	4.1150	35.94	0.02782	519.0	476.7	467.1	424.7	389.3	359.4
7	3.6650	28.52	0.03506	411.8	378.2	370.6	337.	308.9	285.1
8	3.2640	22.62	0.04422	326.6	299.9	293.9	267.2	244.9	226.1
9	2.9060	17.92	0.05579	258.8	237.7	233.0	211.8	194.1	179.2
10	2.5880	14.22	0.07031	205.4	188.6	184.8	168.0	154.0	142.2
11	2.3040	11.27	0.08875	162.7	149.4	146.4	133.1	122.0	112.6
12	2.0520	8.942	0.01118	129.1	118.6	116.2	105.6	96.85	89.40
13	1.8290	7.100	0.01408	102.5	94.16	92.27	83.89	76.90	70.99
14	1.6280	5.628	0.01777	81.26	74.63	73.14	66.49	60.95	56.26
15	1.4500	4.466	0.2239	64.48	59.22	58.03	52.76	48.37	44.65
16	1.2900	3.535	0.2829	51.04	46.87	45.93	41.76	38.28	35.34
17	1.1510	2.811	0.3558	40.58	37.27	36.53	33.21	30.44	28.10
18	1.0240	2.224	0.4496	32.12	29.50	28.91	26.28	24.09	22.24
19	0.9119	1.765	0.5665	25.49	23.41	22.94	20.86	19.12	17.65
20	0.8128	1.403	0.7130	20.25	18.60	18.23	16.57	15.19	14.02
21	0.7239	1.112	0.8989	16.06	14.75	14.46	13.14	12.05	11.12
22	0.6426	0.8767	1.141	12.66	11.63	11.39	10.36	9.495	8.765
23	0.5740	0.6996	1.429	10.10	9.277	9.091	8.265	7.577	6.994
24	0.5105	0.5533	1.807	7.990	7.338	7.191	6.538	5.993	5.532
25	0.4547	0.4388	2.279	6.337	5.820	5.703	5.185	4.753	4.387
26	0.4039	0.3463	2.888	5.000	4.592	4.500	4.091	3.750	3.462
27	0.3607	0.2762	3.621	3.988	3.662	3.589	3.263	2.991	2.761
28	0.3200	0.2174	4.599	3.140	2.884	2.826	2.569	2.355	2.174
29	0.2870	0.1749	5.718	2.525	2.319	2.273	2.066	1.894	1.749
30	0.2540	0.1370	7.301	1.978	1.816	1.780	1.618	1.483	1.369
31	0.2261	0.1085	9.218	1.567	1.439	1.410	1.282	1.175	1.085
32	0.2032	0.08766	11.41	1.266	1.162	1.139	1.0360	0.9494	0.8764
33	0.1803	0.06904	14.48	0.9969	0.9156	0.8973	0.8157	0.7478	0.6903
34	0.1600	0.05436	18.40	0.7849	0.7209	0.7065	0.6423	0.5888	0.5435
35	0.1422	0.04295	23.28	0.6202	0.5696	0.5582	0.5075	0.4652	0.4294
36	0.1270	0.03424	29.20	0.4944	0.4541	0.4450	0.4046	0.3709	0.3423
37	0.1143	0.02774	36.06	0.4005	0.3678	0.3604	0.3277	0.3004	0.2773
38	0.1016	0.02191	45.63	0.3164	0.2906	0.2848	0.2589	0.2373	0.2191

TABLE 10—Wire Table, Solid Aluminum, EC–0—Meters per Ohm—Continued

Gage	Diameter at 20 °C (mm)	Kilograms per kilometer at 20 °C	Meters per gram at 20 °C	Meters per ohm at—					
				0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	0.08890	0.01678	59.60	0.2423	0.2225	0.2180	0.1982	0.1817	0.1677
40	0.07874	0.01316	75.98	0.1901	0.1745	0.1711	0.1555	0.1426	0.1316
41	0.07112	0.01074	93.13	0.1550	0.1424	0.1396	0.1269	0.1163	0.1074
42	0.06350	0.008560	116.8	0.1236	0.1135	0.1112	0.1011	0.09271	0.08558
43	0.05588	0.006629	150.9	0.09572	0.08791	0.08615	0.07832	0.07180	0.06628
44	0.05080	0.005479	182.5	0.07911	0.07265	0.07120	0.06473	0.05934	0.05477
45	0.04470	0.004243	235.7	0.06126	0.05626	0.05514	0.05013	0.04595	0.04242
46	0.03988	0.003376	296.2	0.04875	0.04477	0.04387	0.03989	0.03656	0.03375
47	0.03556	0.002684	372.5	0.03876	0.03560	0.03489	0.03172	0.02907	0.02684
48	0.03150	0.002106	474.8	0.03041	0.02793	0.02737	0.02488	0.02281	0.02105
49	0.02819	0.001688	592.6	0.02437	0.02238	0.02193	0.01994	0.01828	0.01687
50	0.02515	0.001342	744.9	0.01938	0.01780	0.01745	0.01586	0.01454	0.01342
51	0.02235	0.001061	942.8	0.01532	0.01407	0.01378	0.01253	0.01149	0.01060
52	0.01981	0.0008333	1200.	0.01203	0.01105	0.01083	0.009845	0.009025	0.008331
53	0.01778	0.0006711	1490.	0.009691	0.008900	0.008722	0.007929	0.007269	0.006710
54	0.01575	0.0005265	1899.	0.007602	0.006982	0.006842	0.006220	0.005702	0.005264
55	0.01397	0.0004143	2414.	0.005982	0.005494	0.005384	0.004895	0.004487	0.004142
56	0.01245	0.0003288	3041.	0.004748	0.004361	0.004274	0.003885	0.003562	0.003288

TABLE 11—Wire Table, Solid Aluminum, EC–0—Ohms per Kilogram

Gage	Diameter at 20 °C (mm)	Ohms per kilogram at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	17.960	0.0001477	0.0001608	0.0001641	0.0001805	0.0001969	0.0002133
450,000	17.040	0.0001823	0.0001985	0.0002026	0.0002228	0.0002431	0.0002633
400,000	16.070	0.0002307	0.0002512	0.0002563	0.0002819	0.0003075	0.0003332
350,000	15.030	0.0003014	0.0003282	0.0003349	0.0003683	0.0004018	0.0004353
300,000	13.910	0.0004103	0.0004467	0.0004558	0.0005014	0.0005470	0.0005925
250,000	12.700	0.0005907	0.0006432	0.0006563	0.0007219	0.0007875	0.0008531
0000	11.680	0.0008245	0.0008978	0.0009161	0.001008	0.001099	0.001191
000	10.400	0.001312	0.001428	0.001457	0.001603	0.001749	0.001894
00	9.2660	0.002085	0.002270	0.002316	0.002548	0.002779	0.003011
0	8.2520	0.003313	0.003608	0.003681	0.004049	0.004417	0.004785
1	7.3480	0.005270	0.005739	0.005856	0.006441	0.007027	0.007612
2	6.5430	0.008384	0.009129	0.009315	0.01025	0.01118	0.01211
3	5.8270	0.01333	0.01452	0.01481	0.01629	0.01777	0.01925
4	5.1890	0.02119	0.02307	0.02355	0.02590	0.02825	0.03061
5	4.6200	0.03372	0.03672	0.03747	0.04121	0.04496	0.04870
6	4.1150	0.05360	0.05836	0.05956	0.06551	0.07146	0.07741
7	3.6650	0.08515	0.09271	0.09460	0.1041	0.1135	0.1230
8	3.2640	0.1354	0.1474	0.1504	0.1655	0.1805	0.1956
9	2.9060	0.2155	0.2347	0.2395	0.2634	0.2874	0.3113
10	2.5880	0.3424	0.3728	0.3804	0.4185	0.4565	0.4945
11	2.3040	0.5455	0.5940	0.6061	0.6667	0.7273	0.7879
12	2.0520	0.8662	0.9431	0.9624	1.059	1.155	1.251
13	1.8290	1.374	1.496	1.526	1.679	1.831	1.984
14	1.6280	2.187	2.381	2.430	2.673	2.915	3.158
15	1.4500	3.473	3.782	3.859	4.244	4.630	5.016
16	1.2900	5.544	6.036	6.159	6.775	7.391	8.006
17	1.1510	8.767	9.546	9.741	10.71	11.69	12.66
18	1.0240	14.00	15.24	15.55	17.11	18.66	20.21
19	0.9119	22.23	24.20	24.69	27.16	29.63	32.10
20	0.8128	35.21	38.34	39.12	43.03	46.94	50.85
21	0.7239	55.96	60.93	62.17	68.39	74.60	80.82
22	0.6426	90.11	98.11	100.1	110.1	120.1	130.1
23	0.5740	141.5	154.1	157.2	173.0	188.7	204.4
24	0.5105	226.2	246.3	251.3	276.4	301.5	326.7
25	0.4547	359.6	391.6	399.5	439.5	479.4	519.4
26	0.4039	577.6	629.0	641.8	705.9	770.1	834.2
27	0.3607	908.	988.7	1009.	1110.	1211.	1311.
28	0.3200	1465.	1595.	1627.	1790.	1953.	2115.
29	0.2870	2264.	2465.	2516.	2767.	3019.	3270.
30	0.2540	3692.	4020.	4102.	4512.	4922.	5332.
31	0.2261	5884.	6407.	6538.	7191.	7845.	8498.
32	0.2032	9013.	9814.	10010.	11020.	12020.	13020.
33	0.1803	14530.	15820.	16140.	17760.	19370.	20980.
34	0.1600	23440.	25520.	26040.	28640.	31240.	33850.
35	0.1422	37540.	40880.	41710.	45880.	50050.	54220.
36	0.1270	59070.	64320.	65630.	72190.	78750.	85310.
37	0.1143	90030.	98030.	100000.	110000.	120000.	130000.
38	0.1016	144200.	157000.	160200.	176200.	192300.	208300.

TABLE 11—Wire Table, Solid Aluminum, EC–0—Ohms per Kilogram—Continued

Gage	Diameter at 20 °C (mm)	Ohms per kilogram at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	0.08890	246000.	267900.	273300.	300700.	328000.	355300.
40	0.07874	399800.	435300.	444200.	488600.	539200.	577300.
41	0.07112	600600.	654000.	667300.	734100.	800800.	867500.
42	0.06350	945100.	1029000.	1050000.	1155000.	1260000.	1365000.
43	0.05588	1576000.	1716000.	1751000.	1926000.	2101000.	2276000.
44	0.05080	2307000.	2512000.	2564000.	2820000.	3076000.	3332000.
45	0.04470	3848000.	4189000.	4275000.	4702000.	5130000.	5557000.
46	0.03988	6076000.	6616000.	6751000.	7426000.	8101000.	8776000.
47	0.03556	9610000.	10460000.	10680000.	11740000.	12810000.	13880000.
48	0.03150	15620000.	17000000.	17350000.	19080000.	20820000.	22550000.
49	0.02819	24320000.	26480000.	27020000.	29720000.	32420000.	35120000.
50	0.02515	38430000.	41850000.	42700000.	46970000.	51240000.	55510000.
51	0.02235	61560000.	67030000.	68400000.	75240000.	82070000.	88910000.
52	0.01981	99740000.	108600000.	110800000.	121900000.	133000000.	144000000.
53	0.01778	153800000.	167400000.	170800000.	187900000.	205000000.	222100000.
54	0.01575	249800000.	272000000.	277600000.	305300000.	333100000.	360800000.
55	0.01397	403500000.	439300000.	448300000.	493100000.	537900000.	582700000.
56	0.01245	640400000.	697300000.	711500000.	782700000.	853800000.	924900000.

TABLE 12—Wire Table, Solid Aluminum, EC–0—Grams per Ohm

Gage	Diameter at 20 °C (mm)	Grams per ohm at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	17.960	6771000.	6219000.	6095000.	5541000.	5079000.	4689000.
450,000	17.040	5484000.	5037000.	4936000.	4488000.	4114000.	3797000.
400,000	16.070	4335000.	3981000.	3902000.	3547000.	3252000.	3002000.
350,000	15.030	3318000.	3047000.	2986000.	2715000.	2489000.	2297000.
300,000	13.910	2437000.	2239000.	2194000.	1994000.	1828000.	1688000.
250,000	12.700	1693000.	1555000.	1524000.	1385000.	1270000.	1172000.
0000	11.680	1213000.	1114000.	1092000.	992400.	909700.	839700.
000	10.400	762400.	700200.	686200.	623900.	571900.	527900.
00	9.2660	479700.	440600.	431800.	392500.	359800.	332200.
0	8.2520	301800.	277200.	271700.	247000.	226400.	209000.
1	7.3480	189700.	174300.	170800.	155300.	142300.	131400.
2	6.5430	119300.	109500.	107400.	97590.	89460.	82580.
3	5.8270	75010.	68890.	67510.	61380.	56270.	51940.
4	5.1890	47190.	43340.	42470.	38610.	35390.	32670.
5	4.6200	29650.	27230.	26690.	24260.	22240.	20530.
6	4.1150	18660.	17130.	16790.	15270.	13990.	12920.
7	3.6650	11740.	10790.	10570.	9610.	8809.	8132.
8	3.2640	7385.	6783.	6647.	6043.	5540.	5114.
9	2.9060	4639.	4261.	4176.	3796.	3480.	3212.
10	2.5880	2920.	2682.	2629.	2390.	2191.	2022.
11	2.3040	1833.	1684.	1650.	1500.	1375.	1269.
12	2.0520	1155.	1060.	1039.	944.7	866.	799.4
13	1.8290	727.9	668.5	655.2	595.6	546.	504.0
14	1.6280	457.3	420.0	411.6	374.2	343.	316.6
15	1.4500	287.9	264.4	259.2	235.6	216.	199.4
16	1.2900	180.4	165.7	162.4	147.6	135.3	124.9
17	1.1510	114.1	104.8	102.7	93.33	85.56	78.98
18	1.0240	71.45	65.62	64.30	58.46	53.59	49.47
19	0.9119	44.99	41.32	40.49	36.81	33.75	31.15
20	0.8128	28.40	26.08	25.56	23.24	21.30	19.67
21	0.7239	17.87	16.41	16.08	14.62	13.40	12.37
22	0.6426	11.10	10.19	9.989	9.081	8.324	7.684
23	0.5740	7.066	6.490	6.360	5.782	5.300	4.893
24	0.5105	4.421	4.060	3.979	3.618	3.316	3.061
25	0.4547	2.781	2.554	2.503	2.275	2.086	1.925
26	0.4039	1.731	1.590	1.558	1.417	1.299	1.199
27	0.3607	1.101	1.011	0.9912	0.9011	0.8261	0.7626
28	0.3200	0.6827	0.6270	0.6145	0.5586	0.5121	0.4727
29	0.2870	0.4416	0.4056	0.3975	0.3614	0.3313	0.3058
30	0.2540	0.2709	0.2488	0.2438	0.2216	3.2032	0.1875
31	0.2261	0.1699	0.1561	0.1529	0.1391	0.1275	0.1177
32	0.2032	0.1109	0.1019	0.09986	0.09078	0.08322	0.07682
33	0.1803	0.06883	0.06322	0.06195	0.05632	0.05163	0.04766
34	0.1600	0.04267	0.03919	0.03840	0.03491	0.03201	0.02954
35	0.1422	0.02664	0.02446	0.02398	0.02180	0.01998	0.01844
36	0.1270	0.01693	0.01555	0.01524	0.01385	0.01270	0.01172
37	0.1143	0.01111	0.01020	0.09997	0.009089	0.008331	0.07691
38	0.1016	0.006934	0.006368	0.006241	0.005674	0.005201	0.004801

TABLE 12—Wire Table, Solid Aluminum, EC–0—Grams per Ohm—Continued

Gage	Diameter at 20 °C (mm)	Grams per ohm at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	0.08890	0.004065	0.003733	0.003658	0.003326	0.003049	0.002814
40	0.07874	0.002502	0.002297	0.002251	0.002047	0.001876	0.001732
41	0.07112	0.001665	0.001529	0.001498	0.001362	0.001249	0.001153
42	0.06350	0.001058	0.0009717	0.0009523	0.0008658	0.0007936	0.0007326
43	0.05588	0.0006345	0.0005827	0.0005711	0.0005192	0.0004759	0.0004393
44	0.05080	0.0004334	0.0003980	0.0003901	0.0003546	0.0003251	0.0003001
45	0.04470	0.0002599	0.0002387	0.0002339	0.0002127	0.0001949	0.0001800
46	0.03988	0.0001646	0.0001511	0.0001481	0.0001347	0.0001234	0.0001139
47	0.03556	0.0001041	0.00009557	0.00009366	0.00008514	0.00007805	0.00007205
48	0.03150	0.00006404	0.00005881	0.00005764	0.00005240	0.00004803	0.00004434
49	0.02819	0.00004112	0.00003776	0.00003701	0.00003365	0.00003084	0.00002847
50	0.02515	0.00002602	0.00002390	0.00002342	0.00002129	0.00001952	0.00001802
51	0.02235	0.00001624	0.00001492	0.00001462	0.00001329	0.00001218	0.00001125
52	0.01981	0.00001003	0.000009208	0.000009024	0.000008204	0.000007520	0.000006942
53	0.01778	0.000006504	0.000005973	0.000005853	0.000005332	0.000004878	0.000004503
54	0.01575	0.000004002	0.000003676	0.000003602	0.000003275	0.000003002	0.000002771
55	0.01397	0.000002479	0.000002276	0.000002231	0.000002028	0.000001859	0.000001716
56	0.01245	0.000001562	0.000001434	0.000001405	0.000001278	0.000001171	0.000001081
50	0.02515	0.00002602	0.00002390	0.00002342	0.00002129	0.00001952	0.00001802
51	0.02235	0.00001624	0.00001492	0.00001462	0.00001329	0.00001218	0.00001125
52	0.01981	0.00001003	0.000009208	0.000009024	0.000008204	0.000007520	0.000006942
53	0.01778	0.000006504	0.000005973	0.000005853	0.000005332	0.000004878	0.000004503
54	0.01575	0.000004002	0.000003676	0.000003602	0.000003275	0.000003002	0.000002771
55	0.01397	0.000002479	0.000002276	0.000002231	0.000002028	0.000001859	0.000001716
56	0.01245	0.000001562	0.000001434	0.000001405	0.000001278	0.000001171	0.000001081

TABLE 13—Wire Table, Solid Aluminum, EC-H19—Data at 20 °C—English Units

Diameter		Cross section		Ohms per 1000 feet	Feet per ohm	Pounds per 1000 feet	Feet per pound	Ohms per pound	Pounds per ohm
AWG	Mils	Circular mils	Square inch						
500,000	707.10	500000.	.3927	0.03400	29410.	460.2	2.173	0.00007390	13530.
450,000	670.80	450000.	.3534	0.03778	26470.	414.1	2.415	0.00009124	10960.
400,000	632.50	400100.	.3142	0.04250	23530.	368.2	2.716	0.0001154	8663.
350,000	591.60	350000.	.2749	0.04858	20590.	322.1	3.105	0.0001508	6631.
300,000	547.70	300000.	.2356	0.05668	17690.	276.1	3.622	0.0002053	4871.
250,000	500.00	250000.	.1963	0.06801	14700.	230.1	4.346	0.0002956	3383.
0000	460.00	211600.	.1662	0.08035	12450.	194.7	5.135	0.0004126	2424.
000	409.60	167800.	.1318	0.1013	9868.	154.4	6.476	0.0006563	1524.
00	364.80	133100.	.1045	0.1278	7827.	122.5	8.165	0.001043	958.7
0	324.90	105600.	.08291	0.1611	6209.	97.15	10.29	0.001658	603.2
1	289.30	83690.	.06573	0.2031	4923.	77.03	12.98	0.002637	379.2
2	257.60	66360.	.05212	0.2562	3903.	61.07	16.37	0.004195	238.4
3	229.40	52620.	.04133	0.3231	3095.	48.43	20.65	0.006671	149.9
4	204.30	41740.	.03278	0.4073	2455.	38.41	26.03	0.01060	94.3
5	181.90	33090.	.02599	0.5138	1946.	30.45	32.84	0.01687	59.26
6	162.00	26240.	.02061	0.6478	1544.	24.15	41.40	0.02682	37.28
7	144.00	20820.	.01635	0.8165	1225.	19.16	52.18	0.04261	23.47
8	128.00	16510.	.01297	1.030	971.2	15.20	65.80	0.06776	14.76
9	114.40	13090.	.01028	1.290	769.8	12.040	83.02	0.1079	9.271
10	101.90	10380.	.008455	1.637	610.7	9.556	104.6	0.1713	5.836
11	90.70	8226.	.006461	2.067	483.9	7.571	132.1	0.2730	3.663
12	80.80	6529.	.005128	2.604	384.0	6.008	166.4	0.4334	2.307
13	72.00	5184.	.004072	3.280	304.9	4.771	209.6	0.6874	1.455
14	64.10	4109.	.003227	4.138	241.7	3.781	264.4	1.094	0.9138
15	57.10	3260.	.002561	5.215	191.8	3.001	333.3	1.738	0.5754
16	50.80	2581.	.002027	6.588	151.8	2.375	421.0	2.774	0.3605
17	45.30	2052.	.001612	8.285	120.7	1.889	529.5	4.387	0.2279
18	40.38	1624.	.001276	10.47	95.52	1.495	669.0	7.004	0.1428
19	35.90	1289.	.001012	13.19	75.80	1.186	893.1	11.12	0.08991
20	32.00	1024.	.0008042	16.60	60.23	0.9424	1061.	17.62	0.05676
21	28.50	812.2	.0006379	20.93	47.77	0.7475	1338.	28.00	0.03571
22	25.30	640.1	.0005027	26.56	37.65	0.5891	1698.	45.09	0.02218
23	22.60	510.8	.0004011	33.29	30.04	0.4701	2127.	70.81	0.01412
24	20.10	404.0	.0003173	42.08	23.76	0.3718	2689.	113.2	0.008835
25	17.90	320.4	.0002516	53.06	18.85	0.2949	3391.	179.9	0.005557
26	15.90	252.8	.0001986	67.25	14.87	0.2327	4298.	289.0	0.003460
27	14.20	201.6	.0001589	84.32	11.86	0.1856	5387.	454.4	0.002201
28	12.60	158.8	.0001247	107.1	9.338	0.1461	6844.	733.	0.001364
29	11.30	127.7	.0001003	133.2	7.510	0.1175	8509.	1133.	0.0008826
30	10.00	100.0	.00007854	170.	5.882	0.09203	10870.	1847.	0.0005413
31	8.90	79.21	.00006221	214.	4.659	0.07290	13720.	2944.	0.0003396
32	8.00	64.00	.00005027	265.	3.764	0.05890	16980.	4510.	0.0002217
33	7.10	50.41	.00003959	337.	2.965	0.04639	21550.	7270.	0.0001376
34	6.30	39.69	.00003117	428.	2.334	0.03653	27380.	11730.	0.00008527
35	5.60	31 36	.00002463	542.	1.844	0.02886	34650.	18780.	0.00005323
36	5.00	25.00	.00001963	680.	1.470	0.02301	43460.	29560.	0.00003383
37	4.50	20.25	.00001590	839.	1.191	0.01864	53660.	45050.	0.00002220
38	4.00	16.00	.00001257	1063.	0.9411	0.01473	67910.	72160.	0.00001386

TABLE 13—Wire Table, Solid Aluminum, EC–H19—Data at 20 °C—English Units—Continued

Diameter		Cross section		Ohms per 1000 feet	Feet per ohm	Pounds per 1000 feet	Feet per pound	Ohms per pound	Pounds per ohm
AWG	Mils	Circular mils	Square inch						
39	3.50	12.25	.000009621	1388.	0.7205	0.01127	88700.	123100.	0.000008123
40	3.10	9.610	.000007548	1769.	0.5652	0.008844	113100.	200000.	0.000004999
41	2.80	7.840	.000006158	2169.	0.4611	0.007215	138600.	300600.	0.000003327
42	2.50	6.250	.000004909	2720.	0.3676	0.005752	173900.	472900.	0.000002114
43	2.20	4.840	.000003801	3513.	0.2847	0.004454	224500.	788600.	0.000001268
44	2.00	4.000	.000003142	4250.	0.2353	0.003681	271600.	1155000.	0.0000008661
45	1.76	3.098	.000002433	5489.	0.1822	0.002851	350800.	1925000.	0.0000005194
46	1.57	2.465	.000001936	6898.	0.1450	0.002269	440800.	3041000.	0.0000003289
47	1.40	1.960	.000001539	8675.	0.1153	0.001804	554400.	4809000.	0.0000002079
48	1.24	1.538	.000001208	11060.	0.09044	0.001415	706700.	7814000.	0.0000001280
49	1.11	1.232	.000009677	13800.	0.07247	0.001134	881900.	12170000.	0.00000008217
50	0.99	0.9801	.000007698	17350.	0.05765	0.0009020	1109000.	19230000.	0.00000005200
51	0.88	0.7744	.0000006082	21960.	0.04555	0.0007127	1403000.	30810000.	0.00000003246
52	0.78	0.6084	.0000004778	27950.	0.03578	0.0005599	1786000.	49910000.	0.00000002004
53	0.70	0.4900	.0000003848	34700.	0.02882	0.0004510	2217000.	76940000.	0.00000001300
54	0.62	0.3844	.0000003019	44230.	0.02261	0.0003538	2827000.	125000000.	0.000000007999
55	0.55	0.3025	.0000002376	56200.	0.01779	0.0002784	3592000.	201900000.	0.000000004953
56	0.49	0.2401	.0000001886	70810.	0.01412	0.0002210	4525000.	320500000.	0.000000003121

TABLE 14—Wire Table, Solid Aluminum, EC–H19—Ohms per 1000 ft

Gage	Diameter in mils	Cross section at 20 °C		Ohms per 1000 feet at temperature of—					
		Circular mils	Square inch	0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	707.10	500000.	0.3927	0.03126	0.03400	0.03469	0.03812	0.04154	0.04497
450,000	670.80	450000.	0.3534	0.03474	0.03778	0.03855	0.04235	0.04616	0.04997
400,000	632.50	400100.	0.3142	0.03907	0.04250	0.04336	0.04764	0.05192	0.05620
350,000	591.60	350000.	0.2749	0.04466	0.04858	0.04956	0.05445	0.05935	0.06424
300,000	547.70	300000.	0.2356	0.05211	0.05668	0.05782	0.06353	0.06924	0.07495
250,000	500.00	250000.	0.1963	0.06253	0.06801	0.06938	0.07623	0.08308	0.08993
0000	460.00	211600.	0.1662	0.07387	0.08035	0.08197	0.09006	0.09816	0.1063
000	409.60	167800.	0.1318	0.09317	0.1013	0.1034	0.1136	0.1238	0.1340
00	364.80	133100.	0.1045	0.1175	0.1278	0.1303	0.1432	0.1561	0.1689
0	324.90	105600.	0.08291	0.1481	0.1611	0.1643	0.1805	0.1968	0.2130
1	289.30	83690.	0.06573	0.1868	0.2031	0.2072	0.2277	0.2482	0.2686
2	257.60	66360.	0.05212	0.2356	0.2562	0.2614	0.2872	0.3130	0.3388
3	229.40	52620.	0.04133	0.2970	0.3231	0.3296	0.3621	0.3947	0.4272
4	204.30	41740.	0.03278	0.3745	0.4073	0.4156	0.4566	0.4976	0.5387
5	181.90	33090.	0.02599	0.4724	0.5138	0.5242	0.5760	0.6277	0.6795
6	162.00	26240.	0.02061	0.5956	0.6478	0.6609	0.7262	0.7914	0.8567
7	144.30	20820.	0.01635	0.7507	0.8165	0.8330	0.9152	0.9975	1.0800
8	128.50	16510.	0.01297	0.9467	1.0300	1.0500	1.154	1.258	1.362
9	114.40	13090.	0.01028	1.194	1.299	1.325	1.456	1.587	1.718
10	101.90	10380.	0.008155	1.505	1.637	1.670	1.835	2.000	2.165
11	90.70	8226.	0.006461	1.900	2.067	2.108	2.317	2.525	2.733
12	80.80	6529.	0.005128	2.394	2.604	2.657	2.919	3.181	3.444
13	72.00	5184.	0.004072	3.015	3.280	3.346	3.676	4.007	4.337
14	64.10	4109.	0.003227	3.804	4.138	4.221	4.638	5.055	5.472
15	57.10	3260.	0.002561	4.794	5.215	5.320	5.845	6.371	6.896
16	50.80	2581.	0.002027	6.057	6.588	6.721	7.385	8.049	8.712
17	45.30	2052.	0.001612	7.617	8.285	8.452	9.287	10.12	10.96
18	40.30	1624.	0.001276	9.625	10.47	10.68	11.73	12.79	13.84
19	35.90	1289.	0.001012	12.13	13.19	13.46	14.79	16.12	17.45
20	32.00	1024.	0.0008042	15.27	16.60	16.94	18.61	20.28	21.96
21	28.50	812.2	0.0006379	19.24	20.93	21.35	23.46	25.57	27.68
22	25.30	640.1	0.0005027	24.42	26.56	27.10	29.77	32.45	35.13
23	22.60	510.8	0.0004011	30.60	33.29	33.96	37.31	40.67	44.02
24	20.10	404.0	0.0003173	38.69	42.08	42.93	47.17	51.41	55.65
25	17.90	320.4	0.0002516	48.79	53.06	54.13	59.48	64.82	70.17
26	15.90	252.8	0.0001986	61.83	67.25	68.61	75.38	82.16	88.93
27	14.20	201.6	0.0001584	77.52	84.32	86.02	94.51	103.0	111.5
28	12.60	158.8	0.0001247	98.46	107.1	109.3	120.0	130.8	141.6
29	11.30	127.7	0.0001003	122.4	133.2	135.8	149.2	162.7	176.1
30	10.00	100.0	0.00007854	156.3	170.0	173.4	190.6	207.7	224.8
31	8.90	79.21	0.00006221	197.3	214.6	219.0	240.6	262.2	283.8
32	8.00	64.00	0.00005027	244.2	265.7	271.0	297.8	324.5	351.3
33	7.10	50.41	0.00003959	310.1	337.3	344.1	378.1	412.0	446.0
34	6.30	39.69	0.00003117	393.8	428.4	437.0	480.2	523.3	566.5
35	5.60	31.36	0.00002463	498.5	542.2	553.1	607.7	662.3	716.9
36	5.00	25.00	0.00001963	625.3	680.1	693.8	762.3	830.8	899.3
37	4.50	20.25	0.00001590	771.9	839.6	856.5	941.1	1026.	1110.
38	4.00	16.00	0.00001257	977.	1063.	1084.	1191.	1298.	1405.

TABLE 14—Wire Table, Solid Aluminum, EC–H19—Ohms per 1000 ft —Continued

Gage	Diameter in mils	Cross section at 20 °C		Ohms per 1000 feet at temperature of—					
		Circular mils	Square inch	0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	3.50	12.25	0.000009621	1276.	1388.	1416.	1556.	1696.	1835.
40	3.10	9.61	0.000007548	1627.	1769.	1805.	1983.	2161.	2340.
41	2.80	7.840	0.000006158	1994.	2169.	2212.	2431.	2649.	2868.
42	2.50	6.250	0.000004909	2501.	2720.	2775.	3049.	3323.	3597.
43	2.20	4.840	0.000003801	3230.	3513.	3584.	3938.	4291.	4645.
44	2.00	4.000	0.000003142	3908.	4250.	4336.	4764.	5193.	5621.
45	1.76	3.098	0.000002433	5046.	5489.	5599.	6152.	6705.	7258.
46	1.57	2.465	0.000001936	6342.	6898.	7037.	7732.	8427.	9121.
47	1.40	1.960	0.000001539	7975.	8675.	8899.	9723.	10600.	11470.
48	1.24	1.538	0.000001208	10170.	11060.	11280.	12390.	13510.	14620.
49	1.11	1.232	0.0000009677	12690.	13800.	14080.	15470.	16860.	18250.
50	0.99	0.9801	0.0000007698	15950.	17350.	17700.	19440.	21190.	22940.
51	0.88	0.7744	0.0000006082	20190.	21960.	22400.	24610.	26820.	29030.
52	0.78	0.6084	0.0000004778	25690.	27950.	28510.	31320.	34140.	36960.
53	0.70	0.4900	0.0000003848	31900.	34700.	35400.	38890.	42390.	45880.
54	0.62	0.3844	0.0000003019	40670.	44230.	45120.	49580.	54030.	58490.
55	0.55	0.3025	0.0000002376	51670.	56200.	57340.	63000.	68660.	74330.
56	0.49	0.2401	0.0000001886	65100.	70810.	72240.	79370.	86510.	93640.

TABLE 15—Wire Table, Solid Aluminum, EC–H19—Feet per Ohm

Gage	Diameter in mils	Pounds per 1000 feet at 20 °C	Feet per pound at 20 °C	Feet per ohm at—					
				0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	707.10	460.2	2.173	31990.	29410.	28830.	26240.	24070.	22240.
450,000	670.80	414.1	2.415	28790.	26470.	25940.	23610.	21660.	20010.
400,000	632.50	368.2	2.716	25590.	23530.	23070.	20990.	19260.	17790.
350,000	591.60	322.1	3.105	22390.	20590.	20180.	18360.	16850.	15570.
300,000	547.70	276.1	3.622	19190.	17640.	17300.	15740.	14440.	13340.
250,000	500.00	230.1	4.346	15990.	14700.	14410.	13120.	12040.	11120.
0000	460.00	194.7	5.135	13540.	12450.	12200.	11100.	10190.	9411.
000	409.60	154.4	6.476	10730.	9868.	9673.	8803.	8077.	7462.
00	364.80	122.5	8.165	8513.	7827.	7673.	6983.	6407.	5919.
0	324.90	97.15	10.29	6753.	6209.	6086.	5539.	5082.	4695.
1	289.30	77.03	12.98	5354.	4923.	4825.	4392.	4029.	3722.
2	257.60	61.07	16.37	4245.	3903.	3826.	3482.	3195.	2951.
3	229.40	48.43	20.65	3367.	3095.	3034.	2761.	2534.	2341.
4	204.30	38.41	26.03	2670.	2455.	2406.	2190.	2010.	1856.
5	181.90	30.45	32.84	2117.	1946.	1908.	1736.	1593.	1472.
6	162.00	24.15	41.40	1679.	1544.	1513.	1377.	1264.	1167.
7	144.30	19.16	52.18	1332.	1225.	1201.	1093.	1003.	926.1
8	128.50	15.20	65.80	1056.	971.2	952.	866.4	795.	734.4
9	114.40	12.04	83.02	837.2	769.8	754.6	686.7	630.1	582.1
10	101.90	9.556	104.6	664.3	610.7	598.7	544.9	499.9	461.8
11	90.70	7.571	132.1	526.3	483.9	474.3	431.7	396.1	365.9
12	80.80	6.008	166.4	417.7	384.0	376.4	342.6	314.3	290.4
13	72.00	4.771	209.6	331.6	304.9	298.9	272.0	249.6	230.6
14	64.10	3.781	264.4	262.9	241.7	236.0	215.6	197.8	182.7
15	57.10	3.001	333.3	208.6	191.8	188.0	171.1	157.0	145.0
16	50.80	2.375	421.0	165.1	151.8	198.8	135.4	124.2	114.8
17	45.30	1.889	529.0	131.3	120.7	118.3	107.7	98.80	91.27
18	40.30	1.495	669.0	103.9	95.52	93.64	85.22	18.19	72.23
19	35.90	1.186	843.1	82.45	75.80	74.31	67.63	62.05	57.32
20	32.00	0.9424	1061.	65.51	60.23	59.04	53.73	49.30	45.59
21	28.50	0.7475	1338.	51.96	47.77	46.83	42.62	39.11	36.13
22	25.30	0.5891	1698.	40.95	37.65	36.90	33.59	30.82	28.47
23	22.60	0.4701	2127.	32.67	30.04	29.45	26.80	24.59	22.72
24	20.10	0.3718	2689.	25.85	23.76	23.29	21.20	19.45	17.97
25	17.90	0.2949	3391.	20.50	18.85	18.47	16.81	15.43	14.25
26	15.90	0.2327	4298.	16.17	14.87	14.58	13.27	12.17	11.24
27	14.20	0.1856	5389.	12.90	11.860	11.63	10.58	9.708	8.968
28	12.60	0.1461	6844.	10.16	9.338	9.153	8.331	7.644	7.061
29	11.30	0.1175	8509.	8.169	7.510	7.362	6.700	6.148	5.679
30	10.00	0.09203	10870.	6.397	5.882	5.765	5.247	4.815	4.448
31	8.90	0.07290	13720.	5.067	4.659	4.567	4.156	3.814	3.523
32	8.00	0.05890	16980.	4.094	3.764	3.690	3.358	3.081	2.847
33	7.10	0.04639	21550.	3.225	2.965	2.906	2.645	2.427	2.242
34	6.30	0.03653	27380.	2.539	2.334	2.288	2.083	1.911	1.765
35	5.60	0.02886	34650.	2.006	1.844	1.808	1.646	1.510	1.395
36	5.00	0.02301	43460.	1.599	1.470	1.441	1.312	1.204	1.112
37	4.50	0.01864	53660.	1.295	1.191	1.168	1.063	0.9749	0.9007
38	4.00	0.01473	67910.	1.024	0.9411	0.9225	0.8396	0.7703	0.7116

TABLE 15—Wire Table, Solid Aluminum, EC–H19—Feet per Ohm—Continued

Gage	Diameter in mils	Pounds per 1000 feet at 20 °C	Feet per pound at 20 °C	Feet per ohm at—					
				0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	3.50	0.01127	88700.	0.7837	0.7205	0.7063	0.6428	0.5898	0.5448
40	3.10	0.008844	113100.	0.6148	0.5652	0.5541	0.5043	0.4627	0.4274
41	2.80	0.007215	138600.	0.5015	0.4611	0.4520	0.4114	0.3775	0.3487
42	2.50	0.005752	173900.	0.3998	0.3676	0.3603	0.3280	0.3009	0.2780
43	2.20	0.004454	224500.	0.3096	0.2847	0.2790	0.2540	0.2330	0.2153
44	2.00	0.003681	271600.	0.2559	0.2353	0.2306	0.2099	0.1926	0.1779
45	1.76	0.002851	350800.	0.1982	0.1822	0.1786	0.1625	0.1491	0.1378
46	1.57	0.002269	440800.	0.1577	0.1450	0.1421	0.1293	0.1187	0.1096
47	1.40	0.001804	554400.	0.1254	0.1153	0.1130	0.1028	0.09436	0.08718
48	1.24	0.001415	706700.	0.09836	0.09044	0.08865	0.08068	0.07403	0.06839
49	1.11	0.001134	881900.	0.07882	0.09247	0.07104	0.06465	0.05932	0.05480
50	0.99	0.0009020	1109000.	0.06270	0.05765	0.05651	0.05143	0.04719	0.04359
51	0.88	0.0007127	1403000.	0.04954	0.04555	0.04465	0.04063	0.03728	0.03444
52	0.78	0.0005599	1786000.	0.03892	0.03578	0.03508	0.03192	0.02929	0.02706
53	0.70	0.0004510	2217000.	0.03135	0.02882	0.02825	0.02571	0.02359	0.02179
54	0.62	0.0003538	2827000.	0.02459	0.02261	0.02216	0.02017	0.01851	0.01710
55	0.55	0.0002784	3592000.	0.01935	0.01779	0.01744	0.01587	0.01456	0.01345
56	0.49	0.0002210	4525000.	0.01536	0.01412	0.01384	0.01260	0.01156	0.01068

TABLE 16—Wire Table, Solid Aluminum, EC-H19—Ohms per Pound

Gage	Diameter at 20 °C (mils)	Ohms per pound at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	707.10	0.00006794	0.00007390	0.00007539	0.00008283	0.00009028	0.00009772
450,000	670.80	0.00008389	0.00009124	0.00009308	0.0001023	0.0001115	0.0001207
400,000	632.50	0.0001061	0.0001159	0.0001178	0.0001294	0.0001410	0.0001526
350,000	591.60	0.0001387	0.0001508	0.0001539	0.0001690	0.0001842	0.0001994
300,000	547.70	0.0001888	0.0002053	0.0002094	0.0002301	0.0002508	0.0002715
250,000	500.00	0.0002718	0.0002956	0.0003015	0.0003313	0.0003611	0.0003909
0000	460.00	0.0003793	0.0004126	0.0004209	0.0004625	0.0005040	0.0005456
000	409.60	0.0006034	0.0006563	0.0006695	0.0007357	0.0008018	0.0008679
00	364.80	0.0009591	0.001043	0.001064	0.001169	0.001274	0.001379
0	324.90	0.001524	0.001658	0.001691	0.001858	0.002050	0.002192
1	289.30	0.002425	0.002637	0.002690	0.002956	0.003222	0.003488
2	257.60	0.003857	0.004195	0.004280	0.004703	0.005125	0.005548
3	229.40	0.006133	0.006671	0.006805	0.007477	0.008149	0.008822
4	204.30	0.009750	0.01060	0.01082	0.01189	0.01295	0.01402
5	181.90	0.01551	0.01687	0.01721	0.01891	0.02061	0.02231
6	162.00	0.02466	0.02682	0.02736	0.03007	0.03277	0.03597
7	144.30	0.03917	0.04261	0.04347	0.04776	0.05205	0.05634
8	128.50	0.06229	0.06776	0.06912	0.07595	0.08277	0.08960
9	114.40	0.09916	0.1079	0.1100	0.1209	0.1318	0.1426
10	101.90	0.1575	0.1713	0.1748	0.1921	0.2093	0.2266
11	90.70	0.2510	0.2730	0.2785	0.3060	0.3335	0.3610
12	80.80	0.3985	0.4334	0.4422	0.4858	0.5295	0.5732
13	72.00	0.6320	0.6874	0.7013	0.7705	0.8398	0.9091
14	64.10	1.006	1.094	1.116	1.227	1.337	1.447
15	57.10	1.598	1.738	1.773	1.948	2.123	2.298
16	50.80	2.550	2.774	2.830	3.109	3.389	3.668
17	45.30	4.033	4.387	4.475	4.917	5.359	5.801
18	40.30	6.439	7.004	7.145	7.851	8.556	9.262
19	35.90	10.23	11.12	11.35	12.47	13.59	14.71
20	32.00	16.20	17.62	17.97	19.75	21.52	23.30
21	28.50	25.74	28.00	28.57	31.39	34.21	37.03
22	25.30	41.46	45.09	46.00	50.54	55.08	59.63
23	22.60	65.11	70.81	72.24	79.38	86.51	93.65
24	20.10	104.1	113.2	115.5	126.9	138.3	149.7
25	17.90	165.4	179.9	183.6	201.7	219.8	238.0
26	15.90	265.7	289.0	294.9	324.0	353.1	382.2
27	14.20	417.7	454.4	463.5	509.3	555.1	600.9
28	12.60	673.9	733.	747.7	821.6	895.4	969.3
29	11.30	1042.	1133.	1156.	1270.	1384.	1498.
30	10.00	1698.	1847.	1885.	2071.	2257.	2443.
31	8.90	2707.	2944.	3004.	3300.	3597.	3894.
32	8.00	4147.	4510.	4601.	5055.	5510.	5964.
33	7.10	6684.	7270.	7416.	8149.	8881.	9614.
34	6.30	10780.	11730.	11960.	13150.	14330.	15510.
35	5.60	17270.	18780.	19160.	21060.	22950.	28440.
36	5.00	27180.	29560.	30150.	33130.	36110.	39090.
37	4.50	41420.	45050.	45960.	50500.	55040.	59580.
38	4.00	66350.	72160.	73620.	80890.	88160.	95430.

TABLE 16—Wire Table, Solid Aluminum, EC–H19—Ohms per Pound—Continued

Gage	Diameter at 20 °C (mils)	Ohms per pound at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	3.50	113200.	123100.	125600.	138000.	150400.	162800.
40	3.10	183900.	200000.	204100.	224200.	244400.	264500.
41	2.80	276300.	300600.	306600.	336900.	367200.	397500.
42	2.50	434800.	472900.	482500.	530100.	577800.	625400.
43	2.20	725100.	788600.	804500.	884000.	963400.	1043000.
44	2.00	1062000.	1155000.	1178000.	1294000.	1411000.	1527000.
45	1.76	1770000.	1925000.	1964000.	2158000.	2352000.	2546000.
46	1.57	2796000.	3041000.	3102000.	3408000.	3715000.	4021000.
47	1.40	4421000.	4809000.	4906000.	5390000.	5875000.	6359000.
48	1.24	7184000.	7814000.	7971000.	8759000.	9546000.	10330000.
49	1.11	11190000.	12170000.	12410000.	13640000.	14870000.	16090000.
50	0.99	17680000.	19230000.	19620000.	21560000.	23490000.	25430000.
51	0.88	28320000.	30810000.	31430000.	34530000.	37630000.	40740000.
52	0.78	45890000.	49910000.	50910000.	55940000.	60970000.	66000000.
53	0.70	70740000.	76940000.	78490000.	86240000.	94000000.	101700000.
54	0.62	114900000.	125000000.	127500000.	140100000.	152700000.	165300000.
55	0.55	185600000.	201900000.	206000000.	226300000.	246600000.	267000000.
56	0.49	294600000.	320500000.	326900000.	359200000.	391500000.	423800000.

TABLE 17—Wire Table, Solid Aluminum, EC–H19—Pounds per Ohm

Gage	Diameter at 20 °C (mils)	Pounds per ohm at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	707.10	14720.	13530.	13260.	12070.	11080.	10230.
450,000	670.80	11920.	10960.	10740.	9778.	8972.	8288.
400,000	632.50	9423.	8663.	8492.	7729.	7092.	6551.
350,000	591.60	7212.	6631.	6500.	5915.	5428.	5014.
300,000	547.70	5298.	4871.	4775.	4346.	3987.	3683.
250,000	500.00	3680.	3383.	3316.	3018.	2769.	2558.
0000	460.00	2636.	2424.	2376.	2162.	1984.	1833.
000	409.60	1657.	1524.	1494.	1359.	1247.	1152.
00	364.80	1043.	958.7	939.7	855.3	784.7	724.9
0	324.90	656.	603.2	591.3	538.1	493.7	456.1
1	289.30	412.4	379.2	371.7	338.3	310.4	286.7
2	257.60	259.3	238.4	233.6	212.6	195.1	180.2
3	229.40	163.0	149.9	146.9	133.7	122.7	113.4
4	204.30	102.6	94.3	92.44	84.13	77.19	71.31
5	181.90	64.46	59.26	58.09	52.87	48.51	44.81
6	162.00	40.55	37.28	36.55	33.26	30.52	28.19
7	144.30	25.53	23.47	23.01	20.94	19.21	17.75
8	128.50	16.05	14.76	14.47	13.17	12.08	11.16
9	114.40	10.08	9.271	9.088	8.271	7.589	7.011
10	101.90	6.348	5.836	5.721	5.207	4.777	4.413
11	90.70	3.984	3.663	3.591	3.268	2.999	2.774
12	80.80	2.509	2.307	2.262	2.058	1.889	1.745
13	72.00	1.582	1.455	1.426	1.298	1.191	1.100
14	64.10	0.9940	0.9138	0.8958	0.8153	0.7480	0.6911
15	57.10	0.6259	0.5754	0.5641	0.5134	0.4710	0.4351
16	50.80	0.3921	0.3605	0.3534	0.3216	0.2951	0.2726
17	45.30	0.2479	0.2279	0.2234	0.2034	0.1866	0.1724
18	40.30	0.1553	0.1428	0.1400	0.1274	0.1169	0.1080
19	35.90	0.09778	0.08991	0.08814	0.08021	0.07360	0.06799
20	32.00	0.06174	0.05676	0.05564	0.05064	0.04646	0.04292
21	28.50	0.03884	0.03571	0.03501	0.03186	0.02923	0.02701
22	25.30	0.02412	0.02218	0.02174	0.01979	0.01815	0.01677
23	22.60	0.01536	0.01412	0.01384	0.01260	0.01156	0.01068
24	20.10	0.009610	0.008835	0.008661	0.007882	0.007232	0.006681
25	17.90	0.006044	0.005557	0.005447	0.004958	0.004549	0.004202
26	15.90	0.003763	0.003460	0.003391	0.003086	0.002832	0.002616
27	14.20	0.002394	0.002201	0.002157	0.001963	0.001802	0.001664
28	12.60	0.001484	0.001364	0.001337	0.001217	0.001117	0.001032
29	11.30	0.0009600	0.0008826	0.0008652	0.0007874	0.0007225	0.0006674
30	10.00	0.0005888	0.0005413	0.0005306	0.0004829	0.0004431	0.0004093
31	8.90	0.0003694	0.0003396	0.0003329	0.0003030	0.0002780	0.0002568
32	8.00	0.0002412	0.0002217	0.0002173	0.0001978	0.0001815	0.0001677
33	7.10	0.0001496	0.00001376	0.0001348	0.0001227	0.0001126	0.0001040
34	6.30	0.00009275	0.00008527	0.00008359	0.00007607	0.00006980	0.00006448
35	5.60	0.00005790	0.00005323	0.00005218	0.00004749	0.00004358	0.00004026
36	5.00	0.00003680	0.00003383	0.00003316	0.00003018	0.00002769	0.00002558
37	4.50	0.00002414	0.00002220	0.00002176	0.00001980	0.00001817	0.00001679
38	4.00	0.00001507	0.00001386	0.00001358	0.00001236	0.00001134	0.00001048

TABLE 17—Wire Table, Solid Aluminum, EC–H19—Pounds per Ohm—Continued

Gage	Diameter at 20 °C (mils)	Pounds per ohm at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	3.50	0.000008835	0.000008123	0.000007963	0.000007247	0.000006649	0.000006143
40	3.10	0.000005437	0.000004999	0.000004900	0.000004460	0.000004092	0.000003780
41	2.80	0.000003619	0.000003327	0.000003261	0.000002968	0.000002724	0.000002516
42	2.50	0.000002300	0.000002114	0.000002073	0.000001886	0.000001731	0.000001599
43	2.20	0.000001379	0.000001268	0.000001243	0.000001131	0.000001038	0.0000009589
44	2.00	0.0000009420	0.0000008661	0.0000008490	0.0000007727	0.0000007090	0.0000006549
45	1.76	0.0000005649	0.0000005194	0.0000005091	0.0000004634	0.0000004252	0.0000003928
46	1.57	0.0000003577	0.0000003289	0.0000003224	0.0000002934	0.0000002692	0.0000002487
47	1.40	0.0000002262	0.0000002079	0.0000002038	0.0000001855	0.0000001702	0.0000001573
48	1.24	0.0000001392	0.0000001280	0.0000001254	0.0000001142	0.0000001048	0.00000009678
49	1.11	0.00000008938	0.00000008217	0.00000008055	0.00000007331	0.00000006726	0.00000006214
50	0.99	0.00000005656	0.00000005200	0.00000005097	0.00000004639	0.00000004256	0.00000003932
51	0.88	0.00000003531	0.00000003246	0.00000003182	0.00000002896	0.00000002657	0.00000002455
52	0.78	0.00000002179	0.00000002004	0.00000001964	0.00000001788	0.00000001640	0.00000001515
53	0.70	0.00000001414	0.00000001300	0.00000001274	0.00000001159	0.00000001064	0.000000009828
54	0.62	0.000000008700	0.000000007999	0.000000007841	0.000000007136	0.000000006547	0.000000006048
55	0.55	0.000000005388	0.000000004953	0.000000004855	0.000000004419	0.000000004055	0.000000003746
56	0.49	0.000000003394	0.000000003121	0.000000003059	0.000000002784	0.000000002554	0.000000002360

TABLE 18—Wire Table, Solid Aluminum, EC-H19—Data at 20 °C—Metric Units

Gage	Diameter (mm)	Area (sq mm)	Ohms per kilometer	Meters per ohm	Kilograms per kilometer	Meters per gram	Ohms per kilogram	Grams per ohm
500,000	17.960	253.3	0.1116	8964.	684.8	0.001460	0.0001629	6138000.
450,000	17.040	228.0	0.1240	8067.	616.3	0.001623	0.0002011	4972000.
400,000	16.070	202.7	0.1394	7172.	547.9	0.001825	0.0002545	3930000.
350,000	15.030	177.3	0.1594	6275.	479.4	0.002086	0.0003325	3008000.
300,000	13.910	152.0	0.1859	5378.	410.9	0.002434	0.0004526	2210000.
250,000	12.700	126.7	0.2231	4482.	342.4	0.002920	0.0006516	1535000.
0000	11.680	107.2	0.2636	3794.	289.8	0.003450	0.0009096	1099000.
000	10.400	85.01	0.3325	3008.	229.8	0.004352	0.001477	691100.
00	9.2660	67.43	0.4191	2386.	182.3	0.005486	0.002300	434900.
0	8.2520	53.49	0.5284	1892.	144.6	0.006917	0.003655	273600.
1	7.3480	42.41	0.6665	1500.	114.6	0.008724	0.005814	172000.
2	6.5430	33.62	0.8406	1190.	90.89	0.01100	0.009249	108100.
3	5.8270	26.67	1.060	943.4	72.08	0.01387	0.01471	68000.
4	5.1890	21.15	1.336	748.3	57.17	0.01749	0.02338	42780.
5	4.6200	16.77	1.686	593.2	45.32	0.02207	0.03720	26880.
6	4.1150	13.30	2.125	470.5	35.94	0.02782	0.05913	16910.
7	3.6650	10.55	2.679	373.3	28.52	0.03506	0.09393	10650.
8	3.2640	8.367	3.378	296.	22.62	0.04422	0.1494	6695.
9	2.9060	6.631	4.262	234.6	17.92	0.05579	0.2378	4206.
10	2.5880	5.261	5.372	186.2	14.22	0.07031	0.3777	2647.
11	2.3040	4.168	6.780	147.5	11.27	0.08875	0.6018	1662.
12	2.0520	3.308	8.544	117.	8.942	0.1118	0.9555	1047.
13	1.8290	2.627	10.76	92.94	7.100	0.1408	1.515	659.9
14	1.6280	2.082	13.58	73.66	5.628	0.1777	2.412	414.5
15	1.4500	1.652	17.11	58.45	4.466	0.2239	3.831	261.0
16	1.2900	1.308	21.61	46.26	3.535	0.2829	6.115	163.5
17	1.1510	1.040	27.18	36.79	2.811	0.3558	9.671	103.4
18	1.0240	0.8229	34.35	29.12	2.224	0.4496	15.44	64.77
19	0.9119	0.6531	43.28	23.11	1.765	0.5665	24.52	40.79
20	0.8128	0.5189	54.47	18.36	1.403	0.7130	38.84	25.75
21	0.7239	0.4116	68.67	14.56	1.112	0.8989	61.73	16.20
22	0.6426	0.3243	87.14	11.48	0.8767	1.141	99.4	10.06
23	0.5740	0.2588	109.2	9.157	0.6996	1.429	156.1	6.406
24	0.5105	0.2047	138.1	7.243	0.5533	1.807	249.5	4.008
25	0.4547	0.1624	174.1	5.744	0.4388	2.279	396.7	2.521
26	0.4039	0.1281	220.6	4.532	0.3463	2.888	637.2	1.569
27	0.3607	0.1022	276.6	3.615	0.2762	3.621	1002.	0.9984
28	0.3200	0.08045	351.3	2.846	0.2174	4.599	1616.	0.6189
29	0.2870	0.06470	436.8	2.289	0.1749	5.718	2498.	0.4004
30	0.2540	0.05067	557.8	1.793	0.1370	7.301	4073.	0.2455
31	0.2261	0.04014	704.2	1.420	0.1085	9.218	6491.	0.1541
32	0.2032	0.03243	871.6	1.147	0.08766	11.41	9943.	0.1006
33	0.1803	0.02554	1107.	0.9037	0.06904	14.48	16030.	0.06240
34	0.1600	0.02011	1405.	0.7116	0.05436	18.40	25850.	0.03868
35	0.1422	0.01589	1779.	0.5622	0.04295	23.28	41410.	0.02415
36	0.1270	0.01267	2231.	0.4482	0.03424	29.20	65160.	0.01535
37	0.1143	0.01026	2755.	0.3630	0.02774	36.06	99320.	0.01007
38	0.1016	0.008107	3486.	0.2868	0.02191	45.63	159100.	0.006286

TABLE 18—Wire Table, Solid Aluminum, EC–H19—Data at 20 °C—Metric Units—Continued

Gage	Diameter (mm)	Area (sq mm)	Ohms per kilometer	Meters per ohm	Kilograms per kilometer	Meters per gram	Ohms per kilogram	Grams per ohm
39	0.08890	0.006207	4553.	0.2196	0.01678	59.60	271400.	0.003685
40	0.07874	0.004869	5804.	0.1723	0.01316	75.98	441000.	0.002268
41	0.07112	0.003973	7115.	0.1406	0.01074	93.13	662600 .	0.001509
42	0.06350	0.003167	8925.	0.1120	0.008560	116.8	1043000.	0.0009592
43	0.05588	0.002452	11520.	0.08677	0.006629	150.9	1739000.	0.0005752
44	0.05080	0.002027	13940.	0.07171	0.005479	182.5	2595000.	0.0003929
45	0.04470	0.001570	18010.	0.05553	0.004243	235.7	4244000.	0.0002356
46	0.03988	0.001249	22630.	0.04419	0.003376	296.2	6703000.	0.0001492
47	0.03556	0.0009931	28460.	0.03514	0.002684	372.5	10600000.	0.00009433
48	0.03150	0.0007791	36280.	0.02757	0.002106	474.8	17230000.	0.00005805
49	0.02819	0.0006243	45270.	0.02209	0.001688	592.6	26830000.	0.00003728
50	0.02515	0.0004966	56910.	0.01757	0.001342	744.9	42400000.	0.00002359
51	0.02235	0.0003924	72030.	0.01388	0.001061	942.8	67910000.	0.00001473
52	0.01981	0.0003083	91680.	0.01091	0.0008333	1200.	110000000.	0.000009089
53	0.01778	0.0002483	113800.	0.008785	0.0006711	1490.	169600000.	0.000005896
54	0.01575	0.0001948	145100.	0.006891	0.0005265	1899.	275600000.	0.000003628
55	0.01397	0.0001533	184400.	0.005423	0.0004143	2414.	445100000.	0.000002247
56	0.01245	0.0001217	232300.	0.004304	0.0003288	3041.	706500000.	0.000001416

TABLE 19—Wire Table, Solid Aluminum, EC–H19—Ohms per Kilometer

Gage	Diameter at 20 °C (mm)	Area at 20 °C (sq mm)	Ohms per kilometer at—					
			0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	17.960	253.3	0.1026	0.1116	0.1138	0.1250	0.1363	0.1475
450,000	17.040	228.0	0.1140	0.1240	0.1265	0.1389	0.1514	0.1639
400,000	16.070	202.7	0.1282	0.1394	0.1422	0.1563	0.1703	0.1844
350,000	15.030	177.3	0.1465	0.1594	0.1626	0.1786	0.1947	0.2108
300,000	13.910	152.0	0.1710	0.1859	0.1897	0.2084	0.2272	0.2459
250,000	12.700	126.7	0.2051	0.2231	0.2276	0.2501	0.2726	0.2951
0000	11.680	107.2	0.2424	0.2636	0.2689	0.2955	0.3220	0.3486
000	10.4000	85.01	0.3057	0.3325	0.3392	0.3727	0.4062	0.4397
00	9.2660	67.43	0.3854	0.4191	0.4276	0.4698	0.5120	0.5543
0	8.2520	53.49	0.4858	0.5284	0.5391	0.5923	0.6455	0.6988
1	7.3480	42.41	0.6127	0.6665	0.6799	0.7470	0.8142	0.8813
2	6.5430	33.62	0.7728	0.8406	0.8575	0.9422	1.027	1.112
3	5.8270	26.67	0.9745	1.060	1.081	1.188	1.295	1.402
4	5.1890	21.15	1.229	1.336	1.363	1.498	1.633	1.767
5	4.6200	16.77	1.550	1.686	1.720	1.890	2.059	2.229
6	4.1150	13.30	1.954	2.125	2.168	2.382	2.597	2.811
7	3.6650	10.55	2.463	2.679	2.733	3.003	3.273	3.542
8	3.2640	8.367	3.106	3.378	3.446	3.786	4.127	4.467
9	2.9060	6.631	3.919	4.262	4.348	4.777	5.207	5.636
10	2.5880	5.261	4.939	5.372	5.480	6.021	6.563	7.104
11	2.3040	4.168	6.234	6.780	6.917	7.600	8.283	8.966
12	2.0520	3.308	7.855	8.544	8.716	9.577	10.44	11.30
13	1.8290	2.627	9.893	10.76	10.98	12.06	13.14	14.23
14	1.6280	2.082	12.48	13.58	13.85	15.22	16.58	17.95
15	1.4500	1.652	15.73	17.11	17.45	19.18	20.90	22.62
16	1.2900	1.308	19.87	21.61	22.05	24.23	26.41	28.58
17	1.1510	1.040	24.99	27.18	27.73	30.47	33.21	35.95
18	1.0240	0.8229	31.58	34.35	35.04	38.50	41.96	45.42
19	0.9119	0.6531	39.79	43.28	44.15	48.51	52.87	57.23
20	0.8128	0.5189	50.08	54.47	55.57	61.06	66.55	72.03
21	0.7239	0.4116	63.14	68.67	70.06	76.98	83.89	90.81
22	0.6426	0.3243	80.12	87.14	88.90	97.68	106.5	115.2
23	0.5740	0.2588	100.4	109.2	111.4	122.4	133.4	144.4
24	0.5105	0.2047	126.9	138.1	140.8	154.8	168.7	182.6
25	0.4547	0.1624	160.1	174.1	177.6	195.1	212.7	230.2
26	0.4039	0.1281	202.9	220.6	225.1	247.3	269.5	291.8
27	0.3607	0.1022	254.3	276.6	282.2	310.1	337.9	365.8
28	0.3200	0.08045	323.0	351.3	358.4	393.8	429.2	464.6
29	0.2870	0.06470	401.6	436.8	445.6	489.6	533.7	577.7
30	0.2540	0.05067	512.8	557.8	569.0	625.2	681.4	737.6
31	0.2261	0.04014	647.4	704.2	718.4	789.3	860.3	931.2
32	0.2032	0.03243	801.3	871.6	889.1	976.9	1065.	1153.
33	0.1803	0.02554	1017.	1107.	1129.	1240.	1352.	1463.
34	0.1600	0.02011	1292.	1405.	1434.	1575.	1717.	1858.
35	0.1422	0.01589	1635.	1779.	1815.	1994.	2173.	2352.
36	0.1270	0.01267	2051.	2231.	2276.	2501.	2726.	2951.
37	0.1143	0.01026	2533.	2755.	2810.	3088.	3365.	3643.
38	0.1016	0.008107	3205.	3486.	3556.	3908.	4259.	4610.
39	0.08890	0.006207	4186.	4553.	4645.	5104.	5563.	6021.
40	0.07874	0.004869	5336.	5804.	5921.	6506.	7091.	7676.
41	0.07112	0.003973	6541.	7115.	7258.	7975.	8692.	9409.
42	0.06350	0.003167	8205.	8925.	9105.	10000.	10900.	11800.
43	0.05588	0.002452	10600.	11520.	11760.	12920.	14080.	15240.
44	0.05080	0.002027	12821.	13940.	14230.	15630.	17040.	18440.
45	0.04470	0.001570	16560.	18010.	18370.	20180.	22000.	23810.
46	0.03988	0.001249	20810.	22630.	23090.	25370.	27650.	29930.
47	0.03556	0.0009931	26170.	28460.	29030.	31900.	34770.	37630.
48	0.03150	0.0007791	33350.	36280.	37010.	40660.	44320.	47970.
49	0.02819	0.0006243	41620.	45270.	46180.	50750.	55310.	59870.
50	0.02515	0.0004966	52320.	56910.	58060.	63790.	69530.	75260.
51	0.02235	0.0003924	66220.	72030.	73480.	80740.	87990.	95250.
52	0.01981	0.0003083	84290.	91680.	93530.	102800.	112000.	121200.
53	0.01778	0.0002483	104700.	113800.	116100.	127600.	139100.	150500.
54	0.01575	0.0001948	133400.	145100.	148000.	162700.	177300.	191900.
55	0.01397	0.0001533	169500.	184400.	188100.	206700.	225300.	243800.
56	0.01245	0.0001217	213600.	232300.	237000.	260400.	283800.	307200.

TABLE 20—Wire Table, Solid Aluminum, EC–H19—Meters per Ohm

Gage	Diameter at 20 °C (mm)	Kilograms per kilometer at 20 °C	Meters per gram at 20 °C	Meters per ohm at—					
				0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	17.960	684.8	0.001460	9749.	8964.	8787.	7997.	7337.	6778.
450,000	17.040	616.3	0.001623	8774.	8067.	7908.	7197.	6603.	6100.
400,000	16.070	547.9	0.001825	7801.	7172.	7030.	6399.	5871.	5424.
350,000	15.030	479.4	0.002086	6825.	6275.	6151.	5598.	5136.	4745.
300,000	13.910	410.9	0.002434	5849.	5378.	5272.	4798.	4402.	4067.
250,000	12.700	342.4	0.002920	4875.	4482.	4393.	3999.	3669.	3389.
0000	11.680	289.8	0.003450	4126.	3794.	3719.	3384.	3105.	2869.
000	10.400	229.8	0.004352	3271.	3008.	2948.	2683.	2462.	2274.
00	9.2660	182.3	0.005486	2595.	2386.	2339.	2128.	1953.	1804.
0	8.2520	144.6	0.006917	2058.	1892.	1855.	1688.	1549.	1431.
1	7.3480	114.6	0.008724	1632.	1500.	1471.	1339.	1228.	1135.
2	6.5430	90.89	0.01100	1294.	1190.	1166.	1061.	973.8	899.6
3	5.8270	72.08	0.01387	1026.	943.4	924.8	841.7	772.3	713.4
4	5.1890	57.17	0.01749	813.9	748.3	733.5	667.6	612.5	565.8
5	4.6200	45.32	0.02207	645.2	593.2	581.5	529.2	485.6	448.6
6	4.1150	35.94	0.02782	511.7	470.5	461.2	419.7	385.1	355.8
7	3.6650	28.52	0.03506	406.0	373.3	365.9	333.0	305.6	282.3
8	3.2640	22.62	0.04422	322.0	296.0	290.2	264.1	242.3	223.9
9	2.9060	17.92	0.05579	255.2	234.6	230.0	209.3	192.1	177.4
10	2.5880	14.22	0.07031	202.5	186.2	182.5	166.1	152.4	140.8
11	2.3040	11.27	0.08875	160.4	147.5	144.6	131.6	120.7	111.5
12	2.0520	8.942	0.1118	127.3	117.0	114.7	104.4	95.81	88.51
13	1.8290	7.100	0.1408	101.1	92.94	91.10	82.91	76.08	70.28
14	1.6280	5.628	0.1777	80.12	73.66	72.21	65.72	60.30	55.70
15	1.4500	4.466	0.2239	63.58	58.45	57.30	52.15	47.85	44.20
16	1.2900	3.535	0.2829	50.32	46.26	45.35	41.27	37.87	34.99
17	1.1510	2.811	0.3558	40.01	36.79	36.06	32.82	30.11	27.82
18	1.0240	2.224	0.4496	31.67	29.12	28.54	25.98	23.83	22.02
19	0.9119	1.765	0.5665	25.13	23.11	22.65	20.61	18.91	17.47
20	0.8128	1.403	0.7130	19.97	18.36	18.00	16.38	15.03	13.88
21	0.7239	1.112	0.8989	15.84	14.56	14.27	12.99	11.92	11.01
22	0.6426	0.8767	1.141	12.48	11.48	11.25	10.24	9.393	8.678
23	0.5740	0.6996	1.429	9.959	9.157	8.976	8.169	7.495	6.924
24	0.5105	0.5533	1.807	7.878	7.243	7.100	6.462	5.929	5.477
25	0.4547	0.4388	2.279	6.248	5.744	5.631	5.125	4.702	4.344
26	0.4039	0.3463	2.888	4.930	4.532	4.443	4.043	3.710	3.427
27	0.3607	0.2762	3.621	3.932	3.615	3.544	3.225	2.959	2.734
28	0.3200	0.2174	4.599	3.096	2.846	2.790	2.539	2.330	2.152
29	0.2870	0.1749	5.718	2.490	2.289	2.244	2.042	1.874	1.731
30	0.2540	0.1370	7.301	1.950	1.793	1.757	1.599	1.468	1.356
31	0.2261	0.1085	9.218	1.545	1.420	1.392	1.267	1.162	1.074
32	0.2032	0.08766	11.41	1.248	1.147	1.125	1.024	0.9392	0.8676
33	0.1803	0.06904	14.48	0.9830	0.9037	0.8859	0.8063	0.7398	0.6834
34	0.1600	0.05436	18.40	0.7739	0.7116	0.6975	0.6348	0.5825	0.5381
35	0.1422	0.04295	23.28	0.6115	0.5622	0.5511	0.5016	0.4602	0.4251
36	0.1270	0.03424	29.20	0.4875	0.4482	0.4393	0.3999	0.3669	0.3389
37	0.1143	0.02774	36.06	0.3949	0.3630	0.3559	0.3239	0.2972	0.2745
38	0.1016	0.02191	45.63	0.3120	0.2868	0.2812	0.2559	0.2348	0.2169

TABLE 20—Wire Table, Solid Aluminum, EC-H19—Meters per Ohm—Continued

Gage	Diameter at 20 °C (mm)	Kilograms per kilometer at 20 °C	Meters per gram at 20 °C	Meters per ohm at—					
				0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	0.08890	0.01678	59.60	0.2389	0.2196	0.2153	0.1959	0.1798	0.1661
40	0.07874	0.01316	75.98	0.1874	0.1723	0.1689	0.1537	0.1410	0.1303
41	0.07112	0.01074	93.13	0.1529	0.1406	0.1378	0.1254	0.1151	0.1063
42	0.06350	0.008560	116.8	0.1219	0.1120	0.1098	0.09996	0.09172	0.08473
43	0.05588	0.006629	150.9	0.09438	0.08677	0.08506	0.07741	0.07103	0.06562
44	0.05080	0.005479	182.5	0.07800	0.07171	0.07029	0.06398	0.05870	0.05423
45	0.04470	0.004243	235.7	0.06040	0.05553	0.05444	0.04954	0.04546	0.04199
46	0.03988	0.003376	296.2	0.04806	0.04419	0.04332	0.03942	0.03617	0.03342
47	0.03556	0.002684	372.5	0.03822	0.03514	0.03444	0.03135	0.02876	0.02657
48	0.03150	0.002106	474.8	0.02998	0.02757	0.02702	0.02459	0.02256	0.02085
49	0.02819	0.001688	592.6	0.02403	0.02209	0.02165	0.01971	0.01808	0.01670
50	0.02515	0.001342	744.9	0.01911	0.01757	0.01722	0.01568	0.01438	0.01329
51	0.02235	0.001061	942.8	0.01510	0.01388	0.01361	0.01239	0.01136	0.01050
52	0.01981	0.0008333	1200.	0.01186	0.01091	0.01069	0.009731	0.008928	0.008248
53	0.01778	0.0006711	1490.	0.009555	0.008785	0.008611	0.007837	0.007191	0.006643
54	0.01575	0.0005265	1899.	0.007496	0.006891	0.006755	0.006148	0.005641	0.005211
55	0.01397	0.0004143	2414.	0.005899	0.005423	0.005316	0.004838	0.004439	0.004101
56	0.01245	0.0003288	3041.	0.004682	0.004304	0.004219	0.003840	0.003523	0.003255

TABLE 21—Wire Table, Solid Aluminum, EC–H19—Ohms per Kilogram

Gage	Diameter at 20 °C (mm)	Ohms per kilogram at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	17.960	0.0001498	0.0001629	0.0001662	0.0001826	0.0001990	0.0002154
450,000	17.040	0.0001849	0.0002011	0.0002052	0.0002255	0.0002457	0.0002660
400,000	16.070	0.0002340	0.0002545	0.0002596	0.0002852	0.0003109	0.0003365
350,000	15.030	0.0003057	0.0003325	0.0003392	0.0003727	0.0004062	0.0004397
300,000	13.910	0.0004161	0.0004526	0.0004617	0.0005073	0.0005529	0.0005985
250,000	12.700	0.0005991	0.0006516	0.0006647	0.0007304	0.0007960	0.0008617
0000	11.680	0.0008363	0.0009096	0.0009279	0.001020	0.001111	0.001203
000	10.400	0.001330	0.001447	0.001476	0.001622	0.001768	0.001913
00	9.2660	0.002114	0.002300	0.002346	0.002578	0.002809	0.003041
0	8.2520	0.003360	0.003655	0.003729	0.004097	0.004465	0.004833
1	7.3480	0.005345	0.005814	0.005931	0.006517	0.007103	0.007688
2	6.5430	0.008503	0.009249	0.009435	0.01037	0.01130	0.01223
3	5.8270	0.01352	0.01471	0.01500	0.01648	0.01797	0.01945
4	5.1890	0.02149	0.02338	0.02385	0.02620	0.02856	0.03091
5	4.6200	0.03420	0.03720	0.03795	0.04170	0.04544	0.04919
6	4.1150	0.05436	0.05913	0.06032	0.06628	0.07224	0.07819
7	3.6650	0.08636	0.09393	0.09582	0.1053	0.1147	0.1242
8	3.2640	0.1373	0.1494	0.1524	0.1674	0.1825	0.1975
9	2.9060	0.2186	0.2378	0.2426	0.2665	0.2905	0.3144
10	2.5880	0.3473	0.3777	0.3853	0.4234	0.4614	0.4995
11	2.3040	0.5533	0.6018	0.6139	0.6745	0.7352	0.7958
12	2.0520	0.8785	0.9555	0.9747	1.071	1.167	1.264
13	1.8290	1.393	1.515	1.546	1.699	1.851	2.004
14	1.6280	2.218	2.412	2.461	2.704	2.947	3.190
15	1.4500	3.522	3.831	3.908	4.294	4.680	5.066
16	1.2900	5.622	6.115	6.239	6.855	7.471	8.087
17	1.1510	8.892	9.671	9.866	10.84	11.81	12.79
18	1.0240	14.20	15.44	15.75	17.31	18.86	20.42
19	0.9119	22.54	24.52	25.01	27.48	29.95	32.42
20	0.8128	35.71	38.84	39.62	43.53	47.45	51.36
21	0.7239	56.75	61.73	62.97	69.19	75.41	81.63
22	0.6426	91.39	99.40	101.4	111.4	121.4	131.4
23	0.5740	143.5	156.1	159.3	175.0	190.7	206.4
24	0.5105	229.4	249.5	254.5	279.7	304.8	330.0
25	0.4547	364.7	396.7	404.7	444.7	484.6	524.6
26	0.4039	585.8	637.2	650.	714.2	778.4	842.6
27	0.3607	920.9	1002.	1022.	1123.	1224.	1325.
28	0.3200	1486.	1616.	1648.	1811.	1974.	2137.
29	0.2870	2296.	2498.	2548.	2800.	3051.	3303.
30	0.2540	3744.	4073.	4155.	4565.	4975.	5386.
31	0.2261	5968.	6491.	6622.	7276.	7930.	8584.
32	0.2032	9141.	9943.	10140.	11140.	12150.	13150.
33	0.1803	14730.	16030.	16350.	17960.	19580.	21190.
34	0.1600	23770.	25850.	26370.	28980.	31580.	34190.
35	0.1422	38070.	41410.	42250.	46420.	50590.	54760.
36	0.1270	59910.	65160.	66470.	73040.	79600.	86170.
37	0.1143	91310.	99320.	101300.	111300.	121300.	131300.
38	0.1016	146300.	159100.	162300.	178300.	194300.	210400.

TABLE 21—Wire Table, Solid Aluminum, EC–H19—Ohms per Kilogram—Continued

Gage	Diameter at 20 °C (mm)	Ohms per kilogram at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	0.08890	249500.	271400.	276900.	304200.	331500.	358900.
40	0.07874	405400.	441000.	449900.	494300.	538700.	583200.
41	0.07112	609200.	662600.	675900.	742700.	809400.	876200.
42	0.06350	958600.	1043000.	1064000.	1169000.	1274000.	1379000.
43	0.05588	1598000.	1739000.	1774000.	1949000.	2124000.	2299000.
44	0.05080	2340000.	2545000.	2597000.	2853000.	3110000.	3366000.
45	0.04470	3902000.	4244000.	4330000.	4758000.	5185000.	5613000.
46	0.03988	6163000.	6703000.	6838000.	7513000.	8189000.	8864000.
47	0.03556	9747000.	10600000.	10810000.	11880000.	12950000.	14020000.
48	0.03150	15840000.	17230000.	17570000.	19310000.	21040000.	22780000.
49	0.02819	24670000.	26830000.	27370000.	30070000.	32770000.	35480000.
50	0.02515	38980000.	42400000.	43250000.	47520000.	51790000.	56060000.
51	0.02235	62440000.	67910000.	69280000.	76120000.	82960000.	89810000.
52	0.01981	101200000.	110000000.	112200000.	123300000.	13440000.	145500000.
53	0.01778	159900000.	169600000.	173000000.	190100000.	20720000.	224300000.
54	0.01575	253400000.	275600000.	281200000.	308900000.	33670000.	364500000.
55	0.01397	409200000.	445100000.	454000000.	498900000.	54370000.	588500000.
56	0.01245	649500000.	706500000.	720700000.	791900000.	86300000.	934200000.

TABLE 22—Wire Table, Solid Aluminum, EC–H19—Grams per Ohm

Gage	Diameter at 20 °C (mm)	Grams per ohm at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
500,000	17.960	6676000.	6138000.	6017000.	5476000.	5025000.	4642000.
450,000	17.040	5408000.	4972000.	4873000.	4435000.	4070000.	3760000.
400,000	16.070	4274000.	3930000.	3852000.	3506000.	3217000.	2972000.
350,000	15.030	3271000.	3008000.	2948000.	2683000.	2462000.	2274000.
300,000	13.910	2403000.	2210000.	2166000.	1971000.	1809000.	1671000.
250,000	12.700	1669000.	1535000.	1504000.	1369000.	1256000.	1161000.
0000	11.680	1196000.	1099000.	1078000.	980800.	899900.	831400.
000	10.400	751700.	691100.	677500.	616600.	565700.	522600.
00	9.2660	473000.	434900.	426300.	388000.	356000.	328800.
0	8.2520	297600.	273600.	268200.	244100.	224000.	206900.
1	7.3480	187100.	172000.	168600.	153400.	140800.	130100.
2	6.5430	117600.	108100.	106000.	96460.	88500.	81760.
3	5.8270	73960.	68000.	66660.	60660.	55660.	51420.
4	5.1890	46530.	42780.	41930.	38160.	35020.	32350.
5	4.6200	29240.	26880.	26350.	23980.	22000.	20330.
6	4.1150	18390.	16910.	16580.	15090.	13840.	12790.
7	3.6650	11580.	10650.	10440.	9498.	8715.	8051.
8	3.2640	7282.	6695.	6563.	5973.	5480.	5063.
9	2.9060	4574.	4206.	4123.	3752.	3443.	3180.
10	2.5880	2880.	2647.	2595.	2362.	2167.	2002.
11	2.3040	1807.	1662.	1629.	1482.	1360.	1257.
12	2.0520	1138.	1047.	1026.	933.7	856.7	791.4
13	1.8290	717.7	659.9	646.8	588.7	540.1	499.0
14	1.6280	450.9	414.5	406.3	369.8	339.3	313.5
15	1.4500	283.9	261.0	255.9	232.9	213.7	197.4
16	1.2900	177.9	163.5	160.3	145.9	133.9	123.7
17	1.1510	112.5	103.4	101.4	92.25	84.64	78.19
18	1.0240	70.44	64.77	63.49	57.78	53.02	48.98
19	0.9119	44.36	40.79	39.98	36.39	33.39	30.84
20	0.8128	28.00	25.75	25.24	22.97	21.08	19.47
21	0.7239	17.62	16.20	15.88	14.45	13.26	12.25
22	0.6426	10.94	10.06	9.862	8.975	8.235	7.608
23	0.5740	6.967	6.406	6.279	5.715	5.243	4.844
24	0.5105	4.359	4.008	3.929	3.576	3.281	3.031
25	0.4547	2.742	2.521	2.471	2.249	2.063	1.906
26	0.4039	1.707	1.569	1.538	1.400	1.285	1.187
27	0.3607	1.086	0.9984	0.9786	0.8907	0.8172	0.7550
28	0.3200	0.6731	0.6189	0.6067	0.5521	0.5066	0.4680
29	0.2870	0.4355	0.4004	0.3924	0.3572	0.3277	0.3027
30	0.2540	0.2671	0.2455	0.2407	0.2191	0.2010	0.1857
31	0.2261	0.1676	0.1541	0.1510	0.1374	0.1261	0.1165
32	0.2032	0.1094	0.1006	0.09859	0.08973	0.08233	0.07605
33	0.1803	0.06787	0.06240	0.06116	0.05567	0.05108	0.04718
34	0.1600	0.04207	0.03868	0.03792	0.03451	0.03166	0.02925
35	0.1422	0.02626	0.02415	0.02367	0.02154	0.01977	0.01826
36	0.1270	0.01669	0.01535	0.01504	0.01369	0.01256	0.01161
37	0.1143	0.01095	0.01007	0.009870	0.008983	0.008242	0.007614
38	0.1016	0.006837	0.006286	0.006162	0.005608	0.005145	0.004753

TABLE 22—Wire Table, Solid Aluminum, EC–H19—Grams per Ohm—Continued

Gage	Diameter at 20 °C (mm)	Grams per ohm at—					
		0 °C	20 °C	25 °C	50 °C	75 °C	100 °C
39	0.08890	0.004008	0.003685	0.003612	0.003287	0.003016	0.002786
40	0.07874	0.002466	0.002268	0.002223	0.002023	0.001856	0.001715
41	0.07112	0.001642	0.001509	0.001479	0.001346	0.001235	0.001141
42	0.06350	0.001043	0.0009592	0.0009402	0.0008557	0.0007851	0.0007253
43	0.05588	0.0006256	0.0005752	0.0005638	0.0005132	0.0004708	0.0004350
44	0.05080	0.0004273	0.0003929	0.0003851	0.0003505	0.0003216	0.0002971
45	0.04470	0.0002563	0.0002356	0.0002309	0.0002102	0.0001929	0.0001782
46	0.03988	0.0001623	0.0001492	0.0001462	0.0001331	0.0001221	0.0001128
47	0.03556	0.0001026	0.00009433	0.00009247	0.00008415	0.00007721	0.00007133
48	0.03150	0.00006314	0.00005805	0.00005691	0.00005179	0.00004752	0.00004390
49	0.02819	0.00004054	0.00003728	0.00003654	0.00003325	0.00003051	0.00002819
50	0.02515	0.00002565	0.00002359	0.00002312	0.00002104	0.00001731	0.00001784
51	0.02235	0.00001602	0.00001473	0.00001443	0.00001314	0.00001205	0.00001114
52	0.01981	0.000009886	0.000009089	0.000008909	0.000008109	0.000007440	0.000006873
53	0.01778	0.000006412	0.000005896	0.000005779	0.000005260	0.000004826	0.000004458
54	0.01575	0.000003946	0.000003628	0.000003557	0.000003237	0.000002970	0.000002744
55	0.01397	0.000002444	0.000002247	0.000002203	0.000002005	0.000001839	0.000001699
56	0.01245	0.000001540	0.000001416	0.000001388	0.000001263	0.000001159	0.000001070

TABLE 23—Stranded Aluminum Wire Table, Alloy, EC–0—Data at 20 °C—English Units

Nominal size, circular mils or AWG	Ohms per 1000 feet	Pounds per 1000 feet	Class AA			Class A			Class B			Class C		
			No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)
4,000,000	0.004361	3830.							217	135.8	2309.	271	121.5	2309.
3,500,000	0.004987	3350.				127	166.0	2158.	169	143.9	2158.	217	127.0	2159.
3,000,000	0.005817	2872.				127	153.7	1998.	169	133.2	1998.	217	117.6	1999.
2,750,000	0.006288	2606.				91	173.8	1912.						
2,500,000	0.006918	2368.				91	165.7	1823.	127	140.3	1824.	169	121.6	1824.
2,250,000	0.007687	2132.				91	157.2	1729.						
2,000,000	0.008565	1876.				91	148.2	1630.	127	125.5	1632.	169	108.8	1632.
1,900,000	0.009011	1783.							127	122.3	1590.	169	106.0	1590.
1,800,000	0.009502	1691.							127	119.1	1548.	169	103.2	1548.
1,750,000	0.009779	1643.	61	169.4	1525.				127	117.4	1526.	169	101.8	1527.
1,700,000	0.01007	1596.							127	115.7	1504.	169	100.3	1504.
1,600,000	0.01071	1501.							127	112.2	1459.	169	97.3	1459.
1,590,000	0.01077	1492.	61	161.4	1453.	91	132.2	1454.						
1,510,500	0.01133	1419.	61	157.4	1417.	61	157.4	1417.						
1,500,000	0.01141	1408.							91	128.4	1412.	127	108.7	1413.
1,431,000	0.01196	1344.	61	153.2	1379.	61	153.2	1379.						
1,400,000	0.01223	1313.							91	124.0	1364.	127	105.0	1365.
1,351,500	0.01267	1268.	61	148.8	1339.	61	148.8	1339.						
1,300,000	0.01317	1220.							91	119.5	1315.	127	101.2	1316.
1,272,000	0.01346	1194.	61	144.4	1300.	61	144.4	1300.						
1,250,000	0.01369	1173.							91	117.2	1289.	127	99.2	1290.
1,200,000	0.01427	1126.							91	114.8	1263.	127	97.2	1264.
1,192,500	0.01436	1119.	61	139.8	1258.	61	139.8	1258.						
1,113,000	0.01537	1045.	61	135.1	1216.	61	135.1	1216.						
1,100,000	0.01557	1032.							91	109.9	1209.	127	93.1	1210.
1,033,500	0.01657	969.8	37	167.1	1170.	61	130.2	1172.						
1,000,000	0.01712	938.7	37	164.4	1151.	61	128.0	1152.	61	128.0	1152.	91	104.8	1153.
954,000	0.01794	895.9	37	160.6	1124.	61	125.1	1126.						
900,000	0.01901	845.3	37	156.0	1092.	61	121.5	1094.	61	121.5	1094.	91	99.4	1093.
874,500	0.01958	820.5	37	153.7	1076.	61	119.7	1077.						
800,000	0.02140	750.7							61	114.5	1031.	91	93.8	1032.
795,000	0.02153	746.5	37	146.6	1026.	61	114.2	1028.						
750,000	0.02282	704.3	37	142.4	996.8	61	110.9	998.1	61	110.9	998.1	91	90.8	998.8
715,500	0.02391	672.0	37	139.1	973.7	61	108.3	974.7						
700,000	0.02447	656.7	37	137.5	962.5	61	107.1	963.9	61	107.1	963.9	91	87.7	964.7
650,000	0.02631	610.7	37	132.6	928.2				61	103.2	928.8	91	84.5	929.5
636,000	0.02692	597.0	37	131.1	917.7	37	131 1	917 7						
600,000	0.02855	562.9	37	127.3	891.1	37	127 3	891 1	61	99.2	892.8	91	81.2	893.2
556,500	0.03077	522.2	19	171.1	855.	37	122 6	858 2						
550,000	0.03109	516.8							61	95.0	855.0	91	77.7	854.7
500,000	0.03424	469.2	19	162.2	811.0	37	116.2	813.4	37	116.2	813.4	61	90.5	814.5
477,000	0.03591	447.5	19	158.4	792.0	37	113.5	794.5						
450,000	0.03804	422.4	19	153.9	769.5				37	110.3	772.1	61	85.9	773.1
400,000	0.04277	375.7							37	104.0	728.0	61	81.0	729.0
397,500	0.04303	373.5	19	144 7	723 5	19	144 7	723 5						
350,000	0.04893	328.4				19	135.7	678.5	37	97.3	681.1	61	75.7	681.3
336,400	0.05086	316.0				19	133.1	665.5						
300,000	0.05702	281.8				19	125.7	628.5	37	90.0	630.0	61	70.1	630.9

TABLE 23—Stranded Aluminum Wire Table, Alloy, EC–0—Data at 20 °C—English Units—Continued

Nominal size, circular mils or AWG	Ohms per 1000 feet	Pounds per 1000 feet	Class AA			Class A			Class B			Class C		
			No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)
266,800	0.06411	250.6	7	195.3	585.9	19	118.5	592.5						
250,000	0.06846	234.7	7	189.0	567.0	19	114.7	573.5	37	82.2	575.4	61	64.0	576.0
0000	0.08086	198.7	7	173.9	521.7	7	173.9	521.7	19	105.5	527.5	37	75.6	529.2
000	0.1020	157.5	7	154.8	464.4	7	154.8	464.4	19	94.0	470.0	37	67.3	471.1
00	0.1286	125.0	7	137.9	413.7	7	137.9	413.7	19	83.7	418.5	37	60.0	420.0
0	0.1622	99.09	7	122.8	368.4	7	122.8	368.4	19	74.5	372.5	37	53.4	373.8
1	0.2047	78.50	7	109.3	327.9	7	109.3	327.9	19	66.4	332.0	37	47.6	333.2
2	0.2578	62.34	7	97.4	292.2	7	97.4	292.2	7	97.4	292.2	19	59.1	295.5
3	0.3253	49.39							7	86.7	260.1	19	52.6	263.0
4	0.4103	39.16				7	77.2	231.6	7	77.2	231.6	19	46.9	234.5
5	0.5166	31.10							7	68.8	206.4	19	41.7	208.5
6	0.6529	24.61				7	61.2	183.6	7	61.2	183.6	19	37.2	186.0
7	0.8233	19.52							7	54.5	163.5	19	33.1	165.5
8	1.035	15.52							7	48.6	145.8	19	29.5	147.5
9	1.310	12.26							7	43.2	129.6	19	26.2	131.0
10	1.650	9.740							7	38.5	115.5	19	23.4	117.0
12	2.629	6.113							7	30.5	91.5	19	18.5	92.5
14	4.176	3.848							7	24.2	72.6	19	14.7	73.5
16	6.634	2.422							7	19.2	57.6	19	11.7	58.5
18	10.58	1.518							7	15.2	45.6			
20	16.70	0.9621							7	12.1	36.3			

TABLE 24—Stranded Aluminum Wire Table, Alloy, EC–0—Data at 20°C—Metric Units

Nominal size, circular mils or AWG	Area (sq mm)	Ohms per kilometer	Kilograms per kilometer	Class AA			Class A			Class B			Class C		
				No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)
4,000,000	2028.	0.01431	5700.							217	3.45	58.64	271	3.09	58.64
3,500,000	1773.	0.01636	4985.				127	4.22	54.81	169	3.66	54.83	217	3.23	54.84
3,000,000	1520.	0.01909	4274.				127	3.90	50.75	169	3.38	50.75	217	2.99	50.78
2,750,000	1393.	0.02063	3878.				91	4.41	48.56						
2,500,000	1266.	0.02270	3525.				91	4.21	46.30	127	3.56	46.33	169	3.09	46.33
2,250,000	1139.	0.02522	3172.				91	3.99	43.92						
2,000,000	1013.	0.02810	2792.				91	3.76	41.41	127	3.19	41.44	169	2.76	41.45
1,900,000	962.5	0.02956	2654.							127	3.11	40.38	169	2.69	40.39
1,800,000	912.8	0.03117	2517.							127	3.03	39.33	169	2.62	39.32
1,750,000	887.	0.03208	2445.	61	4.30	38.72				127	2.98	38.77	169	2.59	38.79
1,700,000	861.4	0.03303	2375.							127	2.94	38.20	169	2.55	38.12
1,600,000	810.1	0.03513	2234.							127	2.85	37.05	169	2.47	37.07
1,590,000	805.2	0.03534	2220.	61	4.10	36.90	91	3.36	36.94						
1,510,500	765.8	0.03716	2111.	61	4.00	35.98	61	4.00	35.98						
1,500,000	760.2	0.03743	2096.							91	3.26	35.88	127	2.76	35.89
1,431,000	725.4	0.03923	2000.	61	3.89	35.02	61	3.89	35.02						
1,400,000	709.	0.04011	1955.							91	3.15	34.65	127	2.67	34.67
1,351,500	684.4	0.04158	1887.	61	3.78	34.02	61	3.78	34.02						
1,300,000	658.5	0.04322	1815.							91	3.04	33.39	127	2.57	33.42
1,272,000	644.5	0.04415	1777.	61	3.67	33.01	61	3.67	33.01						
1,250,000	633.4	0.04493	1746.							91	2.98	32.75	127	2.52	32.76
1,200,000	607.7	0.04683	1675.							91	2.92	32.08	127	2.47	32.10
1,192,500	604.1	0.04711	1666.	61	3.55	31.96	61	3.55	31.96						
1,113,000	564.2	0.05044	1555.	61	3.43	30.88	61	3.43	30.88						
1,100,000	556.9	0.05109	1535.							91	2.79	30.71	127	2.36	30.74
1,033,500	523.5	0.05436	1443.	37	4.24	29.71	61	3.31	29.76						
1,000,000	506.7	0.05616	1397.	37	4.18	29.23	61	3.25	29.26	61	3.25	29.26	91	2.66	29.28
954,000	483.6	0.05885	1333.	37	4.08	28.55	61	3.18	28.60						
900,000	456.3	0.06237	1258.	37	3.96	27.74	61	3.09	27.77	61	3.09	27.77	91	2.52	27.77
874,500	442.9	0.06425	1221.	37	3.90	27.33	61	3.04	27.36						
800,000	405.2	0.07022	1117.							61	2.91	26.17	91	2.38	26.21
795,000	402.9	0.07062	1111.	37	3.72	26.07	61	2.90	26.11						
750,000	380.2	0.07485	1048.	37	3.62	25.32	61	2.82	25.35	61	2.82	25.35	91	2.31	25.37
715,500	362.8	0.07844	1000.	37	3.53	24.73	61	2.75	24.76						
700,000	354.5	0.08028	977.3	37	3.49	24.45	61	2.72	24.48	61	2.72	24.48	91	2.23	24.25
650,000	329.6	0.08632	908.9	37	3.37	23.58				61	2.62	23.59	91	2.15	23.61
636,000	322.2	0.08831	888.4	37	3.33	23.31	37	3.33	23.31						
600,000	303.8	0.09366	837.6	37	3.23	22.63	37	3.23	22.63	61	2.52	22.68	91	2.06	22.69
556,500	281.8	0.1010	777.1	19	4.35	21.73	37	3.11	21.80						
550,000	279.0	0.1020	769.1							61	2.41	21.72	91	1.97	21.71
500,000	253.3	0.1123	698.3	19	4.12	20.60	37	2.95	20.66	37	2.95	20.66	61	2.30	20.69
477,000	241.6	0.1178	666.0	19	4.02	20.12	37	2.88	20.18						
450,000	228.0	0.1248	628.7	19	3.91	19.55				37	2.80	19.61	61	2.18	19.64
400,000	202.8	0.1403	559.1							37	2.64	18.49	61	2.06	18.52
397,500	201.6	0.1412	555.8	19	3.68	18.38	19	3.68	18.38						
350,000	177.3	0.1605	488.8				19	3.45	17.23	37	2.47	17.30	61	1.92	17.31
336,400	170.6	0.1668	470.2				19	3.38	16.90						
300,000	152.1	0.1871	419.4				19	3.19	15.96	37	2.29	16.00	61	1.78	16.02

TABLE 24—Stranded Aluminum Wire Table, Alloy, EC–0—Data at 20 °C—Metric Units—Continued

Nominal size, circular mils or AWG	Area (sq mm)	Ohms per kilometer	Kilograms per kilometer	Class AA			Class A			Class B			Class C		
				No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)
266,800	135.3	0.2103	373.0	7	4.96	14.88	19	3.01	15.05						
250,000	126.7	0.2246	349.3	7	4.80	14.40	19	2.91	14.57	37	2.09	14.62	61	1.63	14.63
0,000	107.3	0.2653	295.7	7	4.42	13.25	7	4.42	13.25	19	2.68	13.40	37	1.92	13.44
000	85.00	0.3348	234.3	7	3.93	11.80	7	3.93	11.80	19	2.39	11.94	37	1.71	11.97
00	67.45	0.4219	186.0	7	3.50	10.51	7	3.50	10.15	19	2.13	10.63	37	1.52	10.67
0	53.49	0.5320	147.5	7	3.12	9.357	7	3.12	9.357	19	1.89	9.462	37	1.36	9.495
1	42.37	0.6715	116.8	7	2.78	8.329	7	2.78	8.329	19	1.69	8.433	37	1.21	8.463
2	33.65	0.8457	92.77	7	2.47	7.422	7	2.47	7.422	7	2.47	7.422	19	1.50	7.506
3	26.66	1.067	73.51							7	2.20	6.607	19	1.34	6.680
4	21.14	1.346	58.28				7	1.96	5.883	7	1.96	5.883	19	1.19	5.956
5	16.79	1.695	46.29							7	1.75	5.243	19	1.06	5.296
6	13.28	2.142	36.63				7	1.55	4.663	7	1.55	4.663	19	0.94	4.724
7	10.54	2.701	29.05							7	1.38	4.153	19	0.84	4.204
8	8.378	3.397	23.10							7	1.23	3.703	19	0.75	3.747
9	6.619	4.299	18.25							7	1.10	3.292	19	0.67	3.327
10	5.257	5.412	14.50							7	0.98	2.934	19	0.59	2.972
12	3.300	8.624	9.097							7	0.77	2.324	19	0.47	2.350
14	2.077	13.70	5.727							7	0.61	1.844	19	0.37	1.867
16	1.308	21.76	3.605							7	0.49	1.463	19	0.30	1.486
18	0.8195	34.72	2.259							7	0.39	1.158			
20	0.5193	54.80	1.432							7	0.31	0.922			

TABLE 25—Stranded Aluminum Wire Table, Alloy, EC-H19—Data at 20 °C—English Units

Nominal size, circular mils or AWG	Ohms per 1000 feet	Pounds per 1000 feet	Class AA			Class A			Class B			Class C		
			No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)
4,000,000	0.004418	3830.							217	135.8	2309.	271	121.5	2309.
3,500,000	0.005053	3350.				127	166.0	2158.	169	143.9	2158.	217	127.0	2159.
3,000,000	0.005894	2872.				127	153.7	1998.	169	133.2	1998.	217	117.6	1999.
2,750,000	0.006371	2606.				91	173.8	1912.						
2,500,000	0.007009	2368.				91	165.7	1823.	127	140.3	1824.	169	121.6	1824.
2,250,000	0.007787	2132.				91	157.2	1729.						
2,000,000	0.008677	1876.				91	148.2	1630.	127	125.5	1632.	169	108.8	1632.
1,900,000	0.009129	1783.							127	122.3	1590.	169	106.0	1590.
1,800,000	0.009627	1691.							127	119.1	1548.	169	103.2	1548.
1,750,000	0.009907	1643.	61	169.4	1525.				127	117.4	1526.	169	101.8	1527.
1,700,000	0.01020	1596.							127	115.7	1504.	169	100.3	1504.
1,600,000	0.01085	1501.							127	112.2	1459.	169	97.3	1459.
1,590,000	0.01091	1492.	61	161.4	1453.	91	132.2	1454.						
1,510,500	0.01148	1419.	61	157.4	1417.	61	157.4	1417.						
1,500,000	0.01156	1408.							91	128.4	1412.	127	108.7	1413.
1,431,000	0.01211	1344.	61	153.2	1379.	61	153.2	1379.						
1,400,000	0.01239	1313.							91	124.0	1364.	127	105.0	1365.
1,351,500	0.01284	1268.	61	148.8	1339.	61	148.8	1339.						
1,300,000	0.01335	1220.							91	119.5	1315.	127	101.2	1316.
1,272,000	0.01363	1194.	61	144.4	1300.	61	144.4	1300.						
1,250,000	0.01387	1173.							91	117.2	1289.	127	99.2	1290.
1,200,000	0.01446	1126.							91	114.8	1263.	127	97.2	1264.
1,192,500	0.01455	1119.	61	139.8	1258.	61	139.8	1258.						
1,113,000	0.01558	1045.	61	135.1	1216.	61	135.1	1216.						
1,100,000	0.01578	1032.												
1,033,500	0.01679	969.8	37	167.1	1170.	61	130.2	1172.						
1,000,000	0.01734	938.7	37	164.4	1151.	61	128.0	1152.	61	128.0	1152.	91	104.8	1153.
954,000	0.01817	895.9	37	160.6	1124.	61	125.1	1126.						
900,000	0.01926	845.3	37	156.0	1092.	61	121.5	1094.	61	121.5	1094.	91	99.4	1093.
874,000	0.01984	820.5	37	153.7	1076.	61	119.7	1077.						
800,000	0.02168	750.7							61	114.5	1031.	91	93.8	1032.
795,000	0.02181	746.5	37	146.6	1026.	61	114.2	1028.						
750,000	0.02311	704.3	37	142.4	996.8	61	110.9	998.1	61	110.9	998.1	91	90.8	998.8
715,500	0.02422	672.0	37	139.1	973.7	61	108.3	974.7						
700,000	0.02479	656.7	37	137.5	962.5	61	107.1	963.9	61	107.1	963.9	91	87.7	964.7
650,000	0.02666	610.7	37	132.6	928.2				61	103.2	928.8	91	84.5	929.5
636,000	0.02727	597.0	37	131.1	917.7	37	131.1	917.7						
600,000	0.02892	562.9	37	127.3	891.1	37	127.3	891.1	61	99.2	892.8	91	81.2	893.2
556,500	0.03118	522.2	19	171.1	855.5	37	122.6	858.2						
550,000	0.03150	516.8							61	95.0	855.0	91	77.7	854.7
500,000	0.03469	469.2	19	162.2	811.0	37	116.2	813.4	37	116.2	813.4	61	90.5	814.5
477,000	0.03638	447.5	19	158.4	792.0	37	113.5	794.5						
450,000	0.03854	422.4	19	153.9	769.5				37	110.3	772.1	61	85.9	773.1
400,000	0.04333	375.7							37	104.0	728.0	61	81.0	729.0
397,500	0.04359	373.5	19	144.7	723.5	19	144.7	723.5						
350,000	0.04957	328.4				19	135.7	678.5	37	97.3	681.1	61	75.7	681.3
336,400	0.05152	316.0				19	133.1	665.5						
300,000	0.05777	281.8				19	125.7	628.5	37	90.0	630.0	61	70.1	630.9

TABLE 25—Stranded Aluminum Wire Table, Alloy, EC-H19—Data at 20 °C—English Units—Continued

Nominal size, circular mils or AWG	Ohms per 1000 feet	Pounds per 1000 feet	Class AA			Class A			Class B			Class C		
			No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)	No. of strands	Diameter (mils)	Outside diameter (mils)
266,800	0.06495	250.6	7	195.3	585.9	19	118.5	592.5						
250,000	0.06936	234.7	7	189.0	567.0	19	114.7	573.5	37	82.2	575.4	61	64.0	576.0
0000	0.08192	198.7	7	173.9	521.7	7	173.9	521.7	19	105.5	527.5	37	75.6	529.2
000	0.1034	157.5	7	154.8	464.4	7	154.8	464.4	19	94.0	470.0	37	67.3	471.1
00	0.1303	125.0	7	137.9	413.7	7	137.9	413.7	19	83.7	418.5	37	60.0	420.0
0	0.1643	99.09	7	122.8	368.4	7	122.8	368.4	19	74.5	372.5	37	53.4	373.8
1	0.2074	78.50	7	109.3	327.9	7	109.3	327.9	19	66.4	332.0	37	47.6	333.2
2	0.2611	62.34	7	97.4	292.2	7	97.4	292.2	7	97.4	292.2	19	59.1	295.5
3	0.3296	49.39							7	86.7	260.1	19	52.6	263.0
4	0.4157	39.16				7	77.2	231.6	7	77.2	231.6	19	46.9	234.5
5	0.5234	31.10							7	68.8	206.4	19	41.7	208.5
6	0.6615	24.61				7	61.2	183.6	7	61.2	183.6	19	37.2	186.0
7	0.8341	19.52							7	54.5	163.5	19	33.1	165.5
8	1.049	15.52							7	48.6	145.8	19	29.5	147.5
9	1.328	12.26							7	43.2	129.6	19	26.2	131.0
10	1.671	9.740							7	38.5	115.5	19	23.4	117.0
12	2.663	6.113							7	30.5	91.5	19	18.5	92.5
14	4.230	3.848							7	24.2	72.6	19	14.7	73.5
16	6.720	2.422							7	19.2	57.6	19	11.7	58.5
18	10.720	1.518							7	15.2	45.6			
20	16.92	0.9621							7	12.1	36.3			

TABLE 26—Stranded Aluminum Wire Table, Alloy, EC-H19—Data at 20 °C—Metric Units

Nominal size, circular mils or AWG	Area (sq mm)	Ohms per kilometer	Kilograms per kilometer	Class AA			Class A			Class B			Class C		
				No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)
4,000,000	2028.	0.01450	5700.							217	3.45	58.64	271	3.09	58.64
3,500,000	1773.	0.01658	4985.				127	4.22	54.81	169	3.66	54.83	217	3.23	54.84
3,000,000	1520.	0.01934	4274.				127	3.90	50.75	169	3.38	50.75	217	2.99	50.78
2,750,000	1393.	0.02090	3878.				91	4.41	48.56						
2,500,000	1266.	0.02299	3525.				91	4.21	46.30	127	3.56	46.33	169	3.09	46.33
2,250,000	1139.	0.02555	3172.				91	3.99	43.92						
2,000,000	1013.	0.02847	2792.				91	3.76	41.41	127	3.19	41.44	169	2.76	41.45
1,900,000	962.5	0.02995	2654.							127	3.11	40.38	169	2.69	40.39
1,800,000	912.8	0.03158	2517.							127	3.03	39.33	169	2.62	39.32
1,750,000	887.0	0.03250	2445.	61	4.30	38.72				127	2.98	38.77	169	2.59	38.79
1,700,000	861.4	0.03347	2375.							127	2.94	38.20	169	2.55	38.21
1,600,000	810.1	0.03559	2234.							127	2.85	37.05	169	2.47	37.07
1,590,000	805.2	0.03580	2220.	61	4.10	36.90	91	3.36	36.94						
1,510,500	765.8	0.03765	2111.	61	4.00	35.98	61	4.00	35.98						
1,500,000	760.2	0.03792	2096.							91	3.26	35.88	127	2.76	35.89
1,431,000	725.4	0.03794	2000.	61	3.89	35.02	61	3.89	35.02						
1,400,500	709.0	0.04066	1955.							91	3.15	34.65	127	2.67	34.67
1,351,000	684.4	0.04212	1887.	61	3.78	34.02	61	3.78	34.02						
1,300,000	658.5	0.04378	1815.							91	3.04	33.39	127	2.57	33.42
1,272,000	644.5	0.04473	1777.	61	3.67	33.01	61	3.67	33.01						
1,250,000	633.4	0.04552	1746.							91	2.98	32.75	127	2.52	32.76
1,200,500	607.7	0.04744	1675.							91	2.92	32.08	127	2.47	32.10
1,192,000	604.1	0.04772	1666.	61	3.55	31.96	61	3.55	31.96						
1,113,000	564.2	0.05110	1555.	61	3.43	30.88	61	3.43	30.88						
1,100,000	556.9	0.05177	1535.							91	2.79	30.71	127	2.36	30.74
1,033,500	523.5	0.05507	1443.	37	4.24	29.71	61	3.31	29.76						
1,000,000	506.7	0.05689	1397.	37	4.18	29.23	61	3.25	29.26	61	3.25	20.96	91	2.66	29.28
954,000	483.6	0.05962	1333.	37	4.08	28.55	61	3.18	28.60						
900,000	456.3	0.06319	1258.	37	3.96	27.74	61	3.09	28.77	61	3.09	27.77	91	2.52	27.77
874,500	442.9	0.06509	1221.	37	3.90	27.33	61	3.04	27.36						
800,000	405.2	0.07114	1117.							61	2.91	26.17	91	2.38	26.21
795,000	402.9	0.07155	1111.	37	3.72	26.07	61	2.90	26.11						
750,000	380.2	0.07583	1048.	37	3.62	25.32	61	2.82	25.35	61	2.82	25.35	91	2.31	25.37
715,500	362.8	0.07947	1000.	37	3.53	24.73	61	2.75	24.76						
700,000	354.5	0.08133	977.3	37	3.49	24.45	61	2.72	24.48	61	2.72	24.48	91	2.23	24.50
650,000	329.6	0.08746	908.9	37	3.37	23.58				61	2.62	23.59	91	2.15	23.61
636,000	322.2	0.08947	888.4	37	3.33	23.31	37	3.33	23.31						
600,000	303.8	0.09489	837.6	37	3.23	22.63	37	3.23	22.63	61	2.52	22.68	91	2.06	22.69
556,500	281.8	0.1023	777.1	19	4.35	21.73	37	3.11	21.80						
550,000	279.0	0.1033	769.1							61	2.41	21.72	91	1.97	21.71
500,000	253.3	0.1138	698.3	19	4.12	20.60	37	2.95	20.66	37	2.95	20.66	61	2.30	20.69
477,000	241.6	0.1193	666.0	19	4.02	20.12	37	2.88	20.18						
450,000	228.0	0.1264	628.7	19	3.91	19.55				37	2.80	19.61	61	2.18	19.64
400,000	202.8	0.1422	559.1							37	2.64	18.49	61	2.06	18.52
397,500	201.6	0.1430	555.8	19	3.68	18.38	19	3.68	18.38						
350,000	177.3	0.1626	488.8				19	3.45	17.23	37	2.47	17.30	61	1.92	17.31
336,400	170.6	0.1690	470.2				19	3.38	16.90						
300,000	152.1	0.1895	419.4				19	3.19	15.96	37	2.29	16.00	61	1.78	16.02

TABLE 26—Stranded Aluminum Wire Table, Alloy, EC–H19—Data at 20 °C—Metric Units—Continued

Nominal size, circular mils or AWG	Area (sq mm)	Ohms per kilometer	Kilograms per kilometer	Class AA			Class A			Class B			Class C		
				No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)	No. of strands	Diameter (mm)	Outside diameter (mm)
266,800	135.3	0.2131	373.	7	4.96	14.88	19	3.01	15.05						
250,000	126.7	0.2275	349.3	7	4.80	14.40	19	2.91	14.57	37	2.09	14.62	61	1.63	14.63
0000	107.3	0.2688	295.7	7	4.42	13.25	7	4.42	13.25	19	2.68	13.40	37	1.92	13.44
000	85.00	0.3392	234.3	7	3.93	11.80	7	3.93	11.80	19	2.39	11.94	37	1.71	11.97
00	67.45	0.4274	186.0	7	3.50	10.51	7	3.50	10.51	19	2.13	10.63	37	1.52	10.67
0	53.49	0.5390	147.5	7	3.12	9.357	7	3.12	9.357	19	1.89	9.462	37	1.36	9.495
1	42.37	0.6804	116.8	7	2.78	8.329	7	2.78	8.329	19	1.69	8.433	37	1.21	8.463
2	33.65	0.8568	92.77	7	2.47	7.422	7	2.47	7.422	7	2.47	7.422	19	1.50	7.506
3	26.66	1.081	73.51							7	2.20	6.607	19	1.34	6.680
4	21.14	1.364	58.28				7	1.96	5.883	7	1.96	5.883	19	1.19	5.956
5	16.79	1.717	46.29							7	1.75	5.243	19	1.06	5.296
6	13.28	2.170	36.63				7	1.55	4.663	7	1.55	4.663	19	0.94	4.724
7	10.54	2.736	29.05							7	1.38	4.153	19	0.84	4.204
8	8.378	3.441	23.10							7	1.23	3.703	19	0.75	3.747
9	6.619	4.355	18.25							7	1.10	3.292	19	0.67	3.327
10	5.257	5.483	14.50							7	0.98	2.934	19	0.59	2.972
12	3.300	8.737	9.097							7	0.77	2.324	19	0.47	2.350
14	2.077	13.88	5.727							7	0.61	1.844	19	0.37	1.867
16	1.308	22.05	3.605							7	0.49	1.463	19	0.30	1.486
18	0.8195	35.18	2.259							7	0.39	1.158			
20	0.5193	55.51	1.432							7	0.31	0.922			

TABLE 27—Stranded Aluminum Wire Table, Alloy, 5005–H19—Data at 20 °C—English Units

Nominal size, circular mils or AWG	Ohms per 1000 feet	Pounds per 1000 feet	Class AA			Class A		
			Number of strands	Diameter (mils)	Outside diameter (mils)	Number of strands	Diameter (mils)	Outside diameter (mils)
5,000,000	0.004072	4831.	127	198.4	2579.			
4,500,000	0.004520	4351.	127	188.3	2448.			
4,000,000	0.005038	3830.	127	177.5	2308.			
3,500,000	0.005761	3350.				127	166.0	2158.
3,000,000	0.006718	2872.	91	181.6	1998.			
2,500,000	0.007991	2368.				91	165.7	1823.
2,300,000	0.008679	2181.				91	159.0	1749.
2,049,500	0.009742	1943.	61	183.3	1650.			
2,000,000	0.00998	1896.	61	181.1	1630.			
1,926,000	0.01027	1808.	61	177.7	1599.			
1,900,000	0.01041	1784.	61	176.5	1589.			
1,800,000	0.01098	1690.	61	171.8	1546.			
1,750,000	0.01130	1643.	61	169.4	1525.			
1,700,000	0.01207	1538.	61	163.9	1475.			
1,600,000	0.01235	7503.	61	162.0	1458.			
1,500,000	0.01318	1408.				61	156.8	1411.
1,400,000	0.01412	1314.				61	151.5	1364.
1,300,000	0.01521	1221.				61	146.0	1314.
1,272,000	0.01555	1194.	37	185.4	1298.	61	144.4	1300.
1,250,000	0.01582	1173.	37	183.8	1287.	61	143.2	1289.
1,200,000	0.01648	1127.	37	180.1	1261.	61	140.3	1263.
1,193,000	0.01657	1120.	37	179.6	1257.	61	139.9	1259.
1,111,000	0.01779	1043.	37	173.3	1213.			
1,100,000	0.01798	1032.	37	172.4	1207.			
1,092,330	0.01811	1025.	37	171.8	1203.	61	133.8	1204.
1,077,382	0.01834	1012.	37	170.7	1195.	61	132.9	1196.
1,000,000	0.01977	938.7	37	164.4	1151.			
927,200	0.02133	870.4	37	158.3	1108.			
900,000	0.02196	845.3	37	156.0	1092.			
833,600	0.02372	782.5	37	150.1	1051.			
800,000	0.02473	750.5	37	147.0	1029.			
750,000	0.02635	704.3	37	142.4	996.8			
740,800	0.02669	695.4	37	141.5	990.5			
704,600	0.02806	661.5	37	138.0	966.0			
700,000	0.02827	656.7	37	137.5	962.5			
652,400	0.03031	612.4	19	185.3	926.5			
650,000	0.03044	609.8	37	132.5	927.5			
648,470	0.03049	608.9				37	132.4	926.8
600,000	0.03298	562.9	37	127.3	891.1	37	127.3	891.1
587,200	0.03367	551.2	19	175.8	879.0			
559,500	0.03534	525.2	19	171.6	858.0			
556,050	0.03555	522.1				37	122.6	858.2
550,000	0.03596	516.1				37	121.9	853.3
503,600	0.03926	472.7	19	162.8	814.0			
500,000	0.03956	469.2	19	162.2	811.0			
465,400	0.04249	436.8	19	156.5	782.5			
450,000	0.04394	422.4	19	153.9	769.5			
463,245	0.04268	434.9				37	111.9	783.3
419,600	0.04713	393.9	19	148.6	743.0			
400,000	0.04943	375.5	19	145.1	725.5			
394,500	0.05012	370.4	19	144.1	720.5			
392,470	0.05037	368.5				37	103.0	721.0
355,100	0.05569	333.3	19	136.7	683.5			
350,000	0.05651	328.4				19	135.7	678.5
349,565	0.05656	328.2				37	97.2	680.4
312,800	0.06322	293.6	19	128.3	641.5			
311,120	0.06355	292.1				37	91.7	641.9
300,000	0.06586	281.8				19	125.7	628.5
281,400	0.07026	264.2				19	121.7	608.5
250,000	0.07910	234.7				19	114.7	573.5
246,900	0.08009	231.8	7	187.8	563.4			
246,835	0.08008	231.8				19	114.0	570.0
0000	0.0934	198.7	7	173.9	521.7	7	173.9	521.7
195,785	0.1010	183.8				19	101.5	507.5
195,700	0.1010	183.7	7	167.2	501.6			
000	0.1179	157.5	7	154.8	464.4	7	154.8	464.4

TABLE 27—Stranded Aluminum Wire Table, Alloy, 5005–H19—Data at 20 °C—English Units—Con.

Nominal size, circular mils or AWG	Ohms per 1000 feet	Pounds per 1000 feet	Class AA			Class A		
			Number of strands	Diameter (mils)	Outside diameter (mils)	Number of strands	Diameter (mils)	Outside diameter (mils)
155,610	0.1271	146.1				19	90.5	452.5
155,400	0.1272	145.9	7	149.0	447.0			
00	0.1485	125.0	7	137.9	413.7	7	137.9	413.7
123,424	0.1602	115.9				19	80.6	403.0
123,300	0.1604	115.7	7	132.7	398.1			
0	0.1873	99.09	7	122.8	368.4	7	122.8	368.4
97,917	0.2018	91.96	7	118.3	354.9			
97,800	0.2019	91.95				19	71.8	359.0
77,470	0.2552	72.72	7	105.2	315.6			
2	0.2977	62.34	7	97.4	292.2	7	97.4	292.2
61,450	0.3217	57.69				7	93.7	281.1
48,690	0.4061	45.71				7	83.4	250.2
4	0.4740	39.16				7	77.2	231.6
30,580	0.6465	28.71				7	66.1	198.3
6	0.7542	24.61				7	61.2	183.6

TABLE 28—Stranded Aluminum Wire Table, Alloy, 5005–H19—Data at 20 °C—Metric Units

Nominal size, circular mils or AWG	Area (sq mm)	Ohms per kilometer	Kilograms per kilometer	Class AA			Class A		
				Number of strands	Diameter (mm)	Outside diameter (mm)	Number of strands	Diameter (mm)	Outside diameter (mm)
5,000,000	2533.	0.01336	7189.	127	5.04	65.51			
4,500,000	2282.	0.01483	6476.	127	4.78	62.18			
4,000,000	2027.	0.01653	5700.	127	4.51	58.61			
3,500,000	1773.	0.01890	4985.				127	4.22	54.81
3,000,000	1521.	0.02204	4275.	91	4.61	50.74			
2,500,000	1266.	0.02622	3525.				91	4.21	46.30
2,300,000	1166.	0.02847	3245.				91	4.04	44.42
2,049,500	1039.	0.03196	2891.	61	4.66	41.90			
2,000,000	1014.	0.03274	2822.	61	4.60	41.40			
1,926,000	976.	0.03368	2691.	61	4.51	40.62			
1,900,000	962.9	0.03414	2655.	61	4.48	40.35			
1,800,000	912.3	0.03603	2515.	61	4.36	39.27			
1,750,000	887.	0.03706	2445.	61	4.30	38.72			
1,700,000	830.3	0.03959	2289.	61	4.16	37.47			
1,600,000	811.	0.04052	2236.	61	4.11	37.03			
1,500,000	759.4	0.04325	2095.				61	3.98	35.84
1,400,000	709.4	0.04633	1956.				61	3.85	34.63
1,300,000	658.9	0.04989	1817.				61	3.71	33.38
1,272,000	644.4	0.05101	1777.	37	4.71	32.96	61	3.67	33.01
1,250,000	633.4	0.05190	1746.	37	4.67	32.68	61	3.64	32.74
1,200,000	608.1	0.05405	1677.	37	4.57	32.02	61	3.56	32.07
1,193,000	604.7	0.05435	1667.	37	4.56	31.93	61	3.55	31.98
1,111,000	563.1	0.05838	1552.	37	4.40	30.81			
1,100,000	557.2	0.05899	1536.	37	4.38	30.65			
1,092,330	553.4	0.05940	1526.	37	4.36	30.55	61	3.40	30.59
1,077,382	546.3	0.06017	1506.	37	4.34	30.35	61	3.38	30.38
1,000,000	506.7	0.06487	1397.	37	4.18	29.23			
927,200	469.8	0.06997	1295.	37	4.02	28.15			
900,000	456.3	0.07204	1258.	37	3.96	27.74			
833,600	422.4	0.07782	1165.	37	3.81	26.69			
800,000	405.6	0.08114	1117.	37	3.73	26.14			
750,000	380.2	0.08646	1048.	37	3.62	25.32			
740,800	375.4	0.08757	1035.	37	3.59	25.16			
704,600	357.0	0.09206	984.4	37	3.51	24.54			
700,000	354.5	0.09273	977.3	37	3.49	24.45			
652,400	330.6	0.09944	911.4	19	4.71	23.53			
650,000	329.6	0.09987	907.5	37	3.37	23.56			
648,470	328.7	0.1000	906.1				37	3.36	23.54
600,000	303.8	0.1082	837.6	37	3.23	22.63	37	3.23	22.63
587,200	297.5	0.1105	820.3	19	4.47	22.33			
559,500	283.5	0.1159	781.6	19	4.36	21.79			
556,050	281.8	0.1166	776.9				37	3.11	21.80
550,000	278.6	0.1180	768.1				37	3.10	21.67
503,600	255.3	0.1288	703.5	19	4.14	20.68			
500,000	253.3	0.1298	698.3	19	4.12	20.60			
465,400	235.8	0.1394	650.1	19	3.98	19.88			
450,000	228.0	0.1442	628.7	19	3.91	19.55			
463,245	234.8	0.1400	647.2				37	2.84	19.90
419,600	212.6	0.1546	586.1	19	3.77	18.87			
400,000	202.7	0.1622	558.8	19	3.69	18.43			
394,500	199.9	0.1644	551.2	19	3.66	18.30			
392,470	198.9	0.1653	548.4				37	2.62	18.31
355,100	179.9	0.1827	496.0	19	3.47	17.36			
350,000	177.3	0.1854	488.8				19	3.45	17.23
349,565	177.1	0.1856	488.4				37	2.47	17.28
312,800	158.5	0.2074	436.9	19	3.26	16.29			
311,120	157.7	0.2085	434.7				37	2.33	16.30
300,000	152.1	0.2161	419.4				19	3.19	15.96
281,400	142.6	0.2305	393.1				19	3.09	15.46
250,000	126.7	0.2595	349.2				19	2.91	14.57
246,900	125.1	0.2628	344.9	7	4.77	14.31			
246,835	125.1	0.2627	345.0				19	2.90	14.48
0000	107.3	0.3064	295.7	7	4.42	13.25	7	4.42	13.25
195,785	99.18	0.3314	273.5				19	2.58	12.89
195,700	99.16	0.3315	273.4	7	4.25	12.74			
000	85.00	0.3867	234.3	7	3.93	11.80	7	3.93	11.80

TABLE 28—Stranded Aluminum Wire Table, Alloy, 5005–H19—Data at 20 °C—Metric Units—Con.

Nominal size, circular mils or AWG	Area (sq mm)	Ohms per kilometer	Kilograms per kilometer	Class AA			Class A		
				Number of strands	Diameter (mm)	Outside diameter (mm)	Number of strands	Diameter (mm)	Outside diameter (mm)
155,610	78.85	0.4169	217.4				19	2.30	11.49
155,400	78.75	0.4174	217.1	7	3.78	11.35			
00	67.45	0.4873	186.0	7	3.50	10.51	7	3.50	10.51
123,424	62.54	0.5256	172.4				19	2.05	10.24
123,300	62.46	0.5263	172.2	7	3.37	10.11			
0	53.49	0.6145	147.5	7	3.12	9.357	7	3.12	9.357
97,917	49.64	0.6622	136.9	7	3.00	9.014			
97,800	49.63	0.6623	136.8				19	1.82	9.119
77,470	39.25	0.8374	108.2	7	2.67	8.016			
2	33.65	0.9769	92.77	7	2.47	7.422	7	2.47	7.422
61,450	31.14	1.056	85.86				7	2.38	7.140
48,690	24.67	1.332	68.02				7	2.12	6.355
4	21.14	1.555	58.28				7	1.96	5.883
30,580	15.50	2.121	42.73				7	1.68	5.037
6	13.28	2.474	36.63				7	1.55	4.663

TABLE 29—Stranded Aluminum Wire Table, Alloy, 6201–T81—Data at 20 °C—English Units

Nominal size, circular mils or AWG	Ohms per 1000 feet	Pounds per 1000 feet	Class AA			Class A		
			Number of strands	Diameter (mils)	Outside diameter (mils)	Number of strands	Diameter (mils)	Outside diameter (mils)
3,500,000	0.005870	3350.				127	166.0	2158.
3,000,000	0.006848	2872.				127	153.7	1998.
2,750,000	0.007402	2606.				91	173.8	1912.
2,500,000	0.008143	2368.				91	165.7	1823.
2,250,000	0.009048	2132.				91	157.2	1729.
2,000,000	0.01008	1876.				91	148.2	1630.
1,750,000	0.01151	1643.	61	169.4	1525.			
1,590,000	0.01268	1492.	61	161.4	1453.	91	132.2	1454.
1,510,500	0.01333	1419.	61	157.4	1417.	61	157.4	1417.
1,431,000	0.01407	1344.	61	153.2	1379.	61	153.2	1379.
1,351,500	0.01492	1268.	61	148.8	1339.	61	148.8	1339.
1,272,000	0.01591	1198.	61	144.1	1297.	61	144.1	1297.
1,192,500	0.01690	1119.	61	139.8	1258.	61	139.8	1258.
1,113,000	0.01810	1045.	61	135.1	1216.	61	135.1	1216.
1,033,500	0.01950	969.8	37	167.1	1170.	61	130.2	1172.
1,000,000	0.02015	938.7	37	164.4	1151.	61	128.0	1152.
927,200	0.02173	870.4	37	158.3	1108.			
900,000	0.02238	845.3	37	156.0	1092.			
800,000	0.02520	750.5	37	147.0	1029.			
750,000	0.02686	704.3	37	142.4	996.8			
740,800	0.02720	695.4	37	141.5	990.5			
700,000	0.02880	656.7	37	137.5	962.5			
652,400	0.03089	612.4	19	182.3	926.5			
650,000	0.03102	609.8	37	132.5	927.5			
600,000	0.03360	562.9	37	127.3	891.1	37	127.3	891.1
559,500	0.03601	525.2	19	171.6	858.0			
550,000	0.03665	516.1				37	121.9	853.3
500,000	0.04031	496.2	19	162.2	811.0			
465,400	0.04330	436.8	19	156.5	782.5			
450,000	0.04477	422.4	19	153.9	769.5			
400,000	0.05037	375.5	19	145.1	725.5			
394,500	0.05107	370.4	19	144.1	720.5			
350,000	0.05759	328.4				19	135.7	678.5
312,800	0.06442	293.6	19	128.3	641.5			
300,000	0.06712	281.8				19	125.7	628.5
250,000	0.08061	234.7				19	114.7	573.5
246,900	0.08161	231.8	7	187.8	563.4			
0000	0.09518	198.7	7	173.9	521.7	7	173.9	521.7
195,700	0.1030	183.7	7	167.2	501.6			
000	0.1201	157.5	7	154.8	464.4	7	154.8	464.4
155,400	0.1297	145.9	7	149.0	447.0			
00	0.1514	125.0	7	137.9	413.7	7	137.9	413.7
123,300	0.1635	115.7	7	132.7	398.1			
0	0.1909	99.09	7	122.8	368.4	7	122.8	368.4
96,320	0.2092	90.41	7	117.3	351.9			
77,470	0.2601	72.72	7	105.2	315.6			
2	0.3034	62.34	7	97.4	292.2	7	97.4	292.2
60,560	0.3328	56.83	7	93.0	279.0			
48,690	0.4158	45.49				7	83.2	249.6
4	0.4830	39.16				7	77.2	231.6
38,090	0.5285	35.79				7	73.8	221.4
30,580	0.6588	28.71				7	66.1	198.3
6	0.7685	24.61				7	61.2	183.6
19,000	1.060	17.84				7	52.1	156.3

TABLE 30—Stranded Aluminum Wire Table, Alloy, 6201–T81—Data at 20 °C—Metric Units

Nominal size, circular mils or AWG	Area (sq mm)	Ohms per kilometer	Kilograms per kilometer	Class AA			Class A		
				Number of strands	Diameter (mm)	Outside diameter (mm)	Number of strands	Diameter (mm)	Outside diameter (mm)
3,500,000	1773.	0.01926	4985.				127	4.22	54.81
3,000,000	1520.	0.02247	4274.				127	3.90	50.75
2,750,000	1393.	0.02429	3878.				91	4.41	48.56
2,500,000	1266.	0.02672	3525.				91	4.21	46.30
2,250,000	1139.	0.02968	3172.				91	3.99	43.92
2,000,000	1013.	0.03308	2792.				91	3.79	41 41
1,750,000	887.	0.03776	2445.	61	4.30	38.72			
1,590,000	805.2	0.04160	2220.	61	4.10	36.90	91	3.36	36.94
1,510,000	765.8	0.04374	2111.	61	4.00	35.98	61	4.00	35.98
1,431,000	725.4	0.04617	2000.	61	3.89	35.02	61	3.89	35.02
1,351,000	684.4	0.04895	1887.	61	3.78	34.02	61	3.78	34.02
1,272,000	641.8	0.05219	1770.	61	3.66	32.94	61	3.66	32.94
1,192,500	604.1	0.05545	1666.	61	3.55	31.96	61	3.55	31.96
1,113,000	564.2	0.05938	1555.	61	3.43	30.88	61	3.43	30.88
1,033,500	523.5	0.06399	1443.	37	4.24	29.71	61	3.31	29.76
1,000,000	506.7	0.06611	1397.	37	4.18	29.23	61	3.25	29.26
927,200	469.7	0.07130	1295.	37	4.02	28.15			
900,000	456.3	0.07342	1258.	37	3.96	27.74			
800,000	405.1	0.08268	1117.	37	3.73	26.14			
750,000	380.2	0.08811	1048.	37	3.62	25.32			
740,800	375.4	0.08923	1035.	37	3.59	25.16			
700,000	354.5	0.0945	977.3	37	3.49	24.45			
652,400	330.6	0.1013	911.4	19	4.71	23.53			
650,000	329.1	0.1018	907.5	37	3.37	23.56			
600,000	303.8	0.1103	837.6	37	3.23	22.63	37	3.23	22.63
559,500	283.5	0.1182	781.6	19	4.36	21.79			
550,000	278.6	0.1202	768.1				37	3.10	21.67
500,000	253.3	0.1322	698.3	19	4.12	20.60			
465,000	235.8	0.1412	650.1	19	3.98	19.88			
400,000	228.0	0.1469	628.7	19	3.91	19.55			
394,500	202.7	0.1653	558.8	19	3.69	18.43			
350,000	199.9	0.1676	551.2	19	3.66	18.30			
312,800	177.3	0.1889	488.8				19	3.45	17.23
300,000	158.5	0.2114	436.9	19	3.26	16.29			
250,000	152.1	0.2202	419.4				19	3.19	15.96
246,900	126.7	0.2645	349.2				12	2.91	14.57
0000	125.1	0.2678	344.9	7	4.77	14.31			
195,700	107.3	0.3123	295.7	7	4.42	13.25	7	4.42	13.25
000	99.16	0.3378	273.4	7	4.25	12.74			
155,400	85.00	0.3941	234.3	7	3.93	11.80	7	3.93	11.80
00	78.75	0.4254	217.1	7	3.78	11.35			
123,300	67.45	0.4966	186.0	7	3.50	10.51	7	3.50	10.51
0	62.46	0.5363	172.2	7	3.37	10.11			
96,320	53.49	0.6263	147.5	7	3.12	9.357	7	3.12	9.357
77,470	48.80	0.6864	134.6	7	2.98	8.938			
2	39.25	0.8533	108.2	7	2.67	8.016			
60,560	33.65	0.9955	92.77	7	2.47	7.422	7	2.47	7.422
48,690	30.68	1.092	84.58	7	2.36	7.087			
4	21.14	1.585	58.28				7	1.96	5.883
38,090	19.32	1.734	53.26				7	1.87	5.624
30,580	15.50	2.161	42.73				7	1.68	5.037
6	13.28	2.521	36.63				7	1.55	4.663
19,000	9.628	3.479	26.54				7	1.32	3.970

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This handbook of aluminum wire tables is a companion publication to NBS Handbook 100, Copper Wire Tables, a review of which is contained in Part I, Sections 1 and 2. Data are presented on the conductivities and resistivities of both solid and stranded wires of various sizes and composition, together with a variety of other data of interest to the designer of electrical equipment and installations. Values are expressed in both U.S. Customary and International System (SI) Units. Wire sizes involved are based on and restricted to those manufactured and typically used in the United States. American Wire Gage sizes are used for the smaller range of conductors from 56 gage through 4/0. Larger conductors are sized on the basis of circular mil area. The alloy compositions included in these tables are EC-0 (annealed), EC-H19, 5005-H19, and 6201-T81; values are given over a temperature range of 0 to 100 °C.

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