

# Conductivity Of Metals Sorted By Resistivity

Source Code:  
1 - CSNDT  
2 - Eddy Current Testing Manual on Eddy Current Method  
3 - NDT Magazine Sept/Oct 1955, Cosgrove Article

RESIST. ohm-m	COND. SIEMENS/m	% IACS	SOURCE CODE	MATERIAL
1.591E-08	6.287E+07	108.40	1	Silver, Pure
1.642E-08	6.090E+07	105.00	2	Silver, Pure
1.664E-08	6.009E+07	103.60	1	Copper, Pure
1.707E-08	5.858E+07	101.00	1	Copper, Electrolytic Tough Pitch (Annealed)
1.724E-08	5.800E+07	100.00	2	Copper, Pure
2.028E-08	4.930E+07	85.00	1	Copper, Deoxidized (Annealed)
2.349E-08	4.257E+07	73.40	1	Gold
2.463E-08	4.060E+07	70.00	2	Gold, Pure
2.655E-08	3.767E+07	64.94	1	Aluminum, 99.99%
2.826E-08	3.538E+07	61.00	2	Aluminum, Pure
2.871E-08	3.483E+07	60.00	- 60.10	3 Aluminum Alloy, 7072
2.903E-08	3.445E+07	57.00	- 61.80	3 Aluminum Alloy, 1100
2.922E-08	3.422E+07	59.00	1	Aluminum, 2S Cond. "0"
3.025E-08	3.306E+07	57.00	1	Aluminum, 2S Cond. H18
3.073E-08	3.254E+07	55.70	- 56.50	3 Aluminum Alloy, 6951-0
3.079E-08	3.248E+07	56.00	1	Gilding Metal (Annealed)
3.135E-08	3.190E+07	55.00	1	Aluminum, A51S Cond. "0"
3.184E-08	3.141E+07	53.30	- 55.00	3 Aluminum Alloy, 6151-0
3.235E-08	3.091E+07	52.30	- 54.30	3 Aluminum Alloy, 4043-F
3.250E-08	3.077E+07	53.00	- 53.10	3 Aluminum Alloy, 6951-F
3.281E-08	3.048E+07	52.30	- 52.80	3 Aluminum Alloy, 5005
3.435E-08	2.912E+07	50.10	- 50.30	3 Aluminum Alloy, X3005-0
3.448E-08	2.900E+07	50.00	1	Aluminum, 24S Cond. "0"
3.448E-08	2.900E+07	50.00	1	Aluminum, 3S Cond. "0"
3.448E-08	2.900E+07	50.00	1	Aluminum, 18S Cond. "0"
3.448E-08	2.900E+07	50.00	1	Aluminum, 14S Cond. "0"
3.473E-08	2.880E+07	48.60	- 50.70	3 Aluminum Alloy, 2014-F and -0
3.490E-08	2.865E+07	49.30	- 49.50	3 Aluminum Alloy, 2017-F
3.515E-08	2.845E+07	48.30	- 49.80	3 Aluminum Alloy, 5050
3.519E-08	2.842E+07	47.00	- 51.00	3 Aluminum Alloy, 6062-F
3.540E-08	2.825E+07	48.70	1	Calcium
3.592E-08	2.784E+07	48.00	1	Bronze Phos., 1.25% Phos. Grade E
3.592E-08	2.784E+07	48.00	1	Phos. Bronze, 1.25% Phos. Grade E
3.618E-08	2.764E+07	46.80	- 48.50	3 Aluminum Alloy, 2024-F
3.649E-08	2.741E+07	44.70	- 49.80	3 Aluminum Alloy, 3003-0
3.661E-08	2.732E+07	44.70	- 49.50	3 Aluminum Alloy, 6062-T6
3.736E-08	2.677E+07	44.50	- 47.80	3 Aluminum Alloy, 7075-F
3.769E-08	2.654E+07	45.50	- 46.00	3 Aluminum Alloy, X7178-F and -0
3.798E-08	2.633E+07	42.30	- 48.50	3 Aluminum Alloy, 6061-F and -0
3.831E-08	2.610E+07	45.00	1	Aluminum, 17S Cond. "0"
3.831E-08	2.610E+07	45.00	1	Aluminum, 53S Cond. "0"
3.831E-08	2.610E+07	45.00	1	Aluminum, 61S Cond. "0"
3.831E-08	2.610E+07	45.00	1	Aluminum, A51S Cond. T4 and T6
3.831E-08	2.610E+07	45.00	1	Aluminum Alloy, 750
3.861E-08	2.590E+07	42.30	- 47.00	3 Aluminum Alloy, 5357
3.861E-08	2.590E+07	37.80	- 51.50	3 Aluminum Alloy, 3003-H14 and -H12
3.879E-08	2.578E+07	43.90	- 45.00	3 Aluminum Alloy, 6151-T6
3.918E-08	2.552E+07	44.00	1	Bronze, Commercial (Annealed)
3.918E-08	2.552E+07	44.00	1	Aluminum Alloy, 142 Sand Cond. T21
3.941E-08	2.538E+07	43.50	- 44.00	3 Aluminum Alloy, 6062-T4
3.950E-08	2.532E+07	39.30	- 48.00	3 Aluminum Alloy, 6053
4.000E-08	2.500E+07	43.10	1	Beryllium
4.010E-08	2.494E+07	43.00	1	Aluminum Alloy, 355 Sand Cond. T51
4.010E-08	2.494E+07	43.00	1	Aluminum Alloy, 356 Sand Cond. T51
4.043E-08	2.474E+07	37.80	- 47.50	3 Aluminum Alloy, 3003-H24 and -H28
4.066E-08	2.459E+07	40.00	- 44.80	3 Aluminum Alloy, 6061-T6 and -T9
4.066E-08	2.459E+07	41.50	- 43.30	3 Aluminum Alloy, 6151-T4
4.081E-08	2.451E+07	42.10	- 42.40	3 Aluminum Alloy, 2127-T4
4.105E-08	2.436E+07	42.00	1	Aluminum Alloy, 355 Sand Cond. T7
4.105E-08	2.436E+07	42.00	1	Aluminum Alloy, 43 (Annealed)
4.105E-08	2.436E+07	42.00	1	Aluminum, 3S Cond. H 12
4.105E-08	2.436E+07	42.00	1	Bronze, Commercial Lead

4.105E-08	2.436E+07	42.00	1	Leaded Commercial Bronze
4.160E-08	2.404E+07	39.40	- 43.50	3 Aluminum Alloy, 3004
4.205E-08	2.378E+07	41.00	1	Aluminum, 3S Cond. H 14
4.205E-08	2.378E+07	41.00	1	Aluminum Alloy, 122 Sand Cond. T2
4.289E-08	2.332E+07	40.20	3	Aluminum Alloy, 2618
4.310E-08	2.320E+07	40.00	1	Aluminum, 24S Cond. T6
4.310E-08	2.320E+07	40.00	1	Aluminum, 18S Cond. T61
4.310E-08	2.320E+07	40.00	1	Aluminum, 11S Cond. T3
4.310E-08	2.320E+07	40.00	1	Aluminum, 14S Cond. T6
4.310E-08	2.320E+07	40.00	1	Aluminum, 3S Cond. H 18
4.310E-08	2.320E+07	40.00	1	Aluminum, 32S Cond. "0"
4.310E-08	2.320E+07	40.00	1	Aluminum, 53S Cond. T4 and T6
4.310E-08	2.320E+07	40.00	1	Aluminum, 61S Cond. T4 and T6
4.415E-08	2.265E+07	37.60	- 40.50	3 Aluminum Alloy, 6061-T4
4.421E-08	2.262E+07	39.00	1	Aluminum Alloy, 356 Sand Cond. T6
4.421E-08	2.262E+07	39.00	1	Aluminum Alloy, 355 Perm. Mold Cond. T6
4.421E-08	2.262E+07	39.00	1	Aluminum Alloy, 13
4.432E-08	2.256E+07	38.90	1	Beryllium
4.438E-08	2.253E+07	38.00	- 39.70	3 Aluminum Alloy, 2014-T6
4.467E-08	2.239E+07	38.60	1	Magnesium, Pure
4.490E-08	2.227E+07	38.40	1	Rhodium
4.610E-08	2.169E+07	37.40	3	Aluminum Alloy, 2218-T61
4.660E-08	2.146E+07	37.00	1	Aluminum Alloy, 142 Sand Cond. T77
4.660E-08	2.146E+07	37.00	1	Aluminum Alloy, 195 Cond. T62
4.660E-08	2.146E+07	37.00	2	Magnesium
4.660E-08	2.146E+07	37.00	1	Aluminum Alloy, 360
4.660E-08	2.146E+07	37.00	1	Aluminum Alloy, 355 Sand Cond. T61
4.660E-08	2.146E+07	37.00	1	Aluminum Alloy, 43 As Cast
4.660E-08	2.146E+07	37.00	1	Aluminum Alloy, A 108
4.660E-08	2.146E+07	37.00	1	Brass, Red (Annealed)
4.756E-08	2.103E+07	36.00	- 36.50	3 Aluminum Alloy, 2011-T3
4.789E-08	2.088E+07	36.00	1	Aluminum Alloy, B 195 Cond. T6
4.789E-08	2.088E+07	36.00	1	Aluminum Allcast, Cond. Sol. H.T. & Stress
4.789E-08	2.088E+07	36.00	1	Aluminum Alloy, 355 Sand Cond. T6
4.816E-08	2.076E+07	35.30	- 36.30	3 Aluminum Alloy, 4032-T6
4.843E-08	2.065E+07	33.60	- 37.60	3 Aluminum Alloy, 5052
4.926E-08	2.030E+07	35.00	1	Aluminum Alloy, 195 Cond. T4
4.926E-08	2.030E+07	35.00	1	Aluminum Alloy, 214
4.926E-08	2.030E+07	35.00	1	Aluminum Alloy, 40E
4.926E-08	2.030E+07	35.00	1	Aluminum, 52S Cond. "0" and H 38
4.926E-08	2.030E+07	35.00	1	Aluminum, 32S Cond. T6
4.926E-08	2.030E+07	35.00	1	Aluminum Alloy, B 195 Cond. T4
4.998E-08	2.001E+07	34.50	1	Magnesium (Wrought Alloys)
5.071E-08	1.972E+07	34.00	1	Aluminum Alloy, 142 Sand Cond. T571
5.071E-08	1.972E+07	34.00	1	Aluminum Alloy, 122 Perm. Mold As Cast
5.124E-08	1.952E+07	32.50	- 34.80	3 Aluminum Alloy, 2014-T3 and -T4
5.209E-08	1.920E+07	31.40	- 34.80	3 Aluminum Alloy, 7075-T6
5.225E-08	1.914E+07	33.00	1	Molybdenum
5.225E-08	1.914E+07	33.00	1	Aluminum Alloy, 122 Sand Cond. T61
5.225E-08	1.914E+07	33.00	1	Aluminum Alloy, A214
5.289E-08	1.891E+07	32.60	1	Iridium
5.330E-08	1.876E+07	28.60	- 36.10	3 Aluminum Alloy, 2024-T3
5.388E-08	1.856E+07	32.00	1	Brass, Low (Annealed)
5.388E-08	1.856E+07	32.00	1	Aluminum Alloy, 142 Perm. Mold Cond. T61
5.388E-08	1.856E+07	27.00	- 37.00	3 Aluminum Alloy, 7075-W
5.388E-08	1.856E+07	32.00	2	Aluminum Alloy, 7075-T6
5.448E-08	1.836E+07	30.50	- 32.80	3 Aluminum Alloy, 5154
5.491E-08	1.821E+07	31.40	1	Tungsten
5.562E-08	1.798E+07	31.00	1	Aluminum Alloy, 108
5.747E-08	1.740E+07	30.00	1	Aluminum, 24S Cond. T4
5.747E-08	1.740E+07	30.00	1	Aluminum Allcast, Sol H.T. and Aged
5.747E-08	1.740E+07	30.00	1	Aluminum, 17S Cond. T4
5.747E-08	1.740E+07	30.00	1	Aluminum Alloy, 113
5.747E-08	1.740E+07	30.00	1	Aluminum Alloy, R 317
5.747E-08	1.740E+07	30.00	1	Aluminum, 75S Cond. T6
5.747E-08	1.740E+07	30.00	1	Aluminum Allcast, Stress Relieved
5.766E-08	1.734E+07	28.80	- 31.00	3 Aluminum Alloy, 2024-T4
5.805E-08	1.723E+07	26.80	- 32.60	3 Aluminum Alloy, X7178-W and T6
5.884E-08	1.699E+07	29.10	- 29.50	3 Aluminum Alloy, 2024-T36
5.945E-08	1.682E+07	29.00	1	Aluminum Alloy, A 132 Cond. T551
5.945E-08	1.682E+07	29.00	1	Aluminum, Red X-8 Cond. Stress Relieved
5.945E-08	1.682E+07	29.00	1	Aluminum, 56S Cond. "0"
5.945E-08	1.682E+07	29.00	2	Zinc
5.956E-08	1.679E+07	28.10	- 29.80	3 Aluminum Alloy, 5056

6.158E-08	1.624E+07	28.00	1	Zinc, Commercial Rolled
6.158E-08	1.624E+07	28.00	1	Aluminum Alloy, 319 Perm. Mold
6.158E-08	1.624E+07	28.00	1	Cartridge Brass (Annealed)
6.158E-08	1.624E+07	28.00	1	Muntz Metal (Annealed)
6.158E-08	1.624E+07	28.00	1	Aluminum Alloy, 85
6.158E-08	1.624E+07	28.00	1	Brass, Cartridge (Annealed)
6.247E-08	1.601E+07	27.60	1	Cobalt
6.386E-08	1.566E+07	27.00	1	Aluminum Alloy, C113
6.386E-08	1.566E+07	27.00	1	Zinc, Die Cast
6.386E-08	1.566E+07	27.00	1	Aluminum, 56S Cond. H 38
6.386E-08	1.566E+07	27.00	1	Aluminum Allcast, as cast
6.386E-08	1.566E+07	27.00	1	Aluminum Alloy, 319 Sand
6.386E-08	1.566E+07	27.00	1	Brass, Yellow (Annealed)
6.386E-08	1.566E+07	27.00	1	Aluminum Alloy, 380
6.631E-08	1.508E+07	26.00	1	Brass, Low Leaded (Annealed)
6.631E-08	1.508E+07	26.00	1	Brass, Leaded Naval (Annealed)
6.631E-08	1.508E+07	26.00	1	Brass, Naval (Annealed)
6.631E-08	1.508E+07	26.00	1	Aluminum Alloy, Red X-8 As Cast
6.842E-08	1.462E+07	25.20	1	Cadmium
6.842E-08	1.462E+07	25.20	1	Nickel, Pure (Electrolytic)
6.897E-08	1.450E+07	25.00	1	Leaded Yellow Brass
6.897E-08	1.450E+07	25.00	1	Zinc, Die Cast
6.897E-08	1.450E+07	25.00	1	Brass, Leaded Yellow
7.009E-08	1.427E+07	24.60	1	Admiralty Metal (annealed)
7.184E-08	1.392E+07	24.00	2	Brass, Admiralty
7.184E-08	1.392E+07	24.00	1	Aluminum Alloy, 218
7.184E-08	1.392E+07	24.00	1	Bronze Manganese (Annealed)
7.184E-08	1.392E+07	24.00	2	Admiralty Brass
7.184E-08	1.392E+07	24.00	1	Manganese Bronze (Annealed)
7.496E-08	1.334E+07	23.00	1	Brass, Aluminum (Annealed)
7.496E-08	1.334E+07	23.00	1	Aluminum Brass (Annealed)
7.595E-08	1.317E+07	22.70	1	Ruthenium
8.210E-08	1.218E+07	21.00	1	Aluminum Alloy, 220
8.210E-08	1.218E+07	21.00	1	Beryllium Copper, Cond. At
8.210E-08	1.218E+07	21.00	1	Copper Beryllium, Cond. At
8.535E-08	1.172E+07	20.20	1	Lithium
9.473E-08	1.056E+07	18.20	1	Osmium
9.579E-08	1.044E+07	18.00	1	Nickel "A"
9.579E-08	1.044E+07	18.00	1	Phos. Bronze, 5% Phos. Grade A
9.579E-08	1.044E+07	18.00	2	Iron
9.579E-08	1.044E+07	18.00	1	Brass, Leaded Semi Red
9.579E-08	1.044E+07	18.00	1	Leaded Semi Red Brass
9.579E-08	1.044E+07	18.00	1	Bronze Phos., 5% Phos. Grade A
9.852E-08	1.015E+07	17.50	1	Bronze Aluminum, 5% Aluminum (Annealed)
9.852E-08	1.015E+07	17.50	1	Aluminum - Bronze, 5% Aluminum (Annealed)
1.002E-07	9.976E+06	17.20	1	Magnesium, A231
1.014E-07	9.860E+06	17.00	1	Beryllium Copper, Cond. A
1.014E-07	9.860E+06	17.00	1	Copper Beryllium, Cond. "A"
1.039E-07	9.628E+06	16.60	1	Silver, Tin Solder
1.039E-07	9.628E+06	16.60	1	Tin, Silver Solder
1.039E-07	9.628E+06	16.60	1	Solder, Tin Silver
1.059E-07	9.442E+06	16.28	1	Platinum
1.078E-07	9.280E+06	16.00	1	Palladium
1.105E-07	9.048E+06	15.60	1	Iron Ingot (99.9% Fe)
1.105E-07	9.048E+06	15.60	1	Ingot Iron (99.9% Fe)
1.149E-07	8.700E+06	15.00	1	Tin, Pure
1.149E-07	8.700E+06	15.00	1	Magnesium Alloys (Cast)
1.181E-07	8.468E+06	14.60	1	Magnesium, A2 80
1.197E-07	8.352E+06	14.40	1	Selenium
1.232E-07	8.120E+06	14.00	1	Bronze, Leaded Tin
1.232E-07	8.120E+06	14.00	1	Leaded Tin Bronze
1.232E-07	8.120E+06	14.00	1	Tin (Leaded), Bronze
1.232E-07	8.120E+06	14.00	1	Aluminum - Bronze
1.232E-07	8.120E+06	14.00	1	Bronze Aluminum
1.240E-07	8.062E+06	13.90	1	Tantalum
1.268E-07	7.888E+06	13.60	1	Nickel - Platinum Alloys
1.268E-07	7.888E+06	13.60	1	Platinum - Nickel Alloys
1.306E-07	7.656E+06	13.20	1	Columbium
1.326E-07	7.540E+06	13.00	1	Phos. Bronze, 8% Phos. Grade C
1.326E-07	7.540E+06	13.00	1	Bronze Phos., 8% Phos. Grade C
1.347E-07	7.424E+06	12.80	1	Magnesium, A251
1.368E-07	7.308E+06	12.60	1	Aluminum - Bronze, 10% Aluminum (Annealed)
1.368E-07	7.308E+06	12.60	1	Bronze Aluminum, 10% Aluminum (Annealed)
1.379E-07	7.250E+06	12.50	1	Magnesium, T454

1.402E-07	7.134E+06	12.30	1	Magnesium, A261
1.437E-07	6.960E+06	12.00	1	Bronze, Silicon Type B (Annealed)
1.437E-07	6.960E+06	12.00	1	Silicon Bronze, Type B (Annealed)
1.437E-07	6.960E+06	12.00	1	Brass, High Strength Yellow
1.449E-07	6.902E+06	11.90	1	Antimonial Tin Solder
1.449E-07	6.902E+06	11.90	1	Tin Solder (Antimonial)
1.449E-07	6.902E+06	11.90	1	Solder, Antimonial Tin
1.486E-07	6.728E+06	11.60	1	Platinum, Commercial
1.553E-07	6.438E+06	11.10	1	White Metal
1.567E-07	6.380E+06	11.00	1	Phos. Bronze, 10% Phos. Grade D
1.567E-07	6.380E+06	11.00	1	Bronze, Lead Tin Bearing
1.567E-07	6.380E+06	11.00	2	Bronze, Phos.
1.567E-07	6.380E+06	11.00	1	Bronze Phos., 10% Phos. Grade D
1.567E-07	6.380E+06	11.00	2	Phos. Bronze
1.567E-07	6.380E+06	11.00	1	Lead Tin Bearing Bronze
1.567E-07	6.380E+06	11.00	1	Solder, 50-50 Soft
1.596E-07	6.264E+06	10.80	1	Magnesium, AZ80BTA
1.611E-07	6.206E+06	10.70	1	Steel, Cast
1.759E-07	5.684E+06	9.80	1	Solder, 20-80 Soft
1.771E-07	5.647E+06	9.74	4	Copper 90%, Nickel 10%
1.895E-07	5.278E+06	9.10	1	Platinum - Iridium Alloys
1.895E-07	5.278E+06	9.10	1	Iridium - Platinum Alloys
1.916E-07	5.220E+06	9.00	1	Magnesium Cast Alloys
1.959E-07	5.104E+06	8.80	1	Solder, 5-95 Soft
1.959E-07	5.104E+06	8.80	1	Chromium
2.053E-07	4.872E+06	8.40	2	Lead
2.077E-07	4.814E+06	8.30	1	Lead, Corrodine
2.077E-07	4.814E+06	8.30	1	Corrodine Lead
2.188E-07	4.570E+06	7.88	1	Lead, 1% Antimonial (Quenched & Aged)
2.188E-07	4.570E+06	7.88	1	Antimonial Lead, 1% (Quenched and Aged)
2.239E-07	4.466E+06	7.70	1	Lead, Hard (Quenched & Aged)
2.330E-07	4.292E+06	7.40	1	Nickel - Platinum Alloys
2.330E-07	4.292E+06	7.40	1	Platinum - Nickel Alloys
2.463E-07	4.060E+06	7.00	1	Silicon Bronze, Type A (Annealed)
2.463E-07	4.060E+06	7.00	1	Bronze, Silicon Type A (Annealed)
2.612E-07	3.828E+06	6.60	1	Vanadium
2.874E-07	3.480E+06	6.00	1	Silver, 18% Nickel Alloy A
2.874E-07	3.480E+06	6.00	1	Uranium
2.874E-07	3.480E+06	6.00	1	Nickel, 18% Nickel Sil
2.874E-07	3.480E+06	6.00	1	Babbitt, Lead Base
3.135E-07	3.190E+06	5.50	1	Platinum - Ruthenium (Jewelry Grade)
3.135E-07	3.190E+06	5.50	1	Ruthenium - Platinum (Jewelry Grade)
3.316E-07	3.016E+06	5.20	1	Platinum - Iridium Alloys, 18% Nickel Silve
3.316E-07	3.016E+06	5.20	1	Iridium - Platinum Alloys, 18% Nickel Silve
3.748E-07	2.668E+06	4.60	1	Nickel 30% - Cupro
3.748E-07	2.668E+06	4.60	1	Cupro - Nickel 30%
3.831E-07	2.610E+06	4.50	2	Nickel 30%, Copper 70%
3.831E-07	2.610E+06	4.50	2	Copper 70%, Nickel 30%
3.918E-07	2.552E+06	4.40	1	Antimony
4.105E-07	2.436E+06	4.20	1	Tin, Foil
4.105E-07	2.436E+06	4.20	1	Zirconium
4.310E-07	2.320E+06	4.00	1	Ruthenium - Platinum (Contact Grade)
4.310E-07	2.320E+06	4.00	1	Platinum - Ruthenium (Contact Grade)
4.789E-07	2.088E+06	3.60	2	Monel
4.816E-07	2.076E+06	3.58	1	Monel
4.898E-07	2.042E+06	3.52	1	Constantan
5.071E-07	1.972E+06	3.40	2	Zirconium
5.562E-07	1.798E+06	3.10	2	Titanium
5.945E-07	1.682E+06	2.90	1	Steel, High Alloy
6.897E-07	1.450E+06	2.50	1	Steel, 304 Stainless
6.897E-07	1.450E+06	2.50	2	Steel, 304 Stainless
7.184E-07	1.392E+06	2.40	1	Steel, 347 Stainless
7.184E-07	1.392E+06	2.40	2	Zircaloy - 2
7.496E-07	1.334E+06	2.30	1	Steel, 316 Stainless
7.837E-07	1.276E+06	2.20	1	Titanium
9.579E-07	1.044E+06	1.80	1	Mercury
9.796E-07	1.021E+06	1.76	1	Inconel
1.014E-06	9.860E+05	1.70	2	Inconel 600
1.149E-06	8.700E+05	1.50	1	Hastelloy "D"
1.149E-06	8.700E+05	1.50	2	Hastelloy "X"
1.232E-06	8.120E+05	1.40	2	Waspaloy
1.232E-06	8.120E+05	1.40	1	Hastelloy "A"
1.326E-06	7.540E+05	1.30	1	Hastelloy "B" & "C"

1.724E-06	5.800E+05	1.00	2	Titanium, 6AL-4V
7.837E-06	1.276E+05	0.22	1	Graphite