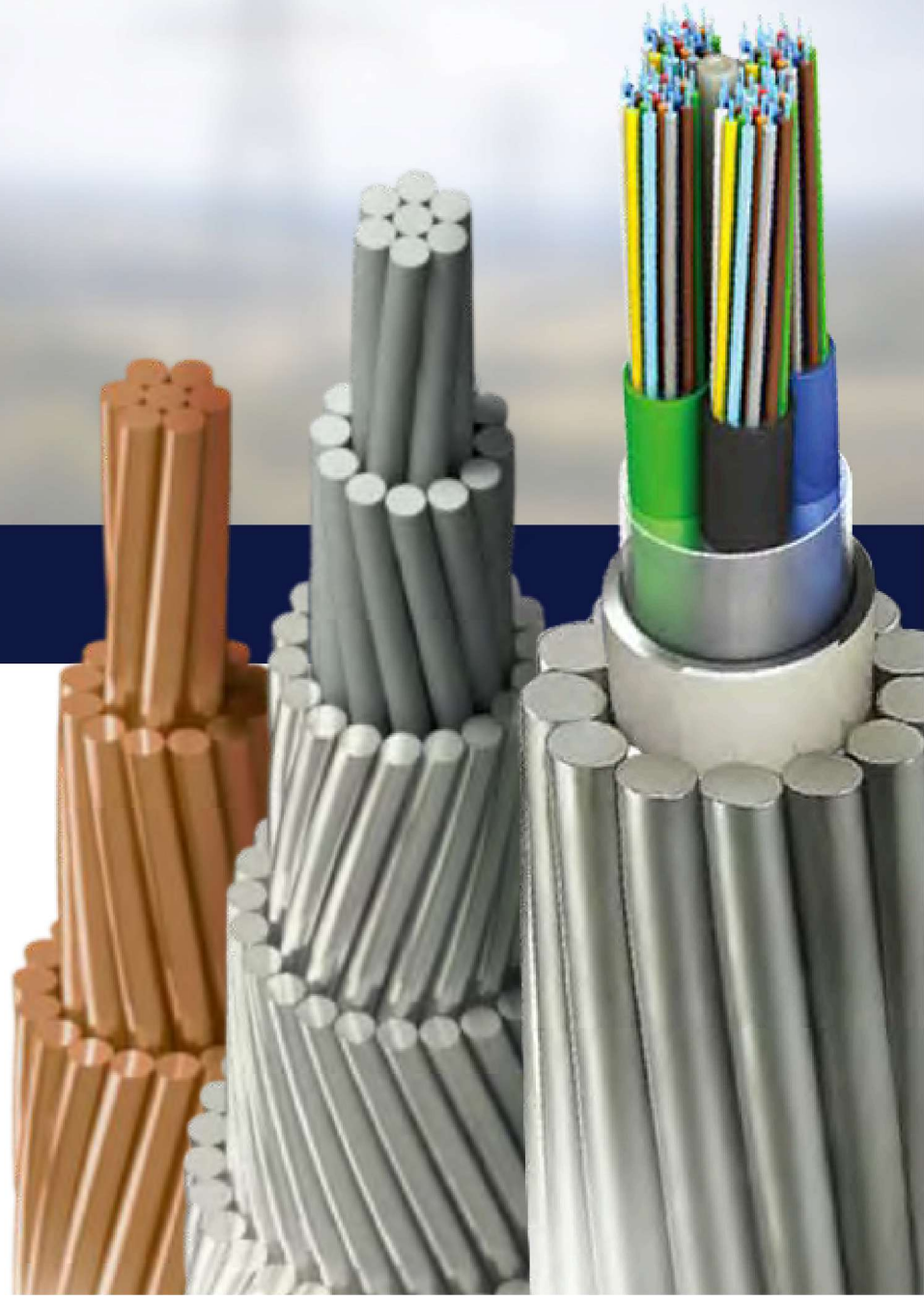
US ElectricWire

POWER & OPTICAL SYSTEMS

CATALOG 2026



Bare Copper Conductor

Description

For grounding and bonding as specified in the National Electrical Code. Also for use in overhead transmission and distribution applications. Suitable for numerous other applications.

Applications

Bare Copper conductors are primarily used for grounding purposes as specified in the National Electrical Code.

Soft-drawn solid or stranded conductors, for use as grounding connections in circuits, and grounding for machinery or equipment.

Hard-drawn conductors for overhead transmission and distribution lines, as grounding connections in circuits, and grounding for machinery or equipment.

Standards

ASTM B1
Standard specification for hard-drawn copper wire.

ASTM B2
Standard specification for medium hard-drawn copper wire.

ASTM B3
Standard specification for soft or annealed copper wire.

ASTM B8
Standard specification for concentric-lay-stranded copper conductors, hard, medium-hard, or soft.

Solid

Stranded

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Bare Copper Conductor

Engineering Information

Conductor Soft bare copper Solid or Classes A or B stranding per ASTM B3 and B8.

On request Hard-drawn and Medium Hard-drawn per ASTM B1, B2.

Options Also available in tinned copper.

Sizes Solid–14 AWG to 2 AWG Class A–4 AWG to 1000 kcmil Class B–6 AWG to 2000 kcmil.

Stranding Soft, Medium Hard- drawn or Hard-drawn copper wires concentrically stranded, consisting of one or more layers of wires helically wrapped around a central wire.

Technical Data 1/2 Solid

Size	Area	Wire OD	Net Weight	Breaking Strength					
				Hard Drawn Rated Strength	DC Resistance @20°C	Medium- Hard Drawn Rated Strength	DC Resistance @20°C	Soft Drawn (Annealed) Rated Strength	DC Resistance @20°C
AWG	cmil	in	lb/kft	lb	Ω/kft	lb	Ω/kft	lb	Ω/kft
14	4110	0.0641	12	214	2.626	167	2.613	124	2.525
12	6530	0.0808	20	337	1.652	261	1.643	198	1.588
10	10380	0.1019	31	529	1.039	410	1.033	314	0.999
8	16510	0.1285	50	826	0.653	644	0.650	480	0.628
6	26240	0.1620	79	1280	0.411	1010	0.409	763	0.395

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Technical Data 2/2 Solid

Size	Area	Wire OD	Net Weight	Breaking Strength					
				Hard Drawn Rated Strength	DC Resistance @20°C	Medium- Hard Drawn Rated Strength	DC Resistance @20°C	Soft Drawn (Annealed) Rated Strength	DC Resistance @20°C
AWG	cmil	in	lb/kft	lb	Ω/kft	lb	Ω/kft	lb	Ω/kft
4	41740	0.2043	126	1970	0.258	1584	0.257	1213	0.249
3	52620	0.2294	159	2439	0.205	1984	0.204	1530	0.197
2	66360	0.2576	201	3003	0.163	2450	0.162	1929	0.156

The above data are approximate and subject to normal manufacturing tolerances.
Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product.
Other sizes available upon request.

Notes

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Bare Copper Conductor

Construction Data 1/2 Stranded

Size		Area	Class A		Class B		Net Weight	DC Resistance*
AWG	Kcmil	cmil	Number of Strands	O.D. In	Number of Strands	O.D. In	lb/kft	20°C
14	—	4110	—	—	7	0.0726	13	2.5800
12	—	6530	—	—	7	0.0915	20	1.6300
10	—	10380	—	—	7	0.1160	32	1.0200
8	—	16510	—	—	7	0.1460	51	0.6400
6	—	26240	—	—	7	0.1840	81	0.4030
4	—	41740	7	0.2320	7	0.2320	129	0.2530
3	—	52620	7	0.2600	7	0.2600	163	0.2010
2	—	66360	7	0.2920	7	0.2920	205	0.1590
1	—	83690	7	0.3280	19	0.3320	258	0.1270
1/0	—	105600	7	0.3680	19	0.3730	326	0.1000
2/0	—	133100	7	0.4140	19	0.4190	411	0.7950
3/0	—	167800	7	0.4640	19	0.4700	518	0.0630
4/0	—	211600	7	0.5220	19	0.5280	653	0.0500
—	250	250000	19	0.5740	37	0.5750	772	0.0423
—	300	300000	19	0.6290	37	0.6300	926	0.0353
—	350	350000	19	0.6790	37	0.6810	1081	0.0302

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Construction Data 2/2 Stranded

Size		Area	Class A		Class B		Net Weight	DC Resistance*
AWG	Kcmil	cmil	Number of Strands	O.D. In	Number of Strands	O.D. In	lb/kft	20°C
—	400	400000	19	0.7260	37	0.7280	1235	0.0264
—	450	450000	37	0.7720	37	0.7720	1389	0.0235
—	500	500000	37	0.8130	37	0.8130	1544	0.0192
—	600	600000	37	0.8910	61	0.8930	1883	0.0177
—	750	750000	61	0.9980	61	0.9980	2316	0.0141
—	1000	100000	61	1.1520	61	1.1520	3088	0.0106
—	1250	125000	61	1.2880	91	1.2890	3859	0.0085
—	1500	150000	61	1.4110	91	1.4120	4631	0.0071
—	1750	175000	91	1.5260	127	1.5260	5403	0.0060
—	2000	200000	91	1.6300	127	1.6320	6175	0.0053
—	1500	150000	61	1.4110	91	1.4120	4631	0.0053
—	1750	175000	91	1.5260	127	1.5260	5403	0.0060
—	2000	200000	91	1.6300	127	1.6320	6175	0.0053

The provided data are approximate and may vary within standard manufacturing tolerances.
When necessary, compatibility with glands, connectors, and accessories should be confirmed using the product's actual dimensions.
Additional sizes are available upon request. *DC resistances apply to Class B, C, and D stranding.

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Bare Copper Conductor

Mechanical and Electrical Data 1/2 Stranded

Size		Strands	Breaking Strength						Allowable Ampacity †
			Hard Drawn		Medium- Hard Drawn		Soft Drawn (Annealed)		
AWG	kcmil		Rated Strength (lbs.)	DC Resistance @20°C (Ω/kft)	Rated Strength (lbs.)	DC Resistance @20°C (Ω/kft)	Rated Strength (lbs.)	DC Resistance @20°C (Ω/kft)	
14	—	7	197	2.67900	158	2.66500	—	—	—
12	—	7	311	1.68500	248	1.67600	—	—	—
10	—	7	492	1.06000	389	1.05400	—	—	—
8	—	7	777	0.66630	610	0.66290	499	.64080	98
6	—	7	1228	0.41910	959	0.41690	794	.40300	124
4	—	7	1938	0.26360	1505	0.26220	1320	.25340	155
3	—	7	2433	0.20900	1885	0.20790	1670	.20100	—
2	—	7	3050	0.16600	2360	0.16500	2110	.15780	209
1	—	7	3801	0.13160	2955	0.13090	2552	.12520	—
1/0	—	7	4752	0.10420	3705	0.10370	3221	.10020	282
2/0	—	7	5926	0.08267	4640	0.08224	4062	.07949	329
3/0	—	7	7366	0.06556	5812	0.06522	5118	.06304	382
4/0	—	7	9154	0.05199	7278	0.05172	6459	.04999	444
4/0	—	19	9617	0.05199	7479	0.05172	6453	.04999	444

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Mechanical and Electrical Data 2/2 Stranded

Size		Strands	Breaking Strength						Allowable Ampacity †
			Hard Drawn		Medium- Hard Drawn		Soft Drawn (Annealed)		
AWG	kcmil		Rated Strength (lbs.)	DC Resistance @20°C (Ω/kft)	Rated Strength (lbs.)	DC Resistance @20°C (Ω/kft)	Rated Strength (lbs.)	DC Resistance @20°C (Ω/kft)	
—	250	19	11360	0.04400	8836	0.04378	7627	.04231	494
—	250	37	11600	0.04400	8952	0.04378	7940	.04231	494
—	300	19	13510	0.03667	10530	0.03648	9160	.03526	556
—	350	19	15590	0.03143	12200	0.03127	10680	.03022	—
—	500	37	22510	0.02200	17550	0.02189	15240	.02116	773
—	600	37	27020	0.01834	21060	0.01825	18300	.01763	—
—	750	61	34090	0.01467	26510	0.01459	22890	.01410	1000
—	1000	61	45030	0.01100	35100	0.01094	30500	.01058	1193

† Ampacity per NEC table 310.15 (B) (21) based on 80 °C Conductor Temperature, 40 °C. Ambient Temperature, 2ft/s Wind in Sun.

Notes

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