

# AWG Conductor Chart

## COPPER CONDUCTOR DATA

The conductors used by General Cable meet the applicable requirements of ASTM specifications B-3, B-33, B-172, B-173, B-174 and B-286 and Federal Specification QQ-W-343.

The following data covers the more commonly used conductor constructions in the electrical and electronics industry. Special constructions, not shown, are available or can be designed to meet specific requirements. It is suggested that the General Cable Product Engineering Department be contacted before a specification is finalized.

AWG	STRANDING	TYPE STRANDING <sup>(1)</sup>	DIAMETER <sup>(4)</sup>		AREA		WEIGHT		D.C. RESISTANCE 20°C <sup>(2)</sup>				BREAK STR. LBS
			in	mm	circ. mils	sq. mm	lbs/Mft	kg/km	TIN COATING <sup>(3)</sup>		BARE OF SILVER COATING		
									Ω/Mft	Ω/km	Ω/Mft	Ω/km	
32	7/40	Co or Bu	.0096	.254	100	.051	.21	.31	176.00	577.00	164.00	538.00	1.986
30	Solid 7/38	-	.010	.254	100	.051	.30	.45	113.00	371.00	104.00	340.00	3.157
		Bu	.012	.305	112	.057	.35	.52	106.00	348.00	92.60	303.00	
28	Solid 7/36	-	.01264	.321	159	.081	.48	.72	70.80	232.00	65.30	214.00	5.020
		Co	.015	.381	175	.089	.55	.82	67.50	221.00	59.30	194.00	
27	Solid 7/35	-	.0142	.361	202	.102	.61	.91	55.60	182.00	51.40	169.00	6.331
		Co or Bu	.017	.432	220	.111	.69	1.04	53.80	176.00	-	-	
26	Solid 7/34	-	.016	.404	253	.128	.77	1.14	44.50	146.00	41.00	135.00	7.983
		Co or Bu	.019	.483	278	.141	.87	1.29	42.50	139.00	37.30	122.00	
		Bu	.0193	.490	250	.127	.78	1.15	47.30	155.00	40.40	133.00	
24	Solid 10/36	Bu or Co	.021	.533	304	.154	.97	1.44	38.90	128.00	34.10	112.00	12.690
		Solid 19/38	-	.0201	.511	404	.205	1.22	27.20	89.20	25.70	84.20	
			Co or Bu	.024	.610	448	.227	1.38	2.05	25.70	84.20	23.10	
22	Solid 16/36	Bu	.024	.610	400	.201	1.25	1.64	29.50	96.80	27.50	90.20	19.430
		Co or Bu	.025	.635	475	.241	1.48	2.20	24.90	81.70	21.80	71.60	
		Co or Bu	.025	.643	643	.324	1.94	2.89	16.70	54.80	16.20	53.20	
20	Solid 19/34	Co or Bu	.030	.762	700	.355	2.19	3.26	16.60	54.40	14.80	48.60	30.890
		Bu or Eq	.0315	.800	754	.382	2.35	3.50	15.50	50.80	13.80	45.10	
		-	.032	.813	1,020	.519	3.10	4.61	10.50	34.40	10.10	33.20	
18	Solid 26/34	Co or Bu	.038	.965	1,111	.507	3.14	4.67	11.40	37.40	10.40	34.00	38.950
		Bu	.039	.940	1,216	.523	3.28	4.88	11.30	37.10	-	-	
		Co, Bu or Eq	.040	1.02	1,000	.616	3.84	5.71	9.48	31.10	8.53	28.00	
16	Solid 41/34	Bu	.049	1.244	1,900	.824	5.09	7.08	7.08	23.20	6.60	21.60	49.120
		Co or Bu	.0403	1.024	1,290	.823	4.92	7.32	6.77	22.20	6.39	21.00	
		Bu	.048	1.22	1,620	.897	5.55	8.26	6.45	21.20	5.55	19.20	
14	Solid 19/294	Bu or Eq	.057	1.45	2,580	1.23	7.52	11.20	4.47	14.70	4.16	13.60	78.100
		Bu	.0585	1.50	2,426	1.32	8.02	11.90	4.39	14.40	4.13	13.50	
		Bu	.0606	1.54	2,601	1.32	8.15	12.10	4.39	14.40	3.99	13.10	
12	Solid 26/30	Bu	.060	1.52	2,600	1.31	8.20	11.90	4.47	14.70	4.16	13.60	124.200
		Co	.0641	1.63	2,581	2.08	12.4	18.50	2.68	8.79	2.52	8.28	
		Co, Eq or Un	.073	1.85	4,110	2.08	12.7	18.90	-	-	2.61	8.56	
10	Solid 19/274	Bu	.074	1.88	3,831	2.08	12.7	18.90	3.05	10.00	2.71	8.88	197.500
		Co, Eq or Un	.074	1.88	3,831	2.08	12.7	18.90	2.73	-	2.61	8.56	
		Bu	.077	1.96	4,106	2.08	12.9	19.20	2.81	9.22	2.53	8.30	
8	Solid 41/30	Bu	.0808	2.05	4,100	3.31	19.8	29.50	1.69	5.54	1.59	5.21	314.500
		Bu	.092	2.34	6,530	3.30	20.2	30.10	-	-	1.64	5.38	
		Co, Eq or Un	.0905	2.299	6,512	3.08	19.4	28.90	1.87	6.13	1.70	5.59	
6	Solid 19/0185	Cu	.0925	2.35	6,088	3.30	20.2	30.10	-	-	1.64	5.25	197.500
		Bu	.094	2.388	6,503	3.29	20.8	31.10	1.82	5.97	1.64	5.25	
		Co	.1019	2.588	6,500	5.26	31.4	46.80	-	-	1.00	3.28	
4	Solid 77/0385	Co	.116	2.95	10,380	5.25	32.0	47.60	-	-	1.00	3.28	314.500
		Bu	.117	2.97	10,376	5.27	32.0	47.60	-	-	.98	3.21	
		Co	.112	2.84	10,404	4.74	29.2	43.40	-	-	1.25	4.10	
2	Solid 105/30	Bu	.126	3.20	9,361	5.32	33.8	49.20	1.10	3.61	.99	3.24	314.500
		Co	.146	3.71	10,500	8.38	50.1	74.50	-	-	.65	2.13	
		Bu or Eq	.144	3.66	16,534	8.38	50.0	74.40	-	-	.65	2.13	
8	Solid 133/29	Ro 7 x 24/30	.169	4.293	16,535	8.61	54.0	80.40	.71	2.33	-	-	197.500
		Ro 7 x 24/30	.174	4.42	16,983	8.51	53.4	79.00	.70	2.30	-	-	
		Bu	.188	4.775	16,800	13.33	81.1	121.00	-	-	.40	1.30	
6	Solid 133/27	Ro 19 x 7/27	.213	5.41	26,576	13.60	84.1	125.00	.43	1.41	-	-	197.500
		Ro 7 x 38/30	.222	5.64	26,818	13.49	83.2	124.00	.44	1.44	-	-	
		Bu	.257	6.53	26,600	21.61	135.0	201.00	.29	.95	-	-	
4	Solid 420/30	Ro 7 x 60/30	.270	6.850	42,615	21.29	140.0	208.00	.28	.92	-	-	197.500
		Ro 19 x 35/30	.338	8.59	42,000	33.72	213.0	317.00	.18	.59	-	-	

(1) Bu - Bunched; Co - Concentric; Eq - Equilay; Ro - Rope; Un - Unilay  
 (2) Typical DC resistance values for uninsulated wires. Multiply by 1.04 for typical values after insulation  
 (3) Values are for tinned, heavy tinned, prefused, overcoated or topcoated conductors  
 (4) Does not meet UL conductor stranding requirements

