

AWG Conductor Chart

COPPER CONDUCTOR DATA

The conductors used by BICCGeneral 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 BICCGeneral Product Engineering Department be contacted before a specification is finalized.

AWG	STRANDING	TYPE STRANDING ⁽¹⁾	DIAMETER ⁽⁴⁾		AREA		WEIGHT		D.C. RESISTANCE 20°C ⁽²⁾				BREAK STR. LBS.
			in.	mm	circ. mils	sq. mm.	lbs/M'	kg/km.	TIN COATING ⁽³⁾		BARE OF SILVER COATING		
									/M'	/km.	/M'	/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	
		Bu or Co	.021	.533	304	.154	.97	1.44	38.90	128.00	34.10	112.00	
24	Solid 7/32	-	.0201	.511	404	.205	1.22	1.82	27.20	89.20	25.70	84.20	12.690
		Co or Bu	.024	.610	448	.227	1.38	2.05	25.70	84.20	23.10	75.90	
		Bu	.024	.610	400	.201	1.25	1.64	29.50	96.80	27.50	90.20	
		Co or Bu	.025	.635	475	.241	1.48	2.20	24.90	81.70	21.80	71.60	
22	Solid 7/30	-	.025	.643	643	.324	1.94	2.89	16.70	54.80	16.20	53.20	19.430
		Co or Bu	.030	.762	700	.355	2.19	3.26	16.60	54.40	14.80	48.60	
		Bu or Eq	.0315	.800	754	.382	2.35	3.50	15.50	50.80	13.80	45.10	
20	Solid 7/28	-	.032	.813	1,020	.519	3.10	4.61	10.50	34.40	10.10	33.20	30.890
		Co or Bu	.038	.965	1,111	.562	3.49	5.19	10.30	33.80	9.33	30.60	
		Bu	.037	.940	1,111	.507	3.14	4.67	11.40	37.40	10.40	34.00	
		Co, Bu or Eq	.040	1.02	1,000	.616	3.84	5.71	9.48	31.10	8.53	28.00	
19	Solid 26/34	Bu	.039	.940	1,216	.523	3.28	4.88	11.30	37.10	-	-	-
		-	.0359	.912	1,032	.653	3.90	5.80	-	-	8.05	26.40	
18	Solid 7/26	-	.0403	1.024	1,290	.823	4.92	7.32	6.77	22.20	6.39	21.00	49.120
		Co or Bu	.048	1.22	1,620	.897	5.55	8.26	6.45	21.20	5.55	19.20	
		Bu	.0475	1.207	1,770	.810	5.01	7.45	7.15	23.40	6.48	21.30	
		Co, Bu or Eq	.050	1.27	1,600	.963	5.95	8.85	6.10	20.00	5.46	17.90	
16	Solid 19/30	Bu	.049	1.244	1,900	.824	5.09	7.08	7.08	23.20	6.60	21.60	78.100
		-	.0508	1.29	1,627	1.31	7.81	11.60	4.47	14.70	4.16	13.60	
		Bu or Eq	.057	1.45	2,580	1.23	7.52	11.20	4.82	15.80	4.27	14.00	
		Bu	.0585	1.50	2,426	1.32	8.02	11.90	4.39	14.40	4.13	13.50	
14	Solid 19/274	Bu	.0606	1.54	2,601	1.32	8.15	12.10	4.39	14.40	3.99	13.10	124.200
		Bu	.060	1.52	2,600	1.31	8.20	11.90	4.47	14.70	4.16	13.60	
		-	.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	
12	Solid 19/254	Bu	.071	1.80	4,100	1.94	12.1	18.00	3.05	10.00	2.71	8.88	197.500
		Co	.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	
		-	.0808	2.05	4,100	3.31	19.8	29.50	1.69	5.54	1.59	5.21	
10	Solid 19/234	Co, Eq or Un	.092	2.34	6,530	3.30	20.2	30.10	-	-	1.64	5.38	314.500
		Bu	.0905	2.299	6,512	3.08	19.4	28.90	1.87	6.13	1.70	5.59	
		Co	.0925	2.35	6,088	3.30	20.2	30.10	-	-	1.64	5.25	
		Bu	.094	2.388	6,503	3.29	20.8	31.10	1.82	5.97	1.64	5.25	
8	Solid 7/0486	-	.1019	2.588	6,500	5.26	31.4	46.80	-	-	1.00	3.28	-
		Co	.116	2.95	10,380	5.25	32.0	47.60	-	-	1.00	3.28	
		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	
6	Solid 19/0374	Bu	.126	3.20	9,361	5.32	33.8	49.20	1.10	3.61	.99	3.24	-
		-	.146	3.71	10,500	8.38	50.1	74.50	-	-	.65	2.13	
		Co or Eq	.144	3.66	16,534	8.38	50.0	74.40	-	-	.65	2.13	
		Ro 19 ■ 7/29	.169	4.293	16,535	8.61	54.0	80.40	.71	2.33	-	-	
4	Solid 133/27	Ro 7 ■ 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	
		Ro 19 ■ 7/27	.213	5.41	26,576	13.60	84.1	125.00	.43	1.41	-	-	
2	Solid 266/30	Ro 7 ■ 38/30	.222	5.64	26,818	13.49	83.2	124.00	.44	1.44	-	-	-
		Ro 7 ■ 60/30	.257	6.53	26,600	21.61	135	201.00	.29	.95	-	-	
2	Solid 420/30	Ro 7 ■ 60/30	.270	6.850	42,615	21.29	140	208.00	.28	.92	-	-	-
		Ro 19 ■ 35/30	.338	8.59	42,000	33.72	213	317.00	.18	.59	-	-	

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

