

Application

Stranded Class 2 bare copper wire to BS EN 60228 / IEC 60228 cables are non insulated and non sheathed soft drawn copper to BS6360/81. Stranded bare soft or annealed copper conductors are recommended for use as neutrals, in circuit ground connections as well as machinery and equipment grounding systems. Soft copper may be used for transformer drop leads or other non-tension hook-up jumpers.

Solid and stranded (classes AA and A) bare copper are suitable for overhead transmission and distribution applications. Stranded conductor of greater flexibility (classes B and C) are suitable for uninsulated hook up, jumpers, and grounds in electrical construction. Soft Drawn copper is unilay construction.

Standard

- BS 6360 and BS EN 60228 / IEC 60228
- ASTM B-1 Hard-Drawn Copper Wire.
- ASTM B-2 Medium-Hard Copper Wire.
- ASTM B-3 Soft or Annealed Copper Wire.
- ASTM B-787 19 Wire Combination Unilay-Stranded Soft copper wire.
- ASTM B-8 Concentric-Lay-Stranded Hard, Medium-Hard or Soft Copper Conductor.

Features And Benefits

Stranded bare soft or annealed copper conductors are suitable for direct burial and do not suffer from the inherent corrosion problems that an aluminum conductor would. Copper is almost twice as conductive as aluminum. Copper is easier than aluminum to terminate and join at splices and joints.

Construction

Bare copper, solid or stranded. Available in tempers hard, medium-hard, or soft. Stranded conductors are concentrically stranded in hard and medium-hard tempers and are Combination Unilay stranded in the soft-drawn temper.

Construction Parameters

Part No.	Cross Section	No./Nominal Diameter of Strands	Conductor Nominal Diameter	Approx. Weight	Max. DC Resistance at 20°C
	mm ²	No./mm	mm	kg/km	Ω/km
CCL-BC-R 50	50 mm ²	19/1.78	8.9	430	0.387
CCL-BC-R 70	70 mm ²	19/2.14	10.7	625	0.268
CCL-BC-R 95	95 mm ²	19/2.52	12.6	866	0.193
CCL-BC-R 120	120 mm ²	37/2.03	14.25	1090	0.153
CCL-BC-R 185	185 mm ²	37/2.52	17.64	1680	0.099
CCL-BC-R 240	240 mm ²	61/2.25	20.3	2220	0.075
CCL-BC-R 300	300 mm ²	61/2.52	22.68	2780	0.06

Size (AWG)	Weight (lbs/100 ft)	Diameter (mils)	Circular Mil Area	Hard Drawn		Medium-Hard Drawn		Soft-Drawn (Annealed)		Allowable Ampacity +
				Rated	DC	Rated	DC	Rated	DC	

			(mils)	Strength > (lbs)	Resistanc e (ohms/100 0 ft) @20°C	Strengt h (lbs)	Resistanc e (ohms/100 0 ft) @20°C	Strengt h (lbs)	Resistanc e (ohms/100 0 ft) @20°C	
SOLID										
14	12.4	64.1	4110	213.5	2.626	166.6	2.613	124.2	2.525	--
13	15.7	72	5180	268	2.083	208.8	2.072	156.6	2.003	--
12	19.8	80.8	6530	336.9	1.652	261.2	1.643	197.5	1.588	--
11	24.9	90.7	8230	422.9	1.31	327.6	1.303	249	1.26	--
10	31.4	101.9	10380	529.2	1.039	410.4	1.033	314	0.999	--
9	39.6	114.4	13090	661.2	0.824	514.2	0.82	380.5	0.792	--
8	50	128.5	16510	826	0.653	643.9	0.65	479.8	0.628	95
7	63	144.3	20820	1030	0.518	806.6	0.515	605	0.498	105
6	79.4	162	26240	1280	0.411	1010	0.409	762.9	0.395	125
5	100.2	181.9	33090	1591	0.326	1265	0.324	961.9	0.313	145
4	126.3	204.3	41740	1970	0.258	1584	0.257	1213	0.249	170
3	159.3	229.4	52620	2439	0.205	1984	0.204	1530	0.197	195
2	200.9	257.6	66360	3003	0.163	2450	0.162	1929	0.156	225
1	253.3	289.3	83690	3688	0.129	3024	0.128	2432	0.124	260
+Ampacity based on 75°C conductor temperature; 25°C ambient temperature; 2 ft./sec. wind in sun.										

Size (AWG)	Strand ing	Strand ing Class	Weigh t (lbs/100 00 ft)	Diameter (mils)		Hard Drawn		Medium-Hard Drawn		Soft-Drawn (Annealed)		Allowa ble Ampaci ty+
				Individ ual Wires	Compl ete Condu ctor	Rated Stren gth (lbs)	DC Resistan ce (ohms/1 000 ft) @20°C	Rated Stren gth (lbs)	DC Resistan ce (ohms/1 000 ft) @20°C	Rated Stren gth (lbs)	DC Resistan ce (ohms/1 000 ft) @20°C	
STRANDED												
8	7	B	51	49	146	777	0.6663	610	0.6629	499	0.6408	95
6	7	B	81	61	184	1228	0.4191	959	0.4169	794	0.403	130
4	7	A, B	128.9	77	232	1938	0.2636	1505	0.2622	1320	0.2534	170
3	7	A, B	162.5	87	260	2433	0.209	1885	0.2079	1670	0.201	200
2	7	A, B	204.9	97	292	3050	0.166	2360	0.165	2110	0.1578	230
1	7	A	258.4	109	328	3801	0.1316	2955	0.1309	2552	0.1252	265
1/0	7	A, AA	326.1	123	368	4752	0.1042	3705	0.1037	3221	0.1002	310
2/0	7	A, AA	410.9	138	414	5926	0.08267	4640	0.08224	4062	0.07949	355
2/0	19	B	410.9	84	418	6690	0.08267	4765	0.08224	4024	0.07949	355
3/0	7	A, AA	518.1	155	464	7366	0.06556	5812	0.06522	5118	0.06304	410
4/0	7	A, AA	653.3	174	522	9154	0.05199	7278	0.05172	6459	0.04999	480
4/0	19	B	653.3	106	528	9617	0.05199	7479	0.05172	6453	0.04999	480
250	19	A	771.9	115	574	11360	0.044	8836	0.04378	7627	0.04231	530
250	37	B	771.9	82	575	11600	0.044	8952	0.04378	7940	0.04231	530

300	19	A	926.2	126	628	13510	0.03667	10530	0.03648	9160	0.03526	590
350	19	A	1080. 6	136	679	15590	0.03143	12200	0.03127	10680	0.03022	650
500	37	A, B	1543. 8	116	814	22510	0.022	17550	0.02189	15240	0.02116	810
600	37	A, AA	1852. 5	127	891	27020	0.01834	21060	0.01825	18300	0.01763	910
750	61	A, B	2315. 6	111	998	34090	0.01467	26510	0.01459	22890	0.0141	1040
1000	61	A, B	3087. 5	128	1152	45030	0.011	35100	0.01094	30500	0.01058	1240

+Ampacity based on 75°C conductor temperature; 25°C ambient temperature; 2 ft./sec. wind in sun.