

# Bare Copper Wire and Cable

Bare Copper Conductor. Solid and Stranded .



## APPLICATIONS

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.

## SPECIFICATIONS

Southwire's bare copper wire and cable meets or exceeds the following ASTM specifications:

- B-1 Hard-Drawn Copper Wire.
- B-2 Medium-Hard Copper Wire.
- B-3 Soft or Annealed Copper Wire.
- B-8 Concentric-Lay-Stranded Hard, Medium-Hard or Soft Copper Conductor.
- B-33 Tinned Conductors
- B-787 19 Wire Combination Unilay-Stranded Soft copper wire.

## 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.

# Bare Copper

| Size (AWG)   | Weight (lbs/1000 ft) | Diameter (mils) | Circular Mil Area (mils) | Hard Drawn           |                                     | Medium-Hard Drawn    |                                     | Soft-Drawn (Annealed) |                                     | Allowable Ampacity+ |
|--------------|----------------------|-----------------|--------------------------|----------------------|-------------------------------------|----------------------|-------------------------------------|-----------------------|-------------------------------------|---------------------|
|              |                      |                 |                          | Rated Strength (lbs) | DC Resistance (ohms/1000 ft) @ 20°C | Rated Strength (lbs) | DC Resistance (ohms/1000 ft) @ 20°C | Rated Strength (lbs)  | DC Resistance (ohms/1000 ft) @ 20°C |                     |
| <b>SOLID</b> |                      |                 |                          |                      |                                     |                      |                                     |                       |                                     |                     |
| 14           | 12.4                 | 64.1            | 4110                     | 213.5                | 2.626                               | 166.6                | 2.613                               | 124.2                 | 2.525                               | --                  |
| 13           | 15.7                 | 72              | 5180                     | 268.0                | 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                | 1.310                               | 327.6                | 1.303                               | 249.0                 | 1.260                               | --                  |
| 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                | .824                                | 514.2                | .820                                | 380.5                 | .792                                | --                  |
| 8            | 50                   | 128.5           | 16510                    | 826.0                | .653                                | 643.9                | .650                                | 479.8                 | .628                                | 95                  |
| 7            | 63                   | 144.3           | 20820                    | 1030.0               | .518                                | 806.6                | .515                                | 605.0                 | .498                                | 105                 |
| 6            | 79.4                 | 162             | 26240                    | 1280.0               | .411                                | 1010.0               | .409                                | 762.9                 | .395                                | 125                 |
| 5            | 100.2                | 181.9           | 33090                    | 1591.0               | .326                                | 1265.0               | .324                                | 961.9                 | .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.

# Bare Copper

| Size (AWG)   | Stranding | Stranding Class | Weight (lbs/1000 ft) | Diameter (mils)  |                    | Hard Drawn           |                                     | Medium-Hard Drawn    |                                     | Soft-Drawn (Annealed) |                                     | Allowable Ampacity+ |
|--|-----------|-----------------|----------------------|------------------|--------------------|----------------------|-------------------------------------|----------------------|-------------------------------------|-----------------------|-------------------------------------|---------------------|
|  |           |                 |                      | Individual Wires | Complete Conductor | Rated Strength (lbs) | DC Resistance (ohms/1000 ft) @ 20°C | Rated Strength (lbs) | DC Resistance (ohms/1000 ft) @ 20°C | Rated Strength (lbs)  | DC Resistance (ohms/1000 ft) @ 20°C |                     |
| <b>STRANDED</b>  |           |                 |                      |                  |                    |                      |                                     |                      |                                     |                       |                                     |                     |
| 8  | 7         | B               | 51                   | 49               | 146                | 777                  | .6663                               | 610                  | .6629                               | 499                   | .6408                               | 95                  |
| 6  | 7         | B               | 81                   | 61               | 184                | 1228                 | .4191                               | 959                  | .4169                               | 794                   | .4030                               | 130                 |
| 4  | 7         | A, B            | 128.9                | 77               | 232                | 1938                 | .2636                               | 1505                 | .2622                               | 1320                  | .2534                               | 170                 |
| 3  | 7         | A, B            | 162.5                | 87               | 260                | 2433                 | .2090                               | 1885                 | .2079                               | 1670                  | .2010                               | 200                 |
| 2  | 7         | A, B            | 204.9                | 97               | 292                | 3050                 | .1660                               | 2360                 | .1650                               | 2110                  | .1578                               | 230                 |
| 1  | 7         | A               | 258.4                | 109              | 328                | 3801                 | .1316                               | 2955                 | .1309                               | 2552                  | .1252                               | 265                 |
| 1/0  | 7         | A, AA           | 326.1                | 123              | 368                | 4752                 | .1042                               | 3705                 | .1037                               | 3221                  | .1002                               | 310                 |
| 2/0  | 7         | A, AA           | 410.9                | 138              | 414                | 5926                 | .08267                              | 4640                 | .08224                              | 4062                  | .07949                              | 355                 |
| 2/0  | 19        | B               | 410.9                | 84               | 418                | 6690                 | .08267                              | 4765                 | .08224                              | 4024                  | .07949                              | 355                 |
| 3/0  | 7         | A, AA           | 518.1                | 155              | 464                | 7366                 | .06556                              | 5812                 | .06522                              | 5118                  | .06304                              | 410                 |
| 4/0  | 7         | A, AA           | 653.3                | 174              | 522                | 9154                 | .05199                              | 7278                 | .05172                              | 6459                  | .04999                              | 480                 |
| 4/0  | 19        | B               | 653.3                | 106              | 528                | 9617                 | .05199                              | 7479                 | .05172                              | 6453                  | .04999                              | 480                 |
| 250  | 19        | A               | 771.9                | 115              | 574                | 11360                | .04400                              | 8836                 | .04378                              | 7627                  | .04231                              | 530                 |
| 250  | 37        | B               | 771.9                | 82               | 575                | 11600                | .04400                              | 8952                 | .04378                              | 7940                  | .04231                              | 530                 |
| 300  | 19        | A               | 926.2                | 126              | 628                | 13510                | .03667                              | 10530                | .03648                              | 9160                  | .03526                              | 590                 |
| 350  | 19        | A               | 1080.6               | 136              | 679                | 15590                | .03143                              | 12200                | .03127                              | 10680                 | .03022                              | 650                 |
| 500  | 37        | A, B            | 1543.8               | 116              | 814                | 22510                | .02200                              | 17550                | .02189                              | 15240                 | .02116                              | 810                 |
| 600  | 37        | A, AA           | 1852.5               | 127              | 891                | 27020                | .01834                              | 21060                | .01825                              | 18300                 | .01763                              | 910                 |
| 750  | 61        | A, B            | 2315.6               | 111              | 998                | 34090                | .01467                              | 26510                | .01459                              | 22890                 | .01410                              | 1040                |
| 1000   | 61        | A, B            | 3087.5               | 128              | 1152               | 45030                | .01100                              | 35100                | .01094                              | 30500                 | .01058                              | 1240                |
| +Ampacity based on 75°C conductor temperature; 25°C ambient temperature; 2 ft./sec. wind in sun. |           |                 |                      |                  |                    |                      |                                     |                      |                                     |                       |                                     |                     |

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