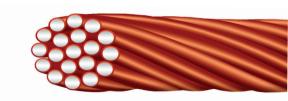
# **Copper-Clad Steel Wire**





## **APPLICATIONS**

Copperciad steel wire and strand combines the electrical characteristics of copper with the mechanical properties of steel. Often used for buried ground grid systems, overhead ground wire and messenger wire, it can resist mechanical damage during installation, as well as electrical damage during a fault condition. Copperciad steel has virtually no scrap value, and is extremely difficult to cut with traditional wire and cable cutting tools, greatly reducing the potential of theft.

## CONSTRUCTION

Dead Soft Annealed (DSA) Coppercial Steel (CCS) conductors are a concentric lay-stranded construction. The CCS strands are a 40% conductivity grade of material using a low carbon steel core rendering greater flexibility to enable easier handling during installation.

## **STANDARDS**

- ASTM B193 Standard Test Method for Resistivity of Electrical Conductor Materials
- ASTM B227 Standard Specification for Hard-Drawn Copperclad Steel Wire
- ASTM B228 Standard Specification for Concentric-Lay-Stranded Copperclad Steel Conductors
- ASTM B258 Standard Specification for Standard Nominal Diameters and Cross-Sectional Areas of AWG Sizes of Solid Round
- ASTM B910 Standard Specification for Annealed Copperclad Steel Wire

|                  | Cross-Sectional |             | Diameter       |              |                 |                     | Minimum<br>Breaking | Resistance                    |
|------------------|-----------------|-------------|----------------|--------------|-----------------|---------------------|---------------------|-------------------------------|
| Item #           | Are<br>(in²)    | ea<br>(mm²) | Strands<br>(#) | Wire<br>(in) | Overall<br>(in) | Weight<br>(lb / ft) | Strength<br>(lb)    | @ 20 deg C<br>(ohm / 1000 ft) |
| 7#9CW-00         | 0.07195         | 46.42       | 7              | 0.1144       | 0.343           | 0.259               | 2650                | 0.2916                        |
| 7#8CW            | 0.09078         | 58.57       | 7              | 0.1285       | 0.385           | 0.327               | 3350                | 0.2311                        |
| 7#7COPPERCLAD40% | 0.1145          | 73.86       | 7              | 0.1443       | 0.433           | 0.413               | 4220                | 0.1833                        |
| 7N06-01CW        | 0.1443          | 93.09       | 7              | 0.162        | 0.486           | 0.52                | 5320                | 0.1454                        |
| 7#5-01CW         | 0.1819          | 117.4       | 7              | 0.1819       | 0.546           | 0.656               | 6710                | 0.1153                        |
| 19#9CW           | 0.1953          | 126         | 19             | 0.1144       | 0.572           | 0.707               | 6820                | 0.1079                        |
| 19#8CW           | 0.2464          | 159         | 19             | 0.1285       | 0.642           | 0.892               | 8610                | 0.0855                        |
| 19#7CW           | 0.3107          | 200.5       | 19             | 0.1443       | 0.721           | 1.125               | 10850               | 0.0678                        |
| 19#6CW           | 0.3916          | 252.7       | 19             | 0.162        | 0.81            | 1.418               | 13680               | 0.0527                        |
| 19#5CW           | 0.4938          | 318.5       | 19             | 0.1819       | 0.91            | 1.787               | 17250               | 0.0418                        |

### **NOTES**

Dimensions and weights are nominal values, subject to standard manufacturing tolerances. The ampacity rating and the DC and AC resistance of the Copperclad Steel wire conductor is not equivalent to that of a copper conductor. To select the correct equivalent please see — Diameter Comparison for Copper Equivalent Fusing Current for Grounding Applications.

