



# BARE WIRE

## 19-WIRE CONCENTRIC LAY

### STRANDED BARE COPPER CONDUCTORS

ASTM Standards B1, B2, B3, B8, B787 (8GA-4/0)

SIZE (AWG)	NUMBER & WIRE SIZE (INCHES)	AREA (CIRCULAR MILS)	APPROX. DIAMETER (INCHES)	APPROX. WEIGHT (LBS./1000')	APPROX. RESISTANCE @ 68°F (20°C) OHMS PER 1,000' FT SOFT (ANNEALED)
8	19 X .0295	18,510	0.146	50.98	0.6408
6	19 X .0372	26,240	0.184	81.02	0.4030
4	19 X .0469	41,740	0.232	128.9	0.2540
3	19 X .0526	52,620	0.260	167.0	0.2010
2	19 X .0591	66,360	0.292	204.9	0.1594
1	19 x .0332	83,690	0.332	253.3	0.1252
1/0	19 X .0745	105,455	0.373	326.0	0.10030
2/0	19 X .0837	133,108	0.419	411.0	0.07947
3/0	19 X .0940	167,884	0.470	518.0	0.06301
4/0	19 X .1055	211,475	0.528	653.3	0.05002

The above data is approximate and subject to normal manufacturing tolerances.

### APPLICATION NOTES

Stranded conductor is normally used in electrical applications where some degree of flexing is encountered either in installation or service. An application with a greater amount of expected service flexing should use a conductor with a larger number of wires and smaller individual wire diameter to make up a given conductor size as compared to a lesser flexing application.

Some of the stranded conductor types manufactured by Republic Wire, Inc. are:

- CONCENTRIC: A conductor constructed with a central wire surrounded by one or more layers of helically laid wires.
- ASTM standards provide for five classes of concentric strand:  
Class AA is the coarsest stranding and Class D is the finest. Concentric conductors are available only in the specific numbers of wires necessary to make up the construction in concentric layers. These numbers are 7, 19, 37, and 61. Larger wire counts are possible, but are not in normal use and are not covered by these standards.