

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. UNCOATED
350 MCM	19 X .1357	349,875	0.679	1080.0	0.03023
300 MCM	19 X .1257	300,209	0.629	926.9	0.03523
250 MCM	19 X .1147	249,966	0.574	771.9	0.04231
4/0 AWG	19 X .1055	211,475	0.528	653.3	0.05002
3/0 AWG	19 X .0940	167,884	0.470	518.0	0.06301
2/0 AWG	19 X .0837	133,108	0.419	411.0	0.07947
1/0 AWG	19 X .0745	105,455	0.373	326.0	0.10030
2 AWG	19 X .0591	66,360	0.292	204.9	0.1594
3 AWG	19 X .0526	52,620	0.260	167.0	0.2010
4 AWG	19 X .0469	41,740	0.232	128.9	0.2540
6 AWG	19 X .0372	26,240	0.184	81.02	0.4030
8 AWG	19 X .0295	18,510	0.146	50.98	0.6408

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 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 the standards.

