

BARE WIRE

7-WIRE CONCENTRIC-LAY

STRANDED BARE COPPER CONDUCTORS

ASTM Standards B1, B2, B3, B8

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
4/0	7 X .1739	211,688	0.522	653.3	0.04997
3/0	7 X .1548	167,741	0.464	518.0	0.06306
2/0	7 X .1379	133,114	0.414	411.0	0.07945
1/0	7 X .1228	105,558	0.368	326.0	0.10020
1	7 X .1093	83,625	0.328	258.2	0.12650
2	7 X .0974	66,407	0.292	204.9	0.15930
3	7 X .0868	52,739	0.260	167.0	0.20060
4	7 X .0772	41,719	0.232	128.9	0.25360
6	7 X .0612	26,218	0.184	81.02	0.40350
8	7 X .0486	16,533	0.146	50.98	0.63980

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. The direction of lay is reversed in successive layers and generally with an increase in length for successive layers.
- **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 these standards.

