

BARE WIRE

37-WIRE CONCENTRIC-LAY

STRANDED BARE COPPER CONDUCTORS

ASTM Standards B1, B2, B3, B8

SIZE (AWG)	NUMBER & WIRE SIZES (INCHES)	AREA (CIRCULAR MILS)	APPROX. DIAMETER (INCHES)	APPROX. WEIGHT (LBS./1000')	APPROX. RESISTANCE @ 68°F (20°C) OHMS Per 1,000 Ft. UNCOATED
500 MCM	37 X .1162	500,000	0.813	1544.0	0.02116
400 MCM	37 X .1040	400,000	0.720	1235.2	0.02644
350 MCM	37 X .0973	350,000	0.679	1080.0	0.03023
300 MCM	37 X .0900	300,000	0.629	926.9	0.03523
250 MCM	37 X .0822	250,000	0.574	771.9	0.04231
4/0 AWG	37 X .0756	211,600	0.528	653.3	0.05002

This 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 lay 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 the standards.

