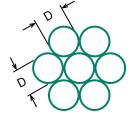## HOW TO COMPUTE CIRCULAR MIL AREA OF (CMA) OF VARIOUS SHAPES OF WIRE

Round Solid Wire AWG

$$D \times D = CMA$$

Multiply the diameter in Mils by itself. $CMA = D^2$

Stranded Wire AWG

Multiply the diameter of one strand (in mils) by itself, and then multiply the result by the total number of strands.

$$D \times D \times \text{Number of Strands} = CMA$$

WIRE SIZES

WIRE SIZE AWG.	STRANDS NUMBER	STRANDS DIA.	AREA CIRC. MILLS	TOTAL DIA.
#26	1	.0159	254	.016
#26	8	.0056	252	.018
#26	10	.005	250	.018
#25	1	.0179	320	.018
#25	10	.0056	315	.020
#25	8	.0063	318	.021
#24	1	.0201	404	.020
#24	8	.0071	398	.023
#24	10	.0063	398	.023
#24	7	.008	448	.024
#23	1	.0226	510	.023
#23	10	.0071	501	.026
#23	8	.008	506	.026
#22	1	.0253	642	.025
#22	21	.005	525	.025
#22	6	.010	600	
#22	8	.0089	632	.029
#22	10	.008	638	.029
#22	7	.010	700	.030
#22	16	.0063	636	.029
#20	1	.032	1,024	.032
#20	19	.007	950	.036
#20	7	.012	1,025	.036

WIRE SIZE AWG.	STRANDS NUMBER	STRANDS DIA.	AREA CIRC. MILLS	TOTAL DIA.
#20	26	.0063	1,035	.039
#20	10	.010	1,005	.040
#20	7	.0126	1,120	.040
#18	1	.040	1,600	.040
#18	19	.0092	1,607	.046
#18	7	.0153	1,639	.046
#18	65	.005	1,625	.048
#18	16	.010	1,616	.049
#18	41	.0063	1,640	.049
#18	7	.0152	1,779	.050
#16	1	.0508	2,583	.051
#16	7	.0192	2,580	.058
#16	19	.0117	2,601	.058
#16	65	.0063	2,587	.059
#16	105	.005	2,625	.059
#16	19	.0117	2,409	.061
#16	26	.010	2,625	.061
#14	1	.064	4,107	.064
#14	37	.0105	4,081	.073
#14	7	.0242	4,099	.073
#14	105	.0063	4,179	.073
#14	19	.0147	4,106	.074
#14	84	.0071	4,208	.074

WIRE SIZE AWG.	STRANDS NUMBER	STRANDS DIA.	AREA CIRC. MILLS	TOTAL DIA.
#14	7	.025	4,494	.076
#14	41	.010	4,141	.077
#12	1	.0808	6,530	.081
#12	19	.0179	6,088	.090
#12	7	.0305	6,512	.091
#12	19	.0185	6,504	.092
#12	37	.0133	6,524	.093
#12	84	.0089	6,695	.094
#12	165	.0063	6,567	.095
#12	65	.010	6,565	.097
#10	1	.1019	10,380	.102
#10	7	.0385	10,380	.115
#10	105	.010	10,550	.116
#10	37	.0167	10,320	.117
#10	19	.0234	10,400	.117
#10	90	.0089	9,090	.120
#10	37	.010	10,445	.122
#8	1	.1285	16,510	.129
#8	7	.0486	16,530	.146
#8	37	.0211	16,470	.148
#8	19	.0295	16,540	.148
#8	133	.0111	16,390	.166
#8	49	.0184	16,590	.166