Published chain link mesh wind areas appear to be approximated as right angle crossings of the wires with the overlaps not subtracted. This is a close approximation for the larger meshes, but is inaccurate for the tighter ones.

% Difference in Solidity Ratios, ε - published values vs actual values from analysis of mesh geometry

Wire Size		Mesh Size									
		3/8"	1/2"	5/8"	1"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/4"	2-3/8"
Gauge	Dia (in)	0.375	0.500	0.625	1.000	1.250	1.500	1.750	2.000	2.250	2.375
5	0.207	-	-	-	-14%	-10%	-	-5%	-4%	-3%	-
6	0.192	-	-	-	-17%	-8%	-	-5%	-3%	-3%	-
8	0.162	-	-	-	-9%	-6%	-	-3%	-3%	-2%	-
9	0.148	7%	6%	5%	-8%	-4%	-	-2%	-2%	-2%	-
10	0.135	10%	5%	5%	-6%	-4%	-	-2%	-2%	-1%	-
11	0.12	7%	4%	4%	-5%	-4%	-	-2%	-2%	-1%	-
12	0.113	7%	4%	4%	-4%	-3%	-	-1%	-1%	-1%	-

Published values higher than actual values for security mesh

Published values lower than actual values for standard mesh

Published values for chain link mesh Solidity Ratios, ε

Wire Size		Mesh Size									
		3/8"	1/2"	5/8"	1"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/4"	2-3/8"
Gauge	Dia (in)	0.375	0.500	0.625	1.000	1.250	1.500	1.750	2.000	2.250	2.375
5	0.207	-	-	-	0.34	0.28	-	0.21	0.19	0.17	-
6	0.192	-	-	-	0.30	0.27	-	0.20	0.18	0.16	-
8	0.162	-	-	-	0.28	0.23	-	0.17	0.15	0.13	-
9	0.148	0.56	0.45	0.38	0.26	0.21	-	0.16	0.14	0.12	-
10	0.135	0.53	0.42	0.36	0.24	0.19	-	0.14	0.13	0.11	-
11	0.12	0.49	0.38	0.32	0.22	0.18	-	0.13	0.11	0.10	-
12	0.113	0.46	0.37	0.31	0.20	0.17	-	0.12	0.11	0.10	-

Rational analysis of projected wind areas - Solidity Ratios, ε

Wire Size		Mesh Size									
		3/8"	1/2"	5/8"	1"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/4"	2-3/8"
Gauge	Dia (in)	0.375	0.500	0.625	1.000	1.250	1.500	1.750	2.000	2.250	2.375
5	0.207	-	-	-	0.40	0.31	0.26	0.22	0.20	0.17	0.17
6	0.192	-	-	-	0.37	0.29	0.24	0.21	0.18	0.16	0.15
8	0.162	-	-	-	0.31	0.24	0.20	0.18	0.15	0.14	0.13
9	0.148	0.53	0.43	0.37	0.28	0.22	0.19	0.16	0.14	0.13	0.12
10	0.135	0.49	0.40	0.34	0.25	0.20	0.17	0.15	0.13	0.12	0.11
11	0.120	0.45	0.37	0.31	0.23	0.18	0.15	0.13	0.12	0.10	0.10
11-½	0.113	0.43	0.35	0.30	0.21	0.17	0.14	0.12	0.11	0.10	0.09

C_f values
1.200
1.300
1.500

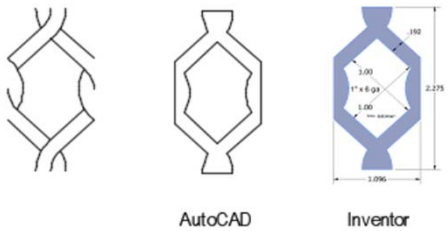
Example of rational analysis of chain link mesh geometry

52.786 in^2 / 144 in^2 = 0.37 ε value

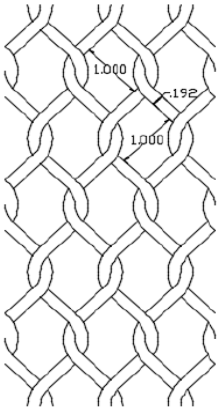
Published value, 0.30 is 17% lower

Unit Cell Geometry

Projected Wind Area



1" x 6 ga



Enlarged Unit Cell Wind Area

Area = 0.914 in^2

x = 1.096 in

y = 2.275 in

Area = (0.914 in^2)(144 / (xy)) = 52.786 in^2 / ft^2