

2-3/8" Chain Link Mesh Variables 11-1/2 ga to 5 ga

| 2-3/8" Mesh Wind & Weight Values | | | | |
|----------------------------------|----------|------------|----------|-------------|
| Gauge | Dia (in) | ϵ | C_{fw} | D_m (psf) |
| 5 | 0.207 | 0.17 | 1.3 | 1.4 |
| 6 | 0.192 | 0.15 | 1.3 | 1.2 |
| 8 | 0.162 | 0.13 | 1.3 | 0.9 |
| 9 | 0.148 | 0.12 | 1.3 | 0.7 |
| 10 | 0.135 | 0.11 | 1.3 | 0.6 |
| 11 | 0.120 | 0.10 | 1.2 | 0.5 |
| 11-1/2 | 0.113 | 0.09 | 1.2 | 0.4 |

ϵ = solidity ratio for chain link
 ϵ' = solidity ratio for iced chain link
 C_{fw} = wind force coefficient
 C_{fi} = wind on ice force coefficient
 D_m = estimated weight of chain link mesh
 Check with supplier for actual weight
 D_i = estimated weight of ice (includes 0.7 ASD factor)
 The values below are only valid for Risk Category I and $K_{zt} = 1.0$
 For ice thickness not shown below, round up to next nearest value

| 2-3/8" Mesh (all gauges) Estimated Ice Loading Risk Category I $K_{zt} = 1.0$ | | | | | | | | | | | | |
|---|-----------------|--|-------------|-------------|--|-------------|-------------|--|-------------|-------------|--|-------------|
| ASCE 7-10 Nominal Ice Thickness, t (in) | Fence Height, h | | | | | | | | | | | |
| | 5' | | | 10' | | | 15' | | | 20' | | |
| | ϵ' | C_{fi} | D_i (psf) | ϵ' | C_{fi} | D_i (psf) | ϵ' | C_{fi} | D_i (psf) | ϵ' | C_{fi} | D_i (psf) |
| 0.25 | 0.56 | 1.5 | 1.2 | 0.58 | 1.5 | 1.3 | 0.60 | 1.5 | 1.4 | 0.61 | 1.5 | 1.5 |
| 0.50 | 0.83 | See solid wall C_{fi} table below | 3.4 | 0.86 | See solid wall C_{fi} table below | 3.8 | 0.88 | See solid wall C_{fi} table below | 4.0 | 0.89 | See solid wall C_{fi} table below | 4.2 |
| 0.75 | 0.98 | | 6.0 | 0.99 | | 6.6 | 1.00 | | 6.9 | 1.00 | | 7.2 |
| 1.00 | 1.00 | | 8.8 | 1.00 | | 9.7 | 1.00 | | 10.2 | 1.00 | | 10.6 |
| 1.25 | 1.00 | | 11.8 | 1.00 | | 12.9 | 1.00 | | 13.5 | 1.00 | | 14.0 |
| 1.50 | 1.00 | | 14.7 | 1.00 | | 15.9 | 1.00 | | 16.7 | 1.00 | | 17.2 |
| ASCE 7-16 Nominal Ice Thickness, t (in) | Fence Height, h | | | | | | | | | | | |
| | 5' | | | 10' | | | 15' | | | 20' | | |
| | ϵ' | C_{fi} | D_i (psf) | ϵ' | C_{fi} | D_i (psf) | ϵ' | C_{fi} | D_i (psf) | ϵ' | C_{fi} | D_i (psf) |
| 0.25 | 0.37 | 1.5 | 0.4 | 0.39 | 1.5 | 0.5 | 0.40 | 1.5 | 0.5 | 0.40 | 1.5 | 0.5 |
| 0.50 | 0.56 | 1.5 | 1.2 | 0.58 | 1.5 | 1.3 | 0.60 | 1.5 | 1.4 | 0.61 | 1.5 | 1.5 |
| 0.75 | 0.71 | See solid wall C_{fi} table below | 2.2 | 0.74 | See solid wall C_{fi} table below | 2.5 | 0.76 | See solid wall C_{fi} table below | 2.6 | 0.77 | See solid wall C_{fi} table below | 2.7 |
| 1.00 | 0.83 | | 3.4 | 0.86 | | 3.8 | 0.88 | | 4.0 | 0.89 | | 4.2 |
| 1.25 | 0.92 | | 4.7 | 0.95 | | 5.2 | 0.96 | | 5.5 | 0.97 | | 5.7 |
| 1.50 | 0.98 | | 6.0 | 0.99 | | 6.6 | 1.00 | | 6.9 | 1.00 | | 7.2 |
| 1.75 | 1.00 | | 7.3 | 1.00 | | 8.1 | 1.00 | | 8.5 | 1.00 | | 8.9 |
| 2.00 | 1.00 | 8.8 | 1.00 | 9.7 | 1.00 | 10.2 | 1.00 | 10.6 | | | | |
| 2.25 | 1.00 | 10.4 | 1.00 | 11.3 | 1.00 | 11.9 | 1.00 | 12.3 | | | | |
| 2.50 | 1.00 | 11.8 | 1.00 | 12.9 | 1.00 | 13.5 | 1.00 | 14.0 | | | | |
| ASCE 7-22 Nominal Ice Thickness, t (in) | Fence Height, h | | | | | | | | | | | |
| | 5' | | | 10' | | | 15' | | | 20' | | |
| | ϵ' | C_{fi} | D_i (psf) | ϵ' | C_{fi} | D_i (psf) | ϵ' | C_{fi} | D_i (psf) | ϵ' | C_{fi} | D_i (psf) |
| 0.25 | 0.42 | 1.5 | 0.6 | 0.44 | 1.5 | 0.7 | 0.45 | 1.5 | 0.7 | 0.46 | 1.5 | 0.7 |
| 0.50 | 0.64 | 1.5 | 1.7 | 0.67 | 1.5 | 1.9 | 0.68 | 1.5 | 2.0 | 0.70 | 1.5 | 2.1 |
| 0.75 | 0.81 | See solid wall C_{fi} table below | 3.1 | 0.84 | See solid wall C_{fi} table below | 3.4 | 0.85 | See solid wall C_{fi} table below | 3.6 | 0.87 | See solid wall C_{fi} table below | 3.8 |
| 1.00 | 0.92 | | 4.7 | 0.95 | | 5.2 | 0.96 | | 5.5 | 0.97 | | 5.7 |
| 1.25 | 0.99 | | 6.4 | 1.00 | | 6.9 | 1.00 | | 7.3 | 1.00 | | 7.6 |
| 1.50 | 1.00 | | 8.1 | 1.00 | | 8.9 | 1.00 | | 9.4 | 1.00 | | 9.8 |
| 1.75 | 1.00 | | 10.0 | 1.00 | | 10.9 | 1.00 | | 11.5 | 1.00 | | 11.9 |
| 2.00 | 1.00 | 11.8 | 1.00 | 12.9 | 1.00 | 13.5 | 1.00 | 14.0 | | | | |
| 2.25 | 1.00 | 13.6 | 1.00 | 14.8 | 1.00 | 15.5 | 1.00 | 16.0 | | | | |
| 2.50 | 1.00 | 15.4 | 1.00 | 16.7 | 1.00 | 17.4 | 1.00 | 18.0 | | | | |

| Solid Wall Case A C_{fi} values for line posts away from ends and corners for $\epsilon' > 0.7$ | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|-----------|
| Only for $s/h = 1$ | B/s | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | ≥ 10 |
| | 1.45 | 1.40 | 1.38 | 1.35 | 1.35 | 1.34 | 1.33 | 1.32 | 1.31 | 1.30 |

B = Length of fence segment being considered Round B/s value down to nearest value shown on the chart
 s = Solid height of fence
 h = Overall height of fence
 $s/h = 1$ assumes ice bridges any gap at the bottom of the fence and $s = h$
 For conditions not show above, see the ASCE §29 Solid Wall Table