

SECTION PROPERTIES (PER METRE OF WIDTH)

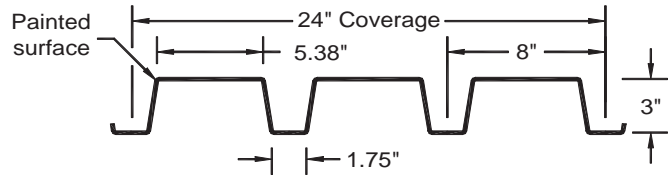
| METRIC | Base Steel Thickness (mm) | Coated Steel Thickness (Z275) (mm) | Coated Mass (kg/m ²) | Sec. Modulus | | Deflection Moment of Inertia (10 ⁶ mm ⁴) | Specified Web Crippling Data | | | |
|--------|---------------------------|------------------------------------|----------------------------------|------------------------------------|------------------------------------|---|------------------------------|--------------------------|-------------------------------|-------------------------------|
| | | | | Midspan | Support | | P _{e1} End (kN) | P _{e2} End (kN) | P _{i1} Interior (kN) | P _{i2} Interior (kN) |
| | | | | (10 ³ mm ³) | (10 ³ mm ³) | | | | | |
| | 0.762 | 0.802 | 10.4 | 19.2 | 20.9 | 0.893 | 1.93 | 0.483 | 3.98 | 0.677 |
| | 0.914 | 0.954 | 12.4 | 23.5 | 26.2 | 1.14 | 2.89 | 0.721 | 5.88 | 1.00 |
| | 1.22 | 1.26 | 16.4 | 32.4 | 35.2 | 1.63 | 5.38 | 1.35 | 10.8 | 1.84 |
| | 1.52 | 1.56 | 20.5 | 41.4 | 43.7 | 2.12 | 8.68 | 2.17 | 17.3 | 2.95 |

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (kPa)

| SPAN LENGTH (m) | | 1-SPAN | | | | 2-SPAN | | | | 3-SPAN | | | |
|-----------------|---|---------------------------|-------|------|------|---------------------------|-------|------|------|---------------------------|-------|------|------|
| | | BASE STEEL THICKNESS (mm) | | | | BASE STEEL THICKNESS (mm) | | | | BASE STEEL THICKNESS (mm) | | | |
| | | 0.762 | 0.914 | 1.22 | 1.52 | 0.762 | 0.914 | 1.22 | 1.52 | 0.762 | 0.914 | 1.22 | 1.52 |
| 1.8 | S | 6.53 | 8.01 | 11.0 | 14.1 | 7.12 | 8.92 | 12.0 | 14.9 | 8.90 | 11.1 | 15.0 | 18.6 |
| | D | 13.3 | 16.9 | 24.3 | 31.6 | 31.8 | 40.4 | 58.2 | 75.7 | 25.1 | 31.9 | 45.9 | 59.6 |
| 2.0 | S | 5.29 | 6.49 | 8.94 | 11.4 | 5.77 | 7.22 | 9.71 | 12.1 | 7.21 | 9.03 | 12.1 | 15.1 |
| | D | 9.66 | 12.3 | 17.7 | 23.0 | 23.2 | 29.5 | 42.4 | 55.2 | 18.3 | 23.2 | 33.4 | 43.5 |
| 2.2 | S | 4.37 | 5.36 | 7.39 | 9.45 | 4.77 | 5.97 | 8.03 | 10.0 | 5.96 | 7.46 | 10.0 | 12.5 |
| | D | 7.26 | 9.23 | 13.3 | 17.3 | 17.4 | 22.2 | 31.9 | 41.5 | 13.7 | 17.4 | 25.1 | 32.7 |
| 2.4 | S | 3.68 | 4.51 | 6.21 | 7.94 | 4.00 | 5.02 | 6.74 | 8.37 | 5.01 | 6.27 | 8.43 | 10.5 |
| | D | 5.59 | 7.11 | 10.2 | 13.3 | 13.4 | 17.1 | 24.6 | 31.9 | 10.6 | 13.4 | 19.3 | 25.2 |
| 2.6 | S | 3.13 | 3.84 | 5.29 | 6.76 | 3.41 | 4.27 | 5.75 | 7.13 | 4.27 | 5.34 | 7.18 | 8.91 |
| | D | 4.40 | 5.59 | 8.05 | 10.5 | 10.6 | 13.4 | 19.3 | 25.1 | 8.31 | 10.6 | 15.2 | 19.8 |
| 2.8 | S | 2.70 | 3.31 | 4.56 | 5.83 | 2.94 | 3.68 | 4.96 | 6.15 | 3.68 | 4.61 | 6.19 | 7.68 |
| | D | 3.52 | 4.48 | 6.44 | 8.38 | 8.45 | 10.7 | 15.5 | 20.1 | 6.66 | 8.46 | 12.2 | 15.8 |
| 3.0 | S | 2.35 | 2.88 | 3.97 | 5.08 | 2.56 | 3.21 | 4.32 | 5.36 | 3.20 | 4.01 | 5.40 | 6.69 |
| | D | 2.86 | 3.64 | 5.24 | 6.81 | 6.87 | 8.74 | 12.6 | 16.4 | 5.41 | 6.88 | 9.90 | 12.9 |
| 3.2 | S | 2.07 | 2.54 | 3.49 | 4.47 | 2.25 | 2.82 | 3.79 | 4.71 | 2.82 | 3.53 | 4.74 | 5.88 |
| | D | 2.36 | 3.00 | 4.32 | 5.61 | 5.66 | 7.20 | 10.4 | 13.5 | 4.46 | 5.67 | 8.16 | 10.6 |
| 3.4 | S | 1.83 | 2.25 | 3.09 | 3.96 | 2.00 | 2.50 | 3.36 | 4.17 | 2.49 | 3.12 | 4.20 | 5.21 |
| | D | 1.97 | 2.50 | 3.60 | 4.68 | 4.72 | 6.00 | 8.64 | 11.2 | 3.72 | 4.73 | 6.80 | 8.85 |
| 3.6 | S | 1.63 | 2.00 | 2.76 | 3.53 | 1.78 | 2.23 | 3.00 | 3.72 | 2.22 | 2.79 | 3.75 | 4.65 |
| | D | 1.66 | 2.11 | 3.03 | 3.94 | 3.98 | 5.06 | 7.28 | 9.46 | 3.13 | 3.98 | 5.73 | 7.45 |
| 3.8 | S | 1.47 | 1.80 | 2.48 | 3.17 | 1.60 | 2.00 | 2.69 | 3.34 | 2.00 | 2.50 | 3.36 | 4.17 |
| | D | 1.41 | 1.79 | 2.58 | 3.35 | 3.38 | 4.30 | 6.19 | 8.05 | 2.66 | 3.39 | 4.87 | 6.34 |
| 4.0 | S | 1.32 | 1.62 | 2.24 | 2.86 | 1.44 | 1.81 | 2.43 | 3.01 | 1.80 | 2.26 | 3.04 | 3.77 |
| | D | 1.21 | 1.54 | 2.21 | 2.87 | 2.90 | 3.69 | 5.31 | 6.90 | 2.28 | 2.90 | 4.18 | 5.43 |
| 4.2 | S | 1.20 | 1.47 | 2.03 | 2.59 | 1.31 | 1.64 | 2.20 | 2.73 | 1.63 | 2.05 | 2.75 | 3.42 |
| | D | 1.04 | 1.33 | 1.91 | 2.48 | 2.50 | 3.18 | 4.58 | 5.96 | 1.97 | 2.51 | 3.61 | 4.69 |
| 4.4 | S | 1.09 | 1.34 | 1.85 | 2.36 | 1.19 | 1.49 | 2.01 | 2.49 | 1.49 | 1.87 | 2.51 | 3.11 |
| | D | 0.91 | 1.15 | 1.66 | 2.16 | 2.18 | 2.77 | 3.99 | 5.18 | 1.72 | 2.18 | 3.14 | 4.08 |
| 4.6 | S | 1.00 | 1.23 | 1.69 | 2.16 | 1.09 | 1.37 | 1.84 | 2.28 | 1.36 | 1.71 | 2.29 | 2.85 |
| | D | 0.79 | 1.01 | 1.45 | 1.89 | 1.91 | 2.42 | 3.49 | 4.54 | 1.50 | 1.91 | 2.75 | 3.57 |
| 4.8 | S | 0.92 | 1.13 | 1.55 | 1.98 | 1.00 | 1.25 | 1.69 | 2.09 | 1.25 | 1.57 | 2.11 | 2.61 |
| | D | 0.70 | 0.89 | 1.28 | 1.66 | 1.68 | 2.13 | 3.07 | 3.99 | 1.32 | 1.68 | 2.42 | 3.14 |
| 5.0 | S | 0.85 | 1.04 | 1.43 | 1.83 | 0.92 | 1.16 | 1.55 | 1.93 | 1.15 | 1.44 | 1.94 | 2.41 |
| | D | 0.62 | 0.79 | 1.13 | 1.47 | 1.48 | 1.89 | 2.72 | 3.53 | 1.17 | 1.49 | 2.14 | 2.78 |

- Notes:**
- 1 Based on ASTM A 653 Grade 230 structural steel.
 - 2 Values in row "S" are based on strength.
 - 3 Values in row "D" are based on deflection of 1/180th span.
 - 4 Web crippling not included in strength calculations. See Example.

Limit States Design principles were used in accordance with CSA Standard S136-01



SECTION PROPERTIES (PER FOOT OF WIDTH)

| IMPERIAL | Base Steel Thickness (in.) | Coated Steel Thickness (G90) (in.) | Coated Weight (psf) | Sec. Modulus | | Deflection Moment of Inertia (in. ⁴) | Specified Web Crippling Data | | | |
|----------|----------------------------|------------------------------------|---------------------|---------------------|---------------------|--|------------------------------|--------------------------|-------------------------------|-------------------------------|
| | | | | Midspan | Support | | P _{e1} End (lb) | P _{e2} End (lb) | P _{i1} Interior (lb) | P _{i2} Interior (lb) |
| | | | | (in. ³) | (in. ³) | | | | | |
| | | | | | | | | | | |
| 0.030 | 0.0315 | 2.12 | 0.357 | 0.389 | 0.655 | 131 | 32.8 | 270 | 45.9 | |
| 0.036 | 0.0375 | 2.54 | 0.438 | 0.487 | 0.832 | 196 | 48.9 | 399 | 67.8 | |
| 0.048 | 0.0495 | 3.36 | 0.603 | 0.655 | 1.20 | 365 | 91.2 | 734 | 125 | |
| 0.060 | 0.0615 | 4.19 | 0.771 | 0.812 | 1.56 | 589 | 147 | 1174 | 200 | |

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (PSF)

| SPAN LENGTH (ft) | | 1-SPAN | | | | 2-SPAN | | | | 3-SPAN | | | |
|------------------|---|-------------------------------|-------|-------|-------|-------------------------------|-------|-------|-------|-------------------------------|-------|-------|-------|
| | | BASE STEEL THICKNESS (inches) | | | | BASE STEEL THICKNESS (inches) | | | | BASE STEEL THICKNESS (inches) | | | |
| | | 0.030 | 0.036 | 0.048 | 0.060 | 0.030 | 0.036 | 0.048 | 0.060 | 0.030 | 0.036 | 0.048 | 0.060 |
| 6.0 | S | 131 | 160 | 221 | 283 | 143 | 179 | 240 | 298 | 178 | 223 | 300 | 372 |
| | D | 264 | 336 | 484 | 629 | 635 | 806 | 1161 | 1509 | 500 | 635 | 914 | 1188 |
| 6.5 | S | 111 | 137 | 188 | 241 | 122 | 152 | 204 | 254 | 152 | 190 | 256 | 317 |
| | D | 208 | 264 | 380 | 495 | 499 | 634 | 913 | 1187 | 393 | 500 | 719 | 935 |
| 7.0 | S | 96 | 118 | 162 | 208 | 105 | 131 | 176 | 219 | 131 | 164 | 220 | 273 |
| | D | 167 | 212 | 305 | 396 | 400 | 508 | 731 | 950 | 315 | 400 | 576 | 748 |
| 7.5 | S | 84 | 103 | 141 | 181 | 91 | 114 | 154 | 191 | 114 | 143 | 192 | 238 |
| | D | 135 | 172 | 248 | 322 | 325 | 413 | 594 | 773 | 256 | 325 | 468 | 608 |
| 8.0 | S | 74 | 90 | 124 | 159 | 80 | 101 | 135 | 167 | 100 | 126 | 169 | 209 |
| | D | 112 | 142 | 204 | 265 | 268 | 340 | 490 | 637 | 211 | 268 | 386 | 501 |
| 8.5 | S | 65 | 80 | 110 | 141 | 71 | 89 | 120 | 148 | 89 | 111 | 149 | 185 |
| | D | 93 | 118 | 170 | 221 | 223 | 284 | 408 | 531 | 176 | 223 | 322 | 418 |
| 9.0 | S | 58 | 71 | 98 | 126 | 63 | 79 | 107 | 132 | 79 | 99 | 133 | 165 |
| | D | 78 | 100 | 143 | 186 | 188 | 239 | 344 | 447 | 148 | 188 | 271 | 352 |
| 9.5 | S | 52 | 64 | 88 | 113 | 57 | 71 | 96 | 119 | 71 | 89 | 120 | 148 |
| | D | 67 | 85 | 122 | 158 | 160 | 203 | 292 | 380 | 126 | 160 | 230 | 299 |
| 10.0 | S | 47 | 58 | 80 | 102 | 51 | 64 | 86 | 107 | 64 | 80 | 108 | 134 |
| | D | 57 | 73 | 104 | 136 | 137 | 174 | 251 | 326 | 108 | 137 | 197 | 257 |
| 10.5 | S | 43 | 52 | 72 | 92 | 47 | 58 | 78 | 97 | 58 | 73 | 98 | 122 |
| | D | 49 | 63 | 90 | 117 | 118 | 150 | 217 | 282 | 93 | 118 | 171 | 222 |
| 11.0 | S | 39 | 48 | 66 | 84 | 42 | 53 | 71 | 89 | 53 | 66 | 89 | 111 |
| | D | 43 | 55 | 78 | 102 | 103 | 131 | 188 | 245 | 81 | 103 | 148 | 193 |
| 11.5 | S | 36 | 44 | 60 | 77 | 39 | 49 | 65 | 81 | 49 | 61 | 82 | 101 |
| | D | 38 | 48 | 69 | 89 | 90 | 115 | 165 | 214 | 71 | 90 | 130 | 169 |
| 12.0 | S | 33 | 40 | 55 | 71 | 36 | 45 | 60 | 74 | 45 | 56 | 75 | 93 |
| | D | 33 | 42 | 60 | 79 | 79 | 101 | 145 | 189 | 62 | 79 | 114 | 149 |
| 12.5 | S | 30 | 37 | 51 | 65 | 33 | 41 | 55 | 69 | 41 | 51 | 69 | 86 |
| | D | 29 | 37 | 53 | 70 | 70 | 89 | 128 | 167 | 55 | 70 | 101 | 131 |
| 13.0 | S | 28 | 34 | 47 | 60 | 30 | 38 | 51 | 63 | 38 | 48 | 64 | 79 |
| | D | 26 | 33 | 48 | 62 | 62 | 79 | 114 | 148 | 49 | 62 | 90 | 117 |
| 13.5 | S | 26 | 32 | 44 | 56 | 28 | 35 | 47 | 59 | 35 | 44 | 59 | 74 |
| | D | 23 | 29 | 42 | 55 | 56 | 71 | 102 | 132 | 44 | 56 | 80 | 104 |
| 14.0 | S | 24 | 29 | 41 | 52 | 26 | 33 | 44 | 55 | 33 | 41 | 55 | 68 |
| | D | 21 | 26 | 38 | 49 | 50 | 63 | 91 | 119 | 39 | 50 | 72 | 94 |

- Notes:**
- 1 Based on ASTM A 653 Grade 33 structural steel.
 - 2 Values in row "S" are based on strength.
 - 3 Values in row "D" are based on deflection of 1/180th span.
 - 4 Web crippling not included in strength calculations. See Example.

Limit States Design principles were used in accordance with CSA Standard S136-01

