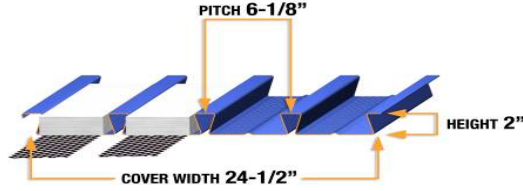


SECTION PROPERTIES

fy=40 ksi

| GAGE | Wd | I _b (DEFLECTION) | S _p | S _n | Rbe | | | Rbi | | | V _a |
|------|------|--------------------------------|----------------|----------------|------|------|------|------|------|------|----------------|
| | | | | | 2" | 3" | 4" | 3" | 4" | 5" | |
| 22 | 2.06 | 0.383 | 0.283 | 0.288 | 712 | 820 | 910 | 1271 | 1395 | 1505 | 2949 |
| 20 | 2.50 | 0.466 | 0.355 | 0.355 | 1013 | 1162 | 1287 | 1811 | 1981 | 2131 | 3562 |
| 18 | 3.31 | 0.620 | 0.474 | 0.480 | 1688 | 1923 | 2121 | 3020 | 3289 | 3526 | 4676 |
| 16 | 4.17 | 0.784 | 0.603 | 0.606 | 2574 | 2915 | 3204 | 4613 | 5003 | 5346 | 5844 |



| ASD DESIGN | | MAXIMUM SUPERIMPOSED UNIFORM ASD LOADS (psf) | | | | | | | | | | | |
|------------|-------------------|--|----|-----|-----|-------------|-----|-----|------|-------------|-----|------|------|
| Span | Load Combinations | SINGLE SPAN | | | | DOUBLE SPAN | | | | TRIPLE SPAN | | | |
| | | GAGE | | | | | | | | | | | |
| | | 22 | 20 | 18 | 16 | 22 | 20 | 18 | 16 | 22 | 20 | 18 | 16 |
| 8' - 6" | D+L (Strength) | 61 | 76 | 102 | 129 | 56* | 70* | 94* | 119* | 67* | 83* | 113* | 142* |
| | D+L (Deflection) | 39 | 47 | 63 | 80 | 56 | 70 | 94 | 119 | 67 | 83 | 113 | 142 |
| | L (Deflection) | 27 | 33 | 44 | 56 | 56 | 70 | 94 | 119 | 51 | 63 | 83 | 105 |
| 9' - 0" | D+L (Strength) | 54 | 68 | 90 | 115 | 51* | 64* | 86* | 108* | 61* | 76* | 103* | 130* |
| | D+L (Deflection) | 32 | 39 | 52 | 66 | 51 | 64 | 86 | 108 | 61 | 76 | 102 | 129 |
| | L (Deflection) | 23 | 28 | 37 | 47 | 51 | 64 | 86 | 108 | 43 | 53 | 70 | 89 |
| 9' - 6" | D+L (Strength) | 48 | 60 | 81 | 103 | 47* | 59* | 79* | 99* | 56* | 70* | 95* | 119* |
| | D+L (Deflection) | 27 | 33 | 44 | 56 | 47 | 59 | 79 | 99 | 53 | 65 | 86 | 109 |
| | L (Deflection) | 20 | 24 | 32 | 40 | 47 | 57 | 76 | 96 | 37 | 45 | 60 | 75 |
| 10' - 0" | D+L (Strength) | 43 | 54 | 73 | 92 | 44* | 54* | 73* | 91* | 52* | 65* | 87* | 110* |
| | D+L (Deflection) | 23 | 28 | 37 | 47 | 44 | 54 | 73 | 91 | 45 | 55 | 73 | 93 |
| | L (Deflection) | 17 | 20 | 27 | 34 | 40 | 49 | 65 | 83 | 32 | 38 | 51 | 65 |
| 10' - 6" | D+L (Strength) | 39 | 49 | 65 | 83 | 40* | 49* | 66* | 83* | 48* | 60* | 81* | 101* |
| | D+L (Deflection) | 20 | 24 | 32 | 40 | 40 | 49 | 66 | 83 | 39 | 47 | 63 | 80 |
| | L (Deflection) | 14 | 18 | 23 | 30 | 35 | 42 | 56 | 71 | 27 | 33 | 44 | 56 |
| 11' - 0" | D+L (Strength) | 35 | 44 | 59 | 76 | 36* | 44* | 60* | 76* | 45* | 56* | 75* | 94* |
| | D+L (Deflection) | 17 | 20 | 27 | 35 | 36 | 44 | 60 | 76 | 34 | 41 | 54 | 69 |
| | L (Deflection) | 13 | 15 | 20 | 26 | 30 | 37 | 49 | 62 | 24 | 29 | 38 | 49 |
| 11' - 6" | D+L (Strength) | 32 | 40 | 54 | 69 | 33* | 40* | 55* | 69* | 41* | 51* | 69* | 87* |
| | D+L (Deflection) | 14 | 18 | 23 | 30 | 33 | 40 | 55 | 69 | 29 | 35 | 47 | 60 |
| | L (Deflection) | 11 | 13 | 18 | 23 | 27 | 32 | 43 | 54 | 21 | 25 | 34 | 43 |
| 12' - 0" | D+L (Strength) | 29 | 37 | 49 | 63 | 30* | 37* | 50* | 63* | 38* | 47* | 63* | 80* |
| | D+L (Deflection) | 12 | 15 | 20 | 26 | 30 | 37 | 50 | 63 | 25 | 31 | 41 | 52 |
| | L (Deflection) | 10 | 12 | 16 | 20 | 23 | 28 | 38 | 48 | 18 | 22 | 30 | 37 |
| 12' - 6" | D+L (Strength) | 27 | 34 | 45 | 58 | 27* | 34* | 46* | 58* | 35* | 43* | 58* | 73* |
| | D+L (Deflection) | 11 | 13 | 18 | 22 | 27 | 34 | 46 | 58 | 22 | 27 | 36 | 45 |
| | L (Deflection) | 9 | 10 | 14 | 18 | 21 | 25 | 33 | 42 | 16 | 20 | 26 | 33 |
| 13' - 0" | D+L (Strength) | 25 | 31 | 42 | 53 | 25* | 31* | 42* | 53* | 32* | 39* | 53* | 67* |
| | D+L (Deflection) | 9 | 11 | 15 | 19 | 25 | 31 | 41 | 52 | 20 | 24 | 32 | 40 |
| | L (Deflection) | 8 | 9 | 12 | 16 | 18 | 22 | 30 | 38 | 14 | 17 | 23 | 29 |
| 13' - 6" | D+L (Strength) | 23 | 29 | 38 | 49 | 23* | 29* | 39* | 49* | 29* | 36* | 49* | 62* |
| | D+L (Deflection) | 8 | 10 | 13 | 17 | 23 | 27 | 36 | 46 | 17 | 21 | 28 | 35 |
| | L (Deflection) | 7 | 8 | 11 | 14 | 16 | 20 | 27 | 34 | 13 | 16 | 21 | 26 |
| 14' - 0" | D+L (Strength) | 21 | 26 | 35 | 45 | 21* | 26* | 36* | 45* | 27* | 34* | 45* | 57* |
| | D+L (Deflection) | 7 | 9 | 12 | 15 | 20 | 24 | 32 | 41 | 15 | 19 | 25 | 31 |
| | L (Deflection) | 6 | 7 | 10 | 13 | 15 | 18 | 24 | 30 | 12 | 14 | 19 | 24 |
| 14' - 6" | D+L (Strength) | 19 | 24 | 33 | 42 | 20* | 24* | 33* | 42* | 25* | 31* | 42* | 53* |
| | D+L (Deflection) | 6 | 8 | 10 | 13 | 18 | 22 | 29 | 36 | 13 | 16 | 22 | 28 |
| | L (Deflection) | 6 | 7 | 9 | 11 | 13 | 16 | 21 | 27 | 10 | 13 | 17 | 21 |
| 15' - 0" | D+L (Strength) | 18 | 23 | 30 | 39 | 18* | 23* | 31* | 39* | 23* | 29* | 39* | 49* |
| | D+L (Deflection) | 5 | 7 | 9 | 11 | 16 | 19 | 26 | 33 | 12 | 15 | 19 | 25 |
| | L (Deflection) | 5 | 6 | 8 | 10 | 12 | 15 | 19 | 24 | 9 | 11 | 15 | 19 |

| | | | |
|---------|------------------|----|---|
| 8' - 6" | D+L (Strength) | 61 | ← Max. superimposed ASD dead + live load (psf) (governed by strength limitation) |
| | D+L (Deflection) | 39 | ← Max. superimposed ASD dead + live load (psf) (governed by deflection limitation of L/240 or 1") |
| | L (Deflection) | 27 | ← Max. superimposed ASD live load (psf) (governed by deflection limitation of L/360 or 1") |
| | | | ← Vertical load span (center to center spacing) |

- | | | | |
|----------------------|--|------------|--|
| Wd | Weight of deck (uncoated), psf | Rbe | Allowable exterior web crippling value per foot of deck width, plf |
| I_b | Moment of inertia for deflection per foot of deck width (in ⁴ /ft) | Rbi | Allowable interior web crippling value per foot of deck width, plf |
| S_p | Section modulus for positive bending per foot of deck width, (in ³ /ft) | D | Uniform dead load, psf |
| S_n | Section modulus for negative bending per foot of deck width, (in ³ /ft) | L | Uniform live load, psf |
| V_a | Allowable shear value per foot of deck width, plf | | |

- Notes:**
- Bending strength based on allowable flexural stress of 24 ksi.
 - Loads marked with asterisk (*) are governed by moment & shear, interior reactions (web crippling) or applied moment & reactions assuming 4" of interior bearing.
 - An upper limit of 400 psf has been applied to the loads.
 - Deck length over 45'-0" require inquiry and special accommodations. Please contact the Metal-Dek Group® for further information.