

| | | | | SECTION PROPERTIES | | | | | | ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values) | | | | | | | | | |
|------------|-------|-----------|------------|----------------------------------|---------------------------------------|----------------------------------|----------------------------------|---------------------------------------|----------------------------------|------------------------------------------------------------------------------|-------|-------|-------|-------|------|------|------|------|--|
| Width, in. | Gauge | Yield ksi | Weight psf | Top in Compression | | | Bottom in Compression | | | Negative Load | | | | | | | | | |
| | | | | I_{xx} in ⁴ /ft. | $I_{xx(eff)}$ in ⁴ /ft. | S_{xx} in ³ /ft. | I_{xx} in ⁴ /ft. | $I_{xx(eff)}$ in ⁴ /ft. | S_{xx} in ³ /ft. | 1' | 1.5' | 2' | 2.5' | 3' | 3.5' | 4' | 4.5' | 5' | |
| 12 | 24 | 50 | 1.32 | 0.0629 | 0.0741 | 0.0648 | 0.1015 | 0.0903 | 0.0808 | 156.1 | 141.9 | 127.6 | 113.4 | 99.2 | 84.9 | 70.7 | 56.4 | 42.2 | |
| 12 | 22 | 50 | 1.60 | 0.0786 | 0.0916 | 0.0835 | 0.1235 | 0.1105 | 0.0993 | 156.1 | 143.8 | 131.4 | 119.1 | 106.7 | 94.4 | 82.0 | 69.7 | 57.3 | |
| 12 | 20 | 33 | 1.94 | 0.1112 | 0.1264 | 0.1288 | 0.1635 | 0.1483 | 0.1346 | 156.1 | 143.8 | 131.4 | 119.1 | 106.7 | 94.4 | 82.0 | 69.7 | 57.3 | |
| 12 | 18 | 33 | 2.35 | 0.1550 | 0.1724 | 0.1953 | 0.2150 | 0.1976 | 0.1796 | 156.1 | 143.8 | 131.4 | 119.1 | 106.7 | 94.4 | 82.0 | 69.7 | 57.3 | |

- Theoretical section properties for steel panels have been calculated per AISI S100 Specification for the Design of Cold-Formed Steel Structural Members.
- Theoretical section properties for aluminum panels have been calculated per the latest edition of the Aluminum Association Design Manual.
- $I_{xx(eff)}$ values are "effective" stiffness properties for positive (downward) load induced deflection determination.
- S_{xx} values are to be used for flexural (bending) stress determination.
- Charted Load/Span values are based on ASTM E1592-05 (2017) testing protocol.
- Charted Load/Span values above are based on Allowable Stress Design (ASD)....Load Resistance Factor Design (LRFD) technique not recommended for charted values.
- Charted Allowable Uniform Loads are based on the Ultimate Uniform Load (per ASTM E1592-05 testing) divided by a 2.00 Factor-of-Safety.
- Charted Allowable Uniform Loads do not consider panel weight (Dead Load) or clip-to-substrate (structure) fastener connection strength.
- Clip-to-substrate (structure) fastener evaluation and analysis should be performed by a licensed structural engineer.
- Panel substrate (structure) may include: open-framing, plywood/OSB, or metal deck.
- Deflection limit consideration for positive (downward) loading is limited to a deflection ratio of L/180 of the span...where "L" is the span in inches.
- Charted Allowable Uniform Loads cannot be increased by 1/3.
- Tested assembly used 24 ga. High Wind Clip.
- Tested assembly for Aluminum used stitch screws at 24" o/c for 5 ft. span and 12" o/c for 1 ft. span.

| | | | | SECTION PROPERTIES | | | | | | ALLOWABLE UNIFORM LOADS, psf For various support spacings (i.e. span values) | | | | | | | | | |
|------------|--------|-----------|------------|----------------------------------|---------------------------------------|----------------------------------|----------------------------------|---------------------------------------|----------------------------------|---------------------------------------------------------------------------------|-------|-------|-------|-------|------|------|------|------|------|
| Width, in. | Gauge | Yield ksi | Weight psf | Top in Compression | | | Bottom in Compression | | | Positive Load | | | | | | | | | |
| | | | | I_{xx} in ⁴ /ft. | $I_{xx(eff)}$ in ⁴ /ft. | S_{xx} in ³ /ft. | I_{xx} in ⁴ /ft. | $I_{xx(eff)}$ in ⁴ /ft. | S_{xx} in ³ /ft. | 1' | 2' | 3' | 4' | 5' | 6' | 7' | 8' | 9' | 10' |
| 12 | 24 | 50 | 1.32 | 0.0629 | 0.0741 | 0.0648 | 0.1015 | 0.0903 | 0.0808 | 705.5 | 352.7 | 180.0 | 101.3 | 64.8 | 45.0 | 33.1 | 25.3 | 20.0 | 16.2 |
| 12 | 22 | 50 | 1.60 | 0.0786 | 0.0916 | 0.0835 | 0.1235 | 0.1105 | 0.0993 | 949.1 | 474.6 | 231.9 | 130.5 | 83.5 | 58.0 | 42.6 | 32.6 | 25.8 | 20.9 |
| 12 | 20 | 33 | 1.94 | 0.1112 | 0.1264 | 0.1288 | 0.1635 | 0.1483 | 0.1346 | 891.8 | 445.9 | 238.5 | 134.2 | 85.9 | 59.6 | 43.8 | 33.5 | 26.5 | 21.5 |
| 12 | 18 | 33 | 2.35 | 0.1550 | 0.1724 | 0.1953 | 0.2150 | 0.1976 | 0.1796 | 1425.5 | 712.7 | 332.6 | 187.1 | 119.7 | 83.2 | 61.1 | 46.8 | 37.0 | 29.9 |
| 12 | 0.032" | 19 | 0.63 | 0.2060 | 0.2060 | 0.5184 | 0.2060 | 0.2060 | 0.1817 | 108.2 | 54.1 | 36.1 | 27.1 | 21.6 | 18.0 | 15.5 | 13.5 | 10.8 | |
| 12 | 0.040" | 19 | 0.78 | 0.2550 | 0.2550 | 0.6398 | 0.2550 | 0.2550 | 0.2233 | 166.4 | 83.2 | 55.5 | 41.6 | 33.3 | 27.7 | 23.8 | 19.9 | 15.7 | 12.7 |

- Theoretical section properties for steel panels have been calculated per 2020 AISI S100 Specification for the Design of Cold-Formed Steel Structural Members.
- Theoretical section properties for aluminum panels have been calculated per the latest edition of the Aluminum Association Design Manual.
- $I_{xx(eff)}$ values are "effective" stiffness properties for positive (downward) load induced deflection determination.
- Allowable load is calculated in accordance with 2020 AISI S100 specifications considering bending, shear, combined bending and shear and deflection. Allowable load considers a 3 or more equal span condition.
- S_{xx} values are to be used for flexural (bending) stress determination.
- Allowable load does not address panel weight, fasteners, connection strength or support material.
- Allowable load includes web crippling.
- Load/Span values are based on theoretical computations and not load testing.
- Deflection is not considered.
- Allowable loads do not include a 1/3 stress increase for wind.
- When panels are installed over solid or closely fitted sheathing, the capacity is limited to the capacity of the underlying sheathing.



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