

**THEORETICAL ALLOWABLE LIVE AND WIND LOADS**

19" American Architectural Metal Manufacturers TLNF-1500/TLC-1500									
SPAN (ft)	SINGLE SPAN CONDITION								
	26 Gauge & 50 ksi			24 Gauge & 50 ksi			22 Gauge & 50 ksi		
	LL (S) (psf)	LL (D) (psf)	WL (psf)	LL (S) (psf)	LL (D) (psf)	WL (psf)	LL (S) (psf)	LL (D) (psf)	WL (psf)
2	94.1	94.1	108.1	140.4	140.4	147.5	176.0	176.0	188.2
2.5	60.2	60.2	69.2	89.9	89.9	94.4	112.6	112.6	120.4
3	41.8	41.8	48.1	62.4	62.4	65.6	78.2	78.2	83.6
3.5	30.7	30.7	35.3	45.8	45.8	48.2	57.5	57.5	61.5
4	23.5	23.5	27.0	35.1	35.1	36.9	44.0	44.0	47.0
4.5	18.6	18.6	21.4	27.7	27.7	29.1	34.8	34.8	37.2
5	15.1	15.1	17.3	22.5	22.5	23.6	28.2	28.2	30.1
5.5	12.4	12.4	14.3	18.6	18.6	19.5	23.3	23.3	24.9
SPAN (ft)	TWO SPAN CONDITION								
	26 Gauge & 50 ksi			24 Gauge & 50 ksi			22 Gauge & 50 ksi		
	LL (S) (psf)	LL (D) (psf)	WL (psf)	LL (S) (psf)	LL (D) (psf)	WL (psf)	LL (S) (psf)	LL (D) (psf)	WL (psf)
2	81.3	81.3	125.2	110.9	110.9	186.7	141.5	141.5	234.1
2.5	52.0	52.0	80.1	71.0	71.0	119.5	90.6	90.6	149.8
3	36.1	36.1	55.6	49.3	49.3	83.0	62.9	62.9	104.0
3.5	26.5	26.5	40.9	36.2	36.2	61.0	46.2	46.2	76.4
4	20.3	20.3	31.3	27.7	27.7	46.7	35.4	35.4	58.5
4.5	16.1	16.1	24.7	21.9	21.9	36.9	28.0	28.0	46.2
5	13.0	13.0	20.0	17.7	17.7	29.9	22.6	22.6	37.5
5.5	10.8	10.8	16.5	14.7	14.7	24.7	18.7	18.7	31.0
SPAN (ft)	THREE OR MORE SPAN CONDITION								
	26 Gauge & 50 ksi			24 Gauge & 50 ksi			22 Gauge & 50 ksi		
	LL (S) (psf)	LL (D) (psf)	WL (psf)	LL (S) (psf)	LL (D) (psf)	WL (psf)	LL (S) (psf)	LL (D) (psf)	WL (psf)
2	95.0	95.0	146.2	129.6	129.6	218.1	165.3	165.3	273.5
2.5	60.8	60.8	93.6	82.9	82.9	139.6	105.8	105.8	175.0
3	42.2	42.2	65.0	57.6	57.6	97.0	73.5	73.5	121.5
3.5	31.0	31.0	47.7	42.3	42.3	71.2	54.0	54.0	89.3
4	23.7	23.7	36.6	32.4	32.4	54.5	41.3	41.3	68.4
4.5	18.8	18.8	28.9	25.6	25.6	43.1	32.7	32.7	54.0
5	15.2	15.2	23.4	20.7	20.7	34.9	26.4	26.4	43.8
5.5	12.6	12.6	19.3	17.1	17.1	28.8	21.9	21.9	36.2

**Notes:**

- \* Theoretical allowable loads are based on uniform span lengths.
- \* LL (S) is allowable live load based on stress limitation
- \* LL (D) is allowable live load based on deflection limitation of L/180

SECTION PROPERTIES: 19" American Architectural Metal Manufacturers TLNF-1500/TLC-1500									
Gauge	Thickness in.	Weight psf	Yield Stress ksi	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
				$I_{xx}$	$S_{xx}$	$M_a$	$I_{xx}$	$S_{xx}$	$M_a$
				in <sup>4</sup> /ft	in <sup>3</sup> /ft	in.kips/ft	in <sup>4</sup> /ft	in <sup>3</sup> /ft	in.kips/ft
26	0.018	0.926	50.0	0.026	0.019	0.565	0.015	0.016	0.488
24	0.024	1.229	50.0	0.038	0.028	0.842	0.022	0.022	0.665
22	0.030	1.528	50.0	0.048	0.035	1.056	0.029	0.028	0.849

**Notes on Section Properties and Load Table:**

- \* Section properties and allowables are calculated in accordance with 1996 AISI Specifications.
- \* I +/- is for deflection determination.
- \* S +/- is for bending determination.
- \*  $M_a$  is allowable bending moment.
- \* All values are for one foot of panel width.
- \* These loads are for panel strength. Frames, purlins, clips, fasteners and all supports must be designed to resist all loads imposed on the panel,
- \* Allowable outward loads based on stress have been increased by 33.33 % for wind uplift.
- \* Allowable loads for deflection are based on deflection limitation of span/180.
- \* For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual 'live load' carrying capacity of the panel.
- \* Minimum bearing length must be checked.
- \* Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.