TAYLOR METAL PRODUCTS

Long Span Series
TMP 2-6-30 With 5 screws
Roof & Wall Panel

				SECTION PROPERTIES						ALLOWABLE UNIFORM LOADS, psf For various support spacings (i.e. span values)						
				Top in Compression			Bottom in Compression			Negative Load						
Width, in.	Gauge	Yield ksi	Weight psf	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	2'	2.5'	3'	3.5	4'	4.5	5'
30	24	50	1.52	0.2490	0.2350	0.1968	0.2010	0.2150	0.1814	180.0	163.3	146.7	130.0	113.3	96.7	80.0
30	22	50	1.80	0.3048	0.2871	0.2438	0.2484	0.2615	0.2292	135.0	125.8	116.7	107.5	98.3	89.2	80.0
30	20	33	2.20	0.4040	0.3854	0.3378	0.3400	0.3585	0.3360	135.0	125.8	116.7	107.5	98.3	89.2	80.0
30	18	33	2.86	0.5360	0.5198	0.4512	0.4800	0.4962	0.5076	135.0	125.8	116.7	107.5	98.3	89.2	80.0

1. Theoretical section properties for steel panels have been calculated per AISI S100 Specification for the Design of Cold-Formed Steel Structural Members.
2. $I_{xx\ (eff)}$ values are "effective" stiffness properties for positive (downward) load induced deflection determination.
3. S_{xx} values are to be used for flexural (bending) stress determination.
4. Charted Load/Span values are based on ASTM E1592-05 (2017) testing protocol.
5. Charted Load/Span values above are based on Allowable Stress Design (ASD).....Load Resistance Factor Design (LRFD) technique not recommended for charted values.
6. Charted Allowable Uniform Loads are based on the Ultimate Uniform Load (per ASTM E1592-05 testing) divided by a 2.00 Factor-of-Safety.
7. Charted Allowable Uniform Loads do not consider panel weight (Dead Load) or clip-to-substrate (structure) fastener connection strength.
8. Panel-to-substrate (structure) fastener evaluation and analysis should be performed by a licensed structural engineer.
9. Minimum recommended substrate (structure) recommendations:
   a. Open-framing (i.e. purlins) - 16 ga. (design thickness = 0.0566")
   b. Plywood/OSB - 15/32" or thicker is recommended to assure an effective degree of fastener thread engagement
   c. Metal deck - 22 ga. (design thickness = 0.0283")
10. Charted Allowable Uniform Loads cannot be increased by 1/3.
11. Tested assembly used five (5) fasteners per panel.

				SECTION PROPERTIES						ALLOWABLE UNIFORM LOADS, psf For various support spacings (i.e. span values)									
				Top in Compression			Bottom in Compression			Positive Load									
Width, in.	Gauge	Yield ksi	Weight psf	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'
30	24	50	1.52	0.2490	0.2350	0.1968	0.2010	0.2150	0.1814	752.7	376.4	250.9	188.2	150.6	125.5	92.6	70.9	56.0	45.4
30	22	50	1.80	0.3048	0.2871	0.2438	0.2484	0.2615	0.2292	1096.4	548.2	365.5	274.1	219.3	159.2	116.94	89.5	70.7	57.3
30	20	33	2.20	0.4040	0.3854	0.3378	0.3400	0.3585	0.3360	1105.5	552.7	368.5	276.4	221.1	154.0	113.1	86.6	68.4	55.4
30	18	33	2.86	0.5360	0.5198	0.4512	0.4800	0.4962	0.5076	1911.8	955.9	637.3	465.3	297.8	206.8	151.93	116.3	91.9	74.5

1. Theoretical section properties for Steel panelshave been calculated per 2020 AISI S100 North American Specification for the Design of Cold-Formed Steel Structural Member. I_{xx} and S_{xx} are effective section properties for deflection and bending.
2. $I_{xx\ (eff)}$ values are "effective" stiffness properties for positive (downward) load induced deflection determination.
3. Allowable loads for Steel panels are 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.
4. S_{xx} values are to be used for flexural (bending) stress determination.
5. Allowable load does not address panel weight, fasteners, connection strength or support material.
6. Allowable load includes web crippling.
7. Load/Span values are based on theoretical computations and not load testing.
8. Deflection is not considered.
9. Allowable loads do not include a 1/3 stress increase for wind.
10. The TMP 2-6-30 Panel when installed as a three-span condition with spans of 5 ft. on-center for Steel and 3 ft. on-center for Aluminum are is capable of withstanding the minimum uniform distributed load of 20 psf (0.958 kPa) noted in Table 1607.1 of the IBC and a minimum concentrated load of 300 lbf (1.33 kN).
11. When panels are installed over solid or closely fitted deck sheathing, the capacity is limited to the capacity of the underlying sheathing.
12. Assembly uses five (5) screws per panel.

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