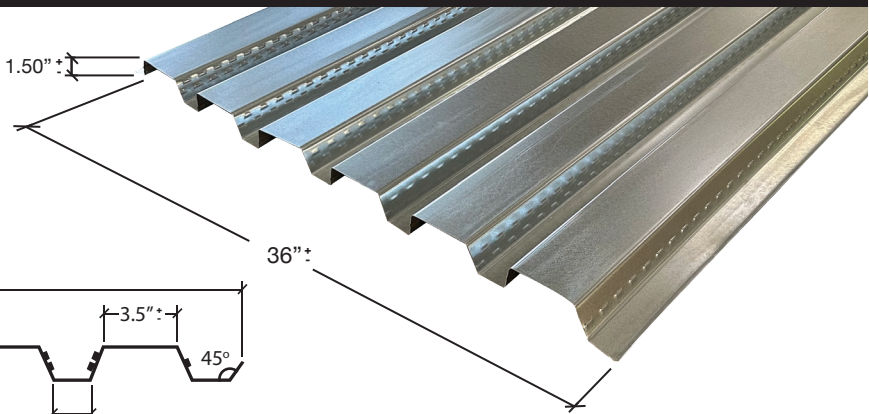
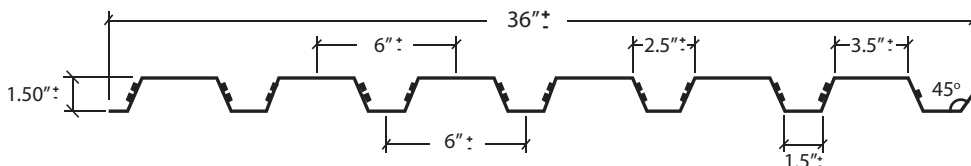




Type B Panel 1.5" COMPOSITE

Coverage



Description:

Metal Decking Type B Composite panel is a wide rib steel product that can be, as shown, used in Non-Composite and Composite Steel Form Deck. 1.5" Composite floor deck panels are primarily and used for pouring concrete slabs. Panel has embossments that "grip" the concrete slab and typically reinforced with rebar or wire mesh.

Specification:

1.5" Metal Decking Type B panel is a rollformed Galvanized steel product conforming to ASTM A-653 SS, Structural Quality Grade 50, with a G-90 hot dipped galvanized coating designation for high corrosion resistance.

Properties

Deck Gauge	Deck Weight W_{dd} (psf)	Base Metal Thickness t (in.)	Yield Strength F_y (ksi)	Effective Moment of Inertia at Service Load $I_d = (2I_o - I_p)/3$		Effective Section Modulus at $F_y = 50$ ksi		Allowable Moment		Vertical Web Shear V_n / Ω (lb/ft)
				I_{d+} (in ⁴ /ft)	I_{d-} (in ⁴ /ft)	S_{e+} (in ³ /ft)	S_{e-} (in ³ /ft)	$M_n +/\Omega$ (lb-ft/ft)	$M_n -/\Omega$ (lb-ft/ft)	
18	2.6	0.0474	50	0.290	0.277	0.318	0.306	793	763	4209
20	2.0	0.0358	50	0.217	0.197	0.229	0.224	571	559	3207
22	1.6	0.0295	50	0.295	0.155	0.179	0.169	447	422	2654

Bearing Length of Webs

Deck Gauge	One- Flange Loading						Two- Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	1 1/2"	2"	3"	4"	3"	4"	1 1/2"	2"	3"	4"	3"	4"
18	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
20	1153	1263	1448	1574	2127	2289	1274	1368	1525	1632	2662	2881
22	807	887	1021	1115	1482	1602	842	908	1017	1093	1834	1994

* Tables conform to ANSI/SDI C-2017

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Maximum Unshored Spans

Composite Deck-Slab Properties

Slab Depth		Deck Gauge	Maximum Unshored Construction Clear Span			Concrete + Deck (psf)	Deflection $I_d = (I_{cr} + I_d)/2$ (in ⁴ /ft)	Moment M_o / Ω (kip-ft/ft)	Shear V_{no} / Ω (kip/ft)
Total	Topping		1	2	3				
3 1/2"	2"	18	8'-6"	9'-11"	10'-3"	38.5	4.11	3.93	3.36
		20	7'-6"	8'-7"	8'-10"	37.9	3.68	3.08	3.36
		22	6'-5"	7'-5"	7'-7"	37.5	3.43	2.60	3.36
5"	3 1/2"	18	7'-6"	8'-9"	9'-0"	56.6	11.05	5.84	5.21
		20	6'-7"	7'-6"	7'-9"	56.0	9.97	4.53	5.21
		22	5'-8"	6'-6"	6'-8"	55.6	9.34	3.80	5.03
6"	4 1/2"	18	7'-1"	8'-2"	8'-5"	67.7	15.62	4.84	5.59
		20	6'-2"	7'-0"	7'-3"	68.1	16.63	5.78	6.10
		22	5'-4"	6'-1"	6'-3"	68.7	18.36	7.48	6.33

Superimposed Allowed Load, W_n / Ω , Limited by L/360 (psf) NWS (145 pcf) $f'_c = 3000$ psi

Total Slab Depth	Deck Gauge	Span (ft-in.)								
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
3 1/2"	18	1639	1219	830	523	350	246	179	134	103
	20	1501	947	646	464	314	220	160	120	93
	22	1261	793	539	386	287	205	150	112	86
5"	18	2545	1813	1241	897	673	520	410	329	267
	20	2210	1394	951	684	510	391	306	243	195
	22	1845	1160	789	565	419	319	248	195	155
6"	18	3095	2324	1593	1152	866	669	529	425	346
	20	2822	1782	1216	875	654	502	394	314	253
	22	2351	1480	1007	722	537	410	319	252	201

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