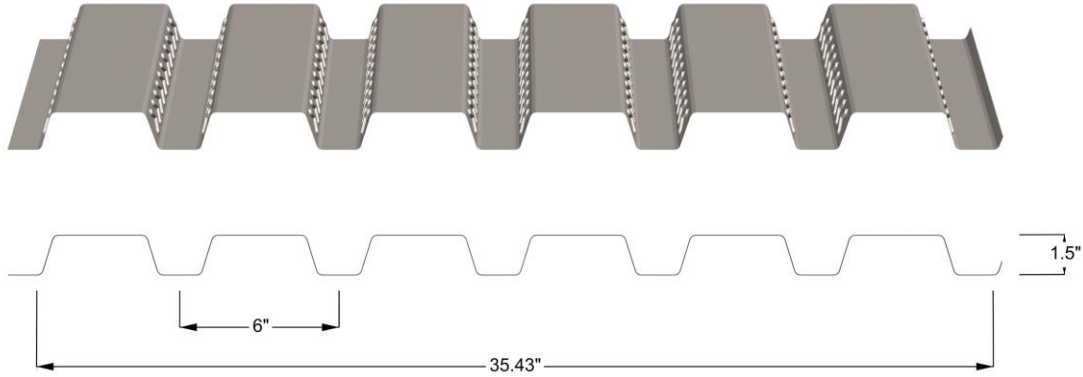


SM900FD-CL

TECHNICAL DATA SHEET



PRODUCT DESCRIPTION

Samson Metals SM900D Products are cold-formed panels with a total coverage of 35.43" (900 mm). With a nominal depth of 1.5" (38 mm) and cell spacing of 6" (152 mm) centre-to-centre. These products are manufactured using galvanized coated sheet steel in accordance to the ASTM A653 Standard with the corresponding zinc coating in either Z275 (G90) or Z120 (G40).

TECHNICAL DESIGN STANDARDS

The physical properties and load tables presented in this document are based on the North American Specification for the Design of Cold-Formed structural Members (CSA-S136-16) and the Canadian Sheet Steel Building Institute (CSSBI) Guide 12M-18.

The CSSBI dictates best practice for steel deck that is utilized in the calculations contained in this document. The engineer of record is responsible to ensure their design follows the requirements outlined in the CSSBI Standard and the National Building Code of Canada (NBCC).

CAUTIONARY STATEMENT

The reader expressly understands that using steel products beyond or outside of their intended scope of use is inherently dangerous. The reader expressly understands and agrees that Samson Metals is not responsible for any damages or loss caused by the use of Samson Metals products outside of the guidelines and specifications contained in this document. The reader is not relying on any representations made by Samson Metals that are not explicitly contained in this document.

SM900FD-CL - 33 KSI (228 Mpa) - LSD

PHYSICAL PROPERTIES FOR NON-COMPOSITE & COMPOSITE APPLICATIONS

Base Steel Thickness		NON-COMPOSITE								COMPOSITE					
GAUGE	Thk (in)	As	Ysb	Sm	Ss	Isd	Br Ext	Br Int	Wd	Slab Thk	Ic	d	Regress Coefficient	WOC	VOC
		(in ² / ft)	(in)	(in ³ / ft)	(in ³ / ft)	(in ⁴ / ft)	(lb/ ft)	(lb/ ft)	(PSF)	(in)	(in ⁴ / in)	(in)	K-Values	PSF	ft ³ / 100ft ²
22	0.030	0.4863	0.700	0.1823	0.1808	0.1506	767	1428	1.66	3.5	24.2	2.6	K1 = 5767 lb/ in ²	31.0	21.3
										4.0	36.1	3.1	K2 = 339 lb/in	37.0	25.5
										4.5	51.5	3.6	K3 = 2.225 lb/in ³	43.1	29.7
										5.0	70.6	4.1	K4 = 0 lb/ in ²	49.1	33.8
20	0.036	0.5823	0.734	0.2222	0.2296	0.1911	1066	1982	1.98	3.5	25.9	2.6	K1 = 5767 lb/ in ²	31.0	21.3
										4.0	38.6	3.1	K2 = 339 lb/in	37.0	25.5
										4.5	54.9	3.6	K3 = 2.225 lb/in ³	43.1	29.7
										5.0	75.3	4.1	K4 = 0 lb/ in ²	49.1	33.8
18	0.048	0.7807	0.792	0.3052	0.3122	0.2741	1817	3377	2.66	3.5	29.1	2.6	K1 = 5767 lb/ in ²	31.0	21.3
										4.0	43.3	3.1	K2 = 339 lb/in	37.0	25.5
										4.5	61.5	3.6	K3 = 2.225 lb/in ³	43.1	29.7
										5.0	84.1	4.1	K4 = 0 lb/ in ²	49.1	33.8
16	0.060	0.9726	0.832	0.3846	0.3859	0.3412	2711	5036	3.31	3.5	31.8	2.6	K1 = 5767 lb/ in ²	31.0	21.3
										4.0	47.4	3.1	K2 = 339 lb/in	37.0	25.5
										4.5	67.3	3.6	K3 = 2.225 lb/in ³	43.1	29.7
										5.0	91.9	4.1	K4 = 0 lb/ in ²	49.1	33.8

PHYSICAL PROPERTIES TABLE - DEFINITIONS & NOTES:

APPLIED CODE is LSD S136-16 (R2021).

MINIMUM SPECIFIED YIELD STRESS Fy = 33 KSI (228 MPa).

- Thk: Base Metal Thickness used in Design
- As Area of Steel
- Ysb Steel Gravity Center from Bottom Flange of Steel (After Effectiveness Iteration)
- Sm Section Modulus at Mid Span, Top in Compression
- Ss Section Modulus at Support, Top in Compression
- Isd Deflection Inertia When Top is in Compression
- Br (Ext) Crippling at External Support with a minimum Supporting Flange width of 3"
- Br (Int) Crippling at Internal Support with a minimum Supporting Flange width of 1.5"
- Wd Decking Weight
- Slab Thk Concrete Slab Depth measured from the lowest member of the Deck
- Ic Inertia of the Composite Slab.
- d Distance between the Steel neutral axis to the top of the concrete level.
- Regress Coef, K1, K2, K3 and K4 vales have been derived by physical product testing.
- WOC Weight of Concrete
- VOC Volume of Concrete

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SPECIFIED LOAD TABLES (PSF)																
SPAN (ft)	Concrete Slab Depth (in)															
	3.5				4.0				4.5				5.0			
	0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060
SINGLE SPAN (1-EQUAL SPAN)																
4.0	424	455	518	580	506	543	619	693	588	631	719	805	670	719	820	918
4.5	327	351	402	450	390	419	479	538	453	487	557	625	517	555	635	712
5.0	257	277	318	358	307	331	380	427	357	385	441	496	407	438	503	566
5.5	206	222	256	289	246	265	306	345	286	309	355	401	326	352	405	457
6.0	167	181	209	237	199	216	250	283	232	251	290	328	264	286	331	374
6.5	137	148	173	196	163	177	206	234	189	206	239	272	216	234	273	310
7.0	112	123	143	164	134	146	171	195	156	170	199	227	178	194	227	259
7.5	93	102	120	138	111	122	143	164	129	141	167	191	147	161	190	218
8.0	77	85	101	116	92	101	120	139	107	118	140	161	122	134	159	184
8.5	64	71	85	99	76	84	101	118	89	98	118	137	101	112	134	156
9.0	53	59	72	84	63	70	85	100	73	82	99	116	83	93	113	133
9.5	43	49	60	71	52	58	72	85	60	68	84	99	69	77	95	113
10.0	35	40	51	61	42	48	60	72	49	56	70	84	56	64	80	96
10.5	29	33	42	51	34	39	51	61	40	46	59	71	45	52	67	81
DOUBLE SPAN (2-EQUAL SPANS)																
4.0	424	455	518	580	506	543	619	693	588	631	719	805	670	719	820	918
4.5	327	351	402	450	390	419	479	538	453	487	557	625	517	555	635	712
5.0	257	277	318	358	307	331	380	427	357	385	441	496	407	438	503	566
5.5	206	222	256	289	246	265	306	345	286	309	355	401	326	352	405	457
6.0	167	181	209	237	199	216	250	283	232	251	290	328	264	286	331	374
6.5	137	148	173	196	163	177	206	234	189	206	239	272	216	234	273	310
7.0	112	123	143	164	134	146	171	195	156	170	199	227	178	194	227	259
7.5	93	102	120	138	111	122	143	164	129	141	167	191	147	161	190	218
8.0	77	85	101	116	92	101	120	139	107	118	140	161	122	134	159	184
8.5	64	71	85	99	76	84	101	118	89	98	118	137	101	112	134	156
9.0	53	59	72	84	63	70	85	100	73	82	99	116	83	93	113	133
9.5	43	49	60	71	52	58	72	85	60	68	84	99	69	77	95	113
10.0	35	40	51	61	42	48	60	72	49	56	70	84	56	64	80	96
10.5	29	33	42	51	34	39	51	61	40	46	59	71	45	52	67	81
TRIPLE SPAN (3-EQUAL SPANS)																
4.0	424	455	518	580	506	543	619	693	588	631	719	805	670	719	820	918
4.5	327	351	402	450	390	419	479	538	453	487	557	625	517	555	635	712
5.0	257	277	318	358	307	331	380	427	357	385	441	496	407	438	503	566
5.5	206	222	256	289	246	265	306	345	286	309	355	401	326	352	405	457
6.0	167	181	209	237	199	216	250	283	232	251	290	328	264	286	331	374
6.5	137	148	173	196	163	177	206	234	189	206	239	272	216	234	273	310
7.0	112	123	143	164	134	146	171	195	156	170	199	227	178	194	227	259
7.5	93	102	120	138	111	122	143	164	129	141	167	191	147	161	190	218
8.0	77	85	101	116	92	101	120	139	107	118	140	161	122	134	159	184
8.5	64	71	85	99	76	84	101	118	89	98	118	137	101	112	134	156
9.0	53	59	72	84	63	70	85	100	73	82	99	116	83	93	113	133
9.5	43	49	60	71	52	58	72	85	60	68	84	99	69	77	95	113
10.0	35	40	51	61	42	48	60	72	49	56	70	84	56	64	80	96
10.5	29	33	42	51	34	39	51	61	40	46	59	71	45	52	67	81

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LOAD TABLE NOTES:

1. Hatched Areas, signifies that Shoring shall be done during Erection at mid-span.
2. Under Concrete Weight and Erection Loads (As considered) the deflection is limited to $L/240$.
3. Concrete type is considered normal (145 PCF). Concrete minimum compressive Stress is 2.9 KSI.
4. Heavy Concentrated Loads, moving loads and vibratory loads are not recommended on a composite floor system without additional negative and transverse reinforcing.
5. The load table has not been limited, however, loads above 200 psf or in structures, or portions thereof, where loads are maintained for lengthy periods, such as warehouses, computer rooms, libraries or other conditions, where the effect of creep must be considered, Contact Samson Metals LTD.
6. The loads indicated in the load tables are, the weight of steel deck, and wet concrete and 20.9 psf uniformly distributed construction load or a 137 lb/ ft transverse live load have been included within the load tables.
7. Shoring shall be installed to divide span in respect of the allowable shoring limits as indicated in the table.
8. Grade of steel used to calculate the span capacities in the tables has a yield strength of 33 KSI (228 MPa) in conformance to ASTM A653 standard.
9. For engineered Stamped Load Tables, please contact Samson Metals Ltd.

FOR ADDITIONAL INFORMATION & RESOURCES, PLEASE CONTACT SAMSON METALS LTD.

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