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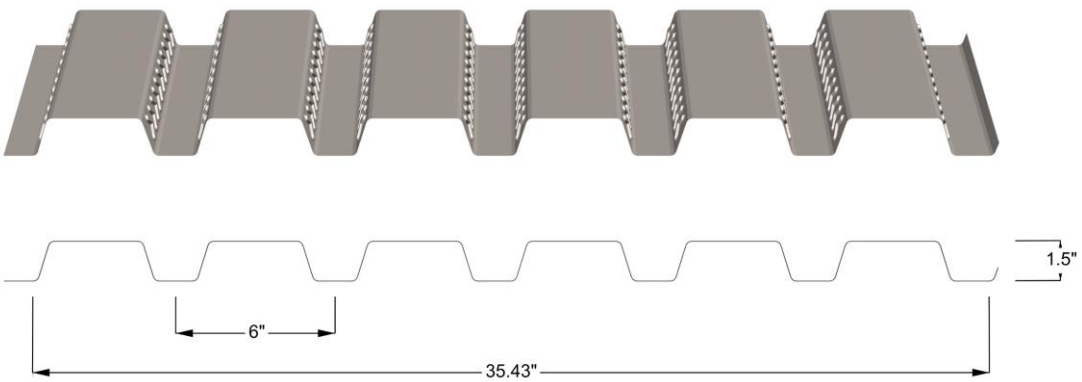
SM900FD-CL TECHNICAL DATA SHEET



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 dicates 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).

SM900FD-CL - 40 KSI (275 Mpa) - LSD

PHYSICAL PROPERTIES FOR NON-COMPOSITE & COMPOSITE APPLICATIONS

Base Steel Thickness		NON-COMPOSITE								COMPOSITE					
GAUGE	Thk (in)	As (in^2/ ft)	Ysb (in)	Sm (in^3/ ft)	Ss (in^3/ ft)	Isd (in^4/ ft)	Br Ext (lb/ ft)	Br Int (lb/ ft)	Wd (PSF)	Slab Thk (in)	Ic (in^4/ in)	d (in)	Regress Coefficient K-Values	WOC PSF	VOC ft^3/ $100ft^2$
22	0.030	0.4863	0.700	0.1801	0.1747	0.1455	927	1724.2	1.66	5.0	93.9	4.6	K1 = 5767 lb/ in^2	55.2	38.0
										5.5	121.8	5.1	K2 = 339 lb/in	61.3	42.2
										6.5	154.6	5.6	K3 = 2.225 lb/in^3	67.3	46.3
										7.0	192.8	6.1	K4 = 0 lb/ in^2	73.4	50.5
20	0.036	0.5823	0.734	0.2197	0.2225	0.1859	1287	2393.5	1.98	5.0	100.0	4.6	K1 = 5767 lb/ in^2	55.2	38.0
										5.5	129.4	5.1	K2 = 339 lb/in	61.3	42.2
										6.5	164.1	5.6	K3 = 2.225 lb/in^3	67.3	46.3
										7.0	204.3	6.1	K4 = 0 lb/ in^2	73.4	50.5
18	0.048	0.7807	0.792	0.3023	0.3122	0.2709	2195	4078.5	2.66	5.0	111.5	4.6	K1 = 5767 lb/ in^2	55.2	38.0
										5.5	144.1	5.1	K2 = 339 lb/in	61.3	42.2
										6.5	182.2	5.6	K3 = 2.225 lb/in^3	67.3	46.3
										7.0	226.3	6.1	K4 = 0 lb/ in^2	73.4	50.5
16	0.060	0.9726	0.832	0.3818	0.3859	0.3412	3274	6082.3	3.31	5.0	121.6	4.6	K1 = 5767 lb/ in^2	55.2	38.0
										5.5	157.0	5.1	K2 = 339 lb/in	61.3	42.2
										6.5	198.3	5.6	K3 = 2.225 lb/in^3	67.3	46.3
										7.0	245.9	6.1	K4 = 0 lb/ in^2	73.4	50.5

PHYSICAL PROPERTIES TABLE - DEFINITIONS & NOTES:

APPLIED CODE is LSD S136-16 (R2021).

MINIMUM SPECIFIED YIELD STRESS Fy = 40 KSI (275MPa).

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 values 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)															
	5.5				6.0				6.5				7.0			
	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-SPAN)																
4.0	752	807	920	1030	834	895	1021	1143	917	983	1121	1255	999	1071	1222	1368
4.5	580	623	713	800	643	691	791	887	707	760	869	974	770	828	947	1062
5.0	457	492	565	635	507	546	626	704	557	599	688	773	606	653	749	843
5.5	366	395	455	513	406	438	504	569	445	481	554	625	485	524	604	681
6.0	296	321	371	420	329	356	412	466	361	391	452	512	393	426	493	558
6.5	242	263	306	348	269	292	340	386	295	321	373	424	322	349	406	462
7.0	199	217	255	291	221	241	282	322	243	265	310	354	265	289	338	386
7.5	165	181	213	244	183	200	236	271	201	220	259	298	219	240	283	324
8.0	137	150	179	206	152	167	198	229	166	183	218	251	181	200	237	274
8.5	113	125	151	175	126	139	167	194	138	153	183	213	150	166	200	232
9.0	94	104	127	149	104	116	141	165	114	127	155	181	124	139	168	197
9.5	77	87	107	126	85	96	119	140	94	106	130	154	102	115	142	168
10.0	63	72	90	107	70	79	100	119	76	87	109	131	83	95	119	143
10.5	50	59	75	91	56	65	83	101	61	71	91	111	67	78	100	121
DOUBLE SPAN (2-EQUAL SPANS)																
4.0	752	807	920	1030	834	895	1021	1143	917	983	1121	1255	999	1071	1222	1368
4.5	580	623	713	800	643	691	791	887	707	760	869	974	770	828	947	1062
5.0	457	492	565	635	507	546	626	704	557	599	688	773	606	653	749	843
5.5	366	395	455	513	406	438	504	569	445	481	554	625	485	524	604	681
6.0	296	321	371	420	329	356	412	466	361	391	452	512	393	426	493	558
6.5	242	263	306	348	269	292	340	386	295	321	373	424	322	349	406	462
7.0	199	217	255	291	221	241	282	322	243	265	310	354	265	289	338	386
7.5	165	181	213	244	183	200	236	271	201	220	259	298	219	240	283	324
8.0	137	150	179	206	152	167	198	229	166	183	218	251	181	200	237	274
8.5	113	125	151	175	126	139	167	194	138	153	183	213	150	166	200	232
9.0	94	104	127	149	104	116	141	165	114	127	155	181	124	139	168	197
9.5	77	87	107	126	85	96	119	140	94	106	130	154	102	115	142	168
10.0	63	72	90	107	70	79	100	119	76	87	109	131	83	95	119	143
10.5	50	59	75	91	56	65	83	101	61	71	91	111	67	78	100	121
TRIPLE SPAN (3-EQUAL SPANS)																
4.0	752	807	920	1030	834	895	1021	1143	917	983	1121	1255	999	1071	1222	1368
4.5	580	623	713	800	643	691	791	887	707	760	869	974	770	828	947	1062
5.0	457	492	565	635	507	546	626	704	557	599	688	773	606	653	749	843
5.5	366	395	455	513	406	438	504	569	445	481	554	625	485	524	604	681
6.0	296	321	371	420	329	356	412	466	361	391	452	512	393	426	493	558
6.5	242	263	306	348	269	292	340	386	295	321	373	424	322	349	406	462
7.0	199	217	255	291	221	241	282	322	243	265	310	354	265	289	338	386
7.5	165	181	213	244	183	200	236	271	201	220	259	298	219	240	283	324
8.0	137	150	179	206	152	167	198	229	166	183	218	251	181	200	237	274
8.5	113	125	151	175	126	139	167	194	138	153	183	213	150	166	200	232
9.0	94	104	127	149	104	116	141	165	114	127	155	181	124	139	168	197
9.5	77	87	107	126	85	96	119	140	94	106	130	154	102	115	142	168
10.0	63	72	90	107	70	79	100	119	76	87	109	131	83	95	119	143
10.5	50	59	75	91	56	65	83	101	61	71	91	111	67	78	100	121

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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 40 KSI (275 MPa) in conformance to ASTM A653 standard.
9. For engineered Stamped Load Tables, please contact Samson Metals Ltd.