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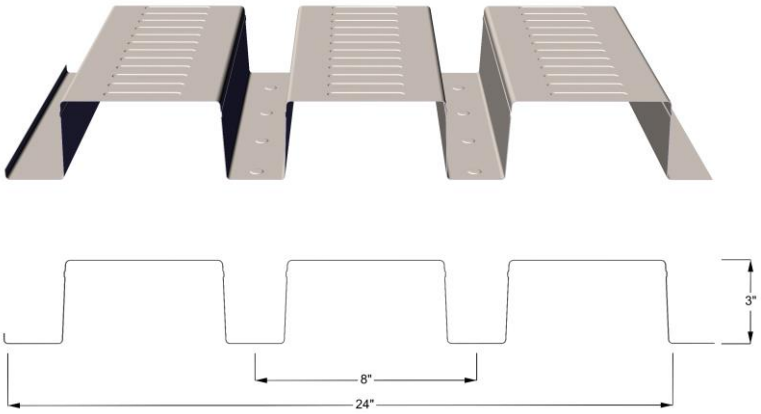
SM675FD-CL TECHNICAL DATA SHEET



PRODUCT DESCRIPTION

Samson Metals SM675FD Products are cold-formed panels with a total coverage of 24" (610 mm). With a nominal depth of 3" (76 mm) and cell spacing of 8" (203 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).

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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	0.6302	1.845	0.4603	0.4518	0.8879	548	1106	2.14	5.0	52.0	3.2	K1 = 4265 lb/in^2	34.4	23.7
										5.5	70.4	3.7	K2 = 414 lb/in	40.5	27.9
										6.0	92.5	4.2	K3 = 688 lb/in^3	46.6	32.0
										6.5	118.9	4.7	K4 = 0 lb/in^2	52.6	36.2
20	0.036	0.7546	1.868	0.5529	0.5573	1.0773	768	1538	2.57	5.0	54.4	3.2	K1 = 4265 lb/in^2	34.4	23.7
										5.5	73.8	3.7	K2 = 414 lb/in	40.5	27.9
										6.0	97.2	4.2	K3 = 688 lb/in^3	46.6	32.0
										6.5	125.0	4.7	K4 = 0 lb/in^2	52.6	36.2
18	0.048	1.0117	1.905	0.7438	0.7438	1.4424	1328	2624	3.44	5.0	58.9	3.2	K1 = 4265 lb/in^2	34.4	23.7
										5.5	80.3	3.7	K2 = 414 lb/in	40.5	27.9
										6.0	106.1	4.2	K3 = 688 lb/in^3	46.6	32.0
										6.5	136.7	4.7	K4 = 0 lb/in^2	52.6	36.2
16	0.060	1.2605	1.915	0.9225	0.9225	1.7946	1999	3917	4.29	5.0	62.9	3.2	K1 = 4265 lb/in^2	34.4	23.7
										5.5	86.0	3.7	K2 = 414 lb/in	40.5	27.9
										6.0	113.9	4.2	K3 = 688 lb/in^3	46.6	32.0
										6.5	146.9	4.7	K4 = 0 lb/in^2	52.6	36.2

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 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)															
	5.0				5.5				6.0				6.5			
	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)																
7.0	308	348	431	510	356	403	498	590	405	457	566	671	453	511	633	751
7.5	273	309	385	458	315	358	445	530	358	406	506	602	400	454	566	674
8.0	243	277	347	415	281	320	401	480	319	363	455	545	356	406	510	610
8.5	218	249	315	378	252	288	364	437	285	327	413	496	319	366	462	555
9.0	196	226	287	346	227	261	331	400	257	296	376	454	288	331	421	508
9.5	178	206	263	318	205	237	304	368	233	269	344	417	260	301	385	467
10.0	162	188	242	294	187	217	279	339	212	246	317	385	237	275	354	431
10.5	148	172	223	272	170	199	258	315	193	225	292	357	216	252	327	399
11.0	135	159	207	253	156	183	239	293	177	207	271	332	197	232	303	371
11.5	124	146	192	236	143	169	222	273	162	191	251	310	181	214	281	346
12.0	114	135	179	221	132	156	207	255	149	177	234	290	167	198	262	324
12.5	106	126	167	207	122	145	193	239	138	164	219	272	154	183	244	304
13.0	98	117	157	195	112	135	181	225	127	152	205	255	142	170	229	285
13.5	90	109	147	184	104	125	169	212	118	142	192	240	131	158	214	269
DOUBLE SPAN (2-EQUAL SPANS)																
7.0	308	348	431	510	356	403	498	590	405	457	566	671	453	511	633	751
7.5	273	309	385	458	315	358	445	530	358	406	506	602	400	454	566	674
8.0	243	277	347	415	281	320	401	480	319	363	455	545	356	406	510	610
8.5	218	249	315	378	252	288	364	437	285	327	413	496	319	366	462	555
9.0	196	226	287	346	227	261	331	400	257	296	376	454	288	331	421	508
9.5	178	206	263	318	205	237	304	368	233	269	344	417	260	301	385	467
10.0	162	188	242	294	187	217	279	339	212	246	317	385	237	275	354	431
10.5	148	172	223	272	170	199	258	315	193	225	292	357	216	252	327	399
11.0	135	159	207	253	156	183	239	293	177	207	271	332	197	232	303	371
11.5	124	146	192	236	143	169	222	273	162	191	251	310	181	214	281	346
12.0	114	135	179	221	132	156	207	255	149	177	234	290	167	198	262	324
12.5	106	126	167	207	122	145	193	239	138	164	219	272	154	183	244	304
13.0	98	117	157	195	112	135	181	225	127	152	205	255	142	170	229	285
13.5	90	109	147	184	104	125	169	212	118	142	192	240	131	158	214	269
TRIPLE SPAN (3-EQUAL SPANS)																
7.0	308	348	431	510	356	403	498	590	405	457	566	671	453	511	633	751
7.5	273	309	385	458	315	358	445	530	358	406	506	602	400	454	566	674
8.0	243	277	347	415	281	320	401	480	319	363	455	545	356	406	510	610
8.5	218	249	315	378	252	288	364	437	285	327	413	496	319	366	462	555
9.0	196	226	287	346	227	261	331	400	257	296	376	454	288	331	421	508
9.5	178	206	263	318	205	237	304	368	233	269	344	417	260	301	385	467
10.0	162	188	242	294	187	217	279	339	212	246	317	385	237	275	354	431
10.5	148	172	223	272	170	199	258	315	193	225	292	357	216	252	327	399
11.0	135	159	207	253	156	183	239	293	177	207	271	332	197	232	303	371
11.5	124	146	192	236	143	169	222	273	162	191	251	310	181	214	281	346
12.0	114	135	179	221	132	156	207	255	149	177	234	290	167	198	262	324
12.5	106	126	167	207	122	145	193	239	138	164	219	272	154	183	244	304
13.0	98	117	157	195	112	135	181	225	127	152	205	255	142	170	229	285
13.5	90	109	147	184	104	125	169	212	118	142	192	240	131	158	214	269

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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.