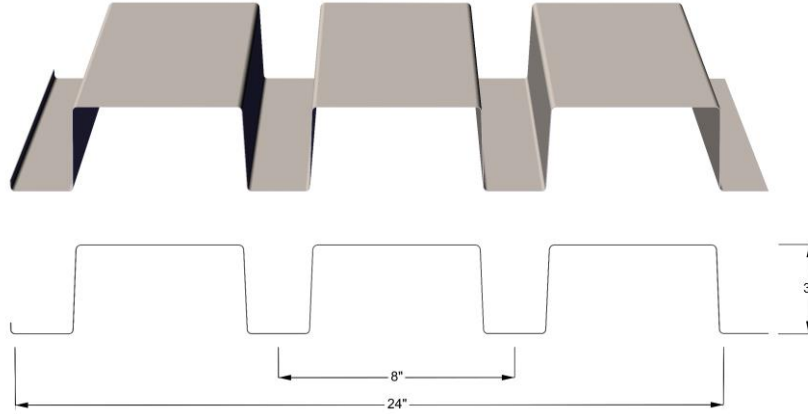


SM675RD-CL

TECHNICAL DATA SHEET



PRODUCT DESCRIPTION

Samson Metals SM675RD 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 10M-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.

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PHYSICAL PROPERTIES FOR STEEL ROOF DECK

				STEEL DECK PROPERTIES (RD) PER PANEL WIDTH										
BASE STEEL THICKNESS		Blank	PROD	Shear & Web Crippling			Top Flat in Compression				Bottom Flat in Compression			
GAUGE	Thk (in)	Girth	WGT	Va	Pa (End)	Pa (Int)	(Def) Ix	Sx (top)	Sx (bot)	Ma	(Def) Ix	Sx (top)	Sx (bot)	Ma
		(ft)	(lb/ft²)	(Kips)	(Kips)	(Kips)	(in⁴)	(in³)	(in³)	(Kip-ft)	(in⁴)	(in³)	(in³)	(Kip-ft)
22	0.030	3.51	2.14	6.27	1.10	2.21	1.308	0.796	0.709	2.026	1.77	0.836	1.534	2.069
20	0.036	3.51	2.57	8.98	1.54	3.08	1.705	0.984	0.962	2.437	2.20	1.041	1.857	2.578
18	0.048	3.51	3.44	12.78	2.66	5.25	2.579	1.380	1.575	3.418	2.95	1.509	2.525	3.736
16	0.060	3.51	4.29	15.86	4.00	7.83	3.446	1.764	2.244	4.367	3.67	1.873	3.127	4.637

PHYSICAL PROPERTIES TABLE - DEFINITIONS & NOTES:

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

SECTION PROPERTIES ARE CALCULATED IN ACCORDANCE WITH THE 2016 EDITION (LSD).

APPLIED CODE is LSD S136-16 (R2021).

- Thk: Base Metal Thickness used in Design.
- WGT: Weight of Steel.
- Va: Allowable Shear Capcailly (LSD) per Panel.
- Pa (End): Allowable Web Crippling Capacity (LSD) per Panel at End Support having 1.5" width.
- Pa (Int): Allowable Web Crippling Capacity (LSD) per Panel at End Support having 3" width.
- (Def) Ix: Deflection Inertia that shall be used in deflection calculation.
- Sx (top) Section Modulus (Top Portion in Compression) when the Deck reaches the Ma Value (LSD).
- Sx (bot): Section Modulus (Bottom Portion in Compression) when the Deck reaches the Ma Value (LSD).
- Ma: Allowable Moment Capacity (LSD).

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ALLOWABLE SUPERIMPOSED UNIFORM LOADS (PSF)

SPAN (ft)	Calculation Mode (-)	Single Span (1)				Double Span (2-Equal)				Triple Span (3-Equal)			
		Base Steel Thickness (in.)				Base Steel Thickness (in.)				Base Steel Thickness (in.)			
		0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060
4.0	Stress L/ 240	271	381	660	994	219	304	521	778	228	317	542	811
		*	*	*	*	*	*	*	*	*	*	*	*
4.5	Stress L/ 240	241	338	586	857	194	270	462	691	202	282	482	720
		*	*	*	*	*	*	*	*	*	*	*	*
5.0	Stress L/ 240	216	304	527	693	174	243	416	621	182	253	433	648
		*	*	*	*	*	*	*	*	*	*	*	*
5.5	Stress L/ 240	196	276	448	572	158	220	377	564	165	230	393	588
		*	*	*	*	*	*	*	*	*	*	*	*
6.0	Stress L/ 240	180	253	375	480	145	202	346	495	151	210	360	533
		*	*	*	*	*	*	*	*	*	*	*	*
6.5	Stress L/ 240	166	228	319	408	133	186	319	423	139	194	332	455
		*	*	*	*	*	*	*	*	*	*	*	*
7.0	Stress L/ 240	154	196	275	351	124	173	294	365	129	180	308	393
		*	*	*	*	*	*	*	*	*	*	*	*
7.5	Stress L/ 240	143	170	239	305	115	161	256	318	120	168	276	342
		*	*	*	*	*	*	*	*	*	*	*	*
8.0	Stress L/ 240	127	149	209	268	108	151	225	280	113	157	243	301
		*	*	*	*	*	*	*	*	*	*	*	*
8.5	Stress L/ 240	112	132	185	236	101	138	200	248	106	148	215	267
		*	*	*	*	*	*	*	*	*	*	*	*
9.0	Stress L/ 240	99	117	164	210	96	123	178	221	100	132	191	238
		*	74	*	*	*	*	*	*	*	*	*	*
9.5	Stress L/ 240	89	105	147	188	86	110	159	198	92	118	172	213
		*	63	95	*	*	*	*	*	*	*	*	*
10.0	Stress L/ 240	80	94	132	169	77	99	144	178	83	107	155	192
		*	53	81	109	*	*	*	*	*	*	*	*
10.5	Stress L/ 240	72	85	120	153	70	89	130	161	75	96	140	174
		48	46	70	93	*	*	*	*	*	*	*	*
11.0	Stress L/ 240	66	77	109	139	64	81	118	147	69	88	127	158
		41	39	60	81	*	*	*	*	*	*	*	*
11.5	Stress L/ 240	60	71	99	127	58	74	108	134	63	80	116	144
		36	34	52	70	*	*	*	*	*	*	*	*
12.0	Stress L/ 240	55	64	91	116	53	68	99	122	57	73	106	132
		31	30	45	61	*	*	*	*	*	*	*	*
12.5	Stress L/ 240	50	59	83	106	49	62	91	113	53	67	98	121
		28	26	40	54	*	*	*	*	*	*	*	*

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TABLE DEFINITIONS & NOTES:

- 1. 'Stress' Line shows the Factored Safe Load checked based on: Crippling, Shear and Moment (LSD).
- 2. L/240 Line shows the Service Unfactored loads to product a deflection of L/ 240 deflection.
- 3. The * sign signifies that Stress is governing.
- 4. Web Crippling is based on a minumum flange width of 1.5" at end support and 3" at intermediate support.
- 5. Panel weight is included in the calculations.
- 6. You can use the Factors of 1.333 to find the service load for L/ 180 deflection.
- 7. You can use the Factor of 0.667 to find the service load for L/ 360 deflection.
- 8. In no case, the service load, whenever factored shall exceed the loads as shown in the Stress Line.
- 9. 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.
- 10. For Engineered Stamped Load Tables, please contact Samson Metals Ltd.

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

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