



## EM LS-36™ Insulated Roof Panel

SECTION PROPERTIES (PSF)						
Panel	Fascia Gauge	Liner Gauge	Panel Thickness (in.)	Moment of Inertia (in <sup>4</sup> /ft)	Liner Section Modulus (in <sup>3</sup> /ft)	Core Area (in <sup>2</sup> /ft)
EM LS-36™ Panel	26	26	1 ½	0.394	0.422	20.56
			2	0.623	0.521	26.56
			2 ½	0.909	0.623	32.56
			3	1.253	0.728	38.56
			4	2.111	0.939	50.56
			5	3.198	1.153	62.56
			6	4.513	1.368	74.56

### NOTES:

- 1) The above values are included for informational purposes. The use of these values is only applicable for a composite section analysis that includes effects from shear deformation of the foam as well as non-composite fascia effects.
- 2) This material is subject to change without notice. Please contact Exceptional® Metals at 1-800-248-0280 for most current data.

The Engineering data contained herein is for the expressed use of customers and design professionals. Along with this data, it is recommended that the design professional have a copy of the most current version of the North American Specification for the Design of Cold-Formed Steel Structural Members published by the American Iron and Steel Institute to facilitate design. This Specification contains the design criteria for cold-formed steel components. Along with the Specification, the designer should reference the most current building code applicable to the project jobsite in order to determine environmental loads. If further information or guidance regarding cold-formed design practices is desired, please contact Exceptional Metals.

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ALLOWABLE UNIFORM LOADS IN POUNDS PER SQUARE FOOT

Panel Depth	Span Type	Load Type	Connection	SPAN IN FEET										
				3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0
1.5"	1-Span	Live/Press <sup>1</sup>	-	175.59	113.58	77.21	54.36	39.38	29.23	22.17	17.14	13.49	10.77	8.72
		Negative	Wall <sup>3,5</sup>	191.05	143.29	110.30	77.66	56.25	41.76	31.67	24.49	19.26	15.39	12.46
		Negative	Roof <sup>4,5</sup>	191.05	143.29	110.30	77.66	56.25	41.76	31.67	24.49	19.26	15.39	12.46
	2-Span	Live/Press <sup>1</sup>	-	185.92	127.93	93.52	70.95	55.20	43.74	35.17	28.62	23.54	19.55	16.37
		Negative	Wall <sup>3,5</sup>	97.96	71.19	55.72	45.74	38.80	33.69	29.78	26.69	24.19	21.36	18.01
		Negative	Roof <sup>4,5</sup>	117.03	85.05	66.56	54.64	46.35	40.25	35.58	31.70	25.75	21.36	18.01
	3-Spans and Greater	Live/Press <sup>1</sup>	-	188.05	128.86	93.09	69.46	53.02	41.21	32.52	26.01	21.06	17.24	14.25
		Negative	Wall <sup>3,5</sup>	102.16	75.82	60.29	50.05	42.80	37.39	33.20	29.85	27.12	24.62	20.36
		Negative	Roof <sup>4,5</sup>	122.03	90.57	72.02	59.79	51.13	44.66	39.65	35.66	30.08	24.62	20.36
2"	1-Span	Live/Press <sup>1</sup>	-	227.51	151.64	106.13	76.71	56.84	43.01	33.15	25.97	20.66	16.66	13.59
		Negative	Wall <sup>3,5</sup>	192.00	144.00	115.20	96.00	81.19	61.44	47.35	37.10	29.51	23.79	19.42
		Negative	Roof <sup>4,5</sup>	192.00	144.00	115.20	96.00	81.19	61.44	47.35	37.10	29.51	23.79	19.42
	2-Span	Live/Press <sup>1</sup>	-	236.19	164.77	122.20	94.14	74.39	59.87	48.87	40.34	33.63	28.27	23.94
		Negative	Wall <sup>3,5</sup>	100.65	73.13	57.13	46.80	39.61	34.35	30.32	27.15	24.58	22.46	20.68
		Negative	Roof <sup>4,5</sup>	118.72	86.26	67.39	55.20	46.73	40.51	35.77	32.02	28.99	26.49	24.39
	3-Spans and Greater	Live/Press <sup>1</sup>	-	238.68	166.52	122.72	93.46	72.78	57.63	46.26	37.57	30.83	25.54	21.35
		Negative	Wall <sup>3,5</sup>	103.93	77.03	61.18	50.75	43.37	37.86	33.61	30.21	27.44	25.14	23.19
		Negative	Roof <sup>4,5</sup>	122.59	90.86	72.16	59.86	51.15	44.66	39.64	35.64	32.37	29.65	27.36
2.5"	1-Span	Live/Press <sup>1</sup>	-	274.11	186.70	133.59	98.60	74.45	57.28	44.79	35.53	28.56	23.23	19.10
		Negative	Wall <sup>3,5</sup>	192.95	144.71	115.77	96.47	82.69	72.36	63.98	50.76	40.80	33.18	27.29
		Negative	Roof <sup>4,5</sup>	192.95	144.71	115.77	96.47	82.69	72.36	63.98	50.76	40.80	33.18	27.29
	2-Span	Live/Press <sup>1</sup>	-	281.20	198.17	148.50	115.65	92.43	75.26	62.14	51.88	43.71	37.12	31.73
		Negative	Wall <sup>3,5</sup>	103.13	74.99	58.53	47.87	40.46	35.03	30.89	27.63	24.99	22.82	21.00
		Negative	Roof <sup>4,5</sup>	120.12	87.34	68.18	55.76	47.13	40.81	35.98	32.18	29.11	26.58	24.46
	3-Spans and Greater	Live/Press <sup>1</sup>	-	283.75	200.43	149.80	115.80	91.54	73.56	59.87	49.25	40.89	34.24	28.89
		Negative	Wall <sup>3,5</sup>	105.71	78.28	62.11	51.48	43.96	38.37	34.04	30.59	27.78	25.45	23.48
		Negative	Roof <sup>4,5</sup>	123.13	91.18	72.34	59.96	51.21	44.69	39.65	35.64	32.36	29.64	27.34
3"	1-Span	Live/Press <sup>1</sup>	-	314.84	217.99	158.71	119.17	91.44	71.39	56.54	45.37	36.83	30.21	25.03
		Negative	Wall <sup>3,5</sup>	194.01	145.51	116.41	97.01	83.15	72.76	64.67	58.20	52.61	43.16	35.76
		Negative	Roof <sup>4,5</sup>	194.01	145.51	116.41	97.01	83.15	72.76	64.67	58.20	52.61	43.16	35.76
	2-Span	Live/Press <sup>1</sup>	-	320.55	227.72	172.01	135.06	108.88	89.45	74.54	62.79	53.38	45.71	39.41
		Negative	Wall <sup>3,5</sup>	105.41	76.76	59.90	48.95	41.32	35.73	31.47	28.12	25.42	23.19	21.33
		Negative	Roof <sup>4,5</sup>	121.26	88.30	68.91	56.31	47.53	41.10	36.20	32.35	29.24	26.68	24.54
	3-Spans and Greater	Live/Press <sup>1</sup>	-	322.96	230.22	173.87	135.94	108.74	88.41	72.79	60.54	50.78	42.93	36.54
		Negative	Wall <sup>3,5</sup>	107.45	79.52	63.04	52.21	44.56	38.88	34.48	30.98	28.13	25.76	23.76
		Negative	Roof <sup>4,5</sup>	123.61	91.48	72.52	60.07	51.27	44.72	39.67	35.64	32.36	29.63	27.33

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4"	1-Span	Live/Press <sup>1</sup>	-	378.17	267.95	200.13	154.26	121.46	97.14	78.69	64.43	53.26	44.41	37.33
		Negative	Wall <sup>3,5</sup>	196.06	147.02	117.62	98.01	84.01	73.51	65.34	58.81	53.46	49.01	45.24
		Negative	Roof <sup>4,5</sup>	196.03	147.02	117.62	98.01	84.01	73.51	65.34	58.81	53.46	49.01	45.24
	2-Span	Live/Press <sup>1</sup>	-	381.73	274.53	209.87	166.80	136.16	113.33	95.70	81.74	70.44	61.15	53.41
		Negative	Wall <sup>3,5</sup>	109.49	80.03	62.52	51.06	43.04	37.15	32.66	29.13	26.29	23.96	22.00
		Negative	Roof <sup>4,5</sup>	122.90	89.83	70.18	57.31	48.31	41.70	36.66	32.70	29.51	26.89	24.70
	3-Spans and Greater	Live/Press <sup>1</sup>	-	383.63	276.96	212.22	168.62	137.23	113.58	95.19	80.56	68.73	59.04	51.01
		Negative	Wall <sup>3,5</sup>	110.77	81.96	64.91	53.69	45.78	39.90	35.36	31.75	28.82	26.38	24.32
		Negative	Roof <sup>4,5</sup>	124.34	92.00	72.86	60.27	51.38	44.78	39.69	35.64	32.35	29.61	27.30
5"	1-Span	Live/Press <sup>1</sup>	-	415.47	298.99	227.37	178.68	143.49	117.03	96.60	80.51	67.66	57.29	48.82
		Negative	Wall <sup>3,5</sup>	198.04	148.53	118.83	99.02	84.88	74.27	66.01	59.41	54.01	49.51	45.70
		Negative	Roof <sup>4,5</sup>	198.04	148.53	118.83	99.02	84.88	74.27	66.01	59.41	54.01	49.51	45.70
	2-Span	Live/Press <sup>1</sup>	-	417.57	303.13	233.87	187.56	154.50	129.79	110.67	95.46	83.10	72.89	64.33
		Negative	Wall <sup>3,5</sup>	113.18	83.07	65.05	53.16	44.79	38.62	33.91	30.21	27.22	24.77	22.73
		Negative	Roof <sup>4,5</sup>	124.02	91.03	71.28	58.25	49.08	42.32	37.16	33.10	29.83	27.15	24.90
	3-Spans and Greater	Live/Press <sup>1</sup>	-	418.89	305.08	236.09	189.66	156.22	130.96	111.22	95.40	82.49	71.79	62.83
		Negative	Wall <sup>3,5</sup>	113.99	84.39	66.80	55.21	47.03	40.95	36.27	32.55	29.52	27.02	24.90
		Negative	Roof <sup>4,5</sup>	124.90	92.47	73.20	60.50	51.53	44.88	39.74	35.67	32.35	29.60	27.29
6"	1-Span	Live/Press <sup>1</sup>	-	323.41	242.55	194.04	161.70	138.60	121.28	107.80	91.59	78.13	67.10	57.96
		Negative	Wall <sup>3,5</sup>	200.06	150.04	120.04	100.03	85.74	75.02	66.69	60.02	54.56	50.01	46.17
		Negative	Roof <sup>4,5</sup>	200.06	150.04	120.04	100.03	85.74	75.02	66.69	60.02	54.56	50.01	46.17
	2-Span	Live/Press <sup>1</sup>	-	314.31	231.63	181.92	148.91	125.54	108.23	94.96	84.50	76.08	69.15	63.37
		Negative	Wall <sup>3,5</sup>	116.63	85.94	67.50	55.25	46.58	40.16	35.24	31.36	28.23	25.66	23.51
		Negative	Roof <sup>4,5</sup>	124.86	92.01	72.27	59.16	49.87	43.00	37.72	33.57	30.22	27.47	25.17
	3-Spans and Greater	Live/Press <sup>1</sup>	-	308.21	225.94	177.17	145.24	122.86	106.39	93.80	83.87	75.84	69.23	63.68
		Negative	Wall <sup>3,5</sup>	117.11	86.81	68.73	56.78	48.33	42.06	37.22	33.38	30.26	27.68	25.50
		Negative	Roof <sup>4,5</sup>	125.38	92.94	73.58	60.79	51.75	45.03	39.85	35.74	32.40	29.63	27.30

**NOTES:**

- 1) Live/Press: Allowable loads applicable to downloads such as roof live, snow, and positive wind pressure.
- 2) Allowable values are based on a 36" wide panel with a 26 ga. fascia and a 26 ga. liner with 3-1/4" #14 SDS in a 3' wide panel at each supporting structural member.
- 3) Connection for Walls: screws located at the middle of the low pan centered between the high ribs of the fascia panel. Attach fascia sidelaps with 1/4" Lapteks at 20" o.c. maximum spacing between main panel connections.
- 4) Connection for Roof: screws located at the middle of the high ribs of the fascia panel with an HW-355 bonded washer under the screw head. Attach fascia sidelaps with 1/4" Lapteks at 20" o.c. maximum spacing between main panel connections.
- 5) Pullout of the self-drilling screws from the supporting structural member must be checked separately.
- 6) Allowable values have been derived from tests conducted in accordance with the ASTM E72 and ASTM E1592 test specifications.
- 7) Allowable face buckling, shear, and panel pullover loads have been calculated using a 1.875 safety factor derived from test data scatter.
- 8) Allowable values include a deflection check against an L/240 limit for live/press loading, and an L/240 limit for 10-year wind pressures for wind suction loading.
- 9) Allowable values shown are intended to be compared against factored loads from ASCE 7 based load combinations.
- 10) Allowable loads are given for equally-spaced supports.
- 11) This material is subject to change without notice. Please contact Exceptional® Metals at 1-800-248-0280 for the most current data.

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