

EM CF Mesa Insulated Panel

SECTION PROPERTIES							
PANEL	FASCIA GAUGE	LINER GAUGE	PANEL THICKNESS (in)	MOMENT OF INERTIA (in ⁴ /ft)	FASCIA SECTION MODULUS (in ³ /ft)	LINER SECTION MODULUS (in ³ /ft)	CORE AREA (in ² /ft)
CF Mesa Insulated Panel	26	26	2	0.427	0.427	0.427	23.57
			2.5	0.669	0.535	0.535	29.57
			3	0.966	0.644	0.644	35.57
			4	1.722	0.861	0.861	47.57
			5	2.695	1.078	1.078	59.57
			6	3.886	1.295	1.295	71.57

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	SPAN IN FEET										
			5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'
2"	Two Spans	Bending & Shear	68.70	56.10	47.30	40.90	36.00	32.10	29.00	26.50	22.20	18.80	16.10
		Deflection (L/180)	70.00	55.10	44.60	36.70	30.70	26.00	22.10	19.00	16.40	14.30	12.50
		Pattern FP1	31.60	25.80	21.70	18.80	16.50	14.80	13.30	12.20	11.20	10.30	9.60
		Pattern FP2	46.20	37.70	31.80	27.50	24.20	21.60	19.50	17.80	16.40	14.30	12.50
		Pattern FP3	58.30	47.60	40.20	34.70	30.50	26.00	22.10	19.00	16.40	14.30	12.50
	Three or More Spans	Bending & Shear	67.50	55.60	47.20	41.10	36.40	32.60	29.60	27.00	24.90	21.90	18.90
		Deflection (L/180)	70.80	55.60	44.60	36.50	30.20	25.20	21.20	18.00	15.40	13.20	11.40
		Pattern FP1	33.10	27.40	23.40	20.40	18.10	16.20	14.70	13.50	12.40	11.50	10.80
		Pattern FP2	48.40	40.10	34.20	29.80	26.40	23.70	21.20	18.00	15.40	13.20	11.40
		Pattern FP3	61.10	50.60	43.20	36.50	30.20	25.20	21.20	18.00	15.40	13.20	11.40
2.5"	Two Spans	Bending & Shear	79.30	64.80	54.60	47.10	41.40	36.90	33.30	30.40	27.10	22.80	19.40
		Deflection (L/180)	87.90	69.90	57.00	47.50	40.10	34.20	29.50	25.60	22.30	19.60	17.30
		Pattern FP1	33.30	27.20	22.90	19.80	17.40	15.50	14.00	12.70	11.70	10.80	10.10
		Pattern FP2	47.50	38.80	32.70	28.20	24.80	22.10	19.90	18.20	16.70	15.40	14.30
		Pattern FP3	60.10	49.00	41.30	35.70	31.40	28.00	25.20	23.00	21.10	19.50	17.30
	Three or More Spans	Bending & Shear	77.60	63.80	54.10	47.00	41.60	37.20	33.70	30.90	28.40	25.90	22.40
		Deflection (L/180)	88.90	70.60	57.50	47.60	39.90	33.70	28.80	24.70	21.30	18.50	16.20
		Pattern FP1	34.60	28.60	24.40	21.30	18.80	16.90	15.30	14.00	12.90	12.00	11.20
		Pattern FP2	49.30	40.80	34.80	30.30	26.80	24.10	21.90	20.00	18.40	17.10	16.00
		Pattern FP3	62.40	51.60	44.00	38.30	33.90	30.50	27.70	24.70	21.30	18.50	16.20
3"	Two Spans	Bending & Shear	89.00	72.70	61.20	52.80	46.40	41.30	37.20	33.90	31.10	26.70	22.70
		Deflection (L/180)	104.10	83.30	68.40	57.30	48.80	41.90	36.40	31.80	28.00	24.80	22.00
		Pattern FP1	35.10	28.70	24.10	20.80	18.30	16.30	14.70	13.40	12.20	11.30	10.50
		Pattern FP2	48.80	39.80	33.60	28.90	25.40	22.60	20.40	18.60	17.00	15.70	14.60
		Pattern FP3	61.80	50.50	42.50	36.70	32.20	28.70	25.90	23.50	21.60	20.00	18.60
		Pattern FP4	71.10	58.00	48.90	42.20	37.00	33.00	29.70	27.10	24.80	22.90	21.30
	Three or More Spans	Bending & Shear	86.90	71.30	60.40	52.40	46.30	41.40	37.50	34.30	31.60	29.20	25.60
		Deflection (L/180)	105.20	84.30	69.20	57.80	48.90	41.80	36.00	31.20	27.20	23.80	21.00
		Pattern FP1	36.10	29.90	25.40	22.20	19.60	17.60	16.00	14.60	13.50	12.50	11.60
		Pattern FP2	50.20	41.50	35.40	30.80	27.30	24.50	22.20	20.30	18.70	17.40	16.20
4"	Two Spans	Bending & Shear	95.10	77.80	65.60	56.50	49.60	44.10	39.70	36.10	33.10	30.50	28.30
		Deflection (L/180)	130.80	105.60	87.60	74.10	63.60	55.20	48.40	42.80	38.10	34.00	30.60
		Pattern FP1	43.00	35.30	29.80	25.60	22.50	20.00	18.00	16.40	15.00	13.80	12.80
		Pattern FP2	63.00	51.80	43.60	37.60	33.00	29.30	26.40	24.00	22.00	20.30	18.80
		Pattern FP3	74.30	61.00	51.50	44.30	38.90	34.60	31.20	28.30	26.00	23.90	22.20
		Pattern FP4	79.60	65.40	55.10	47.50	41.70	37.10	33.40	30.30	27.80	25.70	23.80
		Pattern FP5	83.30	68.40	57.70	49.70	43.60	38.80	34.90	31.70	29.10	26.80	24.90
		Pattern FP9	89.50	73.50	62.00	53.40	46.90	41.70	37.50	34.10	31.30	28.80	26.80
		Pattern FP10	93.60	76.90	64.80	55.90	49.00	43.60	39.30	35.70	32.70	30.20	28.00

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4" Continued	Three or More Spans	Bending & Shear	92.60	75.90	64.20	55.60	49.00	43.80	39.60	36.20	33.30	30.80	28.70
		Deflection (L/180)	131.70	106.60	88.60	74.90	64.20	55.60	48.60	42.70	37.80	33.50	29.90
		Pattern FP1	44.00	36.30	30.90	26.90	23.80	21.30	19.30	17.70	16.30	15.10	14.10
		Pattern FP2	64.40	53.20	45.30	39.40	34.90	31.30	28.30	25.90	23.90	22.10	20.60
		Pattern FP3	76.00	62.80	53.40	46.50	41.10	36.90	33.40	30.60	28.20	26.10	24.30
		Pattern FP4	81.40	67.20	57.20	49.80	44.10	39.50	35.80	32.80	30.20	28.00	26.10
		Pattern FP5	85.10	70.30	59.90	52.10	46.10	41.30	37.50	34.30	31.60	29.30	27.30
		Pattern FP9	91.50	75.60	64.20	55.60	49.00	43.80	39.60	36.20	33.30	30.80	28.70
		Pattern FP10	92.60	75.90	64.20	55.60	49.00	43.80	39.60	36.20	33.30	30.80	28.70
5"	Two Spans	Bending & Shear	108.80	89.30	75.40	65.00	57.00	50.70	45.60	41.40	37.90	35.00	32.40
		Deflection (L/180)	149.10	121.20	101.20	86.20	74.50	65.10	57.50	51.20	45.80	41.30	37.40
		Pattern FP1	42.30	35.80	30.30	26.20	23.00	20.40	18.40	16.70	15.30	14.10	13.00
		Pattern FP2	61.90	52.50	44.50	38.40	33.60	29.90	26.90	24.40	22.40	20.60	19.10
		Pattern FP3	73.10	62.00	52.50	45.20	39.70	35.30	31.70	28.80	26.40	24.30	22.60
		Pattern FP4	78.20	66.40	56.20	48.50	42.50	37.80	34.00	30.90	28.30	26.10	24.20
		Pattern FP5	81.90	69.40	58.80	50.70	44.50	39.60	35.60	32.30	29.60	27.30	25.30
		Pattern FP9	88.00	74.60	63.20	54.50	47.80	42.50	38.20	34.70	31.80	29.30	27.20
		Pattern FP10	92.00	78.10	66.10	57.00	50.00	44.50	40.00	36.30	33.30	30.70	28.40
	Three or More Spans	Bending & Shear	106.20	87.00	73.50	63.60	56.00	50.00	45.10	41.20	37.80	35.00	32.50
		Deflection (L/180)	149.90	122.10	102.20	87.10	75.30	65.90	58.10	51.50	46.00	41.30	37.20
		Pattern FP1	43.50	36.60	31.20	27.10	24.00	21.50	19.40	17.80	16.40	15.20	14.10
		Pattern FP2	63.80	53.70	45.70	39.70	35.10	31.50	28.50	26.10	24.00	22.20	20.70
		Pattern FP3	75.20	63.30	53.90	46.80	41.40	37.10	33.60	30.70	28.30	26.20	24.40
		Pattern FP4	80.60	67.80	57.70	50.20	44.40	39.80	36.00	32.90	30.30	28.10	26.20
		Pattern FP5	84.30	70.90	60.40	52.50	46.40	41.60	37.70	34.40	31.70	29.40	27.40
		Pattern FP9	90.60	76.20	64.90	56.40	49.90	44.70	40.50	37.00	34.10	31.60	29.40
		Pattern FP10	94.80	79.80	67.90	59.00	52.20	46.80	42.40	38.70	35.70	33.00	30.80
6"	Two Spans	Bending & Shear	121.20	99.70	84.30	72.80	63.90	56.90	51.20	46.40	42.50	39.10	36.30
		Deflection (L/180)	159.00	129.90	109.10	93.30	81.10	71.30	63.30	56.60	51.00	46.10	42.00
		Pattern FP1	41.70	35.30	30.70	26.60	23.40	20.80	18.70	17.00	15.50	14.30	13.20
		Pattern FP2	61.20	51.70	45.00	39.00	34.30	30.50	27.40	24.90	22.80	21.00	19.40
		Pattern FP3	72.10	61.00	53.00	46.00	40.40	36.00	32.30	29.40	26.90	24.70	22.90
		Pattern FP4	77.20	65.30	56.80	49.30	43.30	38.50	34.60	31.40	28.80	26.50	24.50
		Pattern FP5	80.80	68.30	59.40	51.60	45.30	40.30	36.20	32.90	30.10	27.70	25.70
		Pattern FP9	86.90	73.40	63.90	55.50	48.70	43.30	39.00	35.40	32.30	29.80	27.60
		Pattern FP10	90.90	76.80	66.80	58.00	50.90	45.30	40.70	37.00	33.80	31.20	28.90
	Three or More Spans	Bending & Shear	118.50	97.20	82.10	71.00	62.50	55.70	50.30	45.80	42.00	38.90	36.10
		Deflection (L/180)	159.50	130.60	109.80	94.20	81.90	72.10	64.00	57.20	51.40	46.50	42.20
		Pattern FP1	42.80	36.30	31.40	27.30	24.10	21.60	19.60	17.90	16.40	15.20	14.20
		Pattern FP2	62.70	53.20	46.00	40.00	35.40	31.70	28.70	26.20	24.10	22.30	20.80
		Pattern FP3	74.00	62.80	54.30	47.20	41.70	37.40	33.80	30.90	28.40	26.30	24.50
		Pattern FP4	79.30	67.20	58.10	50.50	44.70	40.00	36.20	33.10	30.50	28.20	26.30
		Pattern FP5	82.90	70.30	60.80	52.90	46.70	41.90	37.90	34.60	31.90	29.50	27.50
		Pattern FP9	89.10	75.60	65.40	56.80	50.20	45.00	40.80	37.20	34.30	31.70	29.60
		Pattern FP10	93.20	79.10	68.40	59.50	52.60	47.10	42.60	38.90	35.80	33.20	30.90

NOTES:

- 1) Based on 42" EM CF Mesa Insulated Panel with a 26 gauge striated exterior and 26 gauge Light Mesa interior faces (minimum $F_y = 33\text{ksi}$).
- 2) Allowable positive load is the lowest value of the panel bending and shear strength or deflection limit.
- 3) Allowable suction load is the lowest value of the panel bending, shear strength, deflection limited and connection strength for each fastener pattern. The numbers have been reduced to reflect the lowest value.
- 4) Loads based on panel stress, deflection and connection design criteria are derived from ASTM E-72 testing.

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- 5) Allowable loads are calculated with a factor of safety of 2.5 for bending, 3.0 for shear and 2.0 for connection.
- 6) For pattern FP1, CF panel clips are fastened to minimum 14 gauge steel with (2) ¼"-14 SDS Tek 3 at interior and end supports. For 12 gauge or thicker steel, #12-24 SDS or ¼"-14 SDS Tek 5's may be used. In lieu of self-drilling screws, self-tapping screws may be used.
- 7) Fastening patterns FP2, FP3, FP4 and FP5, includes CF panel clip attachment plus 1, 2, 3 or 4 Fab-loks, respectively, at supports per panel width. Fab-lok spacing is 10.5" OC from female edge of panel seam.
- 8) The through fasteners (FP9) are as follows: #12-24 SDS in min 12 gauge steel; or ¼"-14 SDS in minimum 12 gauge steel; ¼"-14 STS in minimum 14 gauge steel. Four fasteners with 5/8" neoprene bonded washers per panel width at maximum 8.4" OC.
- 9) The through fasteners (FP10) are as follows: : #12-24 SDS in min 12 gauge steel; or ¼"-14 SDS in minimum 12 gauge steel; ¼"-14 STS in minimum 14 gauge steel. Five fasteners with 5/8" neoprene bonded washers per panel width at maximum 8.4" OC.
- 10) This structural capacity of the girts are not considered and must be examined independently.
- 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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