Nucor Buildings Group CFR Standing Seam Roof Panel

The CFR Standing Seam Roof System is a raised seam metal roof, designed to float to accommodate thermal expansion & contraction. It has been extensively tested to ensure the highest level of performance for weathertightness and structural integrity, and approved for wind uplift, hail and fire resistance.

Panel Credentials

- ASTM E108 Test Methods for Fire Tests of Roof Coverings – Class A
- ASTM E1592 Test Method for Wind Uplift Performance of Sheet Metal Roofing Systems
- ASTM E1646 Test Method for Water Penetration of Exterior Roof Systems
- ASTM E1680 Test Method for Rate of Air Leakage Through Exterior Roof Systems
- ASTM E2140 Test Method for Water Penetration of Metal Roof Panel Systems by Static Water Head
- US Army Corps of Engineers - Approved per CEGS 07416 Test Specification
- FM 4471 Class 1 Approval
- UL 580 Class 90 Approval (Const. No's 552, 552A, 552B, 590)
- State of Florida Product Approval
- Miami-Dade County Approved

Panel Specifications

						TOP IN COMPRESSION		BOTTOM IN COMPRESSION	
Gage	Thickness (in.)	Yield (ksi)	Tensile (ksi)	Panel Wt. (psf)	I_x (Gross) (in^4)	S_x (eff.) (in^3)	M_a (kip-in)	S_x (eff.) (in^3)	M_a (kip-in)
24	0.0222	50	65	1.14	0.3520	0.1400	3.5005	0.0894	2.6760

Panel Capacity (psf)

	24 GAGE	
SPAN (ft.)	Gravity	Uplift
2.0	468	107
2.5	317	98
3.0	227	89
3.5	171	80
4.0	133	71
4.5	106	62
5.0	86	53
5.5	72	44

NOTES

1. Section properties were calculated in accordance with AISI S100/CSA S136, 2016 Edition.
2. Panels were checked for bending, shear, combined bending and shear, and deflection.
3. Deflection is limited to Span/60.
4. Uplift loads shown are achieved using the standard panel clip and the Vise-Lock 360 seaming profile.
5. Uplift loads shown do not include increases in wind Zones 2 and 3 as allowed by AISI S100.
6. Thermal load has not been considered.
7. Capacities are based on a 3-span condition with equal length spans.
8. "Gravity" load is applied inward on the outer surface towards supports.
9. "Uplift" load is applied outward on the inner surface away from panel supports.

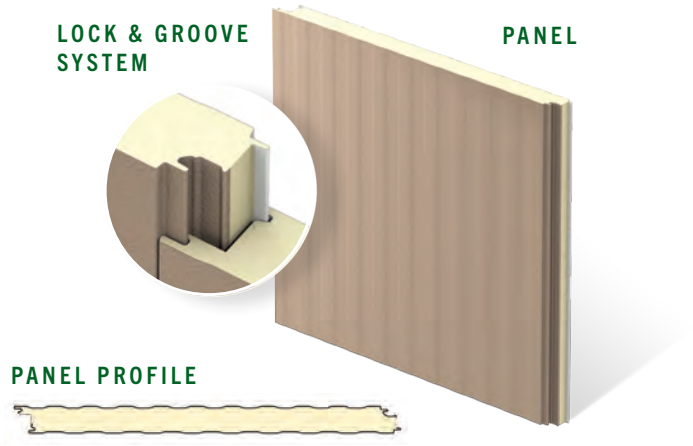
NUCOR® BUILDINGS GROUP

METL SPAN® a NUCOR® company

CF LIGHT MESA

INSULATED METAL WALL PANEL

The MetI-Span CF Light Mesa insulated metal panel is well suited for exterior and interior walls and ceiling applications. The shallower version of the Mesa profile creates symmetry on the outside of the building and room to room within. The minor rib provides a flattened appearance. Light Mesa panels are ideal for commercial, institutional and industrial applications.



PRODUCT SPECIFICATIONS

WIDTH • 30", 36", 42"

THICKNESS • 2", 2½", 3", 4", 5", 6", 8"
Note: 5", 6" & 8" available for Interior Panels Only

LENGTH

NON-DIRECTIONAL EMBOSSED	UNEMBOSSED
8'-0" to 32'-0" Horizontal	8'-0" to 16'-0" Horizontal
8'-0" to 52'-0" Vertical	8'-0" to 16'-0" Vertical

EXTERIOR PROFILE • Lightly profiled 1⁄16" deep, longitudinal planks spaced at nominal 4" on center, embossed or unembossed

EXTERIOR FACE • G-90 galvanized or AZ-50 aluminum-zinc coated steel in 26, 24 and 22 Ga.

INTERIOR PROFILE • Light Mesa, nominal 1⁄16" deep, embossed or unembossed

INTERIOR FACE • G-90 galvanized or AZ-50 aluminum-zinc coated steel, 304 or 316 stainless steel in 26, 24, 22~ Ga.

JOINT • Offset double tongue-and-groove with extended metal shelf for positive face fastening

CORE • Foamed-in-place, zero ozone depleting (zero ODP) Class 1 foam

U-FACTORS AND R-VALUES*

U-FACTOR (BTU/h·ft²·°F)

PANEL WIDTH: 42"	
	35°
2"	0.059
2.5"	0.046
3"	0.039
4"	0.029
5"	0.023
6"	0.019
8"	0.014

R-VALUE (h·ft²·°F/BTU)

PANEL WIDTH: 42"	
	35°
2"	17.5
2.5"	21.9
3"	26.2
4"	35.0
5"	43.7
6"	52.5
8"	70.0

** Based on ASTM C518, ASTM C1363 and thermal modeling
~ 22 Ga not available for stainless steel
This profile is not for use as an exterior wall of a low temp application

DESIGN FEATURES & BENEFITS

- Consistent high quality with foamed-in-place panel manufacturing
- Flat surface, easily washable
- Utilizes concealed clips and eliminates thermal short circuits
- Easy and fast installation, with reduced construction labor costs
- Interior and exterior applications
- USDA Compliant stainless steel for use in aggressive or daily wash-down areas

TESTING: CF LIGHT MESA INSULATED METAL WALL PANEL

TEST/ APPROVAL	TEST METHOD	TEST TITLE	RESULTS
Fire US	ASTM E84	Surface Burning Characteristics of Building Materials	Flame spread <25, smoke developed <450
	ASTM E119	Fire Tests of Building Construction Materials	One hour non-load bearing rating with two layers of Type X Gypsum Vertical or horizontal installation
	FM 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Product approved Exterior wall requires FM 4881 approval
	NFPA 259	Test Method for Potential Heat of Building Materials	Potential heat of foam plastic insulation contained in the assembly tested in accordance with NFPA 285
	NFPA 285-19	Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies	Panel assembly met the requirements of the standard
	NFPA 286	Fire Tests for Evaluating Contribution of Wall and Ceiling Finish to Roof Fire Growth	Test specimen met the criteria of the IBC Section 803.1.2.1
Fire Canada	CAN/ULC S101	Fire Endurance Tests of Building Construction and Materials	One hour non-load bearing fire rating with two layers of Type X Gypsum
	CAN/ULC S101	Fire Endurance Tests of Building Construction and Materials	Meets 15 minute stay-in-place requirements
	CAN/ULC S102	Surface Burning Characteristics of Building Materials and Assemblies	Meets the National Building Code of Canada requirements
	CAN/ULC S134	Fire Test of Exterior Wall Assemblies	Complies with the fire-spread and heat-flux limitations required by the National Building Code of Canada
	CAN/ULC S138	Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration	Met the criteria of the standard
Structural	ASTM E72	Strength Tests of Panels for Building Construction	See Load Chart
	ASTM E1592	Structural Performance of Metal Roof and Siding Systems by Uniform Static Air Pressure Differences	See Load Chart
	FM 4881	Class 1 Exterior Wall Structural Performance	See FM Wall Load Chart
Thermal Performance	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat-Flow Meter Apparatus	K-Factor of 0.114 BTU.in/hr.ft^2.°F at 35° F mean core
	ASTM C1363	Thermal Performance of Building Materials and Envelope Assemblies	See Thermal Performance Guide
Air Infiltration	ASTM E283	Rate of Air Leakage Through Curtain Walls Under Specified Pressure Differences	<0.01 cfm/ft^2 at 20 psf Vertical or horizontal installation
Water Infiltration	ASTM E331	Water Penetration of Exterior Walls by Uniform Static Air Pressure Differences	No uncontrolled leakage when tested to a static pressure of 20 psf Vertical or horizontal installation
Special Approval	Miami-Dade NOA	Product Approval for City of Miami and Dade County	Product has City of Miami and Dade County Notice of Acceptance
	State of Florida	Product Approval for the State of Florida	Product has State of Florida approval

Note: Miami Dade and Florida testing is not available on 8" thickness. Descriptions and specifications contained herein were in effect at the time this publication was approved for printing. In a continuing effort to refine and improve products, Metl-Span reserves the right to discontinue products at any time or change specifications and/or designs without incurring obligation. To ensure you have the latest information available, please inquire or visit Metl-Span's website at metlspan.com.

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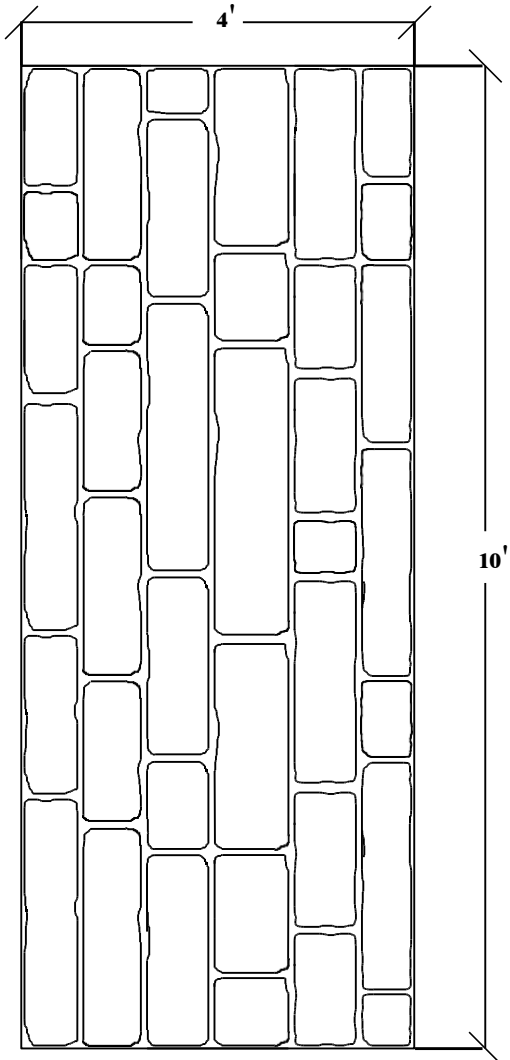
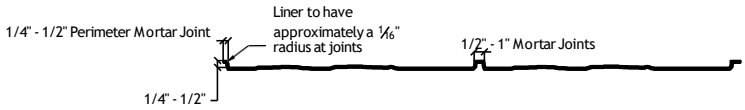
OKLAHOMA NATIVE STONE





General Information:

The Styrene and ABS formliners are an economical solution for providing architectural pattern reproductions. The Styrene plastic formliner is a perfect alternative for single use applications which costs less than other liners. The ABS plastic formliner exhibits good impact resistance and excellent overall performance. Its reuse factor is 10, subject to pattern configuration, proper handling and jobsite configurations.

Care and Handling:

To protect from thermal deformation, formliners should not be exposed to temperatures above 140°F (60°C). To avoid discoloration from sunlight exposure, formliners should be covered with a tarpaulin when not in use. This helps prolong the life of the material and keeps the material clean.

Form Liners are subject to thermal expansion and contraction +/- ⅛" @70°F. Keep away from steam, acids, and certain fuels.

Styrene	ABS
Product Code #	Product Code #
F947037	F940006
Uses	Uses
1	Up to 10
Material Thickness	Material Thickness
.090	.110
Standard Dimensions	Standard Dimensions
10' x 4'	10' x 4'
Color	Color
White	Gray