



INSULATED METAL PANELS:  
**ENVIRONMENTALLY  
CONNECTED**

FOR SUSTAINABILITY & ENERGY EFFICIENCY



PIONEERING INSULATED METAL PANEL TECHNOLOGY



# ENVIRONMENTALLY CONNECTED

CREDIT 7.2

SS  
WE  
EA  
MR  
IEQ  
ID

## Heat Island Effect: Roof (1 POINT)

Roofing materials with a Solar Reflectance Index (SRI) greater than or equal to 78 for low-sloped roof applications and 29 for steep-sloped roof applications, used on at least 75% of the roof's surface, will qualify for this credit. Metl-Span CFR insulated metal roof panels coated in any color from our standard color chart for steep-sloped roof and one color for low-sloped roof applications meet or exceed the SRI requirements to claim one point in SS Credit 7.2.

SS  
WE  
EA

## Building Reuse: Maintain Existing Walls, Floors & Roof (1-3 points)

CREDIT 1.1

MR  
IEQ  
ID

Metl-Span insulated metal wall panels and/or ThermalSafe® fire-resistant panels used in an existing building's envelope or structure can be disassembled, moved, and reused for the envelope/structure of a new project, contributing to points for maintaining at least 55% of the surface area of existing building structure and envelope in MR Credit 1.1.

SS  
WE  
EA

## Building Reuse: Maintain Interior Non-Structural Elements (1 point)

CREDIT 1.2

MR  
IEQ  
ID

Metl-Span insulated metal panels and/or ThermalSafe fire-resistant panels used in a building's interior can be disassembled, moved, and reused for the interior of a new project, contributing to points for using existing interior non-structural elements in at least 50% (by area) of the completed building in MR Credit 1.2.

SS  
WE  
EA

## Materials Reuse (1 or 2 points)

CREDIT 3

MR  
IEQ  
ID

Metl-Span insulated metal panels, both interior and exterior, can be disassembled, moved, and reused for a new project, contributing to points for using salvaged, refurbished or reused materials such that the sum of these materials constitute at least 5% (based on cost) of the total value of materials on the project in MR Credit 3.

SS  
WE  
EA

## Recycled Content (1 or 2 points)

CREDIT 4

MR  
IEQ  
ID

Steel faces on Metl-Span insulated metal wall panels, ThermalSafe fire-resistant panels and CFR roof panels contain a total recycled content of 31.0%. Of this, post-consumer recycled content is equal to 23.0% and pre-consumer recycled content is equal to 7.3%. The polyurethane foam core has a pre-consumer recycled content of 7.32% and 0% post-consumer; while the mineral wool core contains 40% pre-consumer and 0% post-consumer recycled content. Steel used for Metl-Span's single-skin wall panels contain an average post-consumer recycled content of 25.5% and an average pre-consumer recycled content of 6.8%. These percentages of recycled content contribute to using materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project in MR Credit 4.

SS  
WE  
EA

## Rapidly Renewable Materials (1 point)

CREDIT 6

MR  
IEQ  
ID

The foam core in Metl-Span insulated metal wall panels and CFR roof panels contains a component that contributes to one point for using rapidly renewable building materials and products (made from plants that are typically harvested within a ten-year cycle or shorter) for 2.5% of the total value of all building materials and products used in the project (based on cost) in MR Credit 6.

SS  
WE  
EA

## Low-Emitting Materials: Adhesives and Sealants (1 point)

CREDIT 4.1

MR  
IEQ  
ID

All adhesives and sealants must comply with the standards of the South Coast Air Quality Management District, Rule #1168. For architectural sealants, the VOC maximum limit is 250 grams/liter. The sealants supplied with Metl-Span insulated metal wall panels, ThermalSafe fire-resistant panels and CFR roof panels have VOC contents below the maximum limit, contributing to one point for all adhesives and sealants used on the interior of the building complying with stated standards in IEQ Credit 4.1.

## LEGEND

**SS:** Sustainable Sites

**WE:** Water Efficiency

**EA:** Energy & Atmosphere

**MR:** Materials & Resources

**IEQ:** Indoor Environmental Quality

**ID:** Innovation in Design

- CREDIT 8.1** **SS** **WE** **EA** **MR** **IEQ** **ID** **Daylight & Views-Daylight** (1 point)  
The use of the fully integrated Metl-Vision™ window system with horizontal Metl-Span insulated metal wall panels can significantly contribute to points for demonstrating that a minimum daylight illumination level of 25 footcandles has been achieved in a minimum of 75% of the regularly occupied area in IEQ Credit 8.1.
- CREDIT 2** **SS** **WE** **EA** **MR** **IEQ** **ID** **Minimum Energy Performance** (REQUIRED)  
Metl-Span insulated metal panels will contribute to higher energy efficiency of a building that must comply with a 10% improvement in the performance compared to benchmark rating based on ASHRAE/IESNA Standard 90.1-2007 (with errata but without addenda) in EA Prerequisite 2.
- CREDIT 1** **SS** **WE** **EA** **MR** **IEQ** **ID** **Optimize Energy Performance** (1-19 points)  
Metl-Span insulated metal panels have been independently tested using the ASTM C1363 Hot Box method for thermal transmittance. The results meet or surpass the minimums outlined in the ASHRAE/IESNA Standard 90.1-2007. Using Metl-Span insulated metal panels will considerably contribute to points for the building demonstrating a percentage improvement in the proposed building performance rating compared to the baseline performance rating by a whole building project simulation in EA Credit 1.
- CREDIT 2** **SS** **WE** **EA** **MR** **IEQ** **ID** **On-Site Renewable Energy** (1-7points)  
The use of Metl-Span CFR Insul-Solar™ roof panels creates a source of on-site renewable energy that will offset a portion of a building's energy cost. The energy produced by the renewable system must be expressed as a percentage of the building's annual energy cost calculated using the ASHRAE/IESNA Standard 90.1-2007 or the U.S. Department of Energy's Commercial Buildings Energy Consumption Survey database as outlined in EA Credit 2.
- CREDIT 1** **SS** **WE** **EA** **MR** **IEQ** **ID** **Water Efficient Landscaping** (2-4 points)  
Metl-Span CFR insulated metal roof panels, integrated into a building's rainwater harvesting system, can contribute to a point for reducing potable water consumption for irrigation by 50% from a calculated mid-summer baseline case or using captured rainwater for non-potable uses for irrigation in WE Credit 1.
- CREDIT 2** **SS** **WE** **EA** **MR** **IEQ** **ID** **Innovative Wastewater Technologies** (2 points)  
Metl-Span CFR insulated metal roof panels, integrated into a building's rainwater harvesting system, can help to reduce potable water used for building sewage conveyance by 50% as described in WE Credit 2.
- CREDIT 3** **SS** **WE** **EA** **MR** **IEQ** **ID** **Water Use Reduction** (2-4 points)  
Metl-Span CFR insulated metal roof panels, integrated into a building's rainwater harvesting system, can contribute to points for employing a strategy that in aggregate uses at least 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements in WE Credit 3.
- CR. 1.1 to 1.4** **SS** **WE** **EA** **MR** **IEQ** **ID** **Innovation in Design** (1-5 points)  
Metl-Span insulated metal wall panels, ThermalSafe fire-resistant panels, CFR roof panels and/or the Metl-Vision window system integrated into a building's overall design can contribute to points if the building's design team applies strategies or measures that demonstrate performance above the requirements in categories and /or innovative performance not specifically addressed by LEED in ID Credits 1.1 to 1.4.



# ENVIRONMENTALLY CONNECTED

Metl-Span's LEED® support material is being provided to help architects, specifiers, and design professionals in identifying the sustainability benefits, attributes and performance criteria of insulated metal panels relative to qualifying for credits within the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System.

PANEL CORE & STEEL FACES

### VOC (Volatile Organic Compound)

Metl-Span insulated metal wall panels, CFR insulated metal roof panels and ThermalSafe fire-resistant panels contain no VOCs and do not contribute to smog. Metl-Span butyl sealing tape contains no VOCs. Tube sealant is available that is VOC compliant and HAPs (hazardous air pollutant) free.

### ODP (Ozone Depleting Potential)

HFC-134a and Metl-Span's mineral wool core have zero ODP and have no EPA limits for their use today and into the future.

### GWP (Global Warming Potential)

HFC-134a has a small aggregate radiative forcing impact and no EPA limits on its use today and into the future. Metl-Span's mineral wool core does not add to global warming potential.

### Recycled Content of Steel Faces

Total recycled content: **31.0%**      Post-consumer recycled content: **23.0%**      Pre-consumer recycled content: **7.3%**

### R-Values with Air Films for Metl-Span Panels

	75° Mean	40° Mean
2" Panel	15.14	17.03
2-½" Panel	18.71	21.29
2-¾" Panel	20.49	23.42
3" Panel	22.27	25.55
4" Panel	29.42	34.06
5" Panel	36.56	42.58
6" Panel	43.71	51.09

R-Values include the air films on each side of the panel.

75° Mean based on ASTM C-518 Thermal Testing. 40° Mean based on ASTM C-1363 Thermal Testing (Values for C-1363 based on 4" panel testing). All values for other thicknesses extrapolated.

The R-value of the polyurethane core used in Metl-Span insulated metal panels provides the highest insulating value per inch thickness of any building material available today.

### ENERGY STAR®

	Initial Reflectivity	3-Year Aged Reflectivity
Galvalume	.79	.51
Polar White Fluoropon	.70	.67

Metl-Span CFR insulated metal roof panels are ENERGY STAR labeled with unpainted Galvalume® exterior face and Polar White Fluoropon®.

### Cool Roof Rating Council (CRR)

As rated by CRR

	Initial Reflectivity	Initial Emissivity
Title 24 Requirements	.70	.75
Regal White Fluoropon	.70	.85
Unpainted Galvalume	.78	.06

Metl-Span CFR insulated metal roof panels with a Regal White Fluoropon® exterior skin and unpainted Galvalume® are listed in the CRR directory and meet the prescriptive definition of "cool" roofing for low-sloped roofing applications under Title 24, Part 6 of the 2005 California Energy Code.



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## Exterior Color Reflectivity and Emissivity Values

	Initial Reflectivity	Initial Emissivity	Solar Reflectance Index
<b>AVAILABLE STANDARD EXTERIOR COLORS</b>			
Polar White	.70	.86	85
Sandstone	.60	.86	71
Snow White	.59	.85	69
Regal Gray	.55	.86	64
Galleon Gray	.53	.85	61
Sedona Tan	.51	.86	58
Desert Beige	.47	.86	53
Dark Bronze	.34	.87	36
<b>PREMIUM I EXTERIOR COLORS</b>			
Ash Gray	.50	.86	57
Parchment	.50	.86	57
Bright Red	.44	.86	49
Acadian Green	.41	.87	45
Terra-Cotta	.38	.87	41
Pewter	.38	.87	41
Zinc Gray	.36	.87	39
Weathered Copper	.36	.86	38
Colonial Red	.33	.87	35
Regal Blue	.30	.85	30
Tahoe Blue	.30	.86	30
Leaf Green	.30	.86	30
Hemlock Green	.30	.86	30
Aegean Blue	.29	.86	29
Forest Green	.29	.87	29
<b>PREMIUM II EXTERIOR COLORS</b>			
Silver	.53	.79	59
Copper Penny	.50	.85	57
Champagne	.40	.85	43
Zactique	.35	.84	36
Weathered Zinc	.38	.84	41

ENERGY STAR® Requirement: Initial reflectivity of .65 low slope & .25 steep slope. LEED-NC v.3 (SS 7.2): Minimum SRI of 78 low slope & 29 steep slope. Contact MetI-Span for information regarding 3-year solar reflective exposure for all exterior colors.

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Strategically located  
coast-to-coast in Texas,  
Virginia, Nevada & Indiana

**METLSPAN.COM**



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ENERGY STAR® designation is valid in the U.S. only.