

ARCHITECTURAL INTEGRATED METALS, INC.

R-Span™ Panel Specifications

PRODUCT NAME

R-Span Panel for roofing and sidewall applications.

MANUFACTURER

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PRODUCT DESCRIPTION

The R-Span Panel has been designed by Architectural Integrated Metals, Inc. for use in architectural or functional applications where both appearance and weather resistance are primary concerns.

PHYSICAL DESCRIPTION

AIM's R-Span panels have 1 1/4" ribs with major corrugations spaced 12" on center. Each panel provides 36" net coverage. The R-Span panel is adaptable for use on new construction as well as retrofit construction. Associated components such as perimeter adapters, perimeter trim and flashing have been designed to accommodate a wide variety of structures.

PANEL

The panel will be fabricated from steel which is coated with Galvalume, and optional factory applied paint. Galvalume coated steel sheet will provide a long-lasting, weathering membrane. Galvalume coating has a proven weather resistance in excess of 20 years. The steel sheet is impervious to moisture and will resist falling objects and roof traffic better than other known roof membranes commonly used. The ultimate performance of a Galvalume coated steel panel is determined by effectiveness of the design of the steel panel, perimeter seals, and panel attachment methods.

PANEL AND FLASHING MATERIALS

The roof panels will be of 26 ga. or 24 ga.¹ steel, 80,000 psi minimum yield strength (ASTM A446-76, Grade D), coated with AZ50 (minimum) aluminum/zinc alloy for painted finish or AZ55 aluminum/zinc alloy for unpainted finish.²

The flashing and trim will be a 26 ga. steel 50,000 psi minimum yield strength (ASTM A446-76, Grade D), coated with AZ50 (minimum) aluminum/zinc alloy.

FASTENERS

R-Span Panels are attached to the secondary framing members by self-drilling carbon steel screws, No. 12 x 1-1/4" hex washer head, cadmium or zinc plated, assembled with a 0.040" minimum thickness nylon isolation washer. Fasteners are normally color coordinated with a coating system that protects against corrosion and weathering.

R-Span Panel sidelaps are stitched with self-drilling carbon steel screws, No. 14 x 7/8" cadmium or zinc plated,

assembled with a 0.040" minimum thickness nylon isolation washer.

SEALANTS

The seam sealant will be a non-drying, non-hardening, non-oxidizing butyl rubber-based sealant specifically formulated for factory sealing standing seam roof panels. Sealant for the eave, end splice, ridge flashing, and rake trim will be non-drying, non-hardening, butyl-based tape sealant specifically formulated for field application at temperatures of 20° F to 120° F. Service temperature of both sealants will be -60° F to 180° F.

FINISHES

1.) **AIM PRISM 2000™** Silicone Polyester coating is the result of an exceptional effort by Valspar's Research and Development Laboratory team. It is based on a new cycloaliphatic polyester system using state-of-the-art building blocks that achieve a truly synergistic formula. Valspar's premium coatings enable Architectural Integrated Metals, Inc. to provide two of the very best coating technologies available. Valspar's premium coatings have been proven in the field for more than 30 years with no noticeable loss of color or brightness.

MAINTENANCE

Only normal routine maintenance is required over the life of the panels.

WARRANTY

25 year warranties are available.

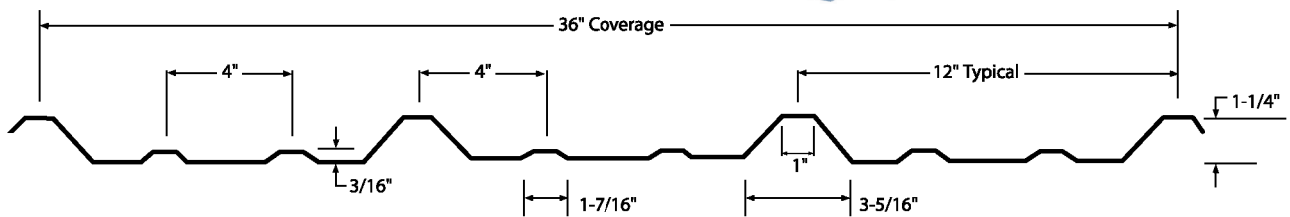
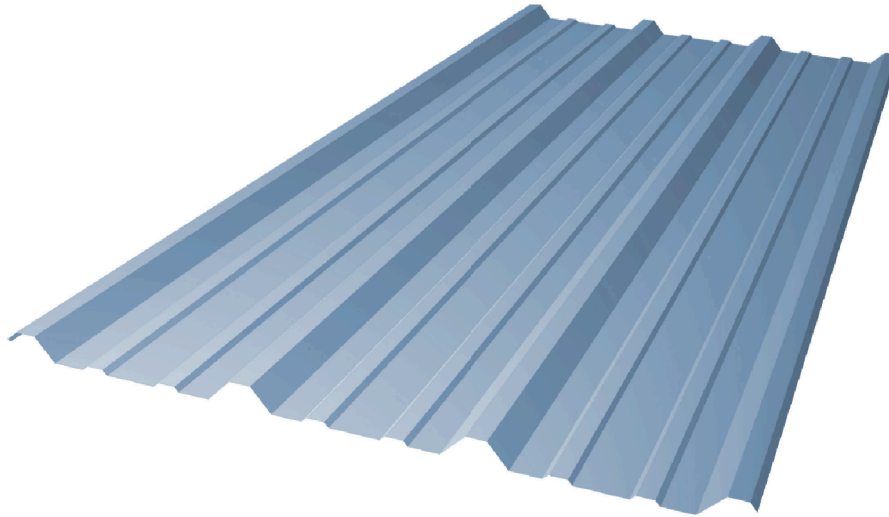
Architectural Integrated Metals, Inc. reserves the right to revise all standard specifications and information.



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CROSS SECTION

SECTION PROPERTIES OF THE R-SPAN PANEL

| Gauge | Thick. (inch) | Wt. (psf) | Panel Top in Compression | | | Panel Bottom in Compression | | |
|-------|---------------|-----------|-----------------------------------|-----------------------------------|----------------------|-----------------------------------|-----------------------------------|----------------------|
| | | | I _x (in ⁴) | S _x (in ³) | F _b (ksi) | I _x (in ⁴) | S _x (in ³) | F _b (ksi) |
| 26 | 0.0193 | 0.94 | 0.043 | 0.039 | 36 | 0.036 | 0.047 | 36 |
| 24 | 0.0241 | 1.17 | 0.060 | 0.054 | 36 | 0.048 | 0.060 | 36 |

MAXIMUM TOTAL UNIFORM LOAD IN PSF

| Span Type | L = 3'-0" | L = 3'-6" | L = 4'-0" | L = 4'-6" | L = 5'-0" | L = 6'-0" | L = 7'-0" | L = 7'-6" | |
|----------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| | | | | | | | | | 1 |
| 26 Gauge Steel | 1 | 105 / -124 | 77 / -87 | 59 / -58 | 47 / -41 | 36 / -30 | 21 / -17 | 13 / -11 | 11 / -9 |
| | 2 | 124 / -105 | 91 / -77 | 70 / -59 | 55 / -47 | 45 / -38 | 31 / -26 | 23 / -19 | 20 / -17 |
| | 3 | 156 / -131 | 114 / -96 | 88 / -74 | 69 / -58 | 56 / -47 | 39 / -33 | 25 / -21 | 20 / -17 |
| | 4 | 145 / -122 | 107 / -90 | 82 / -69 | 65 / -54 | 52 / -44 | 36 / -31 | 26 / -22 | 21 / -18 |

MAXIMUM TOTAL UNIFORM LOAD IN PSF

| Span Type | L = 3'-0" | L = 3'-6" | L = 4'-0" | L = 4'-6" | L = 5'-0" | L = 6'-0" | L = 7'-0" | L = 7'-6" | |
|----------------|-----------|------------|------------|------------|-----------|-----------|-----------|-----------|----------|
| | | | | | | | | | 1 |
| 24 Gauge Steel | 1 | 145 / -160 | 107 / -117 | 82 / -78 | 65 / -55 | 50 / -40 | 29 / -23 | 18 / -15 | 15 / -12 |
| | 2 | 160 / -145 | 118 / -107 | 90 / -82 | 71 / -65 | 58 / -52 | 40 / -36 | 29 / -27 | 26 / -23 |
| | 3 | 200 / -181 | 147 / -133 | 113 / -102 | 89 / -81 | 72 / -65 | 50 / -44 | 34 / -28 | 28 / -22 |
| | 4 | 187 / -169 | 137 / -124 | 105 / -95 | 83 / -75 | 67 / -61 | 47 / -42 | 34 / -29 | 30 / -24 |

- NOTES:**
1. Section properties have been calculated in accordance with the *AISI Specification for the Design of Cold-Formed Steel Structural Members, 1996 Edition, including Supplement No. 1 (1999)*.
 2. Minimum yield strength of 29 or 26 gage steel is 80,000 psi.
 3. Steel panels are either aluminum-zinc alloy or G-90 coated. The base metal thickness shown in the minimum design thickness and was used in determining section properties.
 4. Positive load is downward load applied to the top of the panel cross section as shown above. Negative load is opposite.
 5. The loads shown are limited by the more critical of Span/150 deflection or the allowable bending moment with no stress increase.