

1. PRODUCT NAME

AMS Insulated Hi Rib (HR3) Roof Panels.

2. MANUFACTURER

Insulated panels shall be supplied by:

ARCHITECTURAL METAL SYSTEMS

1150 State Docks Road
Eufaula, Alabama 36027
Phone: (334) 688-2650
Fax: (334) 687-0298

3. PRODUCT DESCRIPTION

These roof panels provide 40" of coverage with 1 3/8" ribs on 20" centers are available in four foam core thickness options; 2 1/2", 4", 5" or 6". The minimum roof slope for the insulated Hi Rib roof panel is 1 to 12.

Basic Use: Insulated Hi Rib roof panels, a steel clad factory insulated roof covering system, installed with related accessories and trims, create a completely weather tight roof system.

Materials: The exterior metal substrate of the Insulated Hi Rib roof panel is 3 rib, lightly planked, smooth 26 gage, G90 zinc-coated (galvanized) steel. Pre-painted exterior panels have Architectural Metal Systems' 30 year SmartKote® (PVDF) finish with a total dry film thickness of 1.0 mil including primer. The plank profile interior liner is pre-painted Imperial White, 26 gage G60 Galvanized or AZ35 Galvalume, steel coated with a 20 year polyester finish and a dry film thickness of 1.0 mill including primer.

The continuously foamed in place panel core is Class 1 rigid polyisocyanurate (polyurethane) foam meeting the physical properties listed under section 4 F.

Sealants: Endlaps, sidelaps, roof flashing laps, rake, ridge and eave closures are sealed with non-staining, non-corrosive, non-toxic and non-volatile tape mastic, Sika Sika-TapeTC-95 or equal. Composition is 100% solid isobutylene tripolymer tape. Service temperature is -60°F to +212°F. Non-skimming, gun grade, butyl caulk sealant used to seal clips, side joints, eaves, rakes, endlaps, ridge and pre-drilled holes for through fasteners shall be Schnee-Morehead 5430 or equivalent with a service temperature of -60°F to +200°F..

Fasteners: All roof fasteners shall be per the following.

A. Exposed self-drilling screws with washers attach through the panel exterior at rake and at side laps with saddle washers shall be carbon steel No. 14 hex head TEK fasteners with washers, required length will vary with panel thickness.

B. Unexposed fasteners that will lie between the panel and secondary members shall be No. 10 x 1" self-drilling pan

head screws zinc plated. These electro zinc plated fasteners shall be clear or yellow chromate coated

C. Premium roof fasteners for exposed panel to panel and panel to trim attachment shall be No. 14 x 3/4" self-drilling carbon steel with a molded zinc alloy hex head EPDM washer screws at all exposed roof panel to panel connections for warranted roofs.

D. Standard roof fasteners for exposed panel to panel and panel to trim attachment shall be No. 14 x 3/4" self-drilling carbon steel with an integral hex head EPDM washer screws. Standard roof fasteners shall have a corrosive resistant coating over zinc plating.

4. TECHNICAL DATA

A. The Insulated Hi Rib roof panel's ability to withstand positive and negative design loads verified by testing in accordance with the ASTM E 72 Vacuum Chamber Method the standard deflection criteria is L/180.

B. Thermal properties have been verified by actual tested values in accordance with the ASTM C 518 steady state thermal transmission test method. Aged K Factor did not exceed .14 @ 75°F mean temperature or .13 @ 40°F mean temperature.

C. Panel core flame spread maximum of 25 and smoke developed maximum of 450 as tested in accordance with ASTM E 84 test method.

D. The panel has a Factory Mutual Class 1 Approval for wall and roof/ceiling construction in accordance with the full scale FM 4880 test program with no height restriction.

E. The panel has a Factory Mutual Approval for wind uplift, hailstorm, foot traffic and spread of flame (ASTM E 108 – Class A rated) in accordance with FM 4471.

F. The polyisocyanurate (polyurethane) foam core meets or exceeds the following physical properties:

- Compressive strength: 25 psi
- Density (in-place): 2.1-2.5 pcf
- Shear Strength: 28-32 psi
- Closed Cell Content: 95%
- Dimensional Stability: 14 day aged (ASTM D 2126)
-20°F < 1% chg, Dry Heat 158°F, < 1% chg, Humid Heat 158°F

5. QUALITY PANEL INSTALLATION

The contractor/installer shall examine the alignment of the framing before installing the insulated roof panels. The steel shall be aligned to the tolerances established in the AISC code of standard practices, section 7, and the supplemental modification control section 7.11.3, adjustable items. The maximum deviation of steel alignment shall be limited to -0 to 3/16" from the control with a 1/8" maximum change in deviation for any member of any 10'-0" run of panel. The erector shall not

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HI RIB

INSULATED PANEL SPECIFICATIONS

proceed with installation if the steel framing is not within the specified tolerances. The face of all structural members to which the panels are attached must be in the same plane, flat and free of obstructions such as weld marks or bolt heads.

The Insulated Hi Rib roof panels shall be erected in accordance with Architectural Metal Systems' Insulated Panel Product Manual, approved drawings and building erection drawings, by an Architectural Metal Systems' Authorized Builder using proper tools and equipment.

6. AVAILABILITY

For availability, contact:

ARCHITECTURAL METAL SYSTEMS

7. WARRANTY

Material warranties are available.

8. MAINTENANCE

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

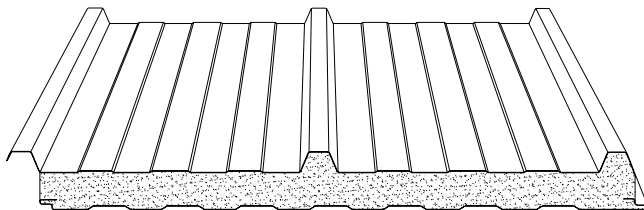
9. TECHNICAL SERVICES

For information, contact:

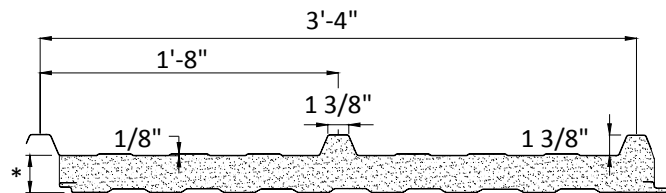
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10. PRODUCT NOTES

Architectural Metal Systems reserves the right to revise all standard specifications and information. Architectural Metal Systems regularly updates its published "Standard Specifications" on the AMS web site, www.ametalsystems.com, which supersedes and replaces any previously published standard specifications of Architectural Metal Systems.



INSULATED HI RIB



* ROOF PANEL THICKNESS: 2 1/2", 4", 5" OR 6"

ALLOWABLE LOAD FOR HR3 ROOF PANELS (PSF) BASED ON L/240 DEFLECTION
SPAN (FT)

PANEL THICKNESS (IN)	PANEL WEIGHT (PSF) 26/26	SIMPLE SPAN (FT)								MULTIPLE SPAN (FT)							
		5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0
2.5"	2.33	72	55	43	34	27				67	60	49	40	34	28		
4"	2.65	122	98	78	64	52	44	36		110	90	76	66	59	52	45	39
5"	2.86	153	128	103	85	71	58	45	36	139	114	96	83	74	66	60	52
6"	3.12	184	153	128	106	90	76	60	50	168	138	117	101	89	80	72	66

- Notes:
- 1) Spans shown are based on transverse load testing of the panels per ASTM E-72. Thermal effect due to temperature differentials have not been considered.
 - 2) Loads shown do not include a check of attachment to the supports. Attachment requirements will vary based on project wind load requirements.