

Product Evaluation

EC114 | 1120

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: EC-114

Effective Date: November 1, 2020

Re-evaluation Date: November 2024

Product Name: ACM Exposed Fastener (MetalBond 500 Series) Wall Panel System

Manufacturer: Byrne Metals, Corporation
848 South Houston Avenue
Humble, TX 77338
(281) 354-1100

General Description:

The ACM Exposed Fastener (MetalBond 500 Series) wall panel system consists of two (2) 0.5mm thick 3105 H14 aluminum skins thermally bonded to a thermoplastic core for a total thickness of 4mm. The interior aluminum face and thermoplastic core is milled off and the exterior aluminum face is rolled over closing off the remaining exposed thermoplastic core along the panel edges.

Limitations:

Wall Framing: The wall panels are installed over minimum 0.063" thick 3105 H14 aluminum, 3/4" tall hats. The aluminum hats are installed over minimum 16-gauge steel framing.

New Wall Framing Attachment: The wall framing must meet or exceed the requirements of the IRC or IBC and must be installed as required for resistance to wind loads.

Design Pressure: The design pressure load resistance must be as specified in Table 1. The design pressures are based on a panel deflection equal to L/60.

Table 1. Design Pressures

Design Wind Pressure (psf)	Panel Size	Horizontal Fastener Spacing	Horizontal Aluminum Hat Spacing
+50.0; -40.5	23-1/2"	12"	24"
+50.0; -45.0	23-1/2"	16"	24"
+25.0; -28.1	29-1/2"	12"	30"
+50.0; -50.0	29-1/2"	16"	15"

Installation:

General: The ACM Exposed Fastener (MetalBond 500 Series) wall panel system must be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Wall Framing: Minimum 16-gauge steel framing. The steel framing is spaced a maximum of 16" on center.

Horizontal Hat Framing: Minimum 0.063" thick 3015 H14 aluminum, 3/4" tall hats. Refer to Table 1 for the required spacing. The hats are secured to the steel wall framing with two (2) 1/4x1" HWH fasteners per steel framing member.

Vertical Hat Framing: Minimum 0.063" thick 3015 H14 aluminum, 3/4" tall hats. The hats are located at each vertical panel reveal. The vertical hats are secured to the horizontal hats with two (2) 3/16" aluminum rivets per end.

Attachment of METALBOND Wall Panels to Aluminum Hats: Secure the METALBOND wall panels to the aluminum hats with #12-14x1" HWH SD3 Alumi-Flex 302 SS fasteners through the pre-drilled holes at the spacing listed in Table 1 along the horizontal hats and at the mid-panel along the vertical hat.

Panel Reveal: The panels have 1/2" horizontal and vertical panel reveals. The panel reveals are created by the aluminum hats.

Water/Vapor Barrier: The wall panel system must be installed over a water/vapor barrier on exterior applications.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.