



# ICC-ES Evaluation Report

## ESR-4474

Reissued July 2023

Revised February 2024

*This report is subject to renewal July 2024.*

**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**

**Section: 07 42 43—Composite Wall Panels**

**REPORT HOLDER:**

**TREMCO CPG, INC.**

**EVALUATION SUBJECT:**

**METALITE SERIES 8000 MCM WALL PANEL SYSTEM**

### 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

- 2021, 2018, 2015, and 2012 *International Building Code*® (IBC)

**Properties evaluated:**

- Structural
- Interior Finish
- Fire Performance (Types I – IV Construction)

### 2.0 USES

The Metalite Series 8000 MCM Wall Panel System is composed of aluminum composite panels complying with 2021 and 2018 IBC Section 1406 (2015 and 2012 IBC Section 1407) for metal composite materials (MCM) and is used as nonload-bearing exterior wall panels in accordance with Section 1406 of the IBC (2015 and 2012 IBC Section 1407). Additionally, the Metalite Series 8000 MCM Wall Panel System is used as an interior wall finish in accordance with IBC Section 803. For installation on exterior walls of Type I, II, III and IV construction, the Metalite Series 8000 MCM Wall Panel System must be installed as a component of exterior wall assemblies constructed in accordance with Section 4.3 of this report. For installation on exterior fire-resistance-rated walls, the wall assemblies must be constructed in accordance with IBC Section 1406.8 (2015 and 2012 IBC Section 1407.8).

### 3.0 DESCRIPTION

#### 3.1 Panels:

The Metalite Series 8000 MCM Wall Panel System may be constructed using any of the following 0.16-inch (4mm) thick

MCM sandwich panels at a maximum fabricated width of 60-inches (152.4 cm): Alpolic®/fr MCM Panels (ESR-2653), Reynobond® FR MCM Panels (ESR-3435) or Alucobond® Plus MCM Panels (ESR-1185). All panels are prefinished and have a Class A classification in accordance with IBC Section 803 with a maximum flame-spread index of less than 25 and a maximum smoke-developed index of less than 450 when tested in accordance with ASTM E84. Detailed panel information can be found in the corresponding ESRs.

#### 3.2 Panel Stiffeners and Attachment Accessories:

Installation of the Metalite Series 8000 MCM Wall Panel System requires perimeter extrusions, base extrusions, edge extrusions, and termination extrusions supplied by the MCM system fabricator. The accessories are manufactured from ASTM B221 6063-T6 aluminum alloy. The perimeter extrusions are factory attached to the rout-return panel edges via a minimum of two #8-18 x 9/32-inch (7.1 mm) set screws spaced 16 inches (406 mm) on center, double sided foam tape and adhesive as specified in the approved quality documentation. The Metalite Series 8000 MCM Wall Panel System also requires stiffeners manufactured from ASTM B221 6063-T6 aluminum. The stiffeners are factory-applied to the interior face of the panels with double-sided tape and adhesive as specified in the approved quality documentation (See Figure 1). Stiffeners are spaced a maximum of 24 inches (61 cm) on center.

### 4.0 DESIGN AND INSTALLATION

#### 4.1 Design:

The maximum allowable design wind pressure for the Metalite Series 8000 MCM Wall Panel System wall cladding system when installed in accordance with Section 4.2 of this report is included in Table 1 of this report. Support framing and the attachment of the system to the support framing, such as wall studs, z-girts or hat channels must be designed in accordance with the applicable code to be adequate for these loadings. Design of the support framing and attachment of the system to the support framing must be submitted to and approved by the code official for each project and is outside of the scope of this report.

#### 4.2 Installation:

The panels must be attached to the exterior walls of the building by use of attachment accessories described in Section 3.2. The MCM systems are assembled in fabrication

facilities; field fabrication is limited to minor adjustments / repairs and cutting the MCM splines, which fit between panels at horizontal and vertical joints, as necessary. The appropriate installation procedures must be followed for each system. The manufacturer's instructions must be available on the jobsite during installation.

**4.2.1 Metalite Series 8000 Wall Panel Fabrication:** The MCM systems are prefabricated by Tremco CPG, Inc. The Metalite Series 8000 panels are flat MCM panels with rout-return edges. The return edge is formed by folding the edges at a right angle to create 1-inch (25.7 mm) return flanges along the tops and sides of the panels and a 7/8-inch (22.2 mm) flange along the bottom of the panels. The perimeter extrusions constructed of ASTM B221 6035-T6 aluminum are factory attached to the rout-return panel edges via a minimum of two #8-18-by-9/32-inch (7.1 mm) set screws spaced 16 inches (406 mm) on center, double-sided foam tape and adhesive as specified in the approved quality documentation. The perimeter extrusions are utilized with the attachment accessories referenced in Section 3.2 for the attachment of the panels to the building substrate. For panels larger than 25 inches (635 mm) in both the horizontal and vertical measurement, aluminum stiffeners are installed parallel to the short dimension on the back of the panels. Stiffeners are positioned parallel to the short dimension at a maximum horizontal spacing of 24 inches (610 mm) on center using adhesives described in Section 3.2.

**4.2.2 Fastening systems:** The Metalite Series 8000 MCM Wall Panel System arrives to the jobsite pre-assembled with perimeter extrusions and stiffeners. The perimeter extrusions and stiffeners are affixed to the panels, as noted in Section 4.2.1, at the factory. The base extrusions, edge extrusions, and termination extrusions, described in Section 3.2, are provided by Tremco CPG, Inc. and are field-attached to the structural framing with project specific fasteners at a maximum spacing of 16 inches (406 mm) on center. The pre-fabricated MCM panels are installed from left to right and bottom to top by interlocking the female perimeter extrusions on the backs of the MCM panels to the base and edge male extrusions for the first row or column and to the male perimeter extrusions on the adjacent panel for subsequent panels. The male perimeter extrusions are field attached to the structural framing with project specific fasteners at a maximum spacing of 16 inches (406 mm) on center. Aluminum Composite Material (ACM) splines made from MCM panels described in Section 3.1, are placed into the slots within the perimeter extrusions between panels to fill the gaps between panels at the horizontal and vertical joints. See Figures 2 through 4.

**4.3 Exterior Walls of Buildings up to 40 feet in Height of Type I, II, III, or IV Construction:** Under 2021 IBC Section 1406.10, the Metalite Series 8000 MCM Wall Panel System must not be installed more than 40 feet (12.2 m) in height above grade.

Under 2018 IBC Section 1406.11.1 (2015, 2012 and 2009 IBC Section 1407.11.1) the Metalite Series 8000 MCM Wall Panel System must not be installed more than 40 feet (12.2 m) in height above grade where installed as follows:

- Where the fire separation distance is 5 feet (1524 mm) or less, the area of MCM must not exceed 10 percent of the exterior wall surfaces.
- Where the fire separation distance is greater than 5 feet (1524 mm), there is no limit on the area of exterior wall surfacing using MCM.

#### 4.4 Interior Wall Covering:

The Metalite Series 8000 MCM Wall Panel System may be used as an interior wall finish in compliance with IBC

Chapter 8. The panels must be installed on the interior side of the wall in accordance with Section 4.2 above. The panels have a Class A interior finish classification.

## 5.0 CONDITIONS OF USE

The Metalite Series 8000 MCM Wall Panel System described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation must comply with this report; the manufacturer's published installation instructions, the applicable code and approved plans. If there are any conflicts between this report and the manufacturer's installation instruction, this report governs.
- 5.2 The allowable transverse load capacity for the MCM panels and the interlock of the perimeter extrusions with the attachment accessories must be submitted to and approved by the code official for each project. The panel dimensions and allowable transverse load capacity shown in Table 1 must equal or exceed the design wind loads for the building determined in accordance with Chapter 16 of the IBC.
- 5.3 The design of the MCM system, vapor retarders (2018, 2015, and 2012 IBC), framing members, connections, and curtain wall framing members must be submitted to and approved by the code official for each project.
- 5.4 Tremco CPG, Inc. must provide a certificate of compliance to the code official attesting that the MCM system fabrication includes the use of adhesives approved for use, that the adhesive application complies with the adhesive manufacturer's installation guidelines, and that the MCM system fabrication complies with approved construction documents.
- 5.5 Where Metalite Series 8000 MCM Wall Panel System are installed on exterior walls of buildings of Types I, II, III and IV construction, the walls must be constructed in accordance with Section 4.3 of this report.
- 5.6 A water-resistive barrier must be installed in accordance with the applicable code. Evidence of weather tightness of the wall cladding system in accordance with Section 1406.6 of the 2021 and 2018 IBC (Section 1407.6 of the 2015 and 2012 IBC) must be submitted to the code official.
- 5.7 Installation of the Metalite Series 8000 MCM Wall Panel System assembly onto a fire-resistance-rated exterior wall is permitted when the assembly attachments do not penetrate through the entire exterior wall assembly.
- 5.8 For MCM systems used on exterior walls of Types I, II, III, or IV construction in accordance with 2021 and 2018 IBC Section 1406.10 (2015, and 2012 IBC Section 1407.10), an approved thermal barrier must be installed to separate the MCM from the interior of the building as specified in 2021 and 2018 IBC Section 1406.10.2 (2015 and 2012 IBC Section 1407.10.2), except when the MCM is an element of a balcony or similar projection, such as architectural trim or embellishments.
- 5.9 The MCM system is fabricated in Carrollton, Texas under a quality control program with inspections conducted by ICC-ES.
- 5.10 The MCM panels are manufactured at the locations noted in their corresponding ESRs, under quality control programs with inspections conducted by ICC-ES.

**6.0 EVIDENCE SUBMITTED**

Data in accordance with the ICC-ES Acceptance Criteria for Metal Composite Material (MCM) (AC25), dated October 2010 (editorially revised March 2021).

**7.0 IDENTIFICATION**

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-4474) along with the name, registered trademark, or registered logo of the report holder (Tremco CPG, Inc.) must be included in the product label.

7.2 In addition, the panels are identified by a label noting the company address, product name, thickness, and flame-spread index.

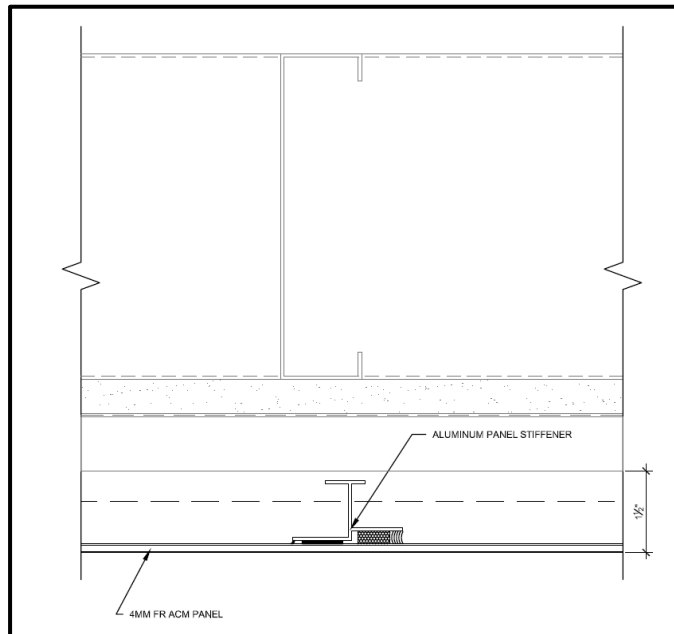
7.3 The report holder’s contact information is the following:

**TREMCO CPG, INC.**  
**3735 GREEN RD.**  
**BEACHWOOD, OHIO 44122**  
**(800) 556-7752**  
[www.tremcocpg.com](http://www.tremcocpg.com)

**TABLE 1—ALLOWABLE WIND LOAD DESIGN VALUES**

<u>MAXIMUM FABRICATED PANEL WIDTH</u>	<u>PANEL STIFFENER SPACING (MAX)</u>	<u>PERIMETER EXTRUSION FASTENER SPACING (MAX)</u>	<u>BASE, EDGE AND TERMINATION EXTRUSION FASTENER SPACING (MAX)</u>	<u>POSITIVE PRESSURE (PSF)</u>	<u>NEGATIVE PRESSURE (PSF)</u>
60 inches	24 inches	16 inches	16 inches	23 psf	24 psf

For SI: 1 inch = 25.4 mm; 1 psf = 47.88 Pa



**FIGURE 1—TYPICAL STIFFENER ATTACHMENT DETAIL**

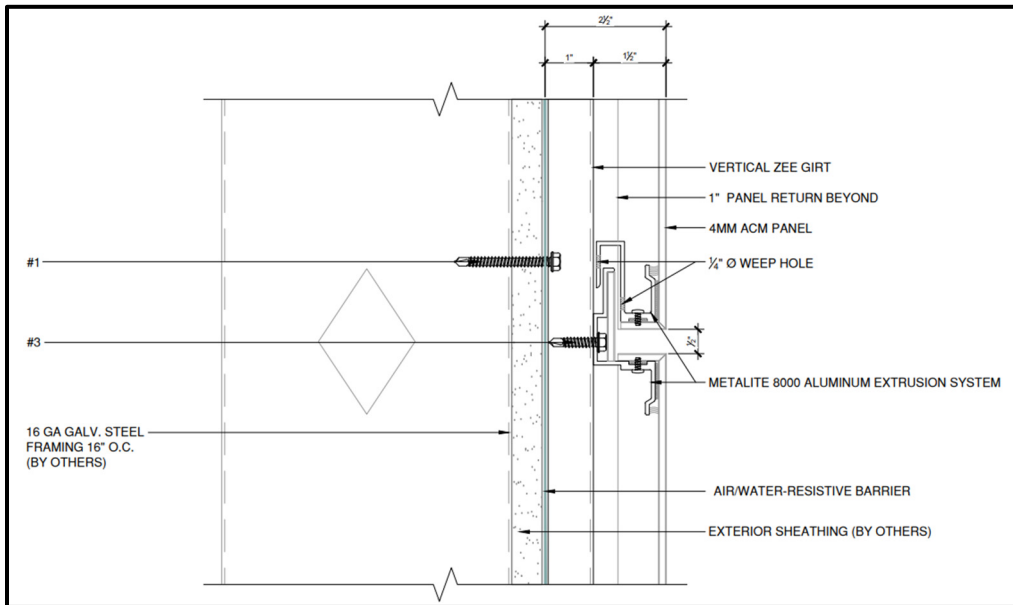


FIGURE 2—TYPICAL HORIZONTAL JOINT DETAIL

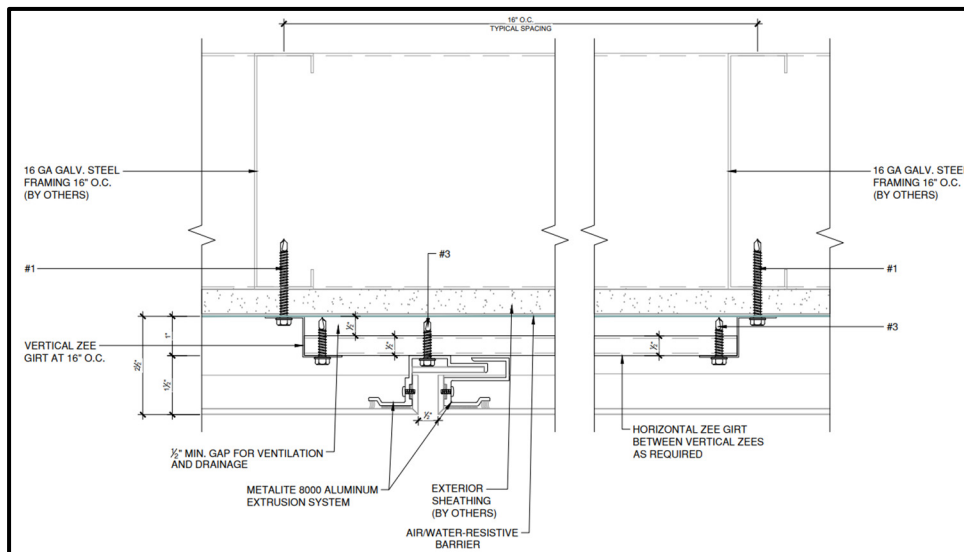


FIGURE 3—TYPICAL VERTICAL JOINT DETAIL

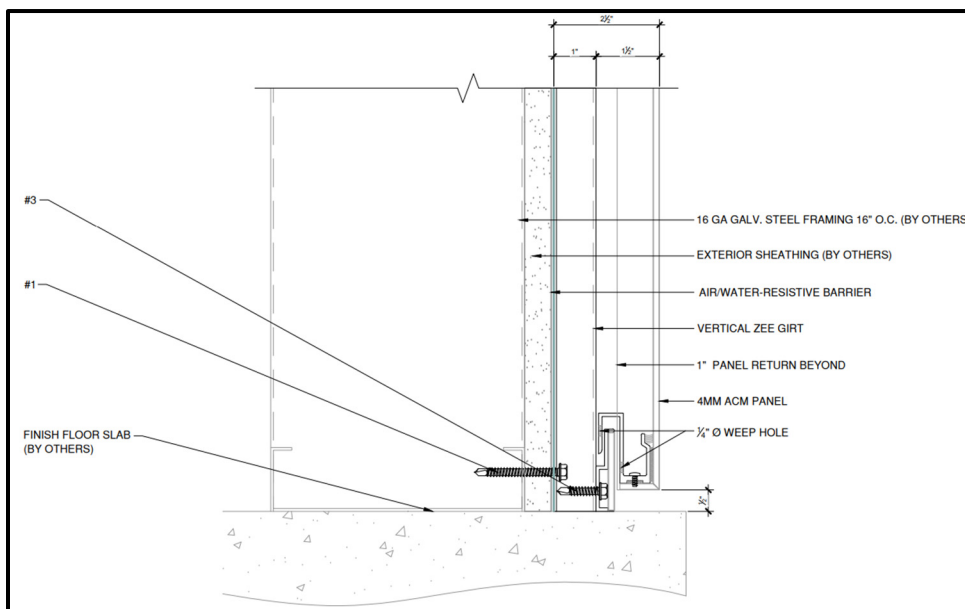


FIGURE 4—TYPICAL BASE DETAIL