



ICC-ES Listing Report ESL-1569

Reissued October 2024

This listing is subject to renewal October 2025.

CSI: DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 42 43—Composite Wall Panels

Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

Product: B1 FR ALUMINUM COMPOSITE PANEL WALL SYSTEM

Listee: JIANGSU HYGROW COMPOSITES CO., LTD.

Evaluation: The B1 Aluminum Composite (ACM) Panel Wall System with the exposed fastening, were evaluated to the following standard:

- NFPA 285-12, Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components, National Fire Protection Association.

Assembly: The B1 FR ACM Panel Wall System with a window opening must be constructed with following components and is shown in Figure 1:

Interior Finish: The interior surface of the wall assembly must be clad with one layer of $\frac{5}{8}$ -inch-thick (15.9 mm) Type X gypsum board, complying with ASTM C1396. The gypsum wallboards must be installed, in a staggered fashion, with the long dimension perpendicular to the wall studs spaced at an on-center spacing of 16 inches (406 mm), and fastened to the wall framing with No. 6 x $1\frac{1}{4}$ -inch long (31.8 mm), bugle head, self-drilling screws with a nominal spacing of 16 inches (406 mm) horizontally and 12 inches (305 mm) vertically. The fasteners and joints must be covered with joint tape and joint compound in accordance with ASTM C840 or GA216.

Wall Framing: The wall must be framed with $3\frac{5}{8}$ -inch (92 mm) wide, 18 GA galvanized steel studs spaced 16 inch (406 mm) on-center and fastened to $3\frac{5}{8}$ -inch (92 mm) wide, 16 GA galvanized steel top and bottom tracks. The studs must be connected to the tracks with two $\frac{1}{2}$ -inch (12.7 mm) long #8 pan head screws per stud on the top and bottom track.

Exterior Finish: The exterior surface of the wall assembly must be covered with one layer of $\frac{1}{2}$ -inch-thick (12.7 mm) Georgia-Pacific Dens-glass® Gold gypsum sheathing, complying with ASTM C1177, and must be attached to wall studs horizontally across the full exterior surface of the wall assembly with vertical joints offset 32 inches (813 mm). The sheathing must be fastened to the wall framing with No. 6 x $1\frac{1}{4}$ -inch (31.8 mm) long, bugle head, self-drilling screws with a nominal on-center spacing of 16 inches (406 mm) horizontally and 12 inches (305 mm) vertically in a staggered fashion. BASF's MasterSeal® AWB 660 I weather resistant barrier must be installed over the exterior sheathing surface to a thickness of 10 mils (0.254 mm).

Sub-Framing for Exterior Cladding: The sub-framing members for installing ACM panels (or exterior cladding) are 1-inch-deep (25.4 mm) aluminum 6063-T5 hat-shape extrusions and 1-inch-deep zee extrusions, respectively, in the field and perimeter of the wall system. The sub-framing members must be installed vertically and horizontally based on the project specifications. The spacing of the extrusion members must be based on the size of the ACM configurations and determined by registered design professional. The ACM panel vertical joints shall not occur over window/door openings. All sub-framing members must be

fastened to the wall framing using No. 12 x 2-inch (51 mm) long, hex head self-drilling screws, spaced at 24 inches (610 mm) on center vertically or at every wall framing stud for horizontal sub-framing members. The ACM panels must be attached to the sub-framing members by using No. 21 x 1-inch (25.4 mm) long, pan head Torx drive screws spaced at 24 inches on center vertically and 18 inches on center horizontally.

B1 FR ACM Panels: The B1 FR ACM panels are fabricated by injecting fire-resistive-treated polyethylene core into the cavity between two 0.02-inch-thick (0.51 mm) aluminum skins. The panels must be bonded to extruded aluminum profiles using approved structural silicone sealant/adhesive complying with ASTM C1184, which are used to stiffen the panels and to provide perimeter fastening to attach the panels to walls. The panels are available in widths from 16 to 60 inches (406 mm to 1524 mm) and lengths up to 243 inches (6172 mm). The panel core thickness is 0.236 inches (6 mm) and has a nominal density of 90.5 lb.ft³ (1.45 g/cm³). Each panel weighs 1.96 lbf/ft² (93.8 N/m²). The aluminum skins are available in anodized, brushed copper and coil applied finishes.

Insulation: Nominal 4-inch-thick (102 mm) R-11 Kraft faced (Class A) fiberglass insulation batts must be installed in the cavities between wall studs per the manufacturer's installation instructions. The stud cavity at the intersection of the floor and exterior walls must be filled with the same 4-inch-thick (101.6 mm) fiberglass insulation batts in accordance with IBC Section 715.4.

Window Detailing: The window header must be lined with 24 gage steel flashing and extended beyond B1 FR ACM Panels. See Figure 1d for window header detail.

Findings:

The wall assembly described in the Assembly section of this listing report complies with the conditions of acceptance described in NFPA 285 when tested in accordance with NFPA 285, as referenced in the applicable section of the following code:

2018 *International Building Code*[®] (IBC)
Applicable Section: 1406.10.4

Identification:

1. The ICC-ES mark of conformity, electronic labeling, or the evaluation listing number (ICC-ES ESL-1569) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
2. In addition, the packaging of the B1 FR ACM Panel Wall System must bear a product label indicating the manufacturer's name (Jiangsu HyGrow Composites Co., Ltd.) and address, the product name (B1 FR ACM Panel System).
3. The report holder's contact information is the following:

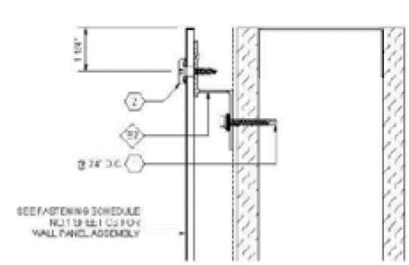
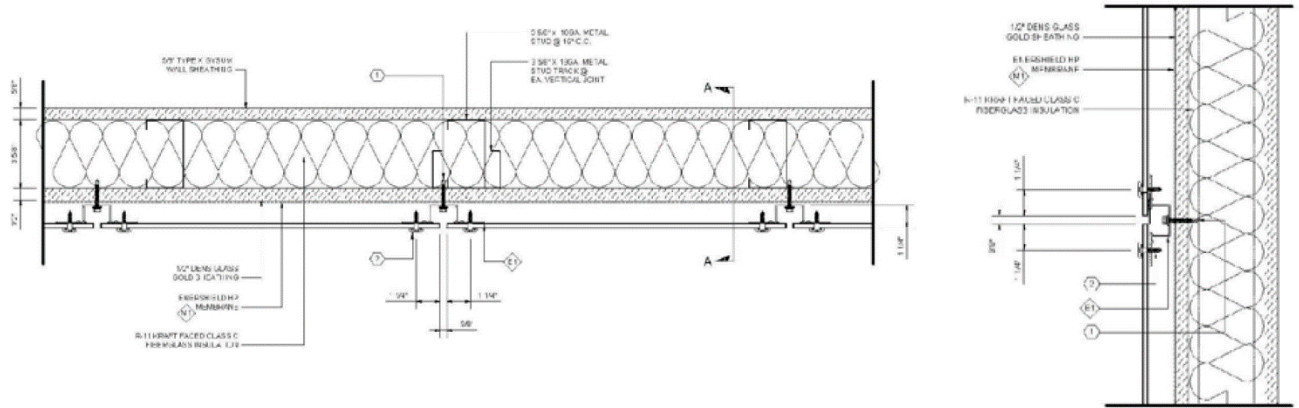
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+86 400 763 6660
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Installation:

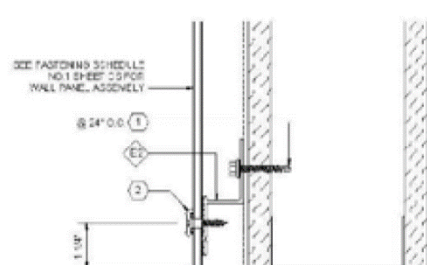
The wall system must be installed in accordance with Jiangsu HyGrow Composites Co., Ltd's published installation instructions and applicable codes.

Conditions of Listing:

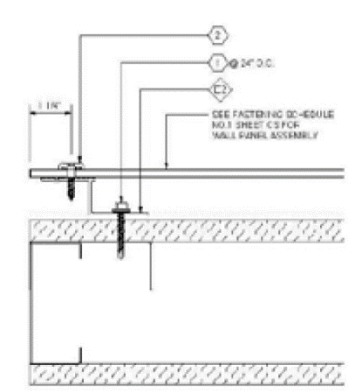
1. The listing report addresses only conformance with the standard and code sections noted above.
2. Approval of the wall system's use is the sole responsibility of the local code official.
3. The listing report applies only to the materials tested and as submitted for review by ICC-ES.
4. The Assembly section describes the wall assembly which demonstrates compliance with NFPA 285, and is limited to use with B1 FR ACM panels, described in this listing report.
5. The B1 FR ACM wall panel system is manufactured under a quality control program with inspections by ICC-ES.



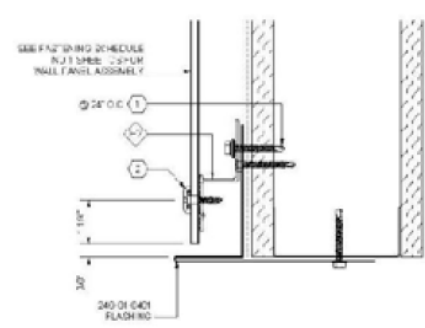
TOP OF WALL DETAIL



BOTTOM OF WALL DETAIL



EDGE OF WALL DETAIL



HEADER OF WINDOW DETAIL

FIGURE 1—B1 FR ALUMINUM COMPOSITE PANEL WALL SYSTEM AND TYPICAL DETAILS