

ICC-ES Evaluation Report

ESR-4601

Reissued February 2024

This report also contains:


- CBC Supplement

Subject to renewal February 2025

- LABC Supplement

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<p>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION</p> <p>Section: 07 42 43— Composite Wall Panels</p> <p>Section: 07 42 00—Wall Panels</p> <p>Section: 07 44 00— Faced Wall Panels</p>	<p>REPORT HOLDER:</p> <p>ARCONIC ARCHITECTURAL PRODUCTS, LLC</p>	<p>EVALUATION SUBJECT:</p> <p>ARCONIC AS3000B 3MM PRE-PAINTED BONDED ALUMINUM SHEET</p>	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, and 2012 [International Building Code® \(IBC\)](#)

For evaluation for compliance with codes adopted by Los Angeles Department of Building and Safety (LADBS), see [ESR-4601 LABC Supplement](#).

Properties evaluated:

- Fire performance (Types I-IV construction)
- Interior finish
- Structural

2.0 USES

Arconic AS3000B 3mm pre-painted bonded aluminum sheets are used as exterior composite wall panels in accordance with IBC Chapter 14, or as interior wall finish in accordance with Chapter 8 of the IBC. The sheets may be used in all Construction Types under the IBC, when installed in accordance with Section 4.3 of this report.

3.0 DESCRIPTION

3.1 General:

Arconic AS3000B 3mm pre-painted bonded aluminum sheets are installed on the exterior face of exterior walls of buildings or interior of buildings. See [Figures 1](#) through [3](#) for assembly details.

3.2 Panels:

Arconic AS3000B 3mm pre-painted bonded aluminum sheets are prefabricated sheets consisting of two 3000 series aluminum sheets having a thickness of 0.06 inch (1.5 mm) bonded together with an adhesive to an overall bonded sheet thickness of 3 mm (0.118 inch). Alloy, temper, mechanical and chemical properties comply with ASTM B209 or EN1396/EN 573-3. Sheets are bonded with 0.0063-inch (0.16 mm) thick adhesive. The sheets and the concealed fastening system are installed on the exterior face of exterior walls of buildings or interior of buildings. The aluminum skins are available in pre-painted finishes.

The bonded sheets have a flame spread index of no more than 25 and a smoke developed index no more than 450 when tested in accordance with ASTM E84/UL 723, and have a Class A interior finish classification.

The stiffeners are custom extruded aluminum “I” shaped and must be located 6-inch (152 mm) from the left and right side of the panel on the interior side. The stiffener measurements are 1½ inch (38 mm) wide, 1⅛ inch (29 mm) high and 56 inches (1422 mm) long, and must be adhered to the panel with double-sided foam tape and structural silicone/sealant adhesive complying with ASTM C920.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The maximum allowable design wind load pressure for the Arconic AS3000B 3mm pre-painted bonded aluminum sheets and systems installed in accordance with this report is 21.7 psf (1.04 kPa), positive or negative. The bonded sheets supporting framing, must be designed in accordance with the applicable code to be adequate for these loadings.

4.2 Installation:

The Arconic AS3000B 3mm pre-painted bonded aluminum sheets must be attached to the exterior building walls by the use of aluminum extrusions installed on the sheets by the systems fabricator in fabrication facility. See [Figures 1](#) through [3](#). The rout-and-return installation method is accomplished with a continuous V-shaped routed groove around the entire sheet perimeter. The corners are removed and the edges are folded to create a “pan” or cassette. The sheet system is a McDougall Series 600 rain screen system which is a 2-inch (51 mm) deep, route-and-return with spline. The folded sheets are fastened to the extrusions using No. 10 corrosion-resistant self-drilling flat head screws spaced 16 inches (406 mm) on center. The joints are a dry ½ joint and AS3000B spline pieces are used to cover the joint.

Extrusions used to stiffen the sheet are installed by the fabricators on the back face of the sheet. The aluminum stiffeners are bonded to the sheets using an approved structural silicone sealant/adhesive.

The bonded sheet systems are assembled in fabrication facilities; field fabrication is limited to minor adjustments and cutting of the assembled bonded sheets to fit as necessary. The appropriate installation procedures must be followed for each system. The manufacturer’s published installation instructions and this report must be strictly adhered to, and a copy of the manufacturer’s instructions must be available on the jobsite during installation.

4.3 Exterior Walls of Buildings of Type I, II, III or IV (Noncombustible) Construction Based on NFPA 285 testing:

Where exterior walls are required to be of noncombustible construction, the walls must be built in accordance with the following:

The wall must be framed with minimum 18 gage C-channel steel studs at 16 in. on-center (406 mm). The interior of the wall must be faced with one layer of 5⁄8-inch-thick (15.9 mm), Type X gypsum wallboard, complying with ASTM C1396, finished and taped in accordance with ASTM C840 or GA216. The walls must be filled with 4 pcf (64 kg/m³) mineral wool insulation at the intersection of the floors and exterior walls in accordance with IBC Section 715.4. The exterior face of the wall must be sheathed with ½-inch (12.7 mm) thick Dens-Glass Gold gypsum sheathing recognized in ESR-3087.

The Wrap Shield SA water resistive self-adhesive air barrier must be applied directly over the exterior sheathing, with minimum 4-inch (102 mm) overlap at all seams.

Closure angle pieces 16 gage galvanized steel, double-zee closure girts must be installed horizontally and attached to the steel framing using No. 8 1¼ inch (45 mm) long self-drilling screws. The spacing of the girts must not exceed 36 inches. Two-inch-thick Rockwool CAVITYROCK insulation having a density of 8 pcf must be applied in the cavities between the girts at a friction fit. The Arconic AS3000B panels must be installed in accordance with Section 4.2 of this report.

5.0 CONDITIONS OF USE:

Arconic AS3000B 3mm pre-painted bonded aluminum sheets described in this report comply with, or are suitable alternatives to what is specified in, the codes indicated in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation must comply with this report, the manufacturer’s published instructions, the applicable code and the approved plans. If there are any conflicts between this report and the manufacturer’s installation

instructions, this report governs. A copy of the manufacturer's instructions must be available on the jobsite during installation.

- 5.2 The design of the structural support system (building framing, attachment accessories, and silicone adhesive), bonded sheet connections provided by the bonded sheet systems fabricator, vapor retarders and curtain wall framing members must be submitted to and approved by the code official for each project. The allowable transverse load capacity for the bonded sheets and their interlock with their attachment accessories must be submitted to and approved by the code official for each project. The allowable transverse load capacity must equal or exceed the design loads determined in accordance with Chapter 16 of the IBC. Allowable transverse loads for the bonded sheet materials are set forth in Section 4.1 of this report.
- 5.3 The Arconic AS3000B 3mm pre-painted bonded aluminum sheets fabricator must provide a certificate of compliance to the code official attesting that the bonded sheet 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 bonded sheet system fabrication complies with approved construction documents. Additionally, when the attachment methods employ adhesives other than to adhere stiffeners to the backs of the bonded sheets, special inspections are required in accordance with 2018, 2015 and 2012 IBC Section 1704.2.5, or the fabricator must be approved by the code official in accordance with 2018, 2015 IBC Section 1704.2.5.1, 2012 IBC Section 1704.2.5.2, as such operations are outside the scope of this report.
- 5.4 Where exterior walls are required to be noncombustible on buildings of Types I, II, III or IV construction, bonded sheet systems must be installed as specified in Sections 4.3 of this report, as applicable.
- 5.5 Use of Arconic AS3000B 3mm pre-painted bonded aluminum sheets in fire-resistance-rated construction in accordance with ASTM E119 has not been evaluated and is outside the scope of this report.
- 5.6 The Arconic AS3000B 3mm pre-painted bonded aluminum wall system must be installed with an approved water-resistive barrier and flashing as required by the building code.
- 5.7 The Arconic AS3000B 3mm pre-painted bonded aluminum sheets are manufactured by Arconic Architectural Products–North America, in Eastman, Georgia, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Reports of strength testing in accordance with ASTM E72 and bonded sheet fastener tests.
- 6.2 Reports of surface burning testing in accordance with ASTM E84.
- 6.3 Reports of flammability testing in accordance with NFPA 285.
- 6.4 Reports of peel torque test for bond strength of panels in accordance with ASTM D1781.
- 6.5 Report of durability testing in accordance with Section 4.5 and 4.6 of the [ICC-ES Acceptance Criteria for Metal Composite Material \(MCM\) \(AC25\)](#).
- 6.6 Reports of panel fastener tests in accordance with Section 4.3 of AC25.

7.0 IDENTIFICATION

- 7.1 The bonded sheets are identified by a label noting the name and address of Arconic Architectural Products, the product name, the thickness, the flame-spread and smoke developed indices, and the evaluation report number (ESR-4601).
- 7.2 The report holder's contact information is the following:

ARCONIC ARCHITECTURAL PRODUCTS, LLC
50 INDUSTRIAL BOULEVARD
EASTMAN, GEORGIA 31023
(478) 374-4746
www.arconic.com

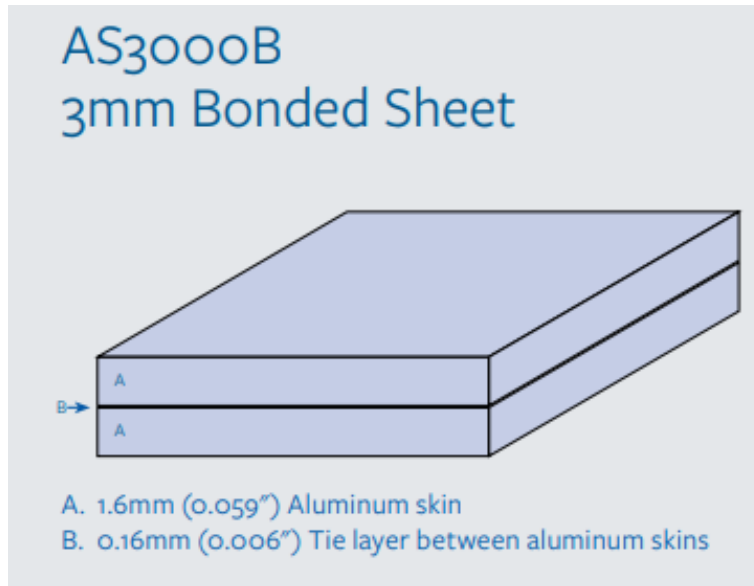


FIGURE 1—Arconic AS3000B 3mm pre-painted bonded aluminum sheets

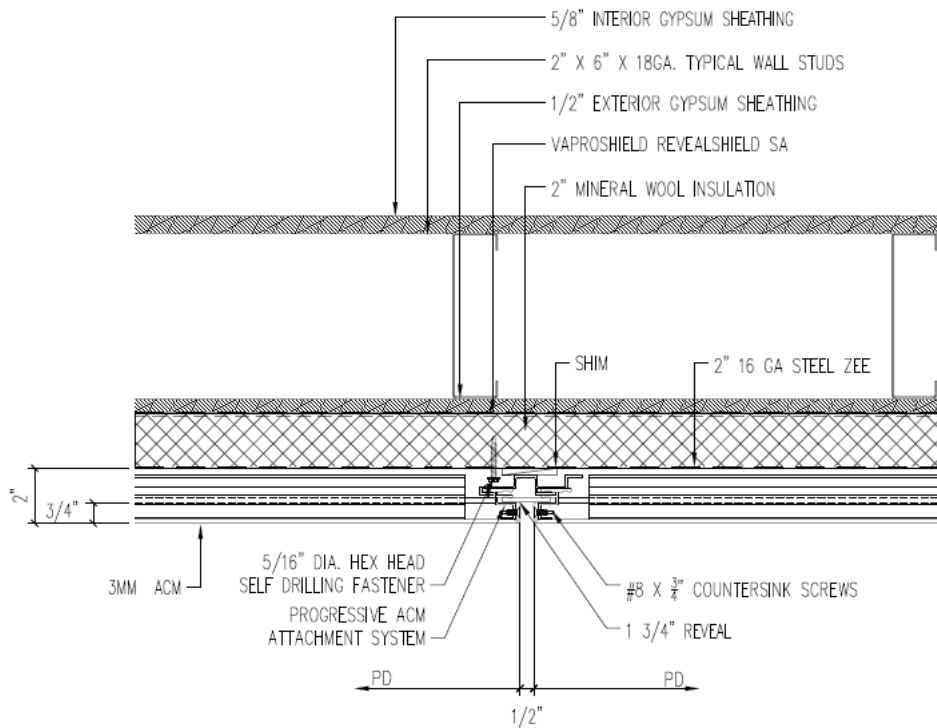


FIGURE 2—Vertical joint detail

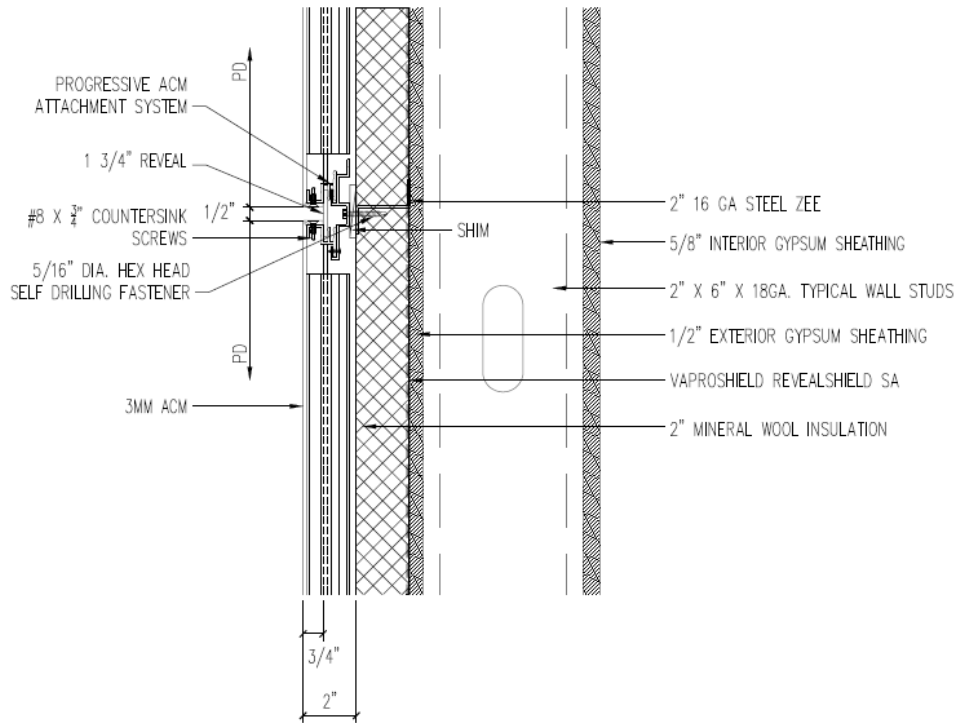


FIGURE 3—Horizontal joint detail

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The purpose of this evaluation report supplement is to indicate that Arconic AS3000B 3mm pre-painted bonded aluminum sheets, described in ICC-ES evaluation report [ESR-4601](#), have also been evaluated for compliance with the code noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code edition:

2020 *City of Los Angeles Building Code* (LABC)

2.0 CONCLUSIONS

The Arconic AS3000B 3mm pre-painted bonded aluminum sheets, described in Sections 2.0 through 7.0 of the evaluation report [ESR-4601](#), comply with the LABC Chapters 8 and 14, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Arconic AS3000B 3mm pre-painted bonded aluminum sheets described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-4601](#).
- The design, installation, conditions of use and identification of the Arconic AS3000B 3mm pre-painted bonded aluminum sheets are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-4601](#).
- The design, installation and inspection are in accordance with the additional requirements of LABC Chapters 8, 14, 16 and 17, as applicable.

This supplement expires concurrently with the evaluation report, reissued February 2024.

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The purpose of this evaluation report supplement is to indicate that Arconic AS3000B 3mm pre-painted bonded aluminum sheets, described in ICC-ES evaluation report ESR-4601, have also been evaluated for compliance with the code noted below.

Applicable code edition:

2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

2.0 CONCLUSIONS**2.1 CBC:**

The Arconic AS3000B 3mm pre-painted bonded aluminum sheets, described in Sections 2.0 through 7.0 of the evaluation report ESR-4601, comply with CBC Chapters 7, 8 and 14, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16 and 17, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

This supplement expires concurrently with the evaluation report, reissued February 2024.