

ALUCOBOND® PLUS

GIVING SHAPE TO GREAT IDEAS

Let's
**Talk
Tech**

**Liberating NFPA 285 Compliant
Large Cavity Air Gap Designs**



Project: Arizona State University
Location: Tempe, Arizona
Architect: DFDG Architecture
Fabricator: KT Fabrication Inc.
ALUCOBOND PLUS: Champagne Metallic,
M2G Gray Mica II, & Bronze

ALUCOBONDUSA.COM / 800.626.3365

Liberating NFPA 285 Compliant Large Cavity Air Gap Designs

What is NFPA 285?

The National Fire Protection Association (NFPA) 285 test was developed to assess the flame propagation characteristics of an exterior, non-load-bearing wall assembly. With roots tracing back to the 1970s, NFPA 285 as a wall assembly test has been a key standard in North American building codes for fire performance and safety for more than fifty years.

In the most current version, to comply with Section 1406 of the 2024 International Building Code (IBC), the exterior wall systems using combustible panels as the exterior cladding on buildings of Types I through IV construction that are greater than 40 ft in height shall meet the requirements of NFPA 285 "Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components".

The NFPA 285 test includes eight pass/fail requirements, and a wall system must satisfy each one to achieve an overall passing result. These requirements include limiting flame reach and temperature limit in key locations of the test wall.

The ALUCOBOND® PLUS Breakthrough:

ALUCOBOND® PLUS by 3A Composites, USA has successfully met the rigorous conditions of NFPA 285 acceptance with up to 7-inch air cavity as standard with mineral wool as the exterior insulation - the first of it's kind in the ACM industry, and a breakthrough after years of investment and development. This achievement allows ALUCOBOND® PLUS to be utilized on complex and unique building designs without requiring project-specific testing. Eligible applications now include, but are not limited to, facades featuring varying projection depths, articulated panels, or fin elements – giving depth and dimensions to the façade elevations.

The following provisions are needed for the compliance within the scope of ALUCOBOND® PLUS' October, 2025 engineering judgement:

- **Mineral Wool** – At least 2-inch of 4 lb/ft³ mineral wool must be installed continuous in the wall cavity air space to keep the NFPA 285 Engineering Judgement (EJ) intact. This also requires minimum density of 4 lb/ft³ at each floor line except for CMU base walls.
- **Exterior Sheathing** – Minimum of one layer 5/8-inch thick Type X exterior type gypsum sheathing.
- **Water Resistive Barrier (WRB)** – When exterior insulation is a minimum of 2-inch of mineral wool, any WRB listed can be used under the mineral wool. Consult with the [engineering letter](#) if WRB is used over the mineral wool exterior insulation.



Figure 1: ALUCOBOND® PLUS Before, During and After NFPA 285 Testing with 7" Cavity Air Gap

Liberating NFPA 285 Compliant Large Cavity Air Gap Designs

Compliant Wall Designs

The perimeters of all wall openings must be protected. This includes the following, which require different details when mineral wool is used as exterior insulation:

- Less than 3 ¼-inch – Does not require any additional protective materials to be installed around wall openings (windows, doors, etc.) at the header, jambs, and sill.

New to the August 2026 Revision:

- Between 3 ¼-inch to 7-inch – Requires a minimum 18-gauge steel flashing that covering the header only for the full depth of the wall system at the open perimeter.
- Greater than 7-inch – Is not currently part of the standard compliance on the 7th Revision of ALUCOBOND's Engineering Extension Analysis. However, with a [submission to the technical team](#), there will be a case-to-case analysis between 3A Composites and Jensen Hughes.

Distinctive ALUCOBOND® PLUS Wall Façade Designs with Variable Air Cavity Depth:



Figure 2: Parmer RTP, Durham North Carolina

ALUCOBOND PLUS: Harvest Gold Mica,
Epernay Champagne Metallic, & New-Age Dark Bronze Mica



Figure 3: LSU Health Shreveport, Baton Rouge, Louisiana

ALUCOBOND PLUS: Silver Metallic

Disclaimer: This Let's Talk Trends has been developed to transmit information and assist fabricators to work with ALUCOBOND® PLUS materials in the most efficient and effective manner. The data contained in this document is based on information that is, in our opinion, reliable. However, since skill, judgment, and quality of equipment and materials is involved and is beyond the control of 3A Composites USA, Inc., the information provided is without guarantee. We recommend that prospective users determine the suitability of the material and suggestions before adopting them on a commercial scale. 3A Composites USA, Inc. does not make any warranties, express or implied including merchantability and fitness for purpose, with respect to any said suggestions and product data. In no event shall 3A Composites USA, Inc. have any liability in any way related to or arising out of said suggestions and product data for direct, special, consequential or any other damages of any kind regardless whether such liability is based on breach of contract, negligence or other tort, or breach of any warranty, express or implied.