TDI | Texas Department of Insurance

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Product Evaluation

RC285 | 0920 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: RC-285

Effective Date: September 1, 2020
Re-evaluation Date: October 2024

Product Name: EPS Foam Core Aluminum Roof Panels

Manufacturer: Elite Aluminum Corporation
4650 Lyons Technology Parkway
Coconut Creek, FL 33073
(954) 949-3200

General Description:
The EPS Foam Core Composite Roof Panels are laminated sandwich panels consisting of aluminum facings adhered to both faces of an expanded polystyrene (EPS) foam plastic core. The panels are available in a nominal thickness of 3", 4", and 6" with a weight of 0.90, 0.97, and 1.11 psf, respectively. The panels are 48" wide and come in different lengths up to 40' (shipping lengths). The longitudinal edges of the panels are designed such that each panel interlocks with the adjacent panel or with a flashing/termination extrusion.

- **Material:** The panel core material is 1.0 pcf (16.0 kg/m3) nominal density, Type I, expanded polystyrene foam plastic board.
    - The panel facing material on both sides of the panel is 3105-H124 aluminum with a base metal thickness of 0.024" or 0.032" depending on engineering requirements.

- The adhesive utilized to bond the facings to the core is ISOGRIP SP 2020, adhesive manufactured by Ashland Specialty.

Product Identification: Each EPS Foam Core Roof Panel is identified by a label bearing the company name (Elite Aluminum Corporation) and address, the product name, the panel dimensions, the name of the inspection agency, and a statement indicating "For Patio Use Only."

Limitations:
General Requirements: This evaluation report is for the roof panels only. Evaluation of the construction supporting the roof panels must be done separately.

Roof Slope: Install the roof panels such that they have a minimum roof slope of 1/4" per foot.

Construction: The panels are valid for use in outdoor patio construction only.

Drawing: Install the EPS Foam Core roof panels in accordance with drawing titled "EPS Foam Core Roof Panels," Drawing No. 19-20093, sheet 1 of 1, dated December 27, 2019, signed and sealed by Frank L. Bennardo, P.E. on January 16, 2020. This evaluation report refers to the stated drawings as the approved drawings. The drawing must be available at the job site.

Design and Installation Requirements: Deign and erect the Elite EPS Foam Core Roof Panels in accordance with this evaluation report, the approved drawing, appropriate construction documents, and the applicable building codes. In the event of a conflict between manufacturer's published installation instructions and this evaluation report, this evaluation report should govern. You must keep the approved drawing and appropriate construction documents at the jobsite during installation.

A Texas licensed professional engineer appointed by the TDI as a qualified inspector must design and inspect structures built using the Elite EPS Foam Core Roof Panels. The approved drawings provide allowable roof spans and specifications on minimum connection requirements. Base the requirements for the design of the Elite EPS Foam Core Roof Panels on the tables and details specified on the approved drawings. A Texas licensed engineer must seal and date the design drawings. The design drawings should reference the appropriate edition of the wind load standard (ASCE 7) used based on the current building specifications adopted by TDI. Reference the basic wind speed and the exposure category used for the design. An engineer must carefully evaluate the existing site conditions and design any deviations from the approved drawings. The engineer must consider additional loading requirements on the roof and host structure.

Panel Span: The allowable roof panel spans are noted on the approved drawings.

Panel Connection: An infinite number of panels may be interlocked.

Panel Support: Connect the panels to the existing host structure in accordance with Detail 1 of the approved drawings. Connect the panel to a beam in accordance with Detail 2 of the approved drawings.

Wall Construction: Mount the EPS Foam Core Roof Panels to the following types of host structure wall construction:

- Precast concrete, cast in place concrete (minimum 3000 psi),
- Grout filled concrete masonry units (CMU) (minimum 1,500 psi,
- Aluminum, minimum 1/8" thick 6063-T6,
- Wood, minimum Southern Yellow Pine dimensional lumber (S.G.=0.55).

Allowable Design Pressure: The allowable design pressure is a function of the loading condition, the deflection limit, and the construction and thickness of the panels. Refer to the approved drawings for the allowable design pressure. The maximum allowable design pressure is ±60 psf (live load or uplift loading).

Anchorage: Anchor the panels to the host structure and beam in accordance with the approved drawings. When anchoring the panels, follow the mounting details on the drawings and the fasteners specified in the minimum anchor schedule.

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.