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ICC-ES Report

ESR-1614

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Reissued 03/2016
This report is subject to renewal 03/2018.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
SECTION: 07 25 00—WATER-RESISTIVE BARRIERS/WEATHER BARRIERS

REPORT HOLDER:

3A COMPOSITES USA, INC.

**3480 TAYLORSVILLE HIGHWAY
STATESVILLE, NORTH CAROLINA 28625**

EVALUATION SUBJECT:

FOME-COR® BOARD



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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 25 00—Water-Resistive Barriers/Weather Barriers

REPORT HOLDER:

3A COMPOSITES USA, INC.
3480 TAYLORSVILLE HIGHWAY
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(704) 658-3520
www.fomecor.com

EVALUATION SUBJECT:
FOME-COR® BOARD
1.0 EVALUATION SCOPE
1.1 Compliance with the following codes:

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)
- 1997 *Uniform Building Code*™ (UBC)

Properties evaluated:

- Water resistance
- Vapor permeability
- Surface-burning characteristics

1.2 Evaluation to the following green code(s) and/or standards:

- 2013 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 2.0

2.0 USES

Fome-Cor® Board is used as a water vapor-permeable, water-resistive barrier in exterior walls of Type V construction and construction permitted under the IRC. The product is an alternative to the water-resistive barrier specified in Section 1404.2 of the IBC or Section R703.2 of the IRC.

The attributes of the Fome-Cor® Board used as a water-resistive barrier have been verified as conforming to the

provisions of (i) CALGreen Section 5.407.1 and (ii) ICC 700-2012 Section 602.1.8, 11.602.1.8 and 12.5.602.1.8; and (iii) ICC 700-2008 Section 602.9 for water-resistive barriers. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

3.0 DESCRIPTION

Fome-Cor® Board is a composite material comprised of a 1/4-inch-thick (6.4 mm) extruded polystyrene foam plastic core, having a 2.0-pound-per-cubic-foot (32.0 kg/m³) nominal density, sandwiched between two layers of paper linerboard. Fome-Cor® Board is equivalent to a Grade C or Grade D building paper as described in UBC Standard 14-1. The 1/4-inch-thick (6.4 mm) bare extruded polystyrene foam plastic has a flame-spread index of less than 25 and a smoke-developed index of less than 450 when tested in accordance with ASTM E84 (UBC Standard 8-1). The Fome-Cor® Board is available in widths up to 8 feet (2438 mm). The 8-foot (2438 mm) board is scored and folded at either 22-inch, 24-inch, 32-inch or 48-inch (559 mm, 610 mm, 813 mm or 1219 mm) intervals, and is available in lengths up to 420 feet (128 m).

4.0 INSTALLATION
4.1 General:

The Fome-Cor® Board must be applied horizontally and lapped with minimum horizontal laps of 2 inches (51 mm) and vertical laps of 6 inches (152 mm). The 8-foot-wide (2438 mm) Fome-Cor® Board must be applied horizontally with minimum vertical laps of 6 inches (152 mm). Fome-Cor® Board is attached to wood or steel framing using nails, screws or staples spaced a maximum of 24 inches (610 mm) on center. Fasteners must be long enough to penetrate the framing a minimum of 3/4 inch (19.1 mm).

4.2 One-hour Fire-resistance-rated Wall Assembly:

4.2.1 Interior Face: One layer of 5/8-inch-thick (15.9 mm), Type X gypsum wallboard, water-resistant backerboard or veneer base, complying with the applicable code, must be applied parallel or at right angles to the interior face of nominally 2-by-4, No. 2, Douglas fir-larch wood studs spaced a maximum of 24 inches (610 mm) on center with the wall cavities filled with R-11 glass fiber insulation. The gypsum wallboard must be attached using 6d, 1 7/8-inch-long (48 mm) coated nails, having 1/4-inch-diameter

(6.4 mm) heads, at 7 inches (178 mm) on center to studs, plates and blocking. All wallboard joints must be backed with minimum 2-by-4 wood framing, taped and treated with joint compound in accordance with ASTM C840 or GA-216. Fastener heads must be treated with joint compound in accordance with ASTM C840 or GA-216.

4.2.2 Exterior Face: One layer of minimum $\frac{5}{8}$ -inch-thick (15.9 mm), Type X, water-resistant-treated-core gypsum sheathing complying with ASTM C79 or C1369, 48 inches (1219 mm) wide, must be applied parallel to studs and fastened using No. 11 gage, $1\frac{3}{4}$ -inch-long (45 mm), galvanized roofing nails having $\frac{7}{16}$ -inch- or $\frac{1}{2}$ -inch-diameter (11.1 mm or 12.7 mm) heads, at 4 inches (102 mm) on center at board edges and 7 inches (178 mm) on center at intermediate studs. The gypsum sheathing must be nailed to top and bottom plates at 7 inches (178 mm) on center. The Fome-Cor[®] Board must be applied in accordance with Section 4.1 of this report. Woven-wire lath with $1\frac{1}{2}$ -inch (38 mm) openings, complying with ASTM C1032, must be installed over the Fome-Cor[®] Board and fastened to all framing members at 6 inches (152 mm) on center using No. 16 gage corrosion-resistant staples having minimum $\frac{3}{4}$ -inch-wide (19 mm) crowns. The staple legs must be long enough to penetrate the framing at least 1 inch (25.4 mm). The lath must be overlapped a minimum of 2 inches (51 mm). Lath overlaps must be offset from Fome-Cor[®] Board overlaps. A cementitious exterior wall coating recognized in a current ICC-ES evaluation report must be applied in accordance with the applicable evaluation report, with a minimum base-coat thickness of $\frac{1}{2}$ inch (12.7 mm) and a minimum finish coat thickness of $\frac{1}{8}$ inch (3.2 mm). The evaluation report on the cementitious exterior wall coating must also reference the fire-resistance-rated assembly evaluated in this report.

4.2.3 Axial Design: The wood stud axial design stress for the wall assembly, calculated in accordance with Sections 3.6 and 3.7 of ANSI AF&PA NDS-05 (IBC and IRC) or

ANSI/NFoPA NDS-91 (UBC), is limited to $0.78 F'_c$, and the maximum stress shall not exceed $0.78 F'_c$ at a maximum l_e/d of 33.

5.0 CONDITIONS OF USE

The Fome-Cor[®] Board 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 Fome-Cor[®] Board must be manufactured, identified and installed in accordance with this report and the manufacturer's published installation instructions. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.

5.2 The interior of the building must be separated from the Fome-Cor[®] Board using an approved thermal barrier in accordance with IBC Section 2603.4, IRC Section R314.4 or UBC Section 2602.4.

5.3 Fome-Cor[®] Board is manufactured in Glasgow, Kentucky, with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated October 2009.

6.2 Reports of testing in accordance with ASTM E119 and ASTM E84 (UBC Standard 8-1).

7.0 IDENTIFICATION

The Fome-Cor[®] Board is identified, at 48-inch (1219 mm) intervals, by the imprint "Fome-Cor[®] Board by 3A Composites, Inc.," and the evaluation report number (ESR-1614). Additionally, labeling includes a statement noting the flame-spread index of 25 or less and the smoke-developed index of 450 or less.