

ICC-ES Evaluation Report

ESR-2922

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**DIVISION: 06 00 00—WOOD, PLASTICS AND
COMPOSITES****Section: 06 50 00 Structural Plastics****REPORT HOLDER:****CERTAINTED CORPORATION**
803 BELDEN ROAD
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www.certainteed.com**EVALUATION SUBJECT:****RESTORATION MILLWORK® EXTERIOR TRIM:
TRIMBOARDS, SHEETS, BEADBOARD AND ONE-PIECE
CORNERS****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2009 *International Building Code*® (2009 IBC)
- 2009 *International Residential Code*® (2009 IRC)
- 2006 *International Building Code*® (2006 IBC)
- 2006 *International Residential Code*® (2006 IRC)

Properties evaluated:

- Weather resistance
- Termite resistance
- Surface-burning characteristics
- Structural—negative transverse wind loads

2.0 USES

Restoration Millwork® Exterior Trim Trimboards, Sheets, Beadboard and One-Piece Corners are used as nonload-bearing exterior trim for construction types in accordance with Section 5.2.

3.0 DESCRIPTION

Restoration Millwork® Exterior Trim Trimboards, Sheets, Beadboard and One-Piece Corners are rigid cellular PVC solid cross sections installed as corner boards, soffits, fascias, column wraps, door pilasters, frieze boards, nonload-bearing rake boards, architectural millwork, door trim and window trim.

The material is expanded rigid polyvinyl chloride with a small-cell micro-structure. Restoration Millwork® Trimboards, Sheets and One-Piece Corners are supplied in woodgrain and smooth surface textures. Restoration Millwork® Beadboard is supplied with a smooth surface. Restoration Millwork® Trimboards are available in nominal

widths of 4 inches (102 mm) to 16 inches (406 mm) and nominal thicknesses of $\frac{5}{8}$ inch (16 mm), 1 inch (25 mm) and $\frac{5}{4}$ inches (32 mm). Restoration Millwork® Sheets are available in 4-foot (1.2 m) widths and in lengths of 8, 10, 12, 18 and 20 feet (2.4, 3.0, 3.7, 5.5 and 6.1 m), with actual thicknesses of $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$ and 1 inch (9.5, 12.7, 15.9, 19.1 and 25.4 mm). Restoration Millwork® Beadboard is available in $\frac{1}{2}$ -inch-thick-by-5 $\frac{1}{8}$ -inch-wide-by-18-foot-long (12.7 mm by 130.1 mm by 5.4 m) segments, and 4-foot-by-8-foot wide (1.2 m by 2.4 m) sheets with a thickness of $\frac{1}{2}$ inch (12.7 mm). Restoration Millwork® One-Piece Corners are available in a nominal thickness of $\frac{5}{4}$ inches (31.8 mm) and nominal 4 inch (102 mm) and 6 inch (152 mm) outside corner sizes.

Restoration Millwork® Exterior Trim, at a maximum nominal thickness of 1 inch (25.4 mm), has a flame-spread index of not more than 200 when tested in accordance with ASTM E 84.

Restoration Millwork® Exterior Trim has demonstrated equivalent termite resistance to that of an approved preservative-treated wood or naturally durable wood in accordance with the code.

4.0 INSTALLATION**4.1 General:**

Restoration Millwork® Exterior Trim Trimboards, Sheets, Beadboard and One-Piece Corners must be installed in accordance with the manufacturer's published installation instructions and this report. A copy of the instructions must be available at all times on the jobsite during installation. The instructions within this report must govern if there are any conflicts between the manufacturer's published installation instructions and this report.

4.2 Fasteners:

Nails must be stainless steel or hot-dipped galvanized. Fasteners must be approved 8d by 2 $\frac{1}{2}$ -inch (63.5 mm) box nails or finish nails and must be designed for wood trim and wood siding. Nails must have blunt points and full round heads. The nails must be long enough to penetrate the solid wood substrate a minimum 1 $\frac{1}{2}$ inches (38.1 mm). The nails located at board ends must be placed $\frac{3}{4}$ inch (19.1 mm) from the end of the board.

4.3 Wind Load Assemblies Using Restoration Millwork® Trimboards or Sheets:

4.3.1 Assembly No. 1—Soffit: Restoration Millwork® Trimboards or Sheets, with a minimum thickness of $\frac{3}{4}$ inch (19.1 mm), must be installed on minimum 2-by-4 wood framing, SPF stud grade (G = 0.42), spaced a maximum of 24 inches (609 mm) on center. The Restoration Millwork® Trimboards or Sheets are placed with the long direction

perpendicular to the wood framing and are fastened to the wood framing with 8d by 2¹/₂-inch-long (63.5 mm) finish nails located 4 inches (101 mm) on center into each supporting framing member starting ³/₄ inch from the edge of the trim board. Trimboards or Sheets with a minimum thickness of ³/₄ inch (19.1 mm) have a maximum allowable design load of 21 psf (1.0 kN/m²) suction or negative pressure.

4.3.2 Assembly No. 2—Sheet: Restoration Millwork[®] Sheets, with a minimum thickness of ³/₈-inch (9.5 mm), must be installed on minimum 2-by-4 wood framing, SPF stud grade (G = 0.42), spaced 16 inches (406 mm) on center. The Restoration Millwork[®] Sheets are fastened to the wood framing with 8d by 2¹/₂-inch-long (63.5 mm) finish nails located 4 inches (101 mm) on center around the perimeter and at each supporting framing member. Perimeter nailing must be located ³/₄ inch (19.1 mm) from the edge of the sheet. Sheets with a minimum thickness of ³/₈ inch (9.5 mm) have a maximum allowable design load of 55 psf (2.6 kN/m²) suction or negative pressure.

4.3.3 Assembly No. 3—Trim: Restoration Millwork[®] Trimboards, with a minimum thickness of ⁵/₈ inch (15.9 mm) and a maximum width of 12 inches (305 mm), must be installed on minimum ⁷/₁₆-inch-thick (11.1 mm) OSB sheathing over 2-by-4 wood framing, SPF stud grade (G = 0.42), spaced 16 inches (406 mm) on center. The Restoration Millwork[®] Trimboards are fastened through the OSB sheathing to the stud framing with 8d by 2¹/₂-inch-long (63.5 mm) finish nails located 16 inches (406 mm) on center lengthwise. Three nails must be placed at each supporting stud member. Trimboards with a minimum thickness of ⁵/₈ inch (15.9 mm) have a maximum allowable design load of 26 psf (1.2 kN/m²) suction or negative pressure.

5.0 CONDITIONS OF USE

The Restoration Millwork[®] Exterior Trim Trimboards, Sheets, Beadboard, and One-Piece Corners described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 This evaluation report and the manufacturer's published installation instructions must be submitted at the time of permit application.
- 5.2 The product is limited to the following construction types:
 - a. Nonload-bearing exterior trim on buildings of combustible nonfire-resistance-rated construction (Type VB) under the IBC.
 - b. Architectural trim on buildings of Type I, II, III and IV construction under the IBC, that do not exceed 40 feet (12.2 m) in height above grade. The trim must be backed by noncombustible construction. The trim is limited to ten percent of the exterior wall surface area where the fire separation distance is 5 feet (15.2 m) or less.
 - c. All buildings permitted under the IRC.
- 5.3 The product must be installed over solid backing material, such as approved exterior sheathing, which is covered with an approved water-resistive barrier or approved exterior wall covering, or as otherwise noted in Section 4.0 of this report.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Rigid Cellular PVC Nonload-bearing Exterior Trim (AC227), dated December 2004 (editorially revised January 2011).

7.0 IDENTIFICATION

Each package of Restoration Millwork[®] Exterior Trim Trimboards, Sheets, Beadboard, and One-Piece Corners described in this report must be labeled with the CertainTeed Corporation name, the product trade name and the evaluation report number (ESR-2922).