

# Code Compliance Research Report CCRR-0451

Issue Date: 08-10-2022 Revised Date: 08-27-2024 Renewal Date: 08-31-2025

DIVISION: 07 00 00 THERMAL AND MOISTURE PROTECTION Section: 07 46 33 Plastic Siding

REPORT HOLDER: CertainTeed LLC 20 Moores Road Malvern, PA 19355 (800) 233-8990

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REPORT SUBJECT:
CertainTeed Reinforced Siding:
Reverse Board & Batten
CERTAplank™ Single 7"

#### 1.0 SCOPE OF EVALUATION

- **1.1** This Research Report addresses compliance with the following Codes:
- 2024, 2021 International Building Code® (IBC)
- 2024, 2021 International Residential Code® (IRC)
- 2023, 2020 Florida Building Code (FBC), excluding High-Velocity Hurricane Zone (HVHZ)
- 2022 California Building Code (CBC), excluding Wildland-Urban Interface (WUI)

NOTE: This report references the most recent editions of the codes cited. Code sections in earlier editions may differ.

- **1.2** The CertainTeed Reinforced Sidings have been evaluated for the following properties:
- Durability
- Surface Burning
- Weather Resistance
- Wind Load Resistance (Negative Transverse)
- Ignition Resistance
- **1.3** The CertainTeed Reinforced Sidings have been evaluated for the following uses:

- Use as an exterior wall cladding on buildings of Type V construction under the IBC and all construction types permitted under the IRC.
- Use as an exterior wall cladding on buildings of Types III and IV-HT construction. See Section 6.4.

# 2.0 STATEMENT OF COMPLIANCE

The CertainTeed Reinforced Siding comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.0.

## 2.1 2024 IBC and IRC Evaluation Reports

The Intertek CCRR is an *Evaluation Report* for approval of an alternate material, design, or method of construction in accordance with Section 104.2.3.6.1 of the 2024 IBC and Section R104.2.2.6.1 of the 2024 IRC.

# 3.0 DESCRIPTION

- **3.1** CertainTeed Reinforced Siding is manufactured in various thicknesses, profiles and colors. A list of products can be found in Table 2.
- **3.2** CertainTeed Reinforced Siding is extruded from polyvinyl chloride (PVC) material, with or without ASA capstock, backed with a rigid expanded polystyrene foam insulation adhered to the back of the PVC siding. The siding conforms to ASTM D7445-18.

# 4.0 PERFORMANCE CHARACTERISTICS

**4.1** Flame Spread — The CertainTeed Reinforced Sidings have a flame spread index not exceeding 200 when tested in accordance with ASTM E 84. The foam plastic backing material has a flame spread index not exceeding 75 and smoke development index not exceeding 450 when tested in accordance with ASTM E 84.







- **4.2** Wind Resistance Design pressures applicable to allowable stress design (ASD) determined in accordance with the applicable code shall not exceed the allowable wind loads specified for the product in Table 3.
- **4.2.1** The CertainTeed Reinforced Siding products have not been evaluated for resisting positive wind pressure. Siding must be installed over structural sheathing designed to resist wind design pressures in accordance with the applicable code.
- **4.2.2** Allowable negative wind design pressures are given in Table 3 for the sidings installed in accordance with Section 5.0.
- **4.3** Ignition Resistance / IBC Section 1405.1.1.1 The CertainTeed Reinforced Siding products did not exhibit sustained flaming when exposed to a radiant heat flux of 12.6 kW/m² in accordance with NFPA 268.

#### 5.0 INSTALLATION

#### 5.1 General:

The CertainTeed Reinforced Siding products must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

#### 5.2 Application:

- **5.2.1** Except as noted herein, the CertainTeed Reinforced Siding products must comply with the prescriptive requirements of IBC Section 1404.15, or IRC Sections R703.4 and R703.11.1.
- **5.2.2** Accessories utilized for installation include starter strip, J-channel, drip cap and inside/outside corner trim.
- **5.2.3** The reinforced sidings shall be installed over an approved water-resistive barrier and structural sheathing. Wood-based sheathing shall be plywood complying with DOC PS 1 or Oriented Strand Board (OSB) Exposure 1 sheathing complying with DOC PS 2. When wood-based sheathing is used for IBC Types III and IV-HT construction, the siding shall be installed over an approved fire-retardant-

- treated wood structural sheathing complying with IBC Section 2303.2.
- **5.2.4** Reverse Board & Batten Reinforced Siding shall be fastened as described in Table 3. Fasteners shall be corrosion resistant.
- **5.2.5** CERTAplank™ Single 7" Reinforced Siding shall be fastened through the sheathing to wood studs as described in Table 3. When attached through sheathings other than wood, the fasteners must be long enough to provide a minimum of 1-1/16-inch penetration into the framing. Fasteners shall be corrosion resistant.

#### 6.0 CONDITIONS OF USE

- **6.1** Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.
- **6.2** For codes recognized in this report, design wind pressures shall be determined in accordance with the IBC Chapter 16 and IRC Section R301.2.
- **6.3** Wind Design pressures shall be determined from allowable stress design wind speeds (V<sub>asd</sub>) and shall not exceed the allowable wind pressures shown in Table 3.
- **6.4** Use of the reinforced sidings is limited to exterior use on buildings of Type V construction and construction permitted by the IRC, except when installed on buildings of Types III and IV-HT construction under the following conditions:
- **6.4.1** The area of the cladding shall not exceed 10 percent of the wall area where the fire separation distance is 5 feet or less. Where fire separation distance is greater than 5 feet, there is no wall area limitation.
- **6.4.2** Building heights of 40 feet or less above grade.
- **6.4.3** Cladding located along the top of exterior walls shall be completely backed by the exterior wall and shall not extend over or above the top of the exterior wall.
- **6.4.4** Fire retardant treated wood (FRTW) exterior wall assemblies with a fire resistance rating of 2-hour or less.



ACCREDITED Product Certification Agency



- **6.5** Compatibility of the supporting construction materials with all fasteners, components, and other hardware components is subject to approval by the code official.
- **6.6** Only those types of fasteners and fastening methods described in this report have been evaluated for the installation of the CertainTeed Reinforced Siding products. Other methods of attachment are outside the scope of this report.
- **6.7** The reinforced siding products are manufactured by CertainTeed under a quality control program with inspections by Intertek Testing Services NA, Inc.

#### 7.0 SUPPORTING EVIDENCE

- **7.1** Manufacturer's drawings and installation instructions.
- **7.2** Reports of testing in accordance with NFPA 268-22, Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source.
- **7.3** Reports of testing in accordance with ASTM D7445-18, Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Siding with Foam Plastic Backing (Backed Vinyl Siding)
- **7.4** Documentation of an Intertek approved quality control system for the manufacturing or products recognized in this report.

#### 8.0 IDENTIFICATION

Labeling on packaging is identified with the following information:

- Product name
- The statement, "See Intertek CCRR-0451 at <u>bpdirectory.intertek.com</u> for uses and performance levels."
- The Intertek Mark as shown below, and the Code Compliance Research Report number.



#### 9.0 OTHER CODES

### 9.1 Florida Building Code

The CertainTeed Reinforced Sidings, described in Sections 2.0 through 7.0 of this Research Report, comply with the 2023 *Florida Building Code – Building* and *Florida Building Code – Residential*, subject to the following conditions:

- Use of the reinforced sidings for compliance with the High-Velocity Hurricane Zone provisions of the Florida Building Code – Building and the Florida Building Code – Residential has not been evaluated and is outside the scope of this Research Report.
- Intertek is an approved evaluation entity and quality assurance entity pursuant to Florida Statute 553.842 – Product Evaluation and Approval.

#### 9.2 California Building Code

The CertainTeed Reinforced Siding, described in Sections 2.0 through 7.0 of this Research Report, comply with the 2022 *California Building Code* and 2022 *California Residential Code*, subject to the following conditions:

 Use of the reinforced sidings for compliance with the Wildland Urban Interface provisions of the California Building Code and California Residential Code has not been evaluated and is outside the scope of this Research Report.

#### 10.0 CODE COMPLIANCE RESEARCH REPORT USE

- **10.1** Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.
- **10.2** Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.
- **10.3** Reference to <a href="https://bpdirectory.intertek.com">https://bpdirectory.intertek.com</a> is recommended to ascertain the current version and status of this report.







#### **TABLE 1 – PROPERTIES EVALUATED**

Property	2024 IBC 2021 IBC	2023 FBC 2020 FBC	2022 CBC	2024 IRC 2021 IRC	2023 FBC-R 2020 FBC-R	2022 CRC
Exterior Wall Performance Requirements	1402	1403	1402	R703.1	R703.1	R703.1
Materials	104.2.3 104.11	104.11	104.11	R104.2.2 R104.11	R104.11	R104.11
Combustible Exterior Wall Coverings for use in Types III, and IV Construction	1405.1	1406.1	1405.1	n/a	n/a	n/a
Wind Load Resistance	1609	1609	1609	R703.1.2	R703.1.2	R703.1.2

# TABLE 2 - REINFORCED SIDING DESCRIPTIONS, THICKNESSES, LENGTHS AND COLORS

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Product Name	Product Code	Profile Name	Nominal Thickness (inches)	Exposure (inches)	Length (feet-inches)	Colors
Reverse Board & Batten	63108	Single 7" Vertical	0.046	7	10-0	Colonial White, Herringbone, Autumn Red, Sable Brown, Midnight Blue, Sterling Gray, Granite Gray, Savannah Wicker, Natural Clay, Pacific Blue and Charcoal Gray.
CERTAplank™	63106	Single 7" Horizontal	0.046	7	12-4 1/2	Colonial White, Forest, Flagstone, Castle Stone, Sterling Gray, Granite Gray, Sable Brown, Midnight Blue, Smoky Gray, Wedgewood Blue, Savannah Wicker, Natural Clay, Pacific Blue and Charcoal Gray.

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# TABLE 3 – WIND RESISTANCE MAXIMUM ALLOWABLE NEGATIVE DESIGN PRESSURE (PSF)<sup>(1)</sup>

	Installation	n	Allowable	Type of Construction	
Siding	Fastener	Sheathing (2)	Negative Design Pressure (psf)		
Reverse Board & Batten installed vertically	1-1/2 inch long, 1/8-inch shank dia., 7/16-inch head	7/16-inch wood sheathing (See 5.2.3)	56	IBC Type V and IRC	
	dia., galvanized roofing nails, spaced 12 inches o.c.	7/16-inch fire- retardant-treated wood sheathing (See 5.2.3)	50 <sup>(3)</sup>	IBC Types III and IV- HT	
Reverse Board & Batten installed vertically	1-1/2 inch long, 1/8-inch shank dia., 7/16-inch head	7/16-inch wood sheathing (See 5.2.3)	98	IBC Type V and IRC	
	dia., galvanized roofing nails, spaced 8 inches o.c.	7/16-inch fire- retardant-treated wood sheathing (See 5.2.3)	88 <sup>(3)</sup>	IBC Types III and IV- HT	
CERTAplank™ Single 7" installed horizontally	Min. 1-1/2 inch long, 1/8-inch shank dia., 7/16-inch head dia., galvanized roofing nails, spaced 16 inches o.c. Min. 1-1/16-in. penetration into framing required.	Any sheathing permitted by the code (See 5.2.3)	82	IBC Type V and IRC	
CERTAplank™ Single 7" installed horizontally	Min. 1-1/2 inch long, 1/8-inch shank dia., 7/16-inch head dia., galvanized roofing nails, spaced 16 inches o.c. Min. 1-1/16-in. penetration into fireretardant-treated wood framing required.	Any sheathing permitted by the code (See 5.2.3)	74 <sup>(3)</sup>	IBC Types III and IV- HT	

<sup>&</sup>lt;sup>1</sup>Design Pressures are determined in accordance with Annex 1 of ASTM D7445 (same as ASTM D7793).

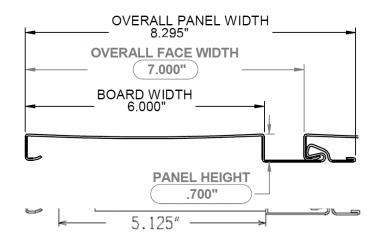




<sup>&</sup>lt;sup>2</sup>Approved structural sheathing rated for the required wind design pressure.

<sup>&</sup>lt;sup>3</sup>In accordance with IBC 2303.2.6, design values shall be adjusted for fire-retardant-treated wood. An adjustment of 0.9 has been applied. If the FRT sheathing manufacturer's adjustment is greater than 0.9, further reduction is required.





Foam backing

FIGURE 1 – REVERSE BOARD & BATTEN REINFORCED SIDING PROFILE

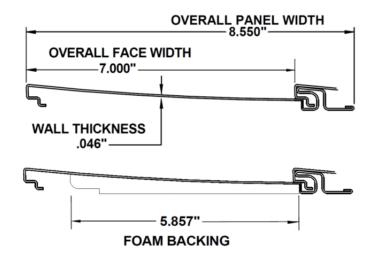


FIGURE 2 – CERTAplank™ SINGLE 7" REINFORCED SIDING PROFILE



