Code Compliance Research Report
CCRR-0300

Issue Date: 11-21-2019
Revision Date: 11-14-2024
Renewal Date: 11-30-2025

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 46 00 – Siding

REPORT HOLDER:
Westlake Royal Building Products
2801 Post Oak Road
Houston, TX 77056
800-521-8486

REPORT SUBJECT:
TruExterior® Siding
TruExterior® Board and Batten
TruExterior® Lap Siding

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2021, 2018 *International Building Code®* (IBC)
- 2021, 2018 *International Residential Code®* (IRC)
- 2023 *Florida Building Code* (FBC), excluding High Velocity Hurricane Zone (HVHZ) (see Section 9)
- 2022 *California Building Code* (CBC), including Wildland Urban Interface (WUI) (See Section 9)

NOTE: This report references the most recent versions of the codes cited, with FBC and CBC code sections shown in brackets where they differ.

1.2 *TruExterior®* products have been evaluated for the following properties:

- Durability
- Physical Properties
- Surface Burning
- Wind Load Resistance
- Thermal Resistance

1.3 *TruExterior®* products have been evaluated for the following:

- Use as an exterior wall cladding on buildings of Type V-B construction under the IBC, FBC and CBC, and construction permitted under the IRC, FBC-R, CRC.
- Use as an exterior wall cladding on buildings of Types I-IV construction.

2.0 STATEMENT OF COMPLIANCE

TruExterior® products 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.

3.0 DESCRIPTION

TruExterior® products are composite exterior wall coverings, composed of a blend of a proprietary polymer, fly ash and glass fiber.

3.1 The siding products are provided in six cross-sections (Channel, Channel Bevel, Cove/Dutch Lap, Nickelgap Shiplap, Shiplap, V-Rustic) in nominal dimensions of 1x6, 1x8, and 1x10. See Figure 1 for actual dimensions.

3.2 The lap siding products are provided in six sizes in nominal dimensions of 5/8 x 3-1/2, 5/8 x 5-1/2, 5/8 x 7-1/4, 5/8 x 9-1/4, and 5/8 x 11-1/4. See Figure 2.

3.3 The Board and Batten system consists of boards in nominal thicknesses of 5/8, 3/4, and 1 inch with nominal widths of 11-1/4 inches and battens in nominal thicknesses of 5/8, 3/4 and 1 inch with nominal widths of 2-1/2 inches. See Figure 3 for actual dimensions.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Allowable wind loads are given in Tables 2 through 4.

4.2 *TruExterior®* products have a flame spread index not exceeding 200 when tested in accordance with ASTM E84.

4.3 *The TruExterior®* material has the following resistance (R-values) when tested in accordance with ASTM C518.

Nominal Thickness	Thermal Resistance (R-value)
5/8 inches	0.63 hr·ft^{2}·^{o}F/Btu
11/16 inches	0.73 hr·ft^{2}·^{o}F/Btu

Note: This data is for information only since thermal resistance of exterior wall coverings is not required by the codes.

4.4 Ignition resistance / IBC Section 1405.1.1.1 [1406.2.1] – *TruExterior® Siding* did not exhibit sustained flaming when tested in accordance with NFPA 268.

5.0 INSTALLATION

5.1 General:

TruExterior® 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 *TruExterior®* products shall be installed over an approved structural wood sheathing complying with Section 2303.1.5 of the IBC, FBC, and CBC.

5.3 Sheathing must be covered by an approved water-resistive barrier in accordance with Section 1404.2 of the IBC, FBC, CBC, and Section R703.1.1 of the IRC, FBC-R, and CRC, and provide a means for draining water that enters the assembly to the exterior.

5.4 Flashing shall be installed in accordance with Section 1404.4 of the IBC [FBC 1405.4], and Section R703.4 of the IRC, FBC-R and CRC.

5.5 Protection against condensation shall be provided in accordance with Section 1405.3 of the IBC, FBC, and CBC.

5.6 For exterior use on buildings of Types I-IV construction, *TruExterior® Siding* shall be installed as described in Table 2 with the following exceptions:

- Exterior sheathing is minimum 1/2-inch gypsum sheathing
- Sheathing is covered with Tyvek CommercialWrap water-resistive barrier
- Maximum spacing of fasteners to wood furring is 16 inches on center

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 between the manufacturer's instructions and this report, this report governs.

6.2 *TruExterior®* products are limited to the following construction types:

6.2.1 Exterior use on buildings permitted to be of combustible, nonfire-resistance-rated construction (Type V-B) under the IBC, FBC, and CBC and non-fire-resistance-rated construction permitted under the IRC, FBC-R, and CRC.

6.2.2 Exterior use on buildings of Types I-IV construction when installed in accordance with Section 5.6 with the following limitations:

- The area of the cladding shall not exceed 10 percent of the wall area where the fire separation distance is 5 feet or less.
- Building height shall be 40 feet or less above grade.
- 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.

6.3 The maximum allowable wind pressure for *TruExterior®* products shall be determined from nominal design wind speeds (V_{asd}) in accordance with Chapter 16 of the IBC, FBC, CBC, and Section R301.2 of the IRC, FBC-R, CRC, and shall not exceed the allowable wind loads given in Table 2, 3 or 4, as applicable.

6.4 The exterior wall must be braced in accordance with the applicable code.

6.5 *TruExterior®* products are manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Reports of testing in accordance with ICC-ES AC389, Acceptance Criteria for Composite Siding Containing Inorganic Microspheres and Proprietary Resins, Used as an Exterior Wall Cladding, approved October 2009, effective November 1, 2009.

7.2 Reports of evaluation and engineering analysis for allowable fastener capacities in accordance with NDS-2018 [2015], National Design Specification (NDS) for Wood Construction.

7.3 Reports of testing in accordance with ASTM E84-16 [2013A], Test Method for Surface Burning Characteristics of Building Materials.

7.4 Reports of ignition resistance testing in accordance with NFPA 268-17, Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source.

7.5 Reports of testing demonstrating compliance with Materials and Construction Methods for Exterior Wildfire Exposure: Exterior Wall Siding and Sheathing, SFM Standard 12-7A-1.

7.6 Reports of testing in accordance with ASTM C518-17, Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.

7.7 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

8.0 IDENTIFICATION

The *TruExterior®* products produced in accordance with this report shall be identified with labeling that includes the name of manufacturer, the Intertek Mark, and the Code Compliance Research Report number (CCRR-0300) as shown:

CODE COMPLIANCE
Intertek
CCRR-0300

9.0 OTHER CODES

9.1 FLORIDA BUILDING CODE

9.1.1 Scope of Evaluation:

The *TruExterior®* products were evaluated for compliance with the Florida Building Code – Building and Florida Building Code – Residential.

9.1.2 Conclusion:

The *TruExterior®* products described in Sections 2.0 through 7.0 of this Research Report, comply with the *Florida Building Code – Building* and *Florida Building Code – Residential* under the following provisions:

- Use of the *TruExterior®* products 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

9.2.1 Scope of Evaluation:

The *TruExterior®* products were evaluated for use as an exterior wall covering in accordance with CBC Chapter 14 and comply with CBC Section 707A.3 and CRC Section R337.7.3.

9.2.2 Conclusion:

The *TruExterior®* products, described in Sections 2.0 through 7.0 of this report, comply with the CBC, subject to the conditions noted in Section 6.0 of this report.

- The *TruExterior® Siding* Channel Bevel, V-Rustic, Cove/Dutch, Shiplap, and Channel Shiplap comply with the provisions of CBC Section 707A.3 and CRC Section R337.7.3 for ignition-resistant material. The *TruExterior® Siding* must be installed on steel or wood framing, spaced 16 inches o.c., sheathed with 7/16-inch-thick oriented-strand board (OSB) of Exposure 1 rating.
- The *TruExterior® Board and Batten* and *TruExterior® Lap Siding* have not been evaluated for compliance with CBC Chapter 7A or CRC Section 337.

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 the https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

Table 1 – Properties Evaluated

Property	2021 & 2018 IBC	2021 & 2018 IRC	2023 FBC - Building	2023 FBC - Residential	2022 CBC	2022 CRC
Exterior Wall Performance Requirements	1402	R703.1	1403	R703.1	1402	R703.1
Materials	104.11 1403	R104.11 R703	104.11 1403	R703	104.11 1403	R104.11 R703
Weather Protection	1404.2	R703	1403.2	R703	1404.2	R703
Combustible Exterior Wall Coverings for use in Types I-IV Construction	1405.1.1	NA	1406.2.1	NA	1405.1.1	NA
Wind Load Resistance	1609	R703.1.2	1609	R703.1.2	1609	R703.1.2
Wildland Urban Interface	NA	NA	NA	NA	704A.2	R337.7.3

Table 2 – Allowable Wind Pressure Summary
for *TruExterior® Siding* Channel, Channel Bevel, Cove/Dutch Lap, Nickel Gap Shiplap, Shiplap and V Rustic[(1)]

Fastener	Fastener Penetration[(2)]	Allowable Wind Pressure (psf)			
		Fastener Spacing[(3)]	1x6 inch	1x8 inch	1x10 inch
PrimeGuard Max 8d Stainless Steel Ring Shank 2.5 inch x 0.094 inch (0.208 inch head dia.) nails	1.20 inch	16”	132.0	96.8	76.4
		24”	87.9	64.5	50.9
Maze 8d hot dipped galvanized Ring Shank 2.5 inch x 0.113 inch (0.286 inch head dia.) nails	1.20 inch	16”	132.0	96.8	76.4
		24”	87.9	64.5	50.9
Maze 6d hot dipped galvanized Ring Shank 2.0 inch x 0.113 inch (0.285 inch head dia.) nails	0.75 inch	16”	70.0	51.3	40.5
		24”	46.6	34.2	27.0
	1.25 inch	16”	116.8	85.6	67.6
		24”	77.9	57.1	45.1

(1) Allowable wind loads are applicable to wind design pressure derived from nominal wind speed (V_{asd}) per Section 1609.3.1 of the IBC, FBC, and CBC.

(2) Installation is with one fastener in the tongue and one through the face.

(3) Each fastener penetrating wood framing having a minimum specific gravity of 0.42 (i.e., SPF).

Table 3 – Allowable Wind Pressure Summary for *TruExterior® Lap Siding*[1]

Fastener	Allowable Wind Pressure (psf)					
	Fastener Spacing[2]	5/8 x 3-1/2	5/8 x 5-1/2	5/8 x 7-1/4	5/8 x 9-1/4	5/8 x 11-1/4
Two (2) 6d Hot Dipped Galvanized Ring Shank Nails (2" Long, 0.113" Shank) at Upper and Lower Portion of Siding (One at Top and One at Bottom)	16”	-89.1	-58.0	-42.9	-33.0	-26.9
	24”	-39.6	-38.6	-28.6	-22.0	-17.9
Two (2) 8d Hot Dipped Galvanized Ring Shank Nails (2-1/2" Long, 0.113" Shank) at Upper and Lower Portion of Siding (One at Top and One at Bottom)	16”	-89.1	-107.2	-80.4	-61.9	-50.4
	24”	-39.6	-47.6	-51.0	-41.3	-33.6
One (1) 6d Hot Dipped Galvanized Ring Shank Nail (2" Long, 0.113" Shank) at Upper Portion of Siding	16”	-75.8	-45.3	-33.5	-25.8	-21.0
	24”	-39.6	-30.2	-22.3	-17.2	-14.0
One (1) 8d Hot Dipped Galvanized Ring Shank Nail (2-1/2" Long, 0.113" Shank) at Upper Portion of Siding	16”	-89.1	-70.6	-52.2	-40.3	-32.7
	24”	-39.6	-47.1	-34.8	-26.8	-21.8

(1) Allowable wind loads are applicable to wind design pressure derived from nominal wind speed (V_{asd}) per Section 1609.3.1 of the IBC, FBC, and CBC.

(2) Fasteners must penetrate sheathing having a minimum specific gravity of 0.42

Table 4 – Allowable Wind Pressure Summary for *TruExterior® Board and Batten*[1]

Fastener	Fastener Penetration[2]	Fastener Spacing[3]	Allowable Wind Pressure (psf)
6d ring shank nail	½ inch	24"	-28.96 psf
8d ring shank nail	½ inch	24"	-33.42 psf
#6 exterior coated stainless-steel trim-head screws	½ inch	24"	-43.44 psf

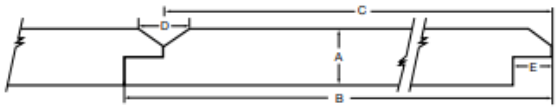
(1) Allowable wind loads are applicable to wind design pressure derived from nominal wind speed (V_{asd}) per Section 1609.3.1 of the IBC, FBC, and CBC.

(2) Installation is with two fasteners through the 11-1/4-inch Board into sheathing, and one fastener through the batten into sheathing.

(3) Fasteners must penetrate sheathing having a minimum specific gravity of 0.42

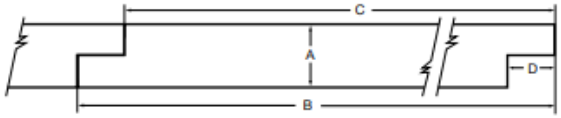
(4) *TruExterior® Board and Batten* is installed vertically.

Nominal Size	Actual Thickness (A)	Actual Width (B)	Reveal (C)	Channel (D)	Tongue (E)
1 x 6	0.6875"	5.50"	5.0"	0.625"	0.50"
1 x 8	0.6875"	7.50"	7.0"	0.625"	0.50"
1 x 10	0.6875"	9.50"	9.0"	0.625"	0.50"



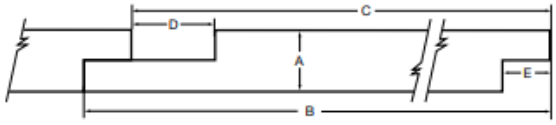
TruExterior® V Rustic

Nominal Size	Actual Thickness (A)	Actual Width (B)	Reveal (C)	Tongue (D)
1 x 6	0.6875"	5.50"	4.969"	0.531"
1 x 8	0.6875"	7.25"	6.719"	0.531"
1 x 10	0.6875"	9.25"	8.719"	0.531"



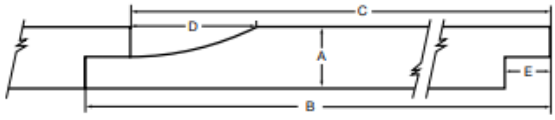
TruExterior® Shiplap

Nominal Size	Actual Thickness (A)	Actual Width (B)	Reveal (C)	Channel (D)	Tongue (E)
1 x 6	0.6875"	5.50"	4.969"	0.969"	0.531"
1 x 8	0.6875"	7.25"	6.719"	0.969"	0.531"
1 x 10	0.6875"	9.25"	8.719"	0.969"	0.531"



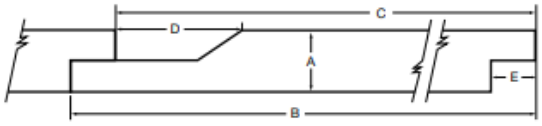
TruExterior® Channel

Nominal Size	Actual Thickness (A)	Actual Width (B)	Reveal (C)	Channel (D)	Tongue (E)
1 x 6	0.6875"	5.50"	4.969"	1.469"	0.531"
1 x 8	0.6875"	7.25"	6.719"	1.469"	0.531"
1 x 10	0.6875"	9.25"	8.719"	1.469"	0.531"



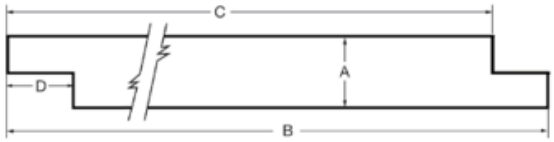
TruExterior® Cove/Dutch Lap

Nominal Size	Actual Thickness (A)	Actual Width (B)	Reveal (C)	Channel (D)	Tongue (E)
1 x 6	0.6875"	5.50"	4.969"	1.469"	0.531"
1 x 8	0.6875"	7.50"	6.969"	1.469"	0.531"
1 x 10	0.6875"	9.50"	8.969"	1.469"	0.531"



TruExterior® Channel Bevel

Nominal Size	Actual Thickness (A)	Actual Width (B)	Actual Width (C)	Tongue (D)
1 x 6	0.6875"	5.50"	5.078125"	0.5"
1 x 8	0.6875"	7.25"	6.828125"	0.5"
1 x 10	0.6875"	9.25"	8.828125"	0.5"



TruExterior® Nickelgap Shiplap

Figure 1 – TruExterior® Siding

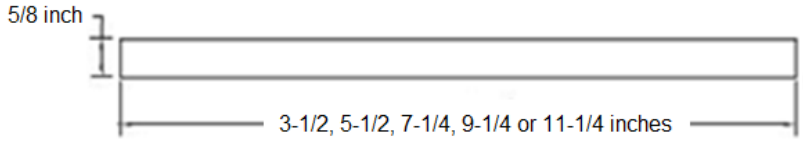
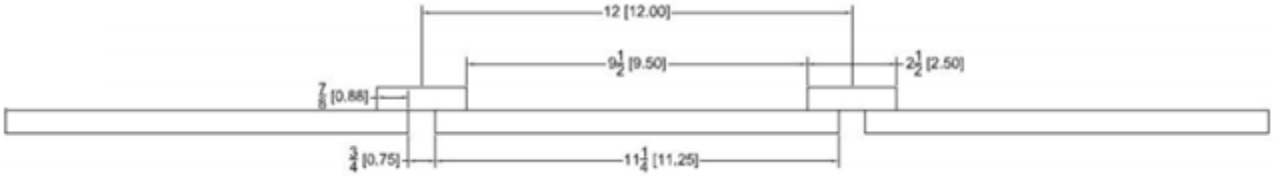


Figure 2 – TruExterior® Lap Siding

11-1/4 inch Board Profile

2-1/2inch Batten Profile



Installation

Figure 3 – TruExterior® Board and Batten