

# **ICC-ES Evaluation Report**

# **ESR-2888** Reissued July 2020 Revised February 2021 This report is subject to renewal July 2021.

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

# **REPORT HOLDER:**

DERBY BUILDING PRODUCTS INC.

# **EVALUATION SUBJECT:**

# NOVIK<sup>®</sup> POLYMER SIDING

# **1.0 EVALUATION SCOPE**

- 1.1 Compliance with the following codes:
- 2018, 2015, 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2018, 2015, 2012, 2009 and 2006 *International Residential Code*<sup>®</sup> (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)<sup>†</sup>

<sup>†</sup>The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

#### **Properties evaluated:**

- Exterior veneer
- Durability
- Wind load resistance—transverse
- Flame spread
- Fire-resistance-rated walls (2018 IBC only)
- Ignition resistance (2018 IBC only)

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

- 2019 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2015, 2012 and 2008 ICC 700 National Green Building Standard<sup>™</sup> (ICC 2015, ICC 700-2012 and ICC 700-2008)

#### Attribute verified:

See Section 2.0

# 2.0 USES

Novik<sup>®</sup> Polymer Siding products are used as exterior wall coverings over a code-complying wood structural panel sheathing or other type of substrate capable of supporting the imposed loads on buildings of all types of construction under the 2018 IBC and on structures constructed in accordance with the IRC, except that the Classic Shake -

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NovikShake<sup>®</sup> CS and Atlas Stone<sup>™</sup> – Stacked products are limited to Type VB construction under the 2018 IBC, and on structures constructed in accordance with the IRC. Under the 2015, 2012, 2009 and 2006 IBC the Novik<sup>®</sup> Polymer Siding products are limited to Type VB construction (IBC), and on structures constructed in accordance with the IRC.

The attributes of the Novik<sup>®</sup> Polymer Siding have been verified as conforming to the provisions of (i) CALGreen Sections A4.405.1.3 (prefinished materials) and A5.406.1.2 (reduced maintenance); (ii) ICC 2015 and ICC 700-2012 Sections 601.7, 11.601.7, and 12.1(A).601.7 (site-applied finishing materials); and (iii) ICC 700-2008 Section 601.7 (site-applied finishing materials). 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. The code may provide supplemental information as guidance.

# 3.0 DESCRIPTION

# 3.1 Siding:

Novik<sup>®</sup> Polymer Siding is a molded polypropylene product conforming to the requirements of ASTM D7254. Siding products include a variety of accessories such as corners and J-channel trims (with and without corner caps) made from a variety of materials such as polypropylene, PVC or aluminum. The universal Novik<sup>®</sup> starter strip is available in either polypropylene or galvanized steel. The siding is available in a range of colors, textures, and profiles designed to overlap at adjacent panel edges. The siding is produced in a nominal wall thicknesses between 0.080 and 0.10 inch (2.0 and 2.5 mm), and is available in finishes simulating cedar shingles, hand-split shakes, brick and stone, as shown in Figure 1. Refer to Table 1 for the profile names and related descriptive information.

# 3.2 Sheathing Substrates:

- Minimum <sup>7</sup>/<sub>16</sub>-inch-thick (11.1 mm) Exposure 1 plywood structural sheathing complying with DOC PS-1.
- Minimum <sup>7</sup>/<sub>16</sub>-inch-thick (11.1 mm) Exposure 1 oriented strand board (OSB) sheathing complying with DOC PS-2.
- Other substrate composed of wood or wood-based material and fasteners having equivalent withdrawal resistance.

# 3.3 Fasteners:

Galvanized or aluminum roofing nails or screws with a minimum length of  $1^{1}/_{2}$  inches (38 mm), a minimum shank diameter of 0.12 inch (3 mm), and a  $7/_{16}$ -inch (11 mm) head

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diameter, except for the Classic Shake - NovikShake<sup>®</sup> CS and Atlas Stone<sup>M</sup> – Stacked, the minimum length of fasteners shall be 2 inches (51 mm).

#### 4.0 DESIGN AND INSTALLATION

#### 4.1 General:

Novik<sup>®</sup> Polymer Siding must be installed in accordance with the manufacturer's published installation instructions, the applicable code, and this report. The manufacturer's published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available on the jobsite at all times during installation.

When tested in accordance with ASTM E84, all portions of the test specimen ahead of the flame front remained in position during testing. The Novik<sup>®</sup> polymer siding, except Classic Shake - NovikShake<sup>®</sup> CS and Atlas Stone<sup>™</sup> – Stacked, complies with 2018 IBC Section 1403.12.1 [2015 and 2012 IBC Section 1404.12.1] and 2018 IRC Section R703.14.3 and is not subject to the fire separation distance as descried in 2018 IBC Section 1403.12.2 [2015 and 2012 IBC Section 1404.12.2 and IRC R703.14.2].

#### 4.2 Design:

**4.2.1 General:** Design wind pressures must be determined in accordance with IBC Chapter 16 or IRC Section R301.2.1.1, as applicable.

#### 4.2.2 IBC:

**4.2.2.1 2018, 2015 and 2012 IBC:** Where the allowable design wind speed, ( $V_{asd}$ ), does not exceed 100 miles per hour (45 m/s) in Exposure C areas, where the building height is less than or equal to 40 feet (12.2 m), Novik<sup>®</sup> Polymer Siding may be installed over solid sheathing, as noted in 2018 IBC Section 1404.18 [2015 and 2012 IBC Section 1405.14.1].

**4.2.2.2 2009 and 2006 IBC:** Where the basic wind speed (3-second gust) does not exceed 100 miles per hour (45 m/s) in Exposure C areas, where the building height is less than or equal to 40 feet (12.2 m), Novik<sup>®</sup> Polymer Siding may be installed over solid sheathing, as noted in 2009 IBC Section 1405.14.1 or 2006 IBC Section 1405.13.1, as applicable.

#### 4.2.3 IRC:

**4.2.3.1 2018 and 2015 IRC:** Where the ultimate design wind speed does not exceed 140 miles per hour (63 m/s) as noted in IRC Table R703.3(1).

**4.2.3.2 2012**, **2009** and **2006 IRC**: Where the building's mean roof height does not exceed 30 feet (9144 mm) and the basic wind speed does not exceed 110 miles per hour (49 m/s) (3-second gust), in Exposure B areas, and does not exceed 90 miles per hour (40 m/s) in Exposure C areas or 85 miles per hour (37 m/s) in Exposure D areas, Novik<sup>®</sup> Polymer Siding may be installed over solid sheathing as noted in IRC Table R703.4.

#### 4.3 Installation:

The Novik<sup>®</sup> Polymer Siding must be installed over a solid sheathing substrate, as described in Section 3.2, which is capable of withstanding the imposed positive and negative design wind loads. Sheathing substrate must be fastened to the wall framing which has a minimum specific gravity (S.G.) of 0.42 in accordance with the applicable code, taking into account the transverse wind loads to which it will be subjected in use. The sheathing substrate must be covered with an approved water-resistive barrier where required by code.

Fasteners as described in Section 3.3 must be used to install the siding. The fasteners must be installed in the center fixing hole, installation hole at the two ends and at maximum intervals of 16 inches on center (406 mm). The fasteners must also be installed in each lateral hole of those models in which lateral holes are present. The siding fastener penetration must be a minimum  $^{3}/_{4}$ -inch (19.1 mm) beyond the backside of the sheathing or a minimum embedment of  $^{3}/_{4}$  inch (19.1 mm) into wood framing, leaving a  $^{1}/_{16}$ -inch (1.6 mm) gap between the fastener head and the panel to allow for thermal expansion. One fastener must be located in the center fixing hole of those models in which a fixing hole is present, to prevent lateral movement.

See the manufacturer's published installation instructions for more details concerning installation of siding and specific trim and accessories. Flashing in accordance with the applicable code must be installed at all openings, penetrations, and abutments with dissimilar materials, and at terminations of the siding and soffit.

#### 4.3.1 Use on Exterior Walls in Types I, II, III, and IV Construction in accordance with 2018 IBC Section 1405.1 (Ignition Resistance):

When the exterior wall is sheathed with fire retardant treated wood sheathing, the Novik® Polymer Siding, except Classic Shake - NovikShake<sup>®</sup> CS and Atlas Stone<sup>™</sup> - Stacked, can be used on the exterior side of exterior walls on buildings of Type I, II, III or IV construction. The siding shows no sustained flaming at a maximum tolerable level of incident radiant heat flux of 12.5 kW/m<sup>2</sup>, when tested in accordance with NFPA 268. The minimum fire separation distance required shall be determined from 2018 IBC Table 1405.1.1.1.2. The installation of the siding must comply with the applicable requirements in 2018 IBC Section 1405.1. When the exterior wall is required to be fireresistance-rated, the fire separation distance must be in accordance with IBC Section 705.5.

# 4.3.2 One-hour Fire-resistance-rated Assembly (Exposed from both sides):

Under the 2018 IBC, the siding panels, except Classic Shake - NovikShake<sup>®</sup> CS and Atlas Stone<sup>™</sup> - Stacked, may be used as an alternate to the wall covering required for the one-hour fire-resistance-rated wall assembly specified in 2018 IBC Item 15-1.15 of Table 721.1 (2). The siding panels must be installed over the exterior face of the assembly using 2<sup>1</sup>/<sub>2</sub> inch (63.5 mm) long washer head wood screws, spaced 16 inches (406 mm) on center. The siding must be fastened through the gypsum sheathing to the studs. The assembly must be used with a minimum fire separation distance of 5 feet (127 mm).

This assembly has not been evaluated for wind loads. Using the assembly to resist wind loads is outside the scope of this evaluation report.

# 5.0 CONDITIONS OF USE

The Novik<sup>®</sup> Polymer Siding 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** Installation must comply with this report, the manufacturer's published instructions, and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.

- **5.2** Under the 2018 IBC, the Classic Shake NovikShake<sup>®</sup> CS and Atlas Stone<sup>™</sup> Stacked siding products are limited to Type VB construction and on structures constructed in accordance with the IRC.
- **5.3** Under the 2015, 2012, 2009 and 2006 IBC, the siding is limited to use on Construction Type VB and to structures constructed in accordance with the IRC.
- **5.4** The siding is limited to use on buildings having a maximum height, and in areas with maximum wind speeds and exposure, as noted in Section 4.2.
- **5.5** The siding must be installed only on exterior walls covered by a wood structural panel sheathing or substrate capable of supporting the imposed loads, including but not limited to positive and negative transverse wind loads.
- **5.6** The substrate must be covered with a water-resistive barrier where required by the code prior to installing the siding, and must comply with IBC Section 1403.2.
- **5.7** Exterior walls must be braced or sheathed to resist racking loads with approved materials in accordance with the requirements of the applicable code.
- 5.8 Under Section R703.14.2 of the IRC, the Classic Shake NovikShake<sup>®</sup> CS and Atlas Stone<sup>™</sup> Stacked must not be installed on walls with a fire separation distance of less than 5 feet (1524 mm) and walls closer than 10 feet (3048) to a building on another lot.
- 5.9 Under Section 1403.12.2 of the 2018 IBC [Section 1404.12.2 of the 2015 and 2012 IBC], the fire separation distance between the buildings and the adjacent buildings constructed with Classic Shake NovikShake<sup>®</sup> CS or Atlas Stone<sup>™</sup> Stacked siding products must be no less than 10 feet (3048 mm).

- **5.10** Wind resistance of soffit panels is outside the scope of this evaluation report.
- 5.11 The Novik<sup>®</sup> Polymer Siding products are manufactured at the Derby Building Product, Inc's facility located in St.-Augustin-de-Desmaures, Quebec, Canada, under an approved quality control program with inspections by ICC-ES

# 6.0 EVIDENCE SUBMITTED

- **6.1** Data in accordance with the ICC-ES Acceptance Criteria for Polypropylene Siding (AC366), dated October 2018.
- 6.2 Data in accordance with ASTM E84.
- 6.3 Data in accordance with NFPA 268.

# 7.0 IDENTIFICATION

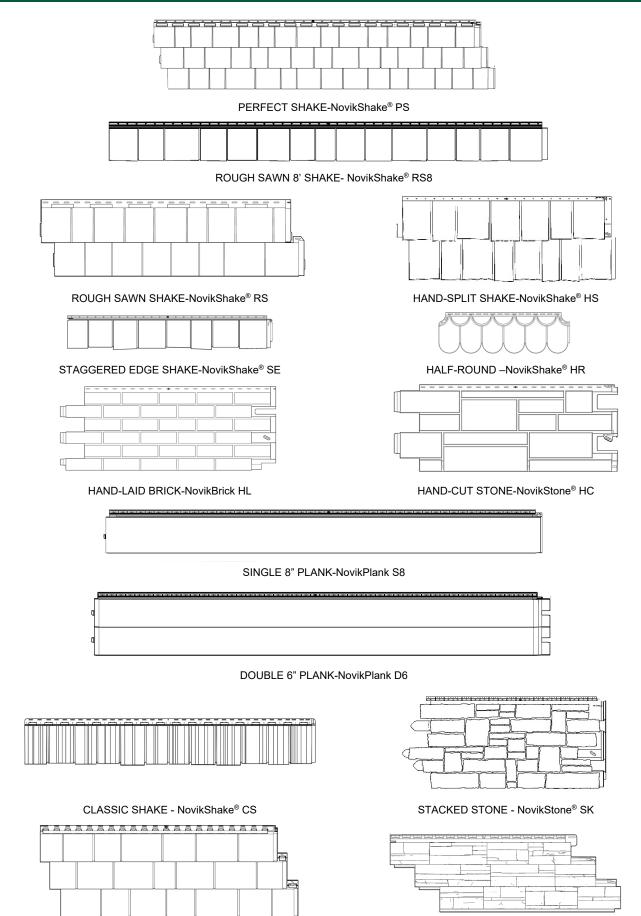
- 7.1 The siding products described in this report are identified by a label on the packaging bearing the manufacturer's name (Derby Building Products Inc.) and address, the product name, the manufacturer's lot number, and the evaluation report number (ESR-2888). Also included on the label is the following statement: "Conforms to ASTM Specification D7254."
- 7.2 The report holder's contact information is the following:

DERBY BUILDING PRODUCTS INC. 160 DES GRANDS-LACS ST. AUGUSTIN-DE-DESMAURES QUEBEC G3A 2K1 CANADA (418) 878-6161 <u>info@derbybp.com</u> <u>www.novik.com</u>

# TABLE 1-NOVIK® POLYMER SIDING PROFILE NAME AND DESCRIPTION

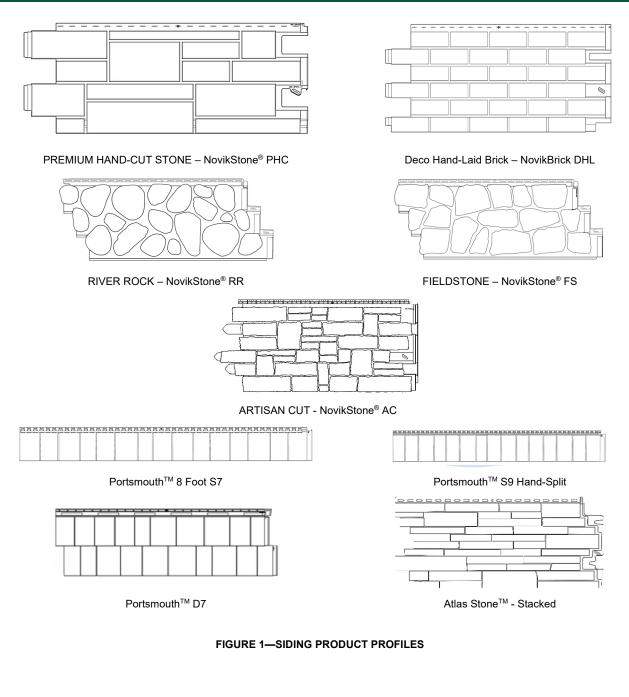
PROFILE NAME	DESCRIPTION
PREMIUM HAND-CUT STONE –NovikStone <sup>®</sup> PHC	Polypropylene Siding; available in multiple colors; overall dimensions: 48" X 18.5" X 0.085"
RIVER ROCK –NovikStone <sup>®</sup> RR	Polypropylene Siding; available in multiple colors; overall dimensions: 50" X $19.1$ " X $0.1$ "
FIELDSTONE – NovikStone <sup>®</sup> FS	Polypropylene Siding; available in multiple colors; overall dimensions: 50" X 19.1" X 0.1"
DRY STACK STONE – NovikStone <sup>®</sup> DS	Polypropylene Siding; available in multiple colors; overall dimensions: 41.75" X 13.1" X 0.1"
DECO HAND-LAID BRICK – NovikBrick DHL	Polypropylene Siding; available in multiple colors; overall dimensions: 48" X 18.5" X 0.085"
HAND-LAID BRICK - NovikBrick HL	Polypropylene Siding; available in multiple colors; overall dimensions: 48" X 18.5" X 0.085"
HAND-CUT STONE - NovikStone <sup>®</sup> HC	Polypropylene Siding; available in multiple colors; overall dimensions: 48" X 18.5" X 0.085"
PERFECT SHAKE - NovikShake <sup>®</sup> PS	Polypropylene Siding; available in multiple colors; overall dimensions: 74" X 15" X 0.085"
STACKED STONE - NovikStone <sup>®</sup> SK	Polypropylene Siding; available in multiple colors; overall dimensions: 45" X 20.25" X 0.090"
ARTISAN CUT - NovikStone <sup>®</sup> AC	Polypropylene Siding; available in multiple colors; overall dimensions: 45" X 20.25" X 0.090"
DOUBLE 6" PLANK - NovikPlank D6	Polypropylene Siding; available in multiple colors; overall dimensions: 98.5" X 13.58" X 0.080"
SINGLE 8" PLANK - NovikPlank S8	Polypropylene Siding; available in multiple colors; overall dimensions: 96" X 9.7" X 0.080"
HALF-ROUND - NovikShake <sup>®</sup> HR	Polypropylene Siding; available in multiple colors; overall dimensions: 32" X 10" X 0.080"
HAND-SPLIT SHAKE - NovikShake <sup>®</sup> HS	Polypropylene Siding; available in multiple colors; overall dimensions: 48" X 19.0" X 0.085"
ROUGH SAWN SHAKE - NovikShake <sup>®</sup> RS	Polypropylene Siding; available in multiple colors; overall dimensions: 49" X 14.5" X 0.085"
STAGGERED EDGE SHAKE - NovikShake <sup>®</sup> SE	Polypropylene Siding; available in multiple colors; overall dimensions: 51.12" X 8.38" X 0.085"
ROUGH SAWN 8' SHAKE – NovikShake <sup>®</sup> RS8	Polypropylene Siding; available in multiple colors; overall dimensions: 96.1" X 8.5" X 0.085"
NORTHERN PERFECTION <sup>®</sup> – NovikShake <sup>®</sup> NP	Polypropylene Siding; available in multiple colors; overall dimensions: 46.88" X 16.5" X 0.080"
CLASSIC SHAKE - NovikShake <sup>®</sup> CS	Polypropylene Siding; available in multiple colors; overall dimension: 72 <sup>7</sup> / <sub>8</sub> " X 11 <sup>1</sup> / <sub>2</sub> " X 0.090"
ATLAS STONE <sup>™</sup> - Stacked	Polypropylene Siding; available in multiple colors; overall dimension: 441/2" X 193/8" X 0.090"
PORTSMOUTH <sup>™</sup> D7	Polypropylene Siding; available in multiple colors; overall dimensions: 53.7" X 16.125" X 0.085"
PORTSMOUTH <sup>™</sup> S9 HAND-SPLIT SHAKE	Polypropylene Siding; available in multiple colors; overall dimensions: $92^{7}/_{8} \times 10^{7}/_{8} \times 0.100^{\circ}$
PORTSMOUTH™ 8 FOOT S7	Polypropylene Siding; available in multiple colors; overall dimensions: 92.7" X 8.7" X 0.085"

For **SI:** 1 inch = 25.4 mm.



DRY STACKED STONE – NovikStone® DS

NORTHERN PERFECTION<sup>®</sup> – NovikShake<sup>®</sup> NP





# **ICC-ES Evaluation Report**

# **ESR-2888 FBC and FRC Supplement**

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**REPORT HOLDER:** 

DERBY BUILDING PRODUCTS INC.

**EVALUATION SUBJECT:** 

NOVIK<sup>®</sup> POLYMER SIDING

# 1.0 REPORT PURPOSE AND SCOPE

# Purpose:

The purpose of this evaluation report supplement is to indicate that NOVIK<sup>®</sup> POLYMER SIDING, described in ICC-ES evaluation report ESR-2888, has also been evaluated for compliance with the codes noted below.

# Applicable code editions:

- 2020 Florida Building Code—Building
- 2020 Florida Building Code—Residential

# 2.0 CONCLUSIONS

The NOVIK<sup>®</sup> POLYMER SIDING, described in Sections 2.0 through 7.0 of the evaluation report ESR-2888, complies with the *Florida Building Code—Building and Florida Building Code—Residential*, provided the design requirements are determined in accordance with the *Florida Building Code-Building* or the *Florida Building Code-Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-2888 for the 2018 *International Building Code®* meet the requirements of the *Florida Building Code-Building* or the *Florida Building Code-Residential*, as applicable, with the following conditions:

- Siding is limited to use in Construction Type VB and on structures constructed in accordance with the FRC.
- Clearance between exterior wall coverings and final earth grade must meet the requirements of Section 1403.8 of the *Florida Building Code—Building* or Section R318.7 *Florida Building Code—Residential*, as applicable.
- Installation over foam sheathing under the *Florida Building Code—Residential* must be in accordance with Section R703.11.2.

Use of the NOVIK<sup>®</sup> POLYMER SIDING, NORTHERN PERFECTION<sup>®</sup> – NovikShake<sup>®</sup> NP installed over solid substrates with a maximum approved corrosion-resistant nail spacing of 2 inches (51 mm) on center, has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code*—*Building* and *Florida Building Code*—*Residential* and has an allowable negative wind pressure of 80.9 psf.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report ESR-2888, reissued July 2020, revised February 2021.

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