Code Compliance Research Report
CCRR-0184

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

NORANDEX, A DIVISION OF AMERICAN BUILDERS & CONTRACTORS SUPPLY CO., INC.
1 ABC Parkway
Beloit, Wisconsin 53511

REPORT SUBJECT:
Norandex Vinyl Siding

1.0 SCOPE OF EVALUATION

This research report addresses compliance with the following Codes:

2015 International Building Code (IBC)
2015 International Residential Code (IRC)

2012 International Building Code (IBC)
2012 International Residential Code (IRC)

Norandex Vinyl Siding has been evaluated for the following properties:

Durability

Exterior Veneer

Wind Load Resistance (Negative Transverse)

2.0 USES

2.1. *Norandex Vinyl Siding* is a rigid polyvinyl chloride (PVC) solid cross sections intended for use as an exterior siding attached to an approved structural sheathing. *Norandex Vinyl Siding* is manufactured in various thicknesses and profiles. A list of products can be found in Table 1.

3.0 DESCRIPTION

3.1. Materials and Processes – *Norandex Vinyl Siding* products are extruded polyvinyl chloride (PVC) or acrylic material and conform to the requirements of ASTM D 3679. Corner trim, starter strips, J-channels and other accessories are manufactured with the same materials.

3.2. All products, except for the Board & Batten 6-¼, are intended to be installed horizontally. The Board & Batten 6-¼ is installed vertically.

4.0 PERFORMANCE CHARACTERISTICS

4.1. *Norandex Vinyl Siding* products are not evaluated for resisting positive wind pressure and must be installed over sheathing materials designed and approved for the required positive design wind pressure.

4.2. *Norandex Vinyl Siding* installed in accordance with the code specified installation is recognized for use within the corresponding limitations prescribed by the code for wind speed, exposure category and other conditions, See Section 5.1 for applications within the code prescribed conditions.

4.3. Maximum allowable wind pressures are given in Table 1 for siding installed in accordance with Section 5.2

5.0 INSTALLATION

Installation shall be in accordance with the manufacturer's installation instructions and this report. Where differences occur between this report and the manufacturer's installation instructions, this report shall govern.

5.1. Prescriptive Requirements (limited to siding installed horizontally)

5.1.1. For IBC applications: Areas where the nominal design wind speed does not exceed 100 mph and the building height is no greater than 40 ft. in Exposure C, installation shall comply with the prescriptive requirements in IBC Section 1405.14.

5.1.2. For 2015 IRC applications: Areas where the ultimate wind speed and maximum mean roof height is in accordance with Table R703.3.1, installation shall comply with the prescriptive requirements in IRC Section R703.3.

5.1.3. For 2012 IRC applications: Areas where the basic wind speed is less than 110 miles per hour in Exposure B, and does not exceed 90 mph in Exposure C or 85 mph in Exposure D, installation shall comply

with the prescriptive requirements in IRC Section R703.4.

5.2. In Excess of Prescriptive Requirements

5.2.1. Vinyl siding shall be installed over structural wood sheathing complying with DOC PS 1, DOC PS 2 or ANSI/APA PRP 210, per IBC 2303.1.5 (2303.1.4 for 2012 IBC).

5.3. Sheathing must be covered by an approved water-resistive barrier in accordance with IBC Section 1404.2 and provide a means for draining water that enters the assembly to the exterior.

5.4. Flashing shall be installed in accordance with IBC 1405.4 and IRC R 703. 4 (R703.8 for 2012 IBC).

5.5. Protection against condensation shall be provided in accordance with IBC 1405.3.

5.6. Fasteners shall be corrosion-resistant roofing nails with a minimum head diameter of 3/8 inch and a minimum shank diameter of 1/8 inch. Length of nails shall be a minimum 1-1/2 inches long.

5.6.1. For siding installed horizontally, nails shall be spaced at a maximum of 16 inches along the nail hem with every nail penetrating a stud of at least 0.75 inches.

5.6.2. For siding installed vertically, nails shall be spaced at a maximum of 12 inches along the nail hem.

5.7. Corner trim, starter strips, J-channels and other accessories must be installed in accordance with the VSI's Vinyl Siding Installation Manual and the applicable code.

6.0 SUPPORTING EVIDENCE

6.1. Manufacturer's drawings and installation instructions.

6.2. Reports of testing demonstrating compliance with ASTM D 3679 (-09 and -11), Rigid Poly (Vinyl Chloride) (PVC) Siding.

6.3. Reports of testing demonstrating compliance with the performance requirements of ICC-ES AC37, Acceptance Criteria for Vinyl Siding, approved February 2014.

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

7.0 CONDITION OF USE

The *Norandex Vinyl Siding* applications identified in this report are deemed to comply with the intent of the provisions of the referenced building codes subject to the following conditions:

7.1. *Norandex Vinyl Siding* is limited to exterior use in Type V-B (IBC) construction and construction permitted by the IRC. Siding products within this report are permitted on exterior walls as described in IBC 1405.14.

7.2. Wind design pressures determined from nominal design wind speeds (V_{ASD}) in accordance with IBC Chapter 16 and IRC Section R301.2.1.1 and shall not exceed the allowable wind loads specified in Table 1. The allowable wind loads in Table 1 require installation over structural wood sheathing (See Section 5.2).

7.3. Exterior walls must be braced or sheathed to resist racking loads with approved materials in accordance with the applicable code.

7.4. All products are manufactured in Claremont, North Carolina by Norandex, a division of American Builders & Contractors Supply Co., Inc. in accordance with the manufacturer's approved quality control system with inspections by Intertek.

8.0 IDENTIFICATION

Norandex Vinyl Siding that is produced in accordance with this report shall be identified with labeling on the individual product packaging that includes the following information:

8.1. Name and address of the manufacturer or distributor.

8.2. The following statement: "Conforms to ASTM Specification D3679."

8.3. The Architectural Testing Code Compliance Research Report mark and number (CCRR-0184).

CODE COMPLIANCE
Intertek
CCRR-0184

9.0 CODE COMPLIANCE RESEARCH REPORT

9.1. 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.

9.2. Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

9.3. Reference to the Intertek website address: whdirectory.intertek.com is recommended to ascertain the current version and status of this report.

Table 1 - Vinyl Siding Thicknesses, Lengths, Descriptions and Design Pressures [1]

Nominal Thickness	Nail Hem Type	Identified As	Profile Name	Exposure (inches)	Length (inches)	Allowable Design Pressure (psf) [2]	Colors
0.040 in.	Single	*Norandex Summit Manor*	Double 4.5 DutchLap	9	145	40	Almond Beige Cactus Champagne Cobblestone Cream Dune Evergreen Fern Firebrick Granite Hazel Ivy Khaki Linen Mocha Olive Saddle Sand Sandstone Seaport Sierra Silver Smoke Steel Blue Tan Tumbleweed Wedgewood Wheat White Yellow
			Double 4 Horizontal	8	150	43	
			Double 4.5 Horizontal	9	145	43	
		Norandex Shenandoah	Triple 3 Horizontal	9	145	61	
0.042 in.	Half-rolled over	*Norandex Woodsman Select*	Double 4 Horizontal	8	150	68	
			Double 4 DutchLap	8	150	98	
			Double 5 DutchLap	10	144	70	
	Single	*Norandex Woodsman Select*	Double 5 Horizontal	10	144	77	
		Norandex Shenandoah	Semi-Beaded 6-½	6.5	148	95	
0.044 in.	Half-rolled over	*Norandex Sterling*	Double 4 Horizontal	8	150	74	
			Double 5 Horizontal	10	144	77	
			Double 5 DutchLap	10	144	70	
	Single	*Norandex Cambridge*	Full-Beaded 6-½	6.5	144	58	
0.046 in.	Double-rolled over	*Norandex Great Barrier* *Norandex Great Barrier XL*	Double 4 Horizontal	8	150	148	
			Double 5 DutchLap	10	148	107	
0.048 in.	Single	*Norandex Sterling*	Single 8 Horizontal	8	150	61	
		Premium D5 Vertical Vinyl Siding	Double 5 Vertical	10	144	55	
0.050 in.	Single-roll over	*Norandex Sagebrush*	Double 5 DutchLap	10	144	70	
	Single	*Norandex Board & Batten*	Single 6-¼ Vertical	6.25	120	145	

[1] The Board & Batten 6-1/4" siding profile is installed vertically, in which nails shall be spaced at a maximum of 12 inches on center along the nail hem. All other siding profiles are installed horizontally, in which nails shall be spaced at a minimum of 16 inches on center along the nail hem with every nail penetrating a stud.

[2] Design Pressures are determined in accordance with Annex A1 of ASTM D 3679, using a pressure equalization factor (PEF) of 0.36 and safety factor of 1.5.

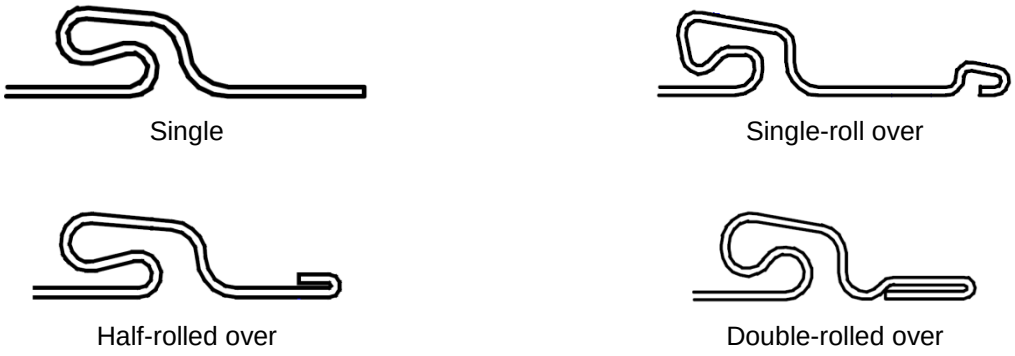

Figure 1 – Nail Hem Types