



#1131 ISO/IEC 17065 Product Certification Body

# **Exterior Portfolio & Haven Insulated Vinyl Siding**

#### TER No. 1301-03

#### Issue Date: June 14, 2013 Updated: May 19, 2017 Subject to Renewal: July 1, 2018

#### **Royal Building Products**

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# **DIVISION: 07 00 00 THERMAL AND MOISTURE PROTECTION**

Section: 07 20 00 – Thermal Protection Section: 07 21 00 – Thermal Insulation Section: 07 21 13 – Foam Board Insulation Section: 07 46 00 – Siding Section: 07 46 33 – Plastic Siding

#### 1. Products Evaluated:

- 1.1. Exterior Portfolio and Haven Insulated Vinyl Siding
- **1.2.** For the most recent version of this Technical Evaluation Report (TER), visit <u>drjengineering.org</u>. For more detailed state professional engineering and code compliance legal requirements and references, visit <u>drjengineering.org/statelaw</u>. DrJ is fully compliant with all state professional engineering and code compliance laws.
- 1.3. This TER can be used to obtain product approval in any country that is an IAF MLA Signatory (all countries found here) and covered by an IAF MLA Evaluation per the Purpose of the MLA (as an example, see letter to ANSI from the Standards Council of Canada). Manufacturers can go to jurisdictions in the U.S., Canada and other IAF MLA Signatory Countries and have their products readily approved by authorities having jurisdiction using DrJ's ANSI accreditation.
- **1.4.** Building code regulations require that evaluation reports are provided by an approved agency meeting specific requirements. Any agency accredited in accordance with ANSI ISO/IEC 17065 meets this requirement within ANSI's scope of accreditation. For a list of accredited agencies, visit ANSI's <u>website</u>. For more information, see <u>drjcertification.org</u>

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- DrJ is an ISO/IEC 17065 accredited product certification body through ANSI Accreditation Services.
- DrJ provides certified evaluations that are signed and sealed by a P.E.
- DrJ's work is backed up by professional liability insurance.
- DrJ is fully compliant with *IBC* Section 1703.

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**1.5.** Requiring an evaluation report from a specific organization (ICC-ES, IAPAMO, CCMC, DrJ, etc.) can be viewed as discriminatory and is a violation of international, federal, state, provincial and local anti-trust and free trade regulations.

# 2. Applicable Codes and Standards:<sup>1</sup>

- 2.1. 2009, 2012 and 2015 International Building Code (IBC)
- 2.2. 2009, 2012 and 2015 International Residential Code (IRC)
- 2.3. 2009, 2012 and 2015 International Energy Conservation Code (IECC)
- 2.4. 2010 and 2014 Florida Building Code Building (FBC)<sup>2</sup>
- **2.5.** ANSI/SBCA FS100 Standard Requirements for Wind Pressure Resistance of Foam Plastic Insulated Sheathing Used in Exterior Wall Covering Assemblies
- 2.6. ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures
- 2.7. ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
- **2.8.** ASTM C1363 Standard Test Method for the Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus
- 2.9. ASTM D3679 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Siding
- 2.10. ASTM D4756 Standard Practice for Installation of Rigid Poly (Vinyl Chloride) (PVC) Siding and Soffit
- 2.11. ASTM D5206 Standard Test Method for Windload Resistance of Rigid Plastic Siding
- 2.12. ASTM D7793 Standard Specification for Insulated Vinyl Siding
- 2.13. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials

#### 3. Evaluation Scope:

- 3.1. This TER examines the use of Exterior Portfolio and Haven Insulated Vinyl Siding when used:
  - **3.1.1.** As an exterior covering in accordance with <u>*IBC* Section 1404</u> and <u>*IBC* Section 1405</u>, and <u>*IRC* Section 1405</u>, and <u>*IRC* Section 1405</u>.
  - 3.1.2. To resist wind loads on walls in accordance with <u>IBC Section 1609</u> and <u>IRC Section R301.2.1</u>.
  - **3.1.3.** For thermal resistance in wall assemblies in accordance with <u>*IRC* Table N1102.1.2</u><sup>3</sup>, <u>*IECC* Table C402.1.3</u> and <u>Table R402.1.2</u><sup>4</sup>.
- **3.2.** The foam plastic insulation component of the insulated vinyl siding was evaluated in accordance with <u>*IBC*</u> <u>Section 2603</u> and <u>*IRC* Section 316</u>.
- **3.3.** Any code compliance issues not specifically addressed in this section are outside the scope of this TER.

# 4. Product Description and Materials:

- **4.1.** Exterior Portfolio and Haven Insulated Vinyl Siding consists of expanded polystyrene (EPS) foam board glued to the back of the vinyl siding.
- **4.2.** This vinyl siding is available in a variety of profiles; see <u>Table 1</u> and <u>Table 2</u> for product codes, descriptions, and dimensions.
- **4.3.** Exterior Portfolio and Haven Insulated Vinyl Siding includes an upper hooking lock, a butt lock, and a slotted nail flange, see <u>Figure 1</u> for profile.

<sup>&</sup>lt;sup>1</sup> Unless otherwise noted, all references in this technical evaluation report (TER) are from the 2015 version of the codes and the standards referenced therein, including, but not limited to, ASCE 7, SDPWS and WFCM. This product also complies with the 2000-2012 versions of the *IBC* and *IRC* and the standards referenced therein. As required by law, where this technical evaluation report is not approved, the building official shall respond in writing, stating the reasons this technical evaluation report was not approved. For variations in state and local codes, if any, see <u>Section 8</u>.

<sup>&</sup>lt;sup>2</sup> Unless otherwise noted, *IBC* reference numbers are the same as the *FBC* references.

<sup>&</sup>lt;sup>3</sup> 2012 IRC Section N1102.1.1.

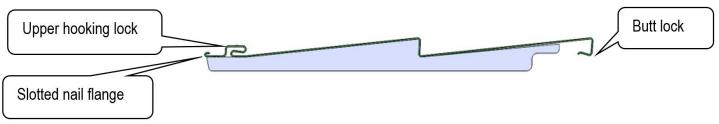


Figure 1: Upper Hooking Lock, Butt Lock & Slotted Nail Flange

- **4.4.** Accessory products such as corners, starter strips, j-channels, trim pieces, and other accessory items are available and are manufactured of the same material as the vinyl siding.
- **4.5.** Exterior Portfolio Brands:

Product Code	Panel Configuration	Exposure (in.)	Product Length (ftin.)	Nominal Thickness (in.)	Profile
TMQ4IP	Horizontal Quad 4" Wire-cut Foam	16"	12-6	0.043"	
TMQ45IP	Horizontal Quad 4.5" Molded Foam	18"	12-1	0.043"	
TMD7IP	Horizontal Double 7" Molded Foam	14"	12-3	0.047"	
TMD716I	Horizontal Double 7" Molded Foam	14"	16-9	0.047"	
TMT6IP	Horizontal Triple 6" Molded Foam	18"	12-1	0.047"	
TMT616I	Horizontal Triple 6" Wire-cut Foam	18"	16-9	0.047"	
D10BBIP	Vertical Double10" Wire-cut Foam	20"	10-0	0.055"	

 Table 1: Exterior Portfolio Brands

# 4.6. Haven Brands:

Product Code	Panel Configuration	Exposure (in.)	Product Length (ftin.)	Nominal Thickness (in.)	Profile
HAVD612	Horizontal Double 6" Wire-cut Foam	12"	12-6	0.045"	
HAVD616	Horizontal Double 6" Wire-cut Foam	12"	16-6	0.045"	
HAVBB10	Vertical Double 10" Wire-cut Foam	20"	10-0	0.055"	
HAVS712	Horizontal Single 7" Wire-cut Foam	7"	12-0	0.044"	
HAVD45D12	Horizontal Double 9" Wire-cut Foam	9"	12-0	0.046"	

#### Table 2: Haven Brands

# 5. Applications:

#### 5.1. General

- **5.1.1.** Exterior Portfolio and Haven Insulated Vinyl Siding are used to provide an exterior weather-resistant envelope for exterior walls (*IBC* Section 1404.9, Table 1405.2 and Section 1405.14; *IRC* Section R703.1.1).
- **5.1.2.** Material testing for code compliance is in accordance with *ASTM D7793*, *D3679* and *C578*.

#### 5.2. Wind Pressure Performance

**5.2.1.** Exterior Portfolio and Haven Insulated Vinyl Siding are also used in exterior wall assemblies providing resistance to wind loads, as seen in <u>Table 3</u>.

Product Code	Installation Method	Maximum Test Pressure <sup>1</sup> (psf)	PEF <sup>2</sup>	Maximum Design Pressure (psf)	Maximum Design Wind Speed <sup>3</sup> (mph)(V <sub>asd</sub> )
TMQ4IP	1 <sup>1</sup> /2" Galvanized Roofing Nails with <sup>1</sup> /8" Dia. Shank & <sup>3</sup> /8" Dia. Head	45	0.65	46	130
TMQ45IP		43	0.53	55	150
TMT6IP		50	0.53	63	150
TMT616I		50	0.65	51	145
TMD7IP		53	0.53	67	150
TMD716I		53	0.53	67	150
HAVD612		63	0.65	65	150
HAVD616		63	0.65	65	150
D10BBIP		41	0.65	42	130
HAVBB10		40	0.65	42	130
HAVS712		43	0.65	44	130
HAVD45D12		58	0.65	60	150
TMQ45IP	1 <sup>1</sup> / <sub>2</sub> " Galvanized Roofing Nails with <sup>1</sup> / <sub>8</sub> " Dia. Shank & <sup>3</sup> / <sub>8</sub> " Dia. Head w/ <sup>5</sup> / <sub>8</sub> " Washers	52	0.53	65	150

. Test Pressure is the pressure determined by listed testing.

PEF = Pressure Equalization Factor is determined by listed testing. Used in the ASTM D7793, Annex A: Design Pressure = Test Pressure / PEF x Safety Factor of 1.5.
 Design Wind Speed = V<sub>asd</sub> (<u>22012 IRC Table R301.2(2)</u>/ASCE 7-05)<sup>5</sup> Components & Cladding for walls, zone 5 (4 foot corner zone), 10 square foot effective wind area, negative pressure, mean roof height of 30', located in Exposure Category B. For other roof heights and/or exposures see <u>IRC Table R301.2(3)</u> (<u>Table 4</u> from this TER) for adjustment factors.

. All pressure values are negative values, since suction loads are the largest in magnitude, and they are the design values used in testing per ASTM D7793.

5. For installation over sheathing that is not separately designed to resist 100% of the wind load, the design wind pressure shall be adjusted in accordance with the manufacturer's installation instructions. Installation over foam plastic insulated sheathing shall be in accordance with <u>IRC Section R703.11.2</u>.

MEAN ROOF		EXPOSURE				
HEIGHT	В	С	D			
15	1.00	1.21	1.47			
20	1.00	1.29	1.55			
25	1.00	1.35	1.61			
30	1.00	1.40	1.66			
35	1.05	1.45	1.70			
40	1.09	1.49	1.74			
45	1.12	1.53	1.78			
50	1.16	1.56	1.81			
55	1.19	1.59	1.84			
60	1.22	1.62	1.87			

Table 3: Maximum Design Wind Pressure & Wind Speeds

Table 4: IRC Table R301.2(3)

- 5.2.2. Exterior Portfolio and Haven Insulated Vinyl Sidings are tested per ASTM D5206/D7793.
- 5.2.3. The Pressure Equalization Factor (PEF) has been determined by testing as shown in Table 3.
- 5.2.4. IRC wind pressure requirements:

<u>R703.1.2</u> Wind resistance. Wall coverings, backing materials and their attachments shall be capable of resisting wind loads in accordance with Tables R301.2(2) and R301.2(3). Wind-pressure resistance of the siding and backing materials shall be determined by ASTM E 330 or other applicable standard test methods. Where wind-pressure resistance is determined by design analysis, data from approved design standards and analysis conforming to generally accepted engineering practice shall be used to evaluate the siding and backing material and its fastening. All applicable failure modes including bending rupture of siding,

<sup>&</sup>lt;sup>5</sup> 2015 *IRC* Table R301.2(2) lists ASD load values based on V<sub>ut</sub> wind speeds. The adjustment factors in Table R301.2(3) are the same in the 2012 and 2015 versions. 2015 *IRC* references *ASCE* 7-10.

fastener withdrawal and fastener head pull-through shall be considered in the testing or design analysis. Where the wall covering and the backing material resist wind load as an assembly, use of the design capacity of the assembly shall be permitted.

**5.2.5.** *IBC* wind pressure requirements:

<u>1405.14</u> Vinyl siding. Vinyl siding conforming to the requirements of this section and complying with ASTM D 3679 shall be permitted on exterior walls of buildings located in areas where V<sub>asd</sub> as determined in accordance with Section 1609.3.1 does not exceed 100 miles per hour (45 m/s) and the building height is less than or equal to 40 feet (12,192 mm) in Exposure C. Where construction is located in areas where V<sub>asd</sub> as determined in accordance with Section 1609.3.1 exceeds 100 miles per hour (45 m/s), or building heights are in excess of 40 feet (12,192 mm), tests or calculations indicating compliance with Chapter 16 shall be submitted. Vinyl siding shall be secured to the building so as to provide weather protection for the exterior walls of the building.

- 5.3. The design wind pressures for Exterior Portfolio and Haven Insulated Siding products are as shown in <u>Table 3</u>.
  - **5.3.1.** Example of how to use <u>Table 3</u> and <u>*IRC* Table R301.2(3)</u>: Can TMD7IP siding be used in exposure C where the mean roof height is 15'?
    - 5.3.1.1. The maximum design pressure for this siding is 67 psf per Table 3.
    - **5.3.1.2.** The tabular maximum wind pressure from <u>*IRC* Table R301.2(2)</u> at 150 mph  $V_{ULT} = -32.0$
    - **5.3.1.3.** The multiplier for a mean roof height of 15' in Exposure C is 1.21 per <u>*IRC* Table R301.2(3)</u>.  $32.0 \times 1.21 = 38.72$
    - 5.3.1.4. TMD7IP siding may be used.
- **5.4.** Fire Performance
  - **5.4.1.** Exterior Portfolio and Haven Insulated Vinyl Siding has been tested in accordance with *ASTM E84* (<u>*IBC*</u> <u>Section 2603.3</u> and <u>*IRC* Section R316.3</u>) for foam plastic insulation. The flame spread index is not greater than 75, and the smoke developed index is not greater than 450.
  - **5.4.2.** Evaluation for compliance with the ICC Wildlife-Urban Interface Code concerns is outside the scope of this TER.

TER No. 1301-03 Exterior Portfolio & Haven Insulated Vinyl Siding

# **5.5.** Energy Performance

**5.5.1.** Exterior Portfolio and Haven Insulated Vinyl Siding are used to provide R-value in energy performance applications and are tested per *ASTM C1363*, see <u>Table 5</u>.

Product Code	R-Value <sup>1</sup>	
TMQ4IP	2.57	
TMQ45IP	2.74	
TMT6IP	2.21	
TMT616I	2.21	
TMD7IP	2.41	
TMD716I	2.41	
HAVD612	2.41	
HAVD616	2.41	
D10BBIP	2.14/2.16	
HAVBB10	2.14/2.16	
HAVS712	2.35	
HAVD45D12	2.90	
value of 0.6 0 for siding. When usir	R402.1.2 <sup>6</sup> and Table C402.1.3 <sup>7</sup> assume a ng these R-values with those tables, nce they include the siding and insulation.	

Table 5: Exterior Portfolio & Haven Insulated Siding R-Values

- **5.5.2.** Insulated siding R-values may be used in conjunction with other sheathing products to meet continuous insulation requirement values (*IRC* Table N1102.1.2<sup>8</sup>, *IECC* Table R402.1.2 and Table C402.1.3).
- **5.5.3.** <u>IECC Section C303.1.4</u> and <u>R301.4</u> include the following requirement, which is not included in *ASTM C1363*. <u>CFR Title 16</u>, Part 460, however, does reference *ASTM C1363*:

**C303.1.4 Insulation product rating.** The thermal resistance (R-value) of insulation shall be determined in accordance with the U.S. Federal Trade Commission R-value rule (CFR Title 16, Part 460) in units of h x ft<sup>2</sup> x °F/Btu at a mean temperature of 75°F (24°C).

**5.6.** Where the application exceeds the limitations set forth herein, design shall be permitted in accordance with accepted engineering procedures, experience and technical judgment.

#### 6. Installation:

- **6.1.** Installation of Exterior Portfolio and Haven Insulated Vinyl Siding products and accessories shall comply with the manufacturer's installation instructions and this TER. In the event of a conflict between the manufacturer's installation instructions and this TER, the more restrictive shall govern.
  - 6.1.1. Manufacturer's published instructions are to be available at the jobsite at all times during installation.
  - **6.1.2.** Exterior Portfolio and Haven Insulated Siding products are also to be installed in accordance with *ASTM D4756*.
    - **6.1.2.1.** Fasteners are to be corrosion resistant and of sufficient length to penetrate not less than <sup>3</sup>/<sub>4</sub>" into furring or framing.
    - 6.1.2.2. Fasteners should be placed in the center of provided slots.
  - 6.1.3. Siding is to be attached 'loosely' to permit thermal movement.

<sup>6 2012</sup> IECC Table R402.1.1

<sup>7 2012</sup> IECC Table C402.2

<sup>8 2012</sup> IRC Table N1102.1.1

- **6.1.4.** Allow clearance at ends to allow for thermal expansion at intersections with accessories.
- **6.1.5.** Siding products are to be installed over a weather-resistant barrier system with flashing and/or caulking per code requirements.
- **6.2.** Exterior Portfolio and Haven Insulated Vinyl Siding products may be installed over structural or non-structural sheathing, provided the applicable code provisions regarding wind load requirements, bracing and sheathing to resist racking loads are met.
  - **6.2.1.** A water-resistant barrier (WRB), as required by the code provisions, must be provided behind the siding (*IBC* Section 1404.2 and *IRC* Section R703.2).
  - **6.2.2.** Flashing, as required by the code provisions, must be installed at all penetrations, abutments with dissimilar materials, and at siding terminations (*IBC* Section 1405.4 and *IRC* Section 703.4<sup>9</sup>).
- **6.3.** Fasteners for Exterior Portfolio and Haven Insulated Vinyl Siding products and accessories shall be as required by the code provisions (*IBC* Section 1405.14.1 and *IRC* Table R703.3(1)<sup>10</sup>), manufacturer's installation instructions, and this TER.
- **6.4.** A minimum <sup>1</sup>/<sub>4</sub>" (6.4 mm) gap must be provided at all openings and terminations to allow for expansion and contraction.
- **6.5.** Where Exterior Portfolio and Haven Insulated Vinyl Siding products are installed in climates with temperatures below 40°F (4.4°C), a minimum <sup>3</sup>/<sub>8</sub>" (9.5 mm) gap must be provided.

#### 7. Test and Engineering Substantiating Data:

- 7.1. Material testing for the Exterior Portfolio and Haven insulated vinyl siding included in this TER has been conducted in accordance with ASTM D7793 Standard Specification for Insulated Vinyl Siding, ASTM D3679 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Siding, and ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- **7.2.** Thermal testing for the Exterior Portfolio and Haven insulated vinyl siding included in this TER has been conducted in accordance with ASTM C1363 Standard Test Method for the Thermal Performance of Building Assemblies by means of a hot box apparatus.
- 7.3. Wind load testing for the Exterior Portfolio and Haven insulated vinyl siding included in this TER has been conducted in accordance with ASTM D5206 Standard Test Method for Windload Resistance of Rigid Plastic Siding, ASTM D7793 Standard Specification for Insulated Vinyl Siding, and ANSI/SBCA FS100 Standard Requirements for Wind Pressure Resistance of Foam Plastic Insulated Sheathing Used in Exterior Wall Covering Assemblies.
- **7.4.** Surface burning characteristics testing for the Exterior Portfolio and Haven insulated vinyl siding included in this TER has been conducted in accordance with *ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.*
- **7.5.** The product(s) evaluated by this TER falls within the scope of one or more of the model, state or local building codes for building construction. The testing and/or substantiating data used in this TER is limited to buildings, structures, building elements, construction materials and civil engineering related specifically to buildings.
- **7.6.** The provisions of model, state or local building codes for building construction do not intend to prevent the installation of any material or to prohibit any design or method of construction. Alternatives shall use consensus standards, performance-based design methods or other engineered alternative means of compliance. This TER assesses compliance with defined standards, generally accepted engineering analysis, performance-based design methods, etc. in the context of the pertinent building code requirements.
- **7.7.** Some information contained herein is the result of testing and/or data analysis by other sources, which DrJ relies on to be accurate as it undertakes its engineering analysis.
- **7.8.** DrJ has reviewed and found the data provided by other professional sources are credible. This information has been approved in accordance with DrJ's procedure for acceptance of data from approved sources.
- **7.9.** DrJ's responsibility for data provided by approved sources is in accordance with professional engineering law.

<sup>9 2012</sup> IRC Section R703.8

<sup>&</sup>lt;sup>10</sup> 2012 IRC Table R703.4

**7.10.** Where appropriate, DrJ relies on the derivation of design values, which have been codified into law through codes and standards (e.g., *IRC*, *WFCM*, *IBC*, *SDPWS*, etc.). This includes review of code provisions and any related test data that helps with comparative analysis or provides support for equivalency to an intended end-use application.

# 8. Findings:

- **8.1.** When installed and fastened in accordance with the manufacturer's installation instructions and this TER, Exterior Portfolio and Haven Insulated Siding meet the exterior wall covering requirements as defined in this TER.
- **8.2.** When installed and fastened in accordance with the manufacturer's installation instructions and this TER, Exterior Portfolio and Haven Insulated Siding may be used to assist in meeting continuous insulation requirements as defined in this TER.
- **8.3.** When installed and fastened in accordance with the manufacturer's installation instructions and this TER, Exterior Portfolio and Haven Insulated Siding are rated for allowable load carrying capacities as defined in this TER for:
  - **8.3.1.** Transverse load resistance due to components and cladding pressures on building surfaces.
- 8.4. IBC Section 104.11 and IRC Section R104.11 (IFC Section 104.9 is similar) state:

**104.11** Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code. ... Where the alternative material, design or method of construction is not *approved*, the *building official* shall respond in writing, stating the reasons the alternative was not *approved*.<sup>11</sup>

- **8.5.** This product has been evaluated with the codes listed in <u>Section 2</u>, and is compliant with all known state and local building codes. Where there are known variations in state or local codes that are applicable to this evaluation, they are listed here:
  - 8.5.1. No known variations
- **8.6.** This TER uses professional engineering law, the building code, ANSI/ASTM consensus standards and generally accepted engineering practice as its criteria for all testing and engineering analysis. DrJ's professional engineering work falls under the jurisdiction of each state Board of Professional Engineers, when signed and sealed.

#### 9. Conditions of Use:

- **9.1.** Where required by the authority having jurisdiction (AHJ) in which the project is to be constructed, this TER and the installation instructions shall be submitted at the time of permit application.
- **9.2.** Any generally accepted engineering calculations needed to show compliance with this TER shall be submitted to the code official for review and approval.
- **9.3.** Design loads shall be determined in accordance with the building code adopted by the jurisdiction in which the project is to be constructed.
- 9.4. Loads applied shall not exceed those recommended by the manufacturer as follows:
  - 9.4.1. Allowable wind loads do not exceed values in Table 3.
- **9.5.** Manufacturer's installation instructions shall be shipped to the jobsite with the materials or otherwise be available on the jobsite for inspection.
- **9.6.** Exterior Portfolio and Haven Insulated Vinyl Siding materials are manufactured in Columbus, OH, under a quality control program with quality control inspections in accordance with <u>IRC Section R109.2</u>, <u>IBC Section 110.3.8</u> and <u>110.3.9</u>.

<sup>&</sup>lt;sup>11</sup> The last sentence is adopted language in the 2015 codes.

# 9.7. Design

- **9.7.1.** Building Designer Responsibility
  - 9.7.1.1. Unless the AHJ allows otherwise, the Construction Documents shall be prepared by a Building Designer (e.g., Owner, Registered Design Professional, etc.) for the Building and shall be in accordance with <u>IRC Section R106</u> and <u>IBC Section 107</u>.
  - **9.7.1.2.** Construction Documents shall be accurate and reliable and shall provide the location, direction and magnitude of all applied loads and shall be in accordance with <u>IRC Section R301</u> and <u>IBC Section 1603.</u>
- 9.7.2. Design loads shall not exceed the allowable loads as defined in this TER.
- 9.7.3. Construction Documents
  - **9.7.3.1.** Construction Documents shall be submitted to the Building Official for approval and shall contain the plans, specifications and details needed for the Building Official to approve such documents.

#### 9.8. Responsibilities

- **9.8.1.** The information contained herein is a product, engineering or building code compliance technical evaluation report performed in accordance with the referenced building codes, testing and/or analysis through the use of accepted engineering procedures, experience and technical judgment.
- **9.8.2.** DrJ technical evaluation reports provide an assessment of only those attributes specifically addressed in the Products Evaluated or Code Compliance Process Evaluated section.
- **9.8.3.** The engineering evaluation was performed on the dates provided in this TER, within DrJ's professional scope of work.
- **9.8.4.** This product is manufactured under a third-party quality control program in accordance with <u>*IRC* Section</u> <u>R104.4</u> and <u>R109.2</u>, and <u>*IBC* Section 104.4</u> and <u>110.4</u>.
- **9.8.5.** The actual design, suitability and use of this TER for any particular building is the responsibility of the Owner or the Owner's authorized agent. This TER shall be reviewed for code compliance by the Building Official.
- **9.8.6.** The use of this TER is dependent on the manufacturer's in-plant QC, the ISO/IEC 17020 third-party inspection process, proper installation per the manufacturer's instructions, the Building Official's inspection and any other code requirements that may apply to assure accurate compliance with the applicable building code.

#### 10. Identification:

- **10.1.** Exterior Portfolio and Haven Insulated Vinyl Siding products described in this TER are identified by a label on the siding or packaging material bearing the manufacturer's name, product name, label of the third-party inspection agency, and other information to confirm code compliance.
- 10.2. Additional technical information can be found at <u>exteriorportfolio.com</u>.

#### 11. Review Schedule:

- **11.1.** This TER is subject to periodic review and revision. For the most recent version of this TER, visit <u>drjengineering.org</u>.
- **11.2.** For information on the current status of this TER, contact <u>DrJ Engineering</u>.



- <u>Mission and Professional Responsibilities</u>
- Product Evaluation Policies
- Product Approval Building Code, Administrative Law and P.E. Law