Exterior Portfolio & Haven Insulated Vinyl Siding

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.

Exterior Portfolio & Haven Insulated Vinyl Siding

TER No. 1301-03

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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 drjengineering.org. For more detailed state professional engineering and code compliance legal requirements and references, visit drjengineering.org/statelaw. 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 website. For more information, see drjcertification.org

DrJ is a Professional Engineering Approved Source

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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:¹

2.2. 2009, 2012 and 2015 International Residential Code (IRC)
2.4. 2010 and 2014 Florida Building Code – Building (FBC)²
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
2.10. ASTM D4756 – Standard Practice for Installation of Rigid Poly (Vinyl Chloride) (PVC) Siding and Soffit

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 IBC Section 1404 and IBC Section 1405, and IRC Section R703.
3.1.2. To resist wind loads on walls in accordance with IBC Section 1609 and IRC Section R301.2.1.
3.1.3. For thermal resistance in wall assemblies in accordance with IRC Table N1102.1.2³, IECC Table C402.1.3 and Table R402.1.2⁴.

3.2. The foam plastic insulation component of the insulated vinyl siding was evaluated in accordance with IBC Section 2603 and IRC Section 316.

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 Table 1 and Table 2 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 Figure 1 for profile.

¹ 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 Section 8.

² Unless otherwise noted, IBC reference numbers are the same as the FBC references.

³ 2012 IRC Section N1102.1.1
⁴ 2012 IRC Table R402.1.1
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:

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Panel Configuration</th>
<th>Exposure (in.)</th>
<th>Product Length (ft.-in.)</th>
<th>Nominal Thickness (in.)</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMQ4IP</td>
<td>Vertical Double 10&quot; Wire-cut Foam</td>
<td>20&quot;</td>
<td>10-0</td>
<td>0.055&quot;</td>
<td><img src="image1" alt="Profile" /></td>
</tr>
<tr>
<td>TMQ45IP</td>
<td>Horizontal Quad 4.5&quot; Molded Foam</td>
<td>18&quot;</td>
<td>12-1</td>
<td>0.043&quot;</td>
<td><img src="image2" alt="Profile" /></td>
</tr>
<tr>
<td>TMD7IP</td>
<td>Horizontal Double 7&quot; Molded Foam</td>
<td>14&quot;</td>
<td>12-3</td>
<td>0.047&quot;</td>
<td><img src="image3" alt="Profile" /></td>
</tr>
<tr>
<td>TMD716I</td>
<td>Horizontal Double 7&quot; Molded Foam</td>
<td>14&quot;</td>
<td>16-9</td>
<td>0.047&quot;</td>
<td><img src="image4" alt="Profile" /></td>
</tr>
<tr>
<td>TMT6IP</td>
<td>Horizontal Triple 6&quot; Molded Foam</td>
<td>18&quot;</td>
<td>12-1</td>
<td>0.047&quot;</td>
<td><img src="image5" alt="Profile" /></td>
</tr>
<tr>
<td>TMT616I</td>
<td>Horizontal Triple 6&quot; Wire-cut Foam</td>
<td>18&quot;</td>
<td>16-9</td>
<td>0.047&quot;</td>
<td><img src="image6" alt="Profile" /></td>
</tr>
<tr>
<td>D10BBIP</td>
<td>Vertical Double10&quot; Wire-cut Foam</td>
<td>20&quot;</td>
<td>10-0</td>
<td>0.055&quot;</td>
<td><img src="image7" alt="Profile" /></td>
</tr>
</tbody>
</table>

Table 1: Exterior Portfolio Brands
4.6. Haven Brands:

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Panel Configuration</th>
<th>Exposure (in.)</th>
<th>Product Length (ft.-in.)</th>
<th>Nominal Thickness (in.)</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAVD612</td>
<td>Horizontal Double 6&quot; Wire-cut Foam</td>
<td>12&quot;</td>
<td>12-6</td>
<td>0.045&quot;</td>
<td></td>
</tr>
<tr>
<td>HAVD616</td>
<td>Horizontal Double 6&quot; Wire-cut Foam</td>
<td>12&quot;</td>
<td>16-6</td>
<td>0.045&quot;</td>
<td></td>
</tr>
<tr>
<td>HAVBB10</td>
<td>Vertical Double 10&quot; Wire-cut Foam</td>
<td>20&quot;</td>
<td>10-0</td>
<td>0.055&quot;</td>
<td></td>
</tr>
<tr>
<td>HAVS712</td>
<td>Horizontal Single 7&quot; Wire-cut Foam</td>
<td>7&quot;</td>
<td>12-0</td>
<td>0.044&quot;</td>
<td></td>
</tr>
<tr>
<td>HAVD45D12</td>
<td>Horizontal Double 9&quot; Wire-cut Foam</td>
<td>9&quot;</td>
<td>12-0</td>
<td>0.046&quot;</td>
<td></td>
</tr>
</tbody>
</table>

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 Table 3.
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<table>
<thead>
<tr>
<th>Product Code</th>
<th>Installation Method</th>
<th>Maximum Test Pressure (psf)</th>
<th>PEF²</th>
<th>Maximum Design Pressure (psf)</th>
<th>Maximum Design Wind Speed² (mph) (V\textsubscript{asd})</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMQ4IP</td>
<td>1\frac{1}{2}&quot; Galvanized Roofing Nails with \frac{1}{8}&quot; Dia. Shank &amp; \frac{3}{8}&quot; Dia. Head</td>
<td>45</td>
<td>0.65</td>
<td>46</td>
<td>130</td>
</tr>
<tr>
<td>TMQ45IP</td>
<td></td>
<td>43</td>
<td>0.53</td>
<td>55</td>
<td>150</td>
</tr>
<tr>
<td>TMT6IP</td>
<td></td>
<td>50</td>
<td>0.53</td>
<td>63</td>
<td>150</td>
</tr>
<tr>
<td>TMT616I</td>
<td></td>
<td>50</td>
<td>0.65</td>
<td>51</td>
<td>145</td>
</tr>
<tr>
<td>TMD7IP</td>
<td></td>
<td>53</td>
<td>0.53</td>
<td>67</td>
<td>150</td>
</tr>
<tr>
<td>TMD716I</td>
<td></td>
<td>53</td>
<td>0.53</td>
<td>67</td>
<td>150</td>
</tr>
<tr>
<td>HAVD612</td>
<td></td>
<td>63</td>
<td>0.65</td>
<td>65</td>
<td>150</td>
</tr>
<tr>
<td>HAVD616</td>
<td></td>
<td>63</td>
<td>0.65</td>
<td>65</td>
<td>150</td>
</tr>
<tr>
<td>D10BBIP</td>
<td></td>
<td>41</td>
<td>0.65</td>
<td>42</td>
<td>130</td>
</tr>
<tr>
<td>HAVBB10</td>
<td></td>
<td>40</td>
<td>0.65</td>
<td>42</td>
<td>130</td>
</tr>
<tr>
<td>HAVS712</td>
<td></td>
<td>43</td>
<td>0.65</td>
<td>44</td>
<td>130</td>
</tr>
<tr>
<td>HAVD45D12</td>
<td></td>
<td>58</td>
<td>0.65</td>
<td>60</td>
<td>150</td>
</tr>
<tr>
<td>TMQ45IP</td>
<td>1\frac{1}{2}&quot; Galvanized Roofing Nails with \frac{1}{8}&quot; Dia. Shank &amp; \frac{3}{8}&quot; Dia. Head w/ \frac{5}{8}&quot; Washers</td>
<td>52</td>
<td>0.53</td>
<td>65</td>
<td>150</td>
</tr>
</tbody>
</table>

1. Test Pressure is the pressure determined by listed testing.
2. 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.
3. Design Wind Speed = V\text{asd} (2012 IRC Table R301.2(2)/ASCE 7-05) 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 IRC Table R301.2(3) (Table 4 from this TER) for adjustment factors.
4. 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 IRC Section R703.11.2.

Table 3: Maximum Design Wind Pressure & Wind Speeds

<table>
<thead>
<tr>
<th>MEAN ROOF HEIGHT</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
<th>50</th>
<th>55</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPOSURE</td>
<td>B</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>1.21</td>
<td>1.29</td>
<td>1.35</td>
<td>1.40</td>
<td>1.45</td>
<td>1.49</td>
<td>1.53</td>
<td>1.59</td>
<td>1.62</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>1.47</td>
<td>1.55</td>
<td>1.61</td>
<td>1.66</td>
<td>1.70</td>
<td>1.74</td>
<td>1.78</td>
<td>1.81</td>
<td>1.84</td>
</tr>
</tbody>
</table>

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:

R703.1.2 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,

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\(^5\) 2015 IRC Table R301.2(2) lists ASD load values based on \(V_\text{sa}\) 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:

**1405.14 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 \( V_{\text{asd}} \) 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 \( V_{\text{asd}} \) 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 Table 3.

5.3.1. Example of how to use Table 3 and *IRC Table R301.2(3)*: 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 *IRC Table R301.2(2)* 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 *IRC Table R301.2(3)*.

\[ 32.0 \times 1.21 = 38.72 \]

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 (IBC Section 2603.3 and IRC Section R316.3)* 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.
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 Table 5.

<table>
<thead>
<tr>
<th>Product Code</th>
<th>R-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMQ4IP</td>
<td>2.57</td>
</tr>
<tr>
<td>TMQ45IP</td>
<td>2.74</td>
</tr>
<tr>
<td>TMT6IP</td>
<td>2.21</td>
</tr>
<tr>
<td>TMT616I</td>
<td>2.21</td>
</tr>
<tr>
<td>TMD7IP</td>
<td>2.41</td>
</tr>
<tr>
<td>TMD716I</td>
<td>2.41</td>
</tr>
<tr>
<td>HAVD612</td>
<td>2.41</td>
</tr>
<tr>
<td>HAVD616</td>
<td>2.41</td>
</tr>
<tr>
<td>D10BBIP</td>
<td>2.14/2.16</td>
</tr>
<tr>
<td>HAVBB10</td>
<td>2.14/2.16</td>
</tr>
<tr>
<td>HAVS712</td>
<td>2.35</td>
</tr>
<tr>
<td>HAVD45D12</td>
<td>2.90</td>
</tr>
</tbody>
</table>

1. IRC Table N1102.1.2, IECC Table R402.1.2 and Table C402.1.3 assume a value of 0.60 for siding. When using these R-values with those tables, subtract 0.60 from the R-values, since 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, IECC Table R402.1.2 and Table C402.1.3).

5.5.3. IECC Section C303.1.4 and R301.4 include the following requirement, which is not included in ASTM C1363. CFR Title 16, 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 ft² 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 ¾” 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.
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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).b).

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) and manufacturer's installation instructions, and this TER.

6.4. A minimum 1/4" (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 11/6" (9.5 mm) gap must be provided.

7. Test and Engineering Substantiating Data:


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.


7.4. 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.

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8 2012 IRC Section R703.8
9 2012 IRC Table R703.4
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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.11

8.5. This product has been evaluated with the codes listed in Section 2, 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 IRC Section R109.2, IBC Section 110.3.8 and 110.3.9.

11 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 IRC Section R106 and IBC Section 107.

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 IRC Section R301 and IBC Section 1603.

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 IRC Section R104.4 and R109.2, and IBC Section 104.4 and 110.4.

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 exteriorportfolio.com.

11. Review Schedule:

11.1. This TER is subject to periodic review and revision. For the most recent version of this TER, visit driengineering.org.

11.2. For information on the current status of this TER, contact DrJ Engineering.