Listing and Technical Evaluation Report™

A Duly Authenticated Report from an Approved Agency

Report No: 2309-01

Issue Date: March 29, 2024

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Subject to Renewal: April 1, 2026

Blueskin™ VP Tech Weather-Resistive Thermal Insulation Sheathing

Trade Secret Report Holder:

Insulfoam®

Phone: 800-459-8870 Website: www.insulfoam.com Email: tom.savoy@insulfoam.com

CSI Designations:

DIVISION: 07 00 00 - THERMAL AND MOISTURE PROTECTION

Section: 07 20 00 - Thermal Protection

Section: 07 21 00 - Thermal Insulation

Section: 07 25 00 - Water-Resistive Barriers/Weather Barriers

Section: 07 26 00 - Vapor Retarders

1 Innovative Product Evaluated[1]

1.1 Blueskin VP Tech Weather-Resistive Thermal Insulation Sheathing

2 Product Description and Materials

2.1 The innovative product evaluated in this report is shown in **Figure 1** and is described in **Table 1**.

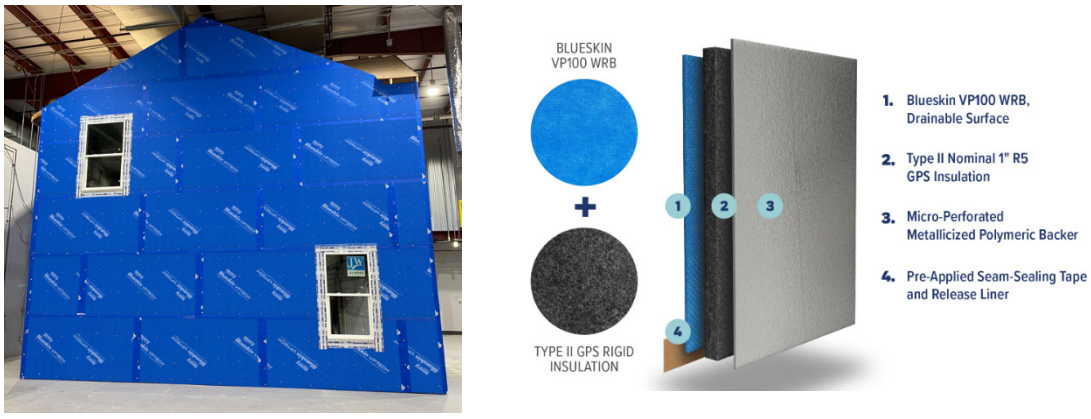

Figure 1. Blueskin VP Tech

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Table 1. Blueskin VP Tech Product Information

Product	Description	Front Facer	Back Facer	Nominal Dimensions
Blueskin VP Tech	Non-structural Foam Plastic Insulating Sheathing (FPIS) comprising of an ASTM C578 Type II compliant graphite expanded polystyrene (GPS) core with a polymeric and perforated polymeric facer	Factory laminated Blueskin composite membrane consisting of Styrene-Butadiene-Styrene (SBS) laminated to high-density polyethylene film.	Perforated metalized polymeric facer	Thickness: 1/2" - 2 1/2" Length: 8' Width: 4'
SI: 1 in = 25.4 mm				

2.2 As needed, review material properties for design in **Section 6** and the regulatory evaluation in **Section 8**.

3 Definitions

3.1 New Materials[2] are defined as building materials, equipment, appliances, systems, or methods of construction not provided for by prescriptive and/or legislatively adopted regulations, known as alternative materials.[3] The design strengths and permissible stresses shall be established by tests[4] and/or engineering analysis.[5]

3.2 Duly authenticated reports[6] and research reports[7] are test reports and related engineering evaluations, which are written by an approved agency[8] and/or an approved source.[9]

3.2.1 These reports contain intellectual property and/or trade secrets, which are protected by the Defend Trade Secrets Act (DTSA).[10]

3.3 An approved agency is *"approved"* when it is ANAB ISO/IEC 17065 accredited. DrJ Engineering, LLC (DrJ) is listed in the ANAB directory.

3.4 An approved source is *"approved"* when a professional engineer (i.e., Registered Design Professional, or RDP) is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the state legislature via its professional engineering regulations.[11]

3.5 Testing and/or inspections conducted for this duly authenticated report were performed by an ISO/IEC 17025 accredited testing laboratory, an ISO/IEC 17020 accredited inspection body, and/or a licensed RDP.

3.5.1 The Center for Building Innovation (CBI) is ANAB[12] ISO/IEC 17025 and ISO/IEC 17020 accredited.

3.6 The regulatory authority shall enforce[13] the specific provisions of each legislatively adopted regulation. If there is a non-conformance, the specific regulatory section and language of the non-conformance shall be provided in writing[14] stating the nonconformance and the path to its cure.

3.7 The regulatory authority shall accept duly authenticated reports from an approved agency and/or an approved source with respect to the quality and manner of use of new materials or assemblies as provided for in regulations regarding the use of alternative materials, designs, or methods of construction.[15]

3.8 ANAB is an International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA) signatory where recognition of certificates, validation and verification statements issued by conformity assessment bodies accredited by all other signatories of the IAF MLA with the appropriate scope, shall be approved.[16] Therefore, all ANAB ISO/IEC 17065 duly authenticated reports are approval equivalent.[17]

3.9 Approval equity is a fundamental commercial and legal principle.[18]

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4 Applicable Standards for the Listing; Regulations for the Regulatory Evaluation[19]

4.1 *Standards*

4.1.1 *ABTG FS 100: Standard Requirements for Wind Pressure Resistance of Foam Plastic Insulating Sheathing Used in Exterior Wall Covering Assemblies*

4.1.2 *ASTM C518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus*

4.1.3 *ASTM C578: Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*

4.1.4 *ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials*

4.1.5 *ASTM E96: Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials*

4.1.6 *ASTM E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference*

4.1.7 *ASTM E331: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*

4.1.8 *ASTM E2178: Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials*

4.1.9 *UL 723 Test for Surface Burning Characteristics of Building Materials*

4.2 *Regulations*

4.2.1 *IBC – 15, 18, 21: International Building Code®*

4.2.2 *IRC – 15, 18, 21: International Residential Code®*

4.2.3 *IECC – 15, 18, 21; International Energy Conservation Code®*

5 Listed[20]

5.1 Equipment, materials, products, or services included in a List published by a nationally recognized testing laboratory (i.e., CBI), an approved agency (i.e., CBI and DrJ), and/or and approved source (i.e., DrJ), or other organization concerned with product evaluation (i.e., DrJ), that maintains periodic inspection (i.e., CBI) of production of listed equipment or materials, and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner.

6 Tabulated Properties Generated from Nationally Recognized Standards

6.1 *General*

6.1.1 Blueskin VP Tech panels are used in light frame residential structures and buildings of Type V construction in accordance with IBC Section 2603 and IRC Section R316.

6.1.2 *Transverse Wind Loads:*

6.1.2.1 Blueskin VP Tech panels are permitted to resist transverse wind load forces using the allowable transverse loads (in pounds per square foot) set forth in **Table 2** and the wind speeds presented in **Table 3**.

6.1.2.2 Blueskin VP Tech having a thickness of $^1/_2$" is used for over sheathing applications only.

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Table 2. Transverse (Out-of-Plane) Wind Load Resistance[1,2,3] – Installed on Open Framing

Product	Maximum Stud Spacing (in)	Fastener Schedule[2]	Fastener Spacing (edge:field) (in)	Allowable Design Wind Pressure (psf)
1" Blueskin VP Tech	24 o.c.	2" x 0.09" Smooth Shank Nail with 1" Plastic Cap	6:12	19.2

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Design wind load shall be in accordance with IBC Section 1609.1.1.
2. Fasteners to be installed parallel to length of framing members.
3. Allowable load is valid for Blueskin VP Tech products with a minimum thickness of 1", and a maximum stud spacing of 24" o.c., as stated.

Table 3. Basic Wind Speed (mph) for Use in Exterior Wall Covering Assemblies[1,2,3] – Installed on Open Framing

Product	Allowable Components & Cladding Basic Wind Speed (mph)	
	ASCE 7-05 (V_{asd})	ASCE 7-16 and 7-22 (V_{ult})
1" Blueskin VP Tech	90	115

SI: 1 in = 25.4 mm, 1 mph = 1.61 km/h

1. Allowable wind speeds are based on the following:
   A building height of 30-feet, GC_p = -1.4 for Zone 5 and an Effective Wind Area of 10ft², Topographic Factor: K_{zt} = 1.0, Ground Elevation Factor: K_e = 1.0,
   Internal Pressure Coefficient, GC_{pi} = +/-0.18 for an enclosed building, K_d = 0.85 for component and cladding.
   See the applicable building code for any adjustment need for specific building location and configuration.
2. Studs spaced 24" o.c.
3. The listed wind speeds are valid for Blueskin VP Tech products with a minimum thickness of 1".

6.2 *Thermal Resistance*

6.2.1 Blueskin VP Tech FPIS panels may be used as thermal insulation in wall, roof, and ceiling assemblies.

6.2.2 These products meet the continuous insulating sheathing requirements complying with the provisions of IRC Section N1102, IECC Section C402, and IECC Section R402.

6.2.3 Thermal properties are presented in **Table 4**:

Table 4. Thermal Resistances of Blueskin VP Tech Foam Insulated Sheathing

Product	Nominal Thickness (in)	R-Value[1] (°F·ft²·hr/Btu)
Blueskin VP Tech	2.50	11.5
	2.18	10.0
	2.00	9.2
	1.50	6.9
	1.25	5.8
	1.06	5.0
	1.00	4.6
	0.50	2.5

SI: 1 in = 25.4 mm

1. Thermal values are determined in accordance with ASTM C518.

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6.3 *Air Barrier Material*

6.3.1 Blueskin VP Tech panels meet the requirements of IRC Section N1102.4.1.1 and IECC Section C402.5.1.3 for use as a component of an air barrier system when installed with the manufacturer installation instructions and this report.

6.3.1.1 When evaluated in accordance with ASTM E2178, Blueskin VP Tech panels meet the requirements as an air barrier material having an air permeance of less than 0.02 L/(s·m^2) at 75 Pa in accordance with IECC Section C402.5.

6.3.2 When used as part of a continuous air barrier assembly, Blueskin VP Tech shall be installed in accordance with **Section 6.6**.

6.3.3 All sheathing panel edges at the top and bottom of wall assemblies, and all joints between sheathing panels, shall be sealed in accordance with IRC Section N1102.4.1.1, IECC Section R402.4.1.1 and IECC Section C402.5.1.

6.3.3.1 All joints between sheathing panels shall be covered by pre-applied overlay flaps or minimum 1^1/$_2$" (38 mm) VP Tech Seam Tape.

6.3.4 All penetrations shall be flashed and sealed in accordance with the flashing manufacturer installation instructions.

6.3.4.1 Self-adhered flashing tape shall comply with AAMA 711.

6.4 *Water-Resistive Barrier (WRB)*

6.4.1 Blueskin VP Tech panels may be used as a WRB in accordance with IBC Section 1403.2[21] and IRC Section R703.2 when installed per **Section 9**, with either the pre-applied overlay flaps or VP Tech Seam Tape.

6.4.1.1 Flashing tape with release liner for effective taping of inside and outside corners is recommended. See the manufacturer product information for further details.

6.4.2 A separate WRB may also be provided. If a separate WRB method is used, taping of the sheathing joints is not required.

6.4.3 *Penetrations:*

6.4.3.1 Flashing of penetrations shall comply with the applicable code and must be installed at all sheathing penetrations.

6.5 *Vapor Retarder*

6.5.1 Blueskin VP Tech panels are Class III vapor retarders in accordance with IBC Section 1404.3, and as shown in **Table 5**.

Table 5. Water Vapor Barrier Properties[1]

Product	Water Vapor Transmission (perm)
Blueskin VP Tech	1.8
1. Tested in accordance with ASTM E96, Desiccant Method.	

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6.6 *Surface Burning Characteristics*

6.6.1 Blueskin VP Tech has the flame spread and smoke developed characteristics shown in **Table 6**, when tested in accordance with ASTM E84 per IBC Section 2603.3.

Table 6. Surface Burning Characteristics[1]

Component	Flame Spread Index	Smoke Developed Index	Classification
Blueskin VP Tech	≤ 25	≤ 450	A
EPS Core			

1. Tested in accordance with UL 723 (equivalent to ASTM E84).

6.7 *Thermal Barrier*

6.7.1 Blueskin VP Tech panels shall be fully protected from the interior of the building by an approved thermal barrier or ignition barrier as required by IBC Section 2603.4 and IRC Section R316.4.

6.8 Where the application falls outside of the performance evaluation, conditions of use, and/or installation requirements set forth herein, alternative techniques shall be permitted in accordance with accepted engineering practice and experience. This includes but is not limited to the following areas of engineering: mechanics or materials, structural, building science, and fire science.

7 Certified Performance[22]

7.1 All construction methods shall conform to accepted engineering practices to ensure durable, livable, and safe construction and shall demonstrate acceptable workmanship reflecting journeyman quality of work of the various trades.[23]

7.2 The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load tests to simulate the actual loads and conditions of application that occur.[24]

8 Regulatory Evaluation and Accepted Engineering Practice

8.1 Blueskin VP Tech complies with the following legislatively adopted regulations and/or accepted engineering practice for the following reasons:

8.1.1 Performance for use as continuous insulating sheathing in accordance with IRC Section N1102, IECC Section C402 and IECC Section R402.

8.1.2 Performance for use as an air barrier in accordance with IRC Section N1102.4.1.1, IECC Section R402.4.1.1 and IECC Section C402.5.1.3.[25]

8.1.3 Performance for use as a WRB in accordance with the IBC Section 1403.2[26] and IRC Section R703.2.

8.1.4 Performance for use as a vapor retarder in accordance with IBC Section 202, IBC Section 1404.3,[27] IRC Section R202 and IRC Section R702.7.

8.1.5 Performance for resistance to wind pressure in accordance with IBC Section 2603.10 and IRC Section R316.8.

8.1.6 Performance for flame spread and smoke developed indices in accordance with IBC Section 2603.3 and IRC Section R316.3.

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8.2 Any building code, regulation and/or accepted engineering evaluations (i.e., research reports, duly authenticated reports, etc.) that are conducted for this Listing were performed by DrJ Engineering, LLC (DrJ), an ISO/IEC 17065 accredited certification body and a professional engineering company operated by RDP/approved sources. DrJ is qualified[28] to practice product and regulatory compliance services within its scope of accreditation and engineering expertise, respectively.

8.3 Engineering evaluations are conducted with DrJ's ANAB accredited ICS code scope of expertise, which are also its areas of professional engineering competence.

8.4 Any regulation specific issues not addressed in this section are outside the scope of this report.

9 Installation

9.1 Installation shall comply with the approved construction documents, the manufacturer installation instructions, this report, and the applicable building code.

9.2 In the event of a conflict between the manufacturer installation instructions and this report, the more restrictive shall govern.

9.3 *Installation Procedure*

9.3.1 *Horizontal Installation:*

9.3.1.1 Blueskin VP Tech panels shall be installed with the long edge of the board faced horizontally with the overlay flaps facing downward and to the left (see **Figure 2**). The horizontal overlay flaps shall be positioned so that they cover the joint of the board below the panel being installed.

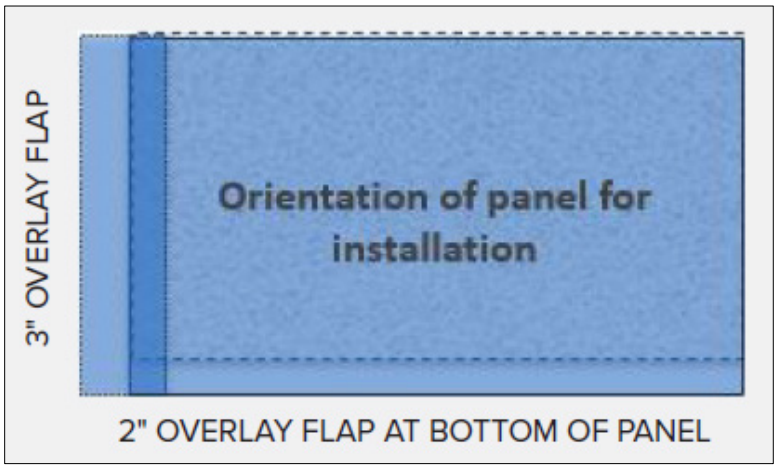

Figure 2. Horizontal Installation Orientation of Blueskin VP Tech – Flap Locations

9.3.1.1.1 When panels are installed in an above grade wall that meets the sill plate the horizontal flap may be removed.

9.3.1.2 Panels shall be installed starting from the bottom left corner.

9.3.1.3 Panels shall be installed using corrosion-resistant cap-nails, large head roofing nails, or 1" wide crown staples.

9.3.1.3.1 Fasteners shall be of sufficient length to penetrate 1" minimum into framing member.

9.3.1.3.2 When installed over open framing, fastener spacing shall be no greater than 6" on center at panel edges and no greater than 12" on center in the field of the panels.

9.3.1.3.3 Stud spacing shall be a maximum 24" (610 mm) on center.

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9.3.1.4 Panels shall be installed using a pneumatic nail or staple gun with an air pressure regulator to ensure no over-penetration.

9.3.1.5 Horizontally adjacent rows of Blueskin VP Tech shall have their vertical joints offset with butt joints occurring over studs.

9.3.1.6 Any horizontal reverse lap created during installation will need to be sealed using Henry® Moistop® Sealant or equivalent.

9.3.1.7 Joints shall be sealed by removing the release liners on the overlay flaps. While adhering the flaps, care shall be taken to not allow wrinkles to form. Joints shall be rolled using a *"J"* roller.

9.3.1.7.1 Horizontal joints shall be sealed before vertical joints.

9.3.2 *Vertical Installation:*

9.3.2.1 Blueskin VP Tech panels may be installed vertically if the pre-applied overlay flap faces downward (by rotating 90° to the left).

9.3.2.1.1 This may create a reverse lap that must be sealed with Henry Moistop Sealant. Contact the manufacturer for more details.

9.3.2.2 The steps under *"Horizontal Installation"* are also applicable to *"Vertical Installation"*.

9.3.3 Wherever the overlay flap is not used, VP Tech Seam Tape, or equivalent, shall be applied to cover the seams. The seam tape must cover a minimum of 3" on each side of the seam.

9.3.4 Any outside corners where the overlay flaps are not used, VP Tech tape or equivalent shall be adhered to seal the corners.

9.3.5 Window and door openings shall be flashed per manufacturer specifications.

9.4 *Minimum Fastening Requirements for Over Sheathing*

9.4.1 Where an approved sheathing material capable of separately resisting transverse wind loads is required and Blueskin VP Tech is installed as over sheathing:

9.4.1.1 The installation of the approved structural sheathing is outside the scope of this report and shall be designed by an RDP.

9.4.1.2 Blueskin VP Tech panels are installed onto the sheathed wall with minimum 0.120" x 1 1/4" (3 mm x 32 mm) galvanized roofing nails or 16-gauge galvanized staples having a 7/16" (11 mm) crown and 1 1/4" (32 mm) leg lengths.

9.4.1.3 Fastener spacing shall be a maximum of 12" (304 mm) at the edges and 24" (610 mm) on intermediate members.

9.4.1.3.1 Stud spacing shall be a maximum of 24" (610 mm) o.c.

9.4.1.3.1.1 Minimum fastener penetration into the framing members is 3/4" (19 mm).

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10 Substantiating Data

10.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:

10.1.1 Air permeance testing in accordance with ASTM E2178

10.1.2 Flame spread and smoke developed testing in accordance with UL 723.

10.1.3 Thermal properties testing in accordance with ASTM C518

10.1.4 Water penetration testing in accordance with ASTM E331

10.1.5 Water vapor permeance testing in accordance with ASTM E96

10.1.6 Wind pressure resistance testing in accordance with ASTM E330 as specified in ABTG FS100

10.2 Information contained herein may include the result of testing and/or data analysis by sources that are approved agencies, approved sources, and/or an RDP. Accuracy of external test data and resulting analysis is relied upon.

10.3 Where applicable, testing and/or engineering analysis are based upon provisions that have been codified into law through state or local adoption of regulations and standards. The developers of these regulations and standards are responsible for the reliability of published content. DrJ's engineering practice may use a regulation-adopted provision as the control. A regulation-endorsed control versus a simulation of the conditions of application to occur establishes a new material as being equivalent to the regulatory provision in terms of quality, strength, effectiveness, fire resistance, durability, and safety.

10.4 The accuracy of the provisions provided herein may be reliant upon the published properties of raw materials, which are defined by the grade mark, grade stamp, mill certificate, or duly authenticated reports from approved agencies and/or approved sources provided by the supplier. These are presumed to be minimum properties and relied upon to be accurate. The reliability of DrJ's engineering practice, as contained in this duly authenticated report, may be dependent upon published design properties by others.

10.5 Testing and engineering analysis: The strength, rigidity, and/or general performance of component parts and/or the integrated structure are determined by suitable tests that simulate the actual conditions of application that occur and/or by accepted engineering practice and experience.[29]

10.6 Where additional condition of use and/or regulatory compliance information is required, please search for Blueskin VP Tech on the DrJ Certification website.

11 Findings

11.1 As outlined in **Section 6**, Blueskin VP Tech has performance characteristics that were tested and/or meet applicable regulations and are suitable for use pursuant to its specified purpose.

11.2 When used and installed in accordance with this duly authenticated report and the manufacturer installation instructions, Blueskin VP Tech shall be approved for the following applications:

11.2.1 Use as insulated sheathing in accordance with the IRC Section N1102.4.1.1, IECC Section R402.1 and IECC Section C402.1.

11.2.2 Use as a WRB in accordance with the IBC Section 1403.2[30] and IRC Section R703.2.

11.2.3 Use as a Class III vapor retarder in accordance with IBC Section 1404.3 and IRC Section R702.7.

11.2.4 Use as an air barrier material in accordance with the IRC Section N1102.4.1.1, IECC Section R402.4.1.1 and IECC Section C402.5.1.3.[31]

11.2.5 Use for resistance to wind pressure in accordance with IBC Section 2603.10 and IRC Section R316.8.

11.2.6 Use for limited flame spread and smoke developed indices in accordance with IBC Section 2603.3 and IRC Section R316.3.

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11.3 Unless exempt by state statute, when Blueskin VP Tech is to be used as a structural and/or building envelope component in the design of a specific building, the design shall be performed by an RDP.

11.4 Any application specific issues not addressed herein can be engineered by an RDP. Assistance with engineering is available from Insulfoam.

11.5 IBC Section 104.11 (IRC Section R104.11 and IFC Section 104.10[32] are similar) in pertinent part states:

> **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. 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.

11.6 **Approved**:[33] Building regulations require that the building official shall accept duly authenticated reports.[34]

11.6.1 An approved agency is *"approved"* when it is ANAB ISO/IEC 17065 accredited.

11.6.2 An approved source is *"approved"* when an RDP is properly licensed to transact engineering commerce.

11.6.3 Federal law, Title 18 US Code Section 242, requires that where the alternative product, material, service, design, assembly, and/or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved. Denial without written reason deprives a protected right to free and fair competition in the marketplace.

11.7 DrJ is a licensed engineering company, employs licensed RDPs and is an ANAB Accredited Product Certification Body – Accreditation #1131.

11.8 Through the IAF Multilateral Agreements (MLA), this duly authenticated report can be used to obtain product approval in any jurisdiction or country because all ANAB ISO/IEC 17065 duly authenticated reports are equivalent.[35]

12 Conditions of Use

12.1 Material properties shall not fall outside the boundaries defined in **Section 6**.

12.2 As defined in **Section 6**, where material and/or engineering mechanics properties are created for load resisting design purposes, the resistance to the applied load shall not exceed the ability of the defined properties to resist those loads using the principles of accepted engineering practice.

12.3 As listed herein, Blueskin VP Tech shall not be used:

12.3.1 With adhesives and solvents that are chemically incompatible. This includes esters, ketones, ethers, aromatic, and aliphatic hydrocarbons; nor

12.3.2 As a nailing base for claddings, trim, windows, or doors.

12.4 Blueskin VP Tech, with thicknesses less than 1", shall be installed over an approved structural sheathing (separately installed) that is capable of resisting required wind pressures.

12.4.1 The separate structural sheathing shall be designed by an RDP.

12.5 When used as part of a continuous air barrier assembly, all sheathing panel edges at the top and bottom of the wall assemblies and all joints between sheathing panels, shall be sealed with an approved construction tape.

12.6 Walls shall be braced by other means when using Blueskin VP Tech.

12.7 When used as a WRB, installation shall be in accordance with **Section 6.4**.

12.8 When Blueskin VP Tech is not installed as a WRB, other means of providing a WRB shall be provided.

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12.9 In areas where the probability of termite infestation is very heavy, and the building is wood-framed construction, Blueskin VP Tech must not be placed on exterior walls located within 6" (152 mm) of the ground and shall meet the requirements of IBC Section 2603.8, IRC Section R316.7 and IRC Section R318.4.

12.10 Blueskin VP Tech panels shall be separated from the interior of the building by an approved thermal barrier except where not required in accordance with IBC Section 2603.4 and IRC Section R316.4.

12.11 When required by adopted legislation and enforced by the building official, also known as the Authority Having Jurisdiction (AHJ) in which the project is to be constructed:

12.11.1 Any calculations incorporated into the construction documents shall conform to accepted engineering practice and, when prepared by an approved source, shall be approved when signed and sealed.

12.11.2 This report and the installation instructions shall be submitted at the time of permit application.

12.11.3 This innovative product has an internal quality control program and a third-party quality assurance program.

12.11.4 At a minimum, this innovative product shall be installed per **Section 9** of this report.

12.11.5 The review of this report by the AHJ shall comply with IBC Section 104 and IBC Section 105.4.

12.11.6 This innovative product has an internal quality control program and a third party quality assurance program in accordance with IBC Section 104.4, IBC Section 110.4, IBC Section 1703, IRC Section R104.4, and IRC Section R109.2.

12.11.7 The application of this innovative product in the context of this report is dependent upon the accuracy of the construction documents, implementation of installation instructions, inspection as required by IBC Section 110.3, IRC Section R109.2, and any other regulatory requirements that may apply.

12.12 The approval of this report by the AHJ shall comply with IBC Section 1707.1, where legislation states in part, *"the building official shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new material or assemblies as provided for in Section 104.11"*, all of IBC Section 104, and IBC Section 105.4.

12.13 Design loads shall be determined in accordance with the regulations adopted by the jurisdiction in which the project is to be constructed and/or by the building designer (i.e., owner or RDP).

12.14 The actual design, suitability, and use of this report for any particular building, is the responsibility of the owner or the authorized agent of the owner.

13 Identification

13.1 The innovative product listed in **Section 1.1** is identified by a label on the board or packaging material bearing the manufacturer name, product name, this report number, and other information to confirm code compliance.

13.2 Additional technical information can be found at www.insulfoam.com.

14 Review Schedule

14.1 This report is subject to periodic review and revision. For the latest version, visit www.drjcertification.org.

14.2 For information on the status of this report, please contact DrJ Certification.

15 Approved for Use Pursuant to United States and International Legislation Defined in Appendix A

15.1 Blueskin VP Tech Weather-Resistive Thermal Insulation Sheathing is included in this report published by an approved agency that is concerned with evaluation of products or services, maintains periodic inspection of the production of listed materials or periodic evaluation of services. This report states either that the material, product, or service meets recognized standards or has been tested and found suitable for a specified purpose. This report meets the legislative intent and definition of being acceptable to the AHJ.

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Appendix A

1 Legislation that Authorizes AHJ Approval

1.1 **Fair Competition**: State legislatures have adopted Federal regulations for the examination and approval of building code referenced and alternative products, materials, designs, services, assemblies, and/or methods of construction that:

1.1.1 Advance innovation.

1.1.2 Promote competition so all businesses have the opportunity to compete on price and quality in an open market on a level playing field unhampered by anticompetitive constraints.

1.1.3 Benefit consumers through lower prices, better quality, and greater choice.

1.2 **Adopted Legislation:** The following local, state and federal regulations affirmatively authorize products to be approved by AHJs, delegates of building departments, and/or delegates of an agency of the federal government:

1.2.1 Interstate commerce is governed by the Federal Department of Justice to encourage the use of innovative products, materials, designs, services, assemblies, and/or methods of construction. The goal is to *"protect economic freedom and opportunity by promoting free and fair competition in the marketplace"*.

1.2.2 Title 18 US Code Section 242 affirms and regulates the right of individuals and businesses to freely and fairly have new products, materials, designs, services, assemblies, and/or methods of construction approved for use in commerce. Disapproval of alternatives shall be based upon non-conformance with respect to specific provisions of adopted legislation and shall be provided in writing stating the reasons why the alternative was not approved, with reference to the specific legislation violated.

1.2.3 The federal government and each state have a public records act. In addition, each state also has legislation that mimics the federal Defend Trade Secrets Act 2016 (DTSA),[36] where providing test reports, engineering analysis, and/or other related IP/TS is subject to prison of not more than ten years[37] and/or a $5,000,000 fine or 3 times the value of[38] the Intellectual Property (IP) and Trade Secrets (TS).

1.2.3.1 Compliance with public records and trade secret legislation requires approval through the use of Listings, certified reports, Technical Evaluation Reports, duly authenticated reports, and/or research reports prepared by approved agencies and/or approved sources.

1.2.4 For new materials[39] that are not specifically provided for in any regulation, the design strengths and permissible stresses shall be established by tests, where suitable load tests simulate the actual loads and conditions of application that occur.

1.2.5 The design strengths and permissible stresses of any structural material shall conform to the specifications and methods of design using accepted engineering practice.[40]

1.2.6 The commerce of approved sources (i.e., registered PEs) is regulated by professional engineering legislation. Professional engineering commerce shall always be approved by AHJs, except where there is evidence provided in writing, that specific legislation have been violated by an individual registered PE.

1.2.7 The AHJ shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in IBC Section 104.11.[41]

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1.3 **Approved**[42] **by Los Angeles**: The Los Angeles Municipal Code (LAMC) states in pertinent part that the provisions of LAMC are not intended to prevent the use of any material, device, or method of construction not specifically prescribed by LAMC. The Department shall use Part III, Recognized Standards in addition to Part II, Uniform Building Code Standards of Division 35, Article 1, Chapter IX of the LAMC in evaluation of products for approval where such standard exists for the product or the material and may use other approved standards that apply. Whenever tests or certificates of any material or fabricated assembly are required by Chapter IX of the LAMC, such tests or certification shall be made by a testing agency approved by the Superintendent of Building to conduct such tests or provide such certifications. The testing agency shall publish the scope and limitation(s) of the listed material or fabricated assembly.[43] The Superintendent of Building Approved Testing Agency Roster is provided by the Los Angeles Department of Building and Safety (LADBS). The Center for Building Innovation (CBI) Certificate of Approval License is TA24945. Tests and certifications found in a DrJ Listing are LAMC approved. In addition, the Superintendent of Building shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in the California Building Code (CBC) Section 1707.1.[44]

1.4 **Approved by Chicago**: The Municipal Code of Chicago (MCC) states in pertinent part that an Approved Agency is a Nationally Recognized Testing Laboratory (NRTL) acting within its recognized scope and/or a certification body accredited by the American National Standards Institute (ANSI) acting within its accredited scope. Construction materials and test procedures shall conform to the applicable standards listed in the MCC. Sufficient technical data shall be submitted to the building official to substantiate the proposed use of any product, material, service, design, assembly, and/or method of construction not specifically provided for in the MCC. This technical data shall consist of research reports from approved sources (i.e., MCC defined Approved Agencies).

1.5 **Approved by New York City**: The 2022 NYC Building Code (NYCBC) states in part that an approved agency shall be deemed[45] an approved testing agency via ISO/IEC 17025 accreditation, an approved inspection agency via ISO/IEC 17020 accreditation, and an approved product evaluation agency via ISO/IEC 17065 accreditation. Accrediting agencies, other than federal agencies, must be members of an internationally recognized cooperation of laboratory and inspection accreditation bodies subject to a mutual recognition agreement[46] (i.e., ANAB, International Accreditation Forum also known as IAF, etc.).

1.6 **Approved by Florida**: Statewide approval of products, methods or systems of construction shall be approved, without further evaluation by:

1.6.1 A certification mark or listing of an approved certification agency

1.6.2 A test report from an approved testing laboratory

1.6.3 A product evaluation report based upon testing or comparative or rational analysis, or a combination thereof, from an approved product evaluation entity

1.6.4 A product evaluation report based upon testing, comparative or rational analysis, or a combination thereof, developed, signed, and sealed by a professional engineer or architect, licensed in Florida.

1.6.5 For local product approval, products or systems of construction shall demonstrate compliance with the structural wind load requirements of the Florida Building Code (FBC) through one of the following methods:

1.6.5.1 A certification mark, listing, or label from a commission-approved certification agency indicating that the product complies with the code,

1.6.5.2 A test report from a commission-approved testing laboratory indicating that the product tested complies with the code,

1.6.5.3 A product-evaluation report based upon testing, comparative or rational analysis, or a combination thereof, from a commission-approved product evaluation entity which indicates that the product evaluated complies with the code,

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1.6.5.4 A product-evaluation report or certification based upon testing or comparative or rational analysis, or a combination thereof, developed and signed and sealed by a Florida professional engineer or Florida registered architect, which indicates that the product complies with the code, or

1.6.5.5 A statewide product approval issued by the Florida Building Commission.

1.6.6 The Florida Department of Business and Professional Regulation (DBPR) website provides a listing of companies certified as a Product Evaluation Agency (i.e., EVLMiami 13692), a Product Certification Agency (i.e., CER10642), and as a Florida Registered Engineer (i.e., ANE13741).

1.7 **Approved by Miami-Dade County (i.e., Notice of Acceptance [NOA])**: A Florida statewide approval is an NOA. An NOA is a Florida local product approval. By Florida law, Miami-Dade County shall accept the statewide and local Florida Product Approval as provided for in Florida legislation 553.842 and 553.8425.

1.8 **Approved by New Jersey**: Pursuant to the 2018 Building Code of New Jersey in IBC Section 1707.1 General,[47] it states: "*In the absence of approved rules or other approved standards, the building official shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in the administrative provisions of the Uniform Construction Code (N.J.A.C. 5:23)*".[48] Furthermore N.J.A.C 5:23-3.7 states: "*Municipal approvals of alternative materials, equipment, or methods of construction*."

1.8.1 **Approvals**: Alternative materials, equipment, or methods of construction shall be approved by the appropriate subcode official provided the proposed design is satisfactory and that the materials, equipment, or methods of construction are suitable for the intended use and are at least the equivalent in quality, strength, effectiveness, fire resistance, durability, and safety of those conforming with the requirements of the regulations.

1.8.1.1 A field evaluation label and report or letter issued by a nationally recognized testing laboratory verifying that the specific material, equipment, or method of construction meets the identified standards or has been tested and found to be suitable for the intended use, shall be accepted by the appropriate subcode official as meeting the requirements of the above.

1.8.1.2 Reports of engineering findings issued by nationally recognized evaluation service programs such as but not limited to, the Building Officials and Code Administrators (BOCA), the International Conference of Building Officials (ICBO), the Southern Building Code Congress International (SBCCI), the International Code Council (ICC), and the National Evaluation Service, Inc., shall be accepted by the appropriate subcode official as meeting the requirements of the above.

1.8.2 The New Jersey Department of Community Affairs has confirmed that technical evaluation reports, from any accredited entity listed by ANAB, meets the requirements of item the previous paragraph, given that the listed entities are no longer in existence and/or do not provide "*reports of engineering findings*".

1.9 **Approved by the Code of Federal Regulations Manufactured Home Construction and Safety Standards**: Pursuant to Title 24, Subtitle B, Chapter XX, Part 3282.14[49] and Part 3280,[50] the Department encourages innovation and the use of new technology in manufactured homes. The design and construction of a manufactured home shall conform to the provisions of Part 3282 and Part 3280 where key approval provisions in mandatory language follow:

1.9.1 *"All construction methods shall be in conformance with accepted engineering practices."*

1.9.2 *"The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load tests to simulate the actual loads and conditions of application that occur."*

1.9.3 *"The design stresses of all materials shall conform to accepted engineering practice."*

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1.10 **Approval by US, Local and State Jurisdictions in General:** In all other local and state jurisdictions, the adopted building code legislation states in pertinent part that:

1.10.1 For new materials that are not specifically provided for in this code, the design strengths and permissible stresses shall be established by tests.[51]

1.10.2 For innovative alternatives and/or methods of construction, the building official shall accept duly authenticated reports from approved agencies with respect to the quality and manner of use of new materials or assemblies.[52]

1.10.2.1 An approved agency is *"approved"* when it is ANAB ISO/IEC 17065 accredited. DrJ Engineering, LLC (DrJ) is in the ANAB directory.

1.10.2.2 An approved source is *"approved"* when an RDP is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the state legislature via its professional engineering regulations.[53]

1.10.3 The design strengths and permissible stresses of any structural material…shall conform to the specifications and methods of design of accepted engineering practice performed by an approved source.[54]

1.11 **Approval by International Jurisdictions**: The USMCA and GATT agreements provide for approval of innovative materials, designs, services, and/or methods of construction through the Agreement on Technical Barriers to Trade and the IAF Multilateral Recognition Arrangement (MLA), where these agreements:

1.11.1 State that conformity assessment procedures (i.e., ISO/IEC 17020, 17025, 17065, etc.) are prepared, adopted, and applied so as to grant access for suppliers of like products originating in the territories of other Members under conditions no less favourable than those accorded to suppliers of like products of national origin or originating in any other country, in a comparable situation.

1.11.2 **Approved**: The purpose of the MLA is to ensure mutual recognition of accredited certification and validation/verification statements between signatories to the MLA and subsequently, acceptance of accredited certification and validation/verification statements in many markets based on one accreditation for the timely approval of innovative materials, designs, services, and/or methods of construction.

1.11.3 ANAB is an IAF-MLA signatory where recognition of certificates, validation, and verification statements issued by conformity assessment bodies accredited by all other signatories of the IAF MLA, with the appropriate scope, shall be approved.[55]

1.11.4 Therefore, all ANAB ISO/IEC 17065 duly authenticated reports are approval equivalent.[56]

1.12 Approval equity is a fundamental commercial and legal principle.[57]

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Notes

1 For more information, visit drjcertification.org or call us at 608-310-6748.

2 https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1702

3 Alternative Materials, Design and Methods of Construction and Equipment: The provisions of any regulation code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by a regulation. Please review https://www.justice.gov/atr/mission and https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#104.11

4 https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1706:~:text=the%20design%20strengths%20and%20permissible%20stresses%20shall%20be%20established%20by%20tests%20as

5 The design strengths and permissible stresses of any structural material shall conform to the specifications and methods of design of accepted engineering practice. https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1706:~:text=shall%20conform%20to%20the%20specifications%20and%20methods%20of%20design%20of%20accepted%20engineering%20practice

6 https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1707.1:~:text=the%20building%20official%20shall%20accept%20duly%20authenticated%20reports%20from%20approved%20agencies

7 https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1703.4.2

8 https://up.codes/viewer/wyoming/ibc-2021/chapter/2/definitions#approved_agency

9 https://up.codes/viewer/wyoming/ibc-2021/chapter/2/definitions#approved_source

10 https://www.law.cornell.edu/uscode/text/18/1832 (b) Any organization that commits any offense described in subsection (a) shall be fined not more than the greater of $5,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided. The federal government and each state have a public records act. To follow DTSA and comply state public records and trade secret legislation requires approval through ANAB ISO/IEC 17065 accredited certification bodies or approved sources. For more information, please review this website: Intellectual Property and Trade Secrets.

11 https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/regulation-professional AND https://apassociation.org/list-of-engineering-boards-in-each-state-archive/

12 https://www.cbitest.com/accreditation/

13 https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#104:~:text=to%20enforce%20the%20provisions%20of%20this%20code

14 https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#104.11:~:text=Where%20the%20alternative%20material%2C%20design%20or%20method%20of%20construction%20is%20not%20approved%2C%20the%20building%20official%20shall%20respond%20in%20writing%2C%20stating%20the%20reasons%20why%20the%20alternative%20was%20not%20approved AND https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#105.3.1:~:text=If%20the%20application%20or%20the%20construction%20documents%20do%20not%20conform%20to%20the%20requirements%20of%20pertinent%20laws%2C%20the%20building%20official%20shall%20reject%20such%20application%20in%20writing%2C%20stating%20the%20reasons%20therefore

15 https://up.codes/viewer/colorado/ibc-2021/chapter/17/special-inspections-and-tests#1707.1:~:text=the%20building%20official%20shall%20accept%20duly%20authenticated%20reports%20from%20approved%20agencies%20in%20respect%20to%20the%20quality%20and%20manner%20of%20use%20of%20new%20materials%20or%20assemblies%20as%20provided%20for%20in%20Section%20104.11

16 https://iaf.nu/en/about-iaf-mla/#:~:text=it%20is%20required%20to%20recognise%20certificates%20and%20validation%20and%20verification%20statements%20issued%20by%20conformity%20assessment%20bodies%20accredited%20by%20all%20other%20signatories%20of%20the%20IAF%20MLA%2C%20with%20the%20appropriate%20scope

17 True for all ANAB accredited product evaluation agencies and all International Trade Agreements.

18 https://www.justice.gov/crt/deprivation-rights-under-color-law AND https://www.justice.gov/atr/mission

19 Unless otherwise noted, all references in this Listing are from the 2021 version of the codes and the standards referenced therein. This material, product, design, service and/or method of construction also complies with the 2000-2021 versions of the referenced codes and the standards referenced therein.

20 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#p-3280.2(Listed%20or%20certified); https://up.codes/viewer/colorado/ibc-2021/chapter/2/definitions#listed AND https://up.codes/viewer/colorado/ibc-2021/chapter/2/definitions#labeled

21 2015 IBC Section 1404.2

22 https://up.codes/viewer/colorado/ibc-2021/chapter/17/special-inspections-and-tests#1703.4

23 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#:~:text=All%20construction%20methods%20shall%20be%20in%20conformance%20with%20accepted%20engineering%20practices%20to%20insure%20durable%2C%20livable%2C%20and%20safe%20housing%20and%20shall%20demonstrate%20acceptable%20workmanship%20reflecting%20journeyman%20quality%20of%20work%20of%20the%20various%20trades

24 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#:~:text=The%20strength%20and%20rigidity%20of%20the%20component%20parts%20and/or%20the%20integrated%20structure%20shall%20be%20determined%20by%20engineering%20analysis%20or%20by%20suitable%20load%20tests%20to%20simulate%20the%20actual%20loads%20and%20conditions%20of%20application%20that%20occur

25 2018 IECC Section C402.5.1.2.1

26 2015 IBC Section 1404.2

27 2015 IBC Section 1405.3

28 Qualification is performed by a legislatively defined Accreditation Body. ANSI National Accreditation Board (ANAB) is the largest independent accreditation body in North America and provides services in more than 75 countries. DrJ is an ANAB accredited product certification body.

29 See Code of Federal Regulations (CFR) Title 24 Subtitle B Chapter XX Part 3280 for definition.

30 2015 IBC Section 1404.2

31 2018 IECC Section C402.5.1.2.1

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32 2018 IFC Section 104.9

33 Approved is an adjective that modifies the noun after it. For example, Approved Agency means that the Agency is accepted officially as being suitable in a particular situation. This example conforms to IBC/IRC/IFC Section 201.4 where the building code authorizes sentences to have an ordinarily accepted meaning such as the context implies.

34 https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1707.1

35 Multilateral approval is true for all ANAB accredited product evaluation agencies and all International Trade Agreements.

36 http://www.drjengineering.org/AppendixC AND https://www.drjcertification.org/cornell-2016-protection-trade-secrets

37 https://www.law.cornell.edu/uscode/text/18/1832#:~:text=imprisoned%20not%20more%20than%2010%20years

38 https://www.law.cornell.edu/uscode/text/18/1832#:~:text=Any%20organization%20that,has%20thereby%20avoided

39 https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1706.2

40 IBC 2021, Section 1706.1 Conformance to Standards

41 IBC 2021, Section 1707 Alternative Test Procedure, 1707.1 General

42 See **Section 11** for the distilled building code definition of Approved.

43 Los Angeles Municipal Code, SEC. 98.0503. TESTING AGENCIES

44 https://up.codes/viewer/california/ca-building-code-2022/chapter/17/special-inspections-and-tests#1707.1

45 New York City, The Rules of the City of New York, § 101-07 Approved Agencies

46 New York City, The Rules of the City of New York, § 101-07 Approved Agencies

47 https://up.codes/viewer/new_jersey/ibc-2018/chapter/17/special-inspections-and-tests#1707.1

48 https://www.nj.gov/dca/divisions/codes/codreg/ucc.html

49 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3282/subpart-A/section-3282.14

50 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280

51 IBC 2021, Section 1706 Design Strengths of Materials, 1706.2 New Materials. Adopted law pursuant to IBC model code language 1706.2.

52 IBC 2021, Section 1707 Alternative Test Procedure, 1707.1 General. Adopted law pursuant to IBC model code language 1707.1.

53 https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/regulation-professional AND https://apassociation.org/list-of-engineering-boards-in-each-state-archive/

54 IBC 2021, Section 1706 Design Strengths of Materials, Section 1706.1 Conformance to Standards Adopted law pursuant to IBC model code language 1706.1.

55 https://iaf.nu/en/about-iaf-mla/#:~:text=it%20is%20required%20to%20recognise%20certificates%20and%20validation%20and%20verification%20statements%20issued%20by%20conformity%20assessment%20bodies%20accredited%20by%20all%20other%20signatories%20of%20the%20IAF%20MLA%2C%20with%20the%20appropriate%20scope

56 True for all ANAB accredited product evaluation agencies and all International Trade Agreements.

57 https://www.justice.gov/crt/deprivation-rights-under-color-law AND https://www.justice.gov/atr/mission

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