Commentary for
ANSI/SBCA FS 100–2012 (R2018)

Standard Requirements for Wind Pressure Resistance of Foam Plastic Insulating Sheathing Used in Exterior Wall Covering Assemblies

(Non-Mandatory)

C1.1 Scope. No commentary.

C1.2 Limitations. The standard applies to applications of *foam plastic insulating sheathing (FPIS)* only where wind pressure resistance is required or is not already addressed by other industry standards. For example, wind pressure resistance is not required where *FPIS* is placed over a solid sheathing material that is able to resist the required wind load, and is also covered by a siding material that is able to resist the required wind load. In this manner the *FPIS* is used as insulation and, in some cases, a water resistive barrier. Structural wind pressure loads are resisted by other materials that constrain the *FPIS*. *Exterior insulating finish systems* are excluded from the scope of this standard because wind pressure resistance of this *exterior wall covering* assembly (which uses *FPIS*) is addressed in other standards. This standard also does not apply to structural sheathing composites including *FPIS*. Such products must be appropriately qualified for wind pressure resistance and other structural functions (e.g., wall bracing) using requirements that may differ from those indicated in this standard for *FPIS*. For example, refer to the discussion on safety factors in Section C6.5.

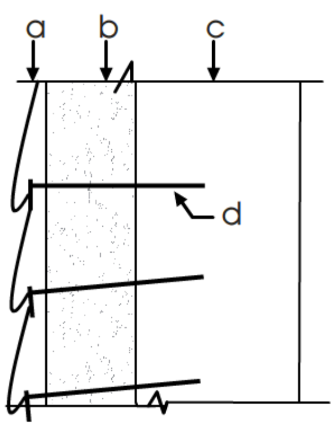
C1.3 Additional Considerations. Wall assemblies are systems and, therefore, require consideration and integration of various code requirements. For example, *FPIS* products can address wind pressure, water resistance, and insulation requirements. Other products must be used to address other code requirements for wall assemblies, such as wall bracing and framing to support structural loads and finishes. This section is intended to help ensure that wall assemblies using *FPIS* meeting the requirements of this standard also address other code requirements for exterior walls and foam plastics.

Cladding Attachments Over Foam Sheathing – Two approaches for attaching cladding over *FPIS* are shown in Figures C1 and C2 below. For guidance on appropriate cladding and furring connections over *FPIS*, refer to the "Guide to Attaching Exterior Wall Coverings through Foam Sheathing to Wood or Steel Wall Framing" (fsc.americanchemistry.com). Also, consult the cladding manufacturer and cladding fastener manufacturer for available data and installation instructions. In no case should the fastener type, size and penetration requirement be less stringent than required by the locally applicable building code or the siding manufacturer's installation instructions.

FPIS fasteners are not shown in Figures C1 and C2. *FPIS* shall be fastened to framing in accordance with the *FPIS* manufacturer's installation instructions. The cladding or furring fasteners are typically intended to provide attachments of the wall covering assembly, including *FPIS*, to resist negative (suction) wind pressure. Unless otherwise evaluated in accordance with Section 6.6.2 and addressed in the *FPIS* manufacturer's installation instructions, *FPIS* fastening is intended for temporary installation conditions only and cladding or furring is intended to provide for permanent fastening.

Use of *FPIS* as the sole exterior sheathing material on exterior walls clad with vinyl siding must comply with requirements in Section R703.11.2 of the 2009 or 2012 editions of the International Residential Code (IRC) for adjustment (reduction) of vinyl siding wind pressure ratings unless the *FPIS* product is attached in accordance with Section 6.6.2 in a manner capable of resisting the full design wind load. The IRC reduction factors are applied as multipliers to vinyl siding wind pressure ratings to increase the pressure equalization factor from 0.36 (ASTM D3679, Annex A) to 0.7 (for walls with minimum ½" gypsum board interior finish) or 1.0 (for walls without an interior surface to share the net wind load). The principle of pressure equalization or load-sharing in multi-layered building envelope assemblies is discussed in ASCE 7-10 commentary, Section C30.1.5 (also see discussion in Section C6.4 in relation to the PEF used for foam sheathing qualification per this standard). In addition, the reduction factors in the IRC increase the safety factor of 1.5 for vinyl siding to a safety factor of 2.0 for the vinyl siding and foam sheathing *exterior wall covering* assembly. Thus, the net adjustment factors (multipliers) for vinyl siding wind pressure ratings in the IRC are (0.36/0.7)(1.5/2.0) = 0.39 for walls with minimum ½" gypsum board interior finish and (0.36/1.0)(1.5/2.0) = 0.27 for use on walls without interior finish. With these adjustments, the vinyl siding wind pressure rating is effectively de-rated by a factor of about 2.5 and 3.7, respectively. As mentioned, these adjustments do not apply to foam sheathing when installed over a sheathing or solid wall system capable of separately resisting the full wind load. Furthermore, these adjustments may be subject to change based on future research and building code and standards development related to vinyl siding wind pressure ratings. Also, use of aluminum siding over *FPIS* products as the sole sheathing material on exterior walls should be avoided unless wind pressure resistance of the assembly is evaluated for code compliance or the *FPIS* product is attached in accordance with Section 6.6.2 in a manner capable of resisting the full design wind load. Aluminum sidings utilize the same pressure equalization principles to determine wind pressure resistance for the siding, yet appropriate adjustments for use over foam sheathing as an *exterior wall covering* assembly have not been determined or codified as of this writing.

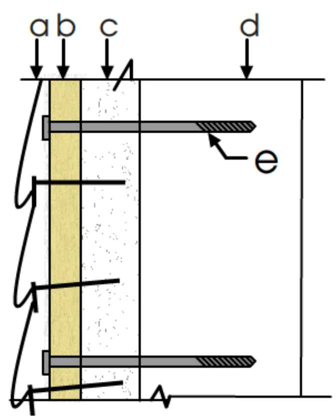
FIGURE C1: Exterior Wall Covering Assembly with Cladding Installed Directly Over FPIS Product



Cladding material

a. Cladding
b. *FPIS* product
c. Wall framing per code (i.e., wood or steel studs)
d. Cladding fastener

FIGURE C2: Exterior Wall Covering Assembly with Cladding and Furring Installed Over FPIS Product



Cladding material and fasteners

a. Cladding
b. Wood or steel furring
c. *FPIS* Product
d. Wall framing per code (i.e., wood or steel studs)
e. Furring fastener

Foam Plastics and Fire Safety Requirements – Fire-safety-related requirements for foam plastics are addressed in Chapter 26 of the International Building Code (IBC) and Section R316 of the IRC. Any use of *FPIS* products in accordance with this standard must also comply with fire-related requirements for foam plastics in the locally applicable building code, including requirements for thermal barriers, ignition barriers, flame spread resistance, limited smoke development, and other factors as relevant to the particular application. For additional information, see the *FPIS* manufacturer's literature and the following supplemental information as applicable:

TER No. 1202-03: Foam Plastic Insulating Sheathing Products in Type V Construction
TER No. 1202-04: Foam Plastic Insulating Sheathing Products in Type I, II, III or IV Construction

Energy Efficiency and Thermal Resistance Requirements – Requirements for use of *FPIS* as thermal insulation are addressed in locally adopted energy codes. In particular, use of *FPIS* products for building energy efficiency design are addressed in the International Energy Conservation Code (IECC) and in ASHRAE standards 90.1 and 90.2. In addition, minimum material requirements, including thermal resistance properties, are addressed in ASTM C578 and ASTM C1289 for the types of *FPIS* addressed in this standard. Furthermore, for home insulation products, the Federal Trade Commission's R-value Rule regulates the measurement and labeling of insulation R-values.

Moisture Vapor Control – As with any wall sheathing component, *FPIS* has moisture vapor permeability properties that should be considered in the strategy for controlling moisture vapor transmission through the wall assembly and limit the potential for condensation. Properties will vary by *FPIS* product type and composition. Because *FPIS* is an insulation material, it can be used to control wall temperatures such that risk of condensation is reduced. All walls act as a system in controlling moisture vapor transmission and preventing condensation. Therefore, the amount of *FPIS* insulation, its location on the wall assembly, the climate conditions, and the moisture vapor transmission properties of other materials comprising a wall assembly should all be considered as part of a moisture vapor control strategy. Refer to the moisture vapor retarder requirements of the 2009 and 2012 editions of the IBC and IRC for more information.

Water Resistive Barrier Performance – Some *FPIS* products also serve as code-compliant water resistive barriers. In general, a code evaluation report by an *approved agency* and approval of the local building official are pre-requisites for this application. Consult the *FPIS* manufacturer for relevant data for code acceptance. Also, use of *FPIS* as a water resistive barrier generally entails strict adherence to installation details addressing flashing and sealing of joints and penetrations.

Wind-debris Resistance – In all but southern Florida's high hurricane hazard areas, building exterior wall constructions are not required by Code to resist wind-borne debris impacts. In southern Florida or other areas were wind-borne debris resistance is desirable, it should be anticipated that *FPIS* products need to be combined with impact-resistant sheathing materials (e.g., *over-sheathing* application) or claddings to achieve required or desired wind-borne debris impact resistance levels.

C1.4 Material Requirements. No commentary.

C1.5 Alternative Methods of Compliance. The various provisions of the standard provide a minimum standard of care in conducting tests, evaluations, and assessments for wind pressure performance qualification and quality assurance to demonstrate and maintain code compliance for *FPIS* products. These provisions are not the only means by which code compliance can be successfully demonstrated and maintained. For example, test methods may be modified or other suitable test methods may be employed provided they result in an at least equivalent measure of performance qualification and quality assurance. In addition, any alternative to or modification of any part of this standard should be considered and approved as equivalent by an *approved agency*.

C2.0 Reference Standards. The provisions of this standard are dependent on the various listed reference standards addressing matters such as material quality, test methods, and design wind loads. Use of updated versions of these standards is not explicitly prohibited, but should be done only when verified as appropriate for use with this standard by an *approved agency*.

C3.0 Definitions. No commentary.

C4.0 Design Wind Load Requirements. Design wind loads provided in this standard are based on consensus standard, "Minimum Design Loads for Buildings and Other Structures," ASCE 7-05. Locally applicable building code requirements or the latest edition of the ASCE 7 standard are also permitted as a means to determine wind load. Pre-calculated design wind loads in this standard are based on common worst-case conditions (i.e., wall corner zone, effective wind area of 10 square feet, and 30-foot building height) for a range of wind speed and exposure conditions. For applications that address wall interior zones only, building heights greater than 30 feet, or design wind speeds other than tabulated, design wind loads must be determined in accordance with Section 4.2 of the standard.

When using the 2012 IBC and ASCE 7-2010 which use a newer form of design wind speed map, wind speeds in the header of Table 1 must be converted to an "ultimate" wind speed basis from the "allowable" design wind speed basis of Table 1 as used in prior building codes and standards. To make this conversion, wind speeds in the header of Table 1 can be multiplied by 1.26. Alternatively, conversion tables or guidance provided in the ASCE 7-2010 standard or the 2012 IBC may be used. Care must be taken, however, to avoid confusion of wind speed basis. For example, the 2012 IRC also uses an updated wind speed map from ASCE 7-2010, but the IRC wind speed map was converted back to the former "allowable" design wind speed basis. Therefore, conversions of wind speeds reported in Table 1 of this standard do not need to be converted for use with the 2012 IRC. Also be aware of the wind speed basis when using other codes and standards as referenced in R301.2.1.1 of the 2012 IRC for use in high-wind regions.

C5.0 Installation Conditions. Section 5.0 of the standard lists specific installation conditions for the intended use of *FPIS* products in accordance with this standard. In accordance with the user note, this standard and typical practice relies primarily on cladding or furring attachments to provide securement for permanent wind load resistance of *exterior wall covering* assemblies which include *FPIS* products as a component. For example, Item 5 provides requirements for cladding use to secure *FPIS* to address this typical practice. Designing *FPIS* attachments for the full design wind load, without reliance on cladding for securement, has some advantages such as improved temporary wind resistance during construction and less reliance on quality of siding installation for wind resistance of the *FPIS* component and wall covering assembly as a whole. For additional information on cladding installation over *FPIS*, refer to Section C1.3.

C6.0 Wind Pressure Resistance Requirements

C6.1 General. Wind pressure qualification tests are required to be conducted using Test Method A2 or A3 in Annex A. Test Method A2 is based on the ASTM E330 test method with modification as noted for the purpose of qualifying the wind pressure resistance of the *FPIS* product. Test Method A3 provides an alternate cyclic wind pressure qualification procedure based on ASTM E1233, and is also referenced in an exception statement in Section 6.5. The intent of Test Methods A2 and A3 is to primarily determine bending resistance to wind pressure on *FPIS* products, or in some cases (as in 6.6.2) to additionally determine fastener resistance to wind pressure for *FPIS* products independent of siding, but not the wall framing assembly or *exterior wall covering* attachments which may vary according to code requirements and assembly conditions. Therefore, *FPIS* products qualified for wind pressure resistance in accordance with this standard are applicable for use on any code compliant wall assembly with exception that the spacing of the framing or supports is limited to the maximum spacing of framing used for purposes of qualifying the *FPIS* product's wind pressure resistance.

Table 2 provides a matrix of end-use conditions for which wind pressure resistance qualification testing is required depending on the complexity of bending strength behavior of the *FPIS* product. Wind pressure resistance may be qualified for each end-use condition separately or more generally for all end-use conditions in Table 2 if the worst case condition is used for determining a single nominal wind pressure resistance value.

C6.2 Nominal Wind Pressure Resistance (P_{nom}). For each tested end use condition (see Table 2), the nominal wind pressure resistance is determined as the lowest peak or lowest maximum uniform pressure value achieved using Test Method A2 or A3, as applicable, and three test repetitions. This constitutes the basis for a strength-based performance criterion for wind pressure resistance. When using Test Method A2, an additional yield-based criterion is separately applied as explained in Section C6.3.

In general, deflection is not considered as a limiting serviceability criterion for wall sheathing applications. Furthermore, a sheathing material is not necessarily required behind cladding materials constructed in accordance with the applicable building code where wall bracing is provided by other means in accordance with the building code. For example, walls clad with Portland cement stucco, wood lap siding, and others do not require the use of sheathing in the 2009 IRC. Thus, strength of the siding and/or sheathing material, when present, is the primary consideration for wind pressure performance. This emphasis on strength is also echoed for other wall sheathing materials. For example, DOC PS2-10 Performance Standard for Wood-Based Structural-Use Panels does not require deflection limitations for wood structural panel wall sheathing.

Similarly, the ASTM C208 standard for regular and structural types of cellulosic fiber insulating board does not apply deflection criteria for out-of-plane wind pressure bending (flexural) resistance. Instead, the average maximum flexural strength is determined from 3"x15" strips of fiberboard sheathing in accordance with ASTM C209 Section 10. The average maximum flexural strength is then used to calculate wind pressure resistance without consideration of deflection.[1]

By precedent and accepted practice, deflection criteria have not been applied to code-compliant wall coverings including cladding and sheathing. However, the total wall framing assembly (with or without an exterior sheathing material as permitted by code) is required by code to meet deflection criteria (e.g., 2009 IRC Section R301.7 or 2009 IBC Section 1604.3.1). The code deflection requirements exclude any requirement for wall sheathing. Furthermore, *FPIS* products qualified in accordance with this standard are intended for application on code-compliant wall framing providing a code-compliant level of overall wall deflection and strength. Stiffness of code-compliant wall framing assemblies, with or without the presence of *FPIS*, is beyond the scope of this standard.

C6.3 Yield Wind Pressure Resistance (P_y). Design wind pressure resistance values determined in accordance with Section 6.5 are limited or "capped" by a yield wind pressure resistance, P_y. Plastics and many other materials or composites are not linear in load-deflection behavior (i.e., yielding is a progressive process without a clear delineation between linear elastic and non-linear inelastic behavior).

[1]Special Design Provisions for Wind and Seismic, American Forest & Paper Association, American Wood Council, Washington, D.C. 2005, pp 8-9.

This creates some difficulty in defining a meaningful yield point or proportional limit. In some cases, yielding may be associated with a region where stiffness (slope of load-deflection plot) decreases abruptly in a relative sense. Other standards, such as ASTM D198, suggest that a proportional limit for wood members in flexure “can be determined using a threshold value of the slope deviation or other suitable criteria.” The yield wind pressure resistance, P_y, in Section 6.3 uses criteria based on the project committee’s review of similar criteria for other materials and bending load-deflection behavior of *FPIS* products from industry-representative testing of a variety of *FPIS* products.[2,3] Determination of P_y is illustrated in Figure C.3 for an actual *FPIS* product. Other *FPIS* products may behave differently, but the criteria are applied in the same manner.

Other methods of determining P_y are permissible, but the expectation is that P_y should not exceed that determined in accordance with Section 6.3.

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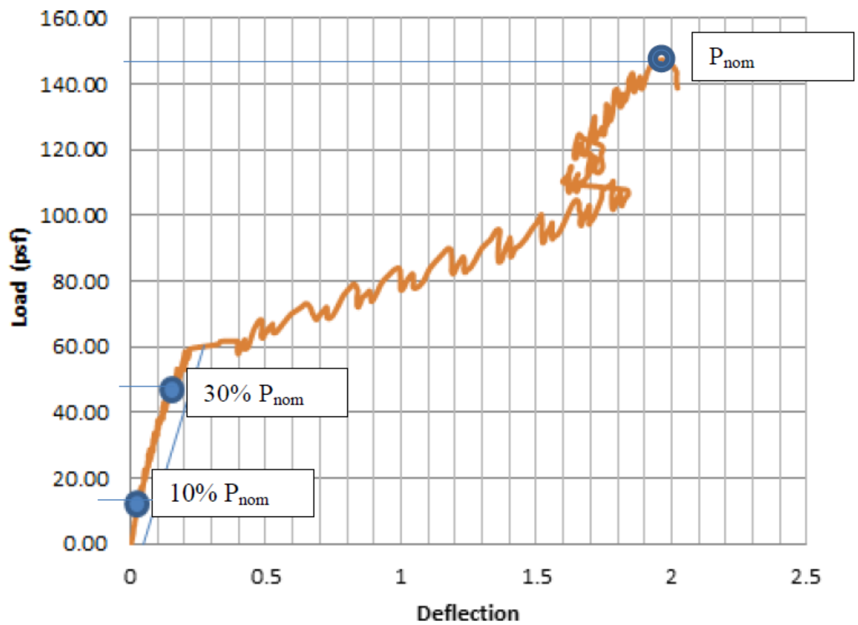
[2]Wind Pressure Testing of Wall Assemblies with Foam Sheathing and Vinyl Siding Products (Report #4107003013108), NAHB Research Center, Inc., Upper Marlboro, MD. January 31, 2008. (Available at fsc.americanchemistry.com.)
[3]Positive Wind Pressure Testing of Foam Sheathed Wall Assemblies (Report #4108007062508), NAHB Research Center, Inc., Upper Marlboro, MD. July 10, 2008. (Available at fsc.americanchemistry.com.)

FIGURE C3: Illustration of Recommended Criteria to Determine P_y



	Load (psf)	Deflection (in)
Max Test Load (Pnom)	147.3	1.96
10% of Pnom	14.73	0.034
30% of Pnom	44.19	0.14

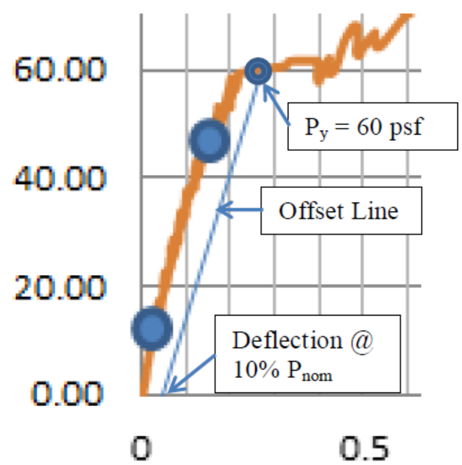
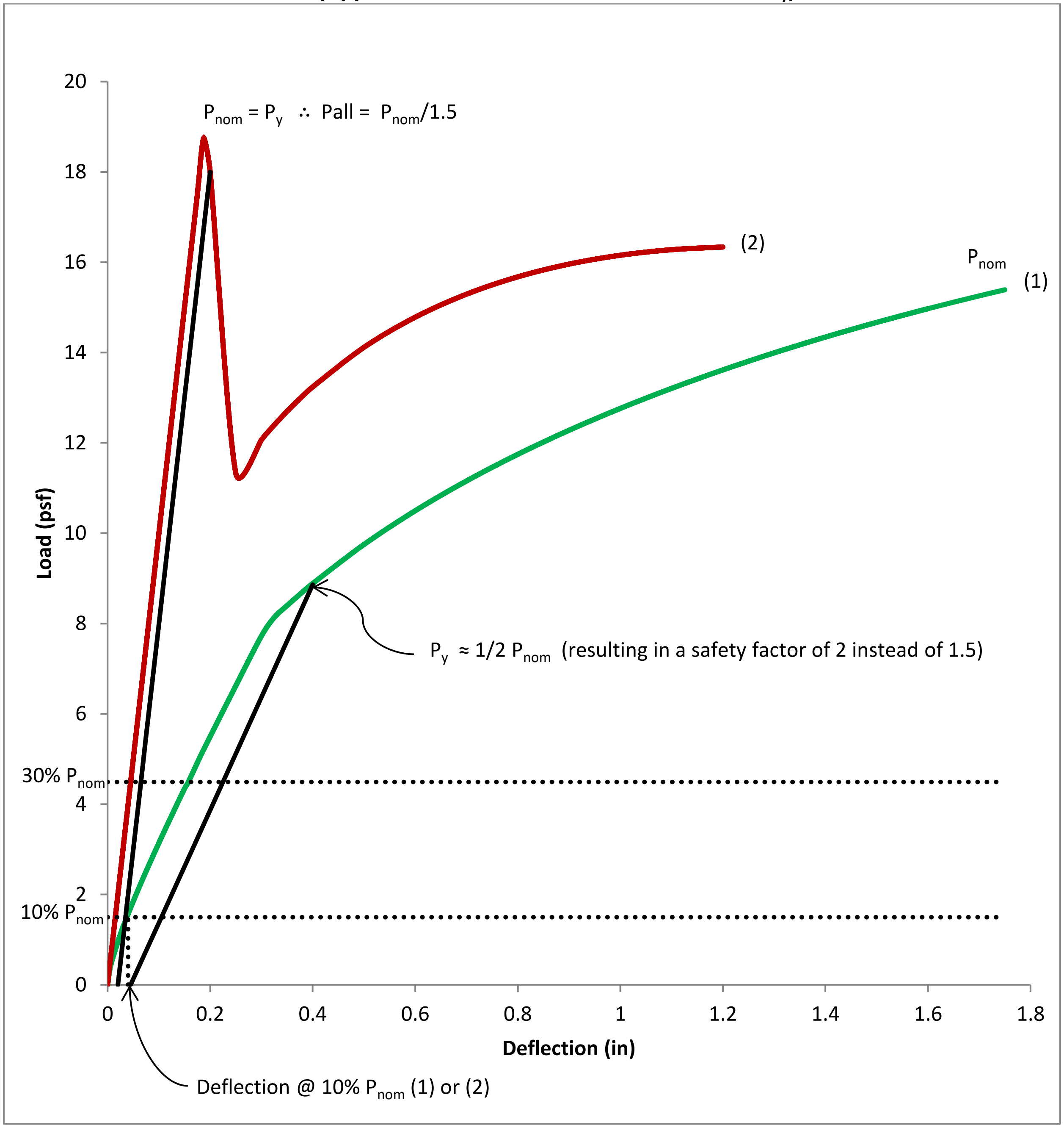
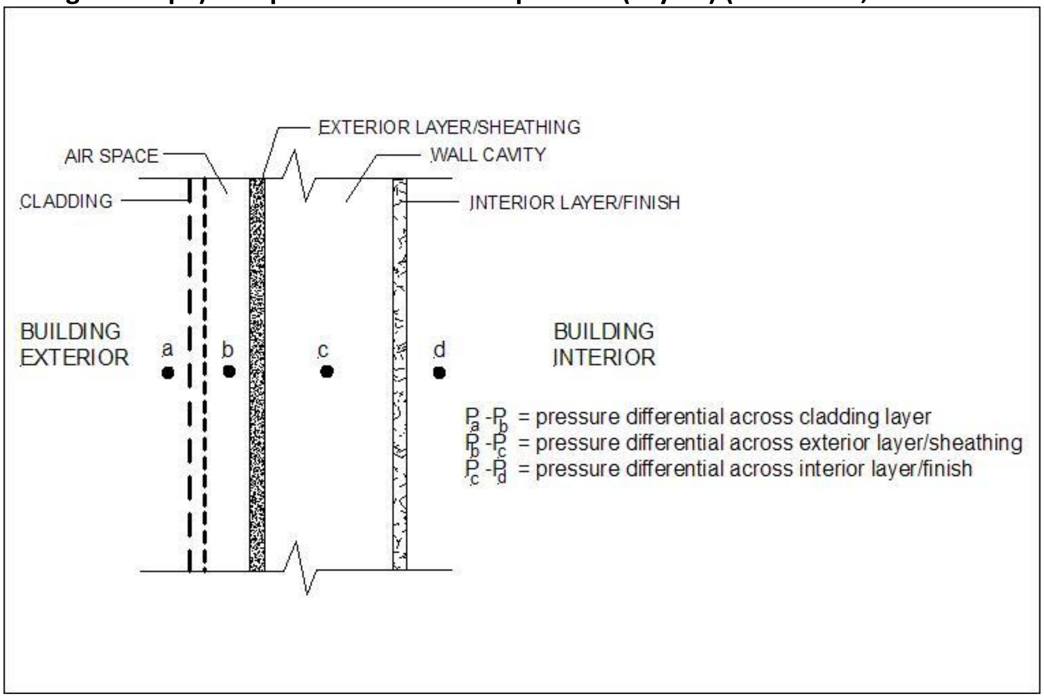


FIGURE C4: Examples from Extremes in FSC Test Data (Applications of Yield Criteria to Determine P_y)



C6.4 Pressure Equalization Factor (PEF). A pressure equalization factor (PEF) of 1.0 represents a baseline condition for evaluation of *FPIS* wind pressure resistance. It is a common design assumption whereby 100% of the wind load acting across an entire wall assembly is considered to act on the exterior sheathing layer. If there is only one layer on a wall assembly then that layer will indeed experience 100% of the wind load. However, if there are multiple layers in a wall assembly (cladding, exterior sheathing, interior sheathing), those layers share the wind load for reasons discussed in ASCE 7-10 Commentary, Section C30.1.5 as illustrated in the figure below. Consequently, the exception statement in Section 6.4 permits use of a 0.9 PEF for a limited condition where an additional layer (i.e., gypsum wall board interior finish) is present to share a portion of the total wind pressure acting across the entire wall assembly. The 0.9 PEF is based on the project committee's judgment from review of relevant full-scale wind tunnel test data with actual wind flow conditions creating temporally- and spatially-varying wind pressure.[4,5] This data suggests a maximum 0.6 PEF for the foam sheathing layer when used in combination with siding such as vinyl siding; however, a conservative 0.9 PEF was selected for the purpose of qualifying foam sheathing resistance to bending stress from wind pressure. The same data also confirmed use of a 0.7 PEF for vinyl siding and foam sheathing *exterior wall covering* assembly as discussed in Section C1.3. Such pressure equalization effects cannot be reliably determined under conventional static or cyclic wind pressure test methods that produce a spatially uniform pressure condition.

FIGURE C5: Distribution of Net Components and Cladding Pressure Acting on a Building Surface (Building Envelope) Comprised of Three Components (Layers) (ASCE 7–10, FIGURE C30.1-1)



C6.5 Allowable Design Wind Pressure Resistance (P_{all}). Allowable wind pressure resistance is determined using the nominal wind pressure resistance (Section 6.2), the yield wind pressure resistance (Section 6.3), a PEF factor (Section 6.4), and a safety factor. Based on the intended application of *FPIS* as a wall insulation sheathing, a safety factor of 1.5 is used in the standard together with a minimum value of the peak tested wind pressure resistance (nominal wind pressure resistance). This safety factor may be compared with precedents for other wall components as follows:

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[4]Cope, Anne D., et al., "Wind pressure performance evaluation and building code improvements for energy efficient exterior wall assemblies including continuous insulation – Phase 1," Advances in Hurricane Engineering Conference, Applied Technology Council and Structural Engineering Institute of ASCE, Miami, FL. October 24-26, 2012. (Accepted paper.)

[5]Kopp, Gregory A. and Eri Gavanski, "Effects of pressure equalization on the performance of residential wall systems under extreme wind loads," Journal of Structural Engineering. August 5, 2011.

TABLE C1: Comparison of Safety Factors

Product Type	**Use**	**Safety Factor**	**Reference**
Exterior Windows and Doors	Building Envelope Component	1.5 (applied to single proof test)	AAMA/WDMA/CSA 101/I.S.2/A440 and ASTM E330 (Section 5.3)
Garage Doors	Building Envelope Component	1.5 (applied to a single proof test)	ANSI/DASMA 108 and ASTM E330 (Section 5.3)
Vinyl Siding	Cladding Material	1.5 (applied to average of three pressure tests)	ASTM D3679 and ASTM D5206
Regular Cellulosic Insulating Fiber Board	Wall Insulation	1.6 (applied to average of three small-scale bending tests for each board direction)	ASTM C208, ASTM C209, and AWC/SDPWS
Structural Cellulosic Insulating Fiber Board	Wall Insulation and Bracing	1.6 (applied to average of three small-scale bending tests for each board direction)	ASTM C208, ASTM C209, and AWC/SDPWS
Backerboard Cellulosic Insulating Fiber Board	Wall Insulation/Backer for Siding	Undefined	ASTM C208
Wood Structural Panel	Wall Sheathing, Fastener Base and Bracing	1.6 (applied to lowest value 10 tests)	DOC PS 2-04 and AWC/SDPWS
		1.3 (applied to lower-bound statistic from 60 or more tests)	ASTM D7033 (with safety factor isolated from load duration adjustment)
Engineered Wood Panel Siding	Wall Cladding and Bracing	SF unspecified; Qualification to 150 psf capacity based on five tests; inspection reference values based on lowest of five bending tests in both panel directions	APA/PRP 210-2008

For structural design, safety margins as low as 1.5 are considered adequate for structures such as retaining walls (e.g., 2009 IBC Section 1807.2.3). For wall bracing against wind loads, a safety factor of 2 on minimum values is commonly used for in-plane racking shear resistance of sheathing and other bracing materials. For structural connections under withdrawal load in wood, a safety factor of 3.125 (applied to average withdrawal strength and assuming load duration factor of 1.6 does not apply to fasteners in withdrawal such that the safety factor is effectively 5/1.6 = 3.125) is used to account for the large variability in withdrawal capacity of nail fasteners in wood. For lumber structural materials, which are highly variable in properties relative to other materials, a safety factor of 1.3 is applied to a lower bound statistical representation of bending strength (lower 5th percentile value). For steel structural members, the safety factor is 1.6 which is applied to a nominal (minimum) bending stress value and relatively low material variability.

Based on the above survey of precedents for safety margins applied to building envelop components and structural materials, a safety factor of 1.5 (applied to the lowest value of three full-scale wind pressure tests) was considered appropriate by the project committee for the intended function of *FPIS* as a building envelope component. A larger safety factor would provide little overall building envelope performance benefit relative to the performance of other key building envelope components (e.g., windows, doors, and sheathing such as fiber board). Conversely, a lesser safety factor would potentially create a weak link in the overall building envelop performance.

C6.6 Conditions of Use. No commentary.

C7.0 Quality Assurance and Product Labeling. The quality assurance provisions of Sections 7.1 through 7.3 are modeled after ASTM D7033 with modifications deemed appropriate by the project committee. For each *FPIS* product with wind pressure resistance qualified and determined in accordance with Section 6.0, a correlated l bending strength value (reference bending strength) must also be determined for quality control purposes in accordance with Section 7.4. This procedure ensures that the stiffness and strength of the material is maintained above an acceptable minimum tolerance during production.

The product labeling requirements of Section 7.5 are in addition to those otherwise already required and provided to demonstrate building code compliance for requirements beyond the scope of this standard.

ANNEX A – Test Methods

CA.1 Bending Strength Behavior and Quality Control Test Method ("Test Method A.1"). This test method is based on the ASTM C203 Method 1, Procedure D. Modifications to the *specimen* preparation and displacement rate were made to ensure applicability as a structural property test that correlates to full-scale wind pressure performance as determined by Test Method A.2 or A.3.

CA.2 Wind Pressure Qualification Test Method ("Test Method A.2"). The wind pressure test method is based on the ASTM E330 standard, which is typically used to assess the wind pressure resistance of entire wall assemblies. However, its use in the ANSI standard is to assess the wind pressure resistance of a foam sheathing layer in bending. The amount of design wind load resistance is then determined as described in Section 6.0.

FPIS should be attached to framing according to *FPIS* manufacturer installation instructions or with adequate attachment to prevent movement of the *FPIS* material relative to the test frame. However, the intent of the test as required by Table 2 of the standard is not to test *FPIS* attachments. Thus, the tests are conducted with suction pressure only causing the *FPIS* to bear against framing. Table 2 addresses orientation of panel faces relative to suction pressure chamber to address *FPIS* products with asymmetric bending behavior (usually due to use of non-identical *facers* on opposite faces of a panel) resulting in differences in performance under a positive or negative wind loading direction experienced in end-use. The User Note in Section A.2.2 addresses the use of ASTM E330 for testing *FPIS* attachment, when qualification is desired for *FPIS* wind pressure resistance independent of cladding and cladding fasteners. In this case, *FPIS* will not bear against framing or battens (unless the battens are the intended means of *FPIS* attachment to resist wind load independently), and will be placed adjacent to the suction chamber relative to the test frame.

CA.3 Wind Pressure Qualification Test Method ("Test Method A3"). This test method is based on ASTM E1233 and is provided as an alternative to the application of P_y in Section 6.3 as a cap to design pressure. Use of this test method is referenced in the exception statement of Section 6.5. User Notes in Section A.3.2 address use of ASTM E1233 for testing *FPIS* attachment, when qualification is desired for *FPIS* wind pressure resistance independent of cladding and cladding fasteners. In this case, *FPIS* will not bear against framing or battens (unless the battens are the intended means of *FPIS* attachment to resist wind load independently), and will be placed adjacent to the suction chamber relative to the test frame.