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## Hunter Xci Tech Topic #105

### NFPA 285 Extension Reports For Hunter Xci Polyiso, and Weather Resistant Barriers in Wall Assemblies

**Question:** How are Extension reports used in qualifying wall assemblies for NFPA 285 test?

**Answer:** Questions have been raised regarding the use of Extension Reports (also called EEVs) to qualify wall assemblies for the NFPA 285 test. In the EEV methodology, a qualified, independent expert declares that many wall assemblies pass NFPA 285 based on testing a few assemblies and making reasoned engineering judgments. The concern about using EEVs arises from the verbiage of the code:

**International Building Code (IBC) 2006, 2009, 2012 and 2015. Chapter 26: Foam Plastic Insulation (Sec 2603) 2603.5.5 Vertical and lateral fire propagation.** *The exterior wall assembly shall be tested in accordance with and comply with the acceptance criteria of NFPA 285.*

**IBC 2012 and 2015. Chapter 14: Exterior Walls, Performance Requirements (Sec 1403) 1403.5 Vertical and lateral flame propagation.** *Exterior walls on buildings of Type I, II, III or IV construction that are 40 ft in height above grade plane and contain a combustible water resistive barrier shall be tested in accordance with and comply with the acceptance criteria of NFPA 285*

Foam plastic insulation, and now water resistive barrier membranes (WRBs), trigger a requirement for NFPA 285. The verbiage implies that when these materials are used, the exact wall assemblies on the Project must be tested to NFPA 285 for code compliance. The issue with this approach - it is simply not possible to test EVERY wall assembly. There are relatively few facilities that perform the NFPA 285 test, it is a costly test and it typically takes a few to several weeks to complete each one. Also, what would constitute a "different" wall assembly? For example, if the color of the cladding or the brand of attachment anchor is changed, would that be sufficient to warrant a separate test? Hunter Panels recognizes the importance of the NFPA 285 test as it relates to fire safety of buildings. However, strict literal interpretation of the code is impractical. Foam insulation and WRB membrane products provide great benefits to the building's energy efficiency and to the wall assembly performance. These benefits are recognized in IBC through the requirements for continuous insulation and continuous air barriers. The EEV methodology addresses the essential fire safety concerns triggered by these combustible materials, yet this approach allows flexibility through approval of diverse assemblies with less testing.

Fortunately, IBC provides a method of approval for materials and systems outside of the explicit code language. These provisions are in IBC *Chapter 17: Special Inspections and Tests*. Chapter 17 states that an *approved agency* can provide affirmation of code compliance of materials or systems through testing, evaluation and reasoned judgment. Examples of approved agencies (independent from contractor and manufacturer) are ICC-ES, IAPMO, Intertek, UL, DRJ Engineering and a host of others. Companies such as these have been in business for many years publishing code evaluation reports for new, innovative materials and systems. Hunter Panels has two such reports for Xci polyiso insulation, published by DRJ Engineering, an IBC 1703 Approved Agency.

Keep in mind that acceptance of construction materials and assemblies are always at the discretion of the Building Code Official. Hunter Panels strives to provide thorough, independent information to make it easy for code officials to understand the proposed materials, and to understand the justifications for the materials' intended end use. A summary of Hunter's approach to recommending Xci polyiso and, if desired, complementary WRB Membranes in code-compliant wall assemblies is shown on the next page.



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# Hunter Xci Tech Topic #105 (continued)

## Process used by Hunter Panels to Disseminate NFPA 285 Wall WRB and Insulation Product Information:

