Are you needing help with Polyiso insulation panels? Looking for Xci CG specs or maybe a quick review of how Xci ConCast fits into ASHRAE 90.1? No problem. The new HunterPanels.com is overflowing with practical information, documents, links, drawings, and tons of other tools to help building professionals understand Hunter Xci polyiso wall products.

Thanks to great feedback from users across the country, the new website, released in October, has over 400 different PDFs ready for download, education videos, an easy to use “Sample and Literature Request” area, and contact information to the entire Hunter Panels team.

You’ll also find:
- Hunter Xci Field Guides (as either a complete document, or as individual sections)
- “Understanding NFPA Compliance” Video
- Xci Case Studies
- “Tech Topic” bulletins
- Xci product specs
- Features and benefits, images and literature for the full Hunter Panels Xci product line

Visit the new HunterPanels.com to see for yourself. And, please share any suggestions with Mary Schenker at Mary.Schenker@hpanels.com.

When Indianapolis-based RATIO Architects looked to design an energy-efficient and economical LEED-certified building façade for the new Big Ten headquarters in Rosemont, IL, by using a unique rainscreen wall system for the 50,000-sq.-ft., three-story building, they turned to Hunter Panels for their insulation.

The Big Ten building used Xci Class A exterior continuous insulation. “We wanted to use this one because it’s made for rainscreen systems,” RAM senior project manager Jim Yeary explained. Using continuous insulation that covers all structural elements, with the exception of windows, doors, and fasteners, greatly improves energy efficiency. Xci Class A, a polyisocyanurate foam-board insulation with embossed foil facers on both sides, offers R-values from 6.3 to 19.5 in a single layer. “In a similar thickness, polyiso has a higher R-value than most competitors’ products,” said Jim De Francisco, area manufacturer’s representative for Hunter. “And at a competitive price.”

View the entire case study at http://www.commercialarchitecturemagazine.com/terra-cotta-scores-at-big-ten-headquarters/
When looking for a printable, detailed overview of continuous insulation and how Hunter Xci Polyiso is the best choice for CI, our latest detailed product brochure is your answer. A helpful resource, “Hunter Xci: Exterior Continuous Insulation - Energy Efficiency and NFPA 285 Compliance Made Easy” introduces why “ci” is important and shares insight on how Polyiso offers the highest R-value per inch of any foam plastic board insulation.

This resource includes Xci Foil, Xci Class A, Xci 286, Xci Ply, and Xci CG, providing specific application notes, plus multi-layered illustrations showing how the products should be installed. It is a quick view to assist in understanding and sharing the best use of each product. Find it here: https://www.hunterpanels.com/product-documents/xci/xci-misc-docs/878-hunter-xci-product-brochure/file

Does a lower ASTM E84 value always convey better fire performance?

Polyiso, by its thermoset nature, has superior fire performance properties over thermoplastic insulations. Thermosets can withstand a high temperature without losing physical properties and physical integrity. During the ASTM E 84 test, polyiso stays intact and performs per the standard minimum value of <450 smoke developed and <25 or <75 flame spread depending on the product.

Testing of materials that melt, drip, or delaminate to such a degree that the continuity of the flame front is destroyed results in low flame spread indices that do not directly relate to indices obtained by testing materials that remain in place. This is a common occurrence for thermoplastic insulations (e.g. XPS or EPS) during the ASTM E84 test. Thermoplastics tend to soften at temperatures nearing 165 degrees and melt/drip approaching 200 degrees. The test is then terminated because the product ceases to exist, and a flame spread measurement is then assigned.

As a result, although E84 is effective for testing materials used in horizontal application, the NFPA 285 is the proper gauge of safety when using foam plastics vertically in the wall.
Even though some insulation products may have a lower flame spread, it does not necessarily mean that the product is more fire resistive. It is important to understand the dynamics of the testing standard and how certain products behave in the test. The ASTM E 84 test is a tunnel test where the product being tested is put in a single layer in the horizontal position on the ceiling of the tunnel, and then subjected to flame on one end. Temperature and smoke development performance values are then gathered as the flame travels.

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**Question:** Explain why there may be differences in ASTM E84 flame spread and smoke developed values of foam insulations. Does a lower ASTM E84 value always convey better fire performance?

**Answer:**

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From ASTM E 84 Test Procedure

X4.7.7 Some materials, such as cellular plastics and thermoplastic materials, can be difficult to evaluate. Thermoplastic materials not mechanically fastened will often fall to the floor of the tunnel. Accordingly, these materials as well as thermosetting cellular plastics can also receive relatively low fsi. (8,9) If supported on wire screen, rods, or other supports, some plastic materials can be completely engulfed in flame and a questionable comparison would result between the flame spread indices and smoke developed indices of these materials and those of materials that are unsupported.

X4.7.8 The materials described above, that is those that drip, melt, delaminate, draw away from the fire, or require artificial support present unique problems and require careful interpretation of the test results. Some of these materials that are assigned a low fsi based on this method may exhibit an increasing intensity of the fire exposure. The result, therefore, may not be indicative of their performance if evaluated under large-scale test procedures. Alternative means of testing may be necessary to fully evaluate some of these materials.

UL now notes via footnote that the results for thermoplastics testing were evaluated while material remained in the initial test position. The footnote then references measured flame spread and smoke developed values for molten residue that dripped to the floor of the test apparatus. These additional noted details result in values that are significantly higher than published ASTM E 84 test values for the same material.

Flame Spread and smoke developed recorded while material remained in the original test position. Ignition of molten residue on the furnace floor resulted in flame travel equivalent to calculated flame spread Classification of 110 and smoke developed Classification of over 500.

Polyiso, by its thermoset nature, has superior fire performance properties over thermoplastic insulations. Thermosets can withstand a high temperature without losing physical properties and physical integrity. During the ASTM E 84 test, polyiso stays intact and performs per the standard minimum value of <450 smoke developed and <25 or <75 flame spread depending on the product.
Hunter Xci Tech Topic #104 (continued)

Comparison of Fire Resistance Properties for Polyiso and Other Material

<table>
<thead>
<tr>
<th>Fire Resistance Property</th>
<th>Polyiso</th>
<th>Other Foam Plastics (Polystyrenes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Spread Index (FSI) (ASTM E84)</td>
<td>25 or less for Types I – IV commercial structures, or 75 or less for Types I – IV commercial structures if tested via large scale testing per IBC Section 2603.10 Special Approval*</td>
<td>25 or less required for Types I – IV commercial structures</td>
</tr>
<tr>
<td></td>
<td>75 or less required for Type V commercial and all residential construction</td>
<td>75 or less required for Type V commercial and all residential construction</td>
</tr>
<tr>
<td>Smoke Developed Index (SDI) (ASTM E84)</td>
<td>450 or less required</td>
<td>450 or less required</td>
</tr>
<tr>
<td></td>
<td>May be used in all building types</td>
<td>May be used in all building types</td>
</tr>
</tbody>
</table>

*For example, the following LPI flame spread and smoke development caveat is included on LPI products in the market today: “Flame spread and smoke development recorded while material remained in the original test position. Ignition of mottled residue on the surface resulted in flame travel equal to calculated flame spread index of 125 and smoke development index of over 500.” See also PIMA Technical Bulletin #101.

*See Hunter Panels TER-1402-02
Between your “Watch ESPN” and “Plants vs. Zombies” apps, do you have the one that provides easy access to wall assembly guides and product details? The Hunter Xci Assembly Guide, available in your Apple App and Google Play stores, helps design professionals create NFPA compliant wall assemblies utilizing Hunter Xci polyiso products. Using a simple, 3-step selection process, the app collects your build information and directs you to a PDF that includes the specs and all of the material components necessary to help you achieve NFPA compliance. This handy resource is constantly being updated with new PDFs and assists with over 200 wall assembly combinations.

Search “Hunter Xci Assembly Guide” to download your next favorite app today.

Updated: Hunter Xci App Produces Over 200 Wall Assemblies

The next time you are working on your wall assembly project and get stumped on which Hunter Xci wall product will fit the need, use our “Technical e-Hotline.” There is a team of specialists ready to help via email to provide answers, direction to resources and recommendations based on your specific project needs. Look to them for help with installation instructions, R-Value questions, and even more specific questions like how different IBC classifications have different wall requirements. You can reach the Technical e-Hotline through HunterPanels.com and click “TECHNICAL E-HOTLINE” in the top navigation.