

Spray Foam Ignition Barrier Requirements Made Simple

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There appears to be a general awareness that "something is changing" in the SPF world related to ignition barrier requirements in attics and crawl spaces in January, 2011, but there is surprisingly little information that is readily available on this topic. To further compound the confusion, what can be located through Internet searches or industry sources tends to be highly technical and/or unclear. The objective of this document is to provide a small amount of background on the topic and, most importantly, to provide direction related to what a spray foam applicator should be aware of when applying SPF products in attics and crawl spaces beginning in January, 2011.

First, the background: In June, 2009 modifications to the standard for SPF applications were adopted after considerable work done by the Spray Polyurethane Foam Alliance (SPFA) in conjunction with the Engineering Services group of the International Code Council (ICC ES). The applicable modifications to the acceptance criteria for the spray foam industry, called AC 377, spell out the revised testing requirements for ignition barrier protection in attics and crawl spaces under its "Appendix X." These changes included effective dates for implementation, making Appendix X the only applicable testing criteria for an alternative to a prescriptive ignition barrier beginning with reports in use on or after January 1, 2011. In effect, this means that all ICC ES reports in use by SPF manufacturers after this date are required to reflect compliance with these new standards.

Now, the requirements: The building codes require that all SPF products be separated from the interior (occupied) space of the building by an approved thermal barrier. This is normally accomplished by separating the occupied space of the building from the attics and crawl spaces with gypsum wallboard, or other approved protective covering, within the interior ceiling and flooring assemblies. The building codes further require that the SPF used in attics and crawl spaces meet the ignition barrier requirements prescribed by the applicable sections of the IBC (2603.4.1.6) or IRC (R316.5.3 and R316.5.4). The specific ignition barriers listed in these code sections are:

- 1.5" mineral fiber insulation
- 0.25" wood structural panels
- 0.375" particleboard
- 0.25" hardboard
- 0.375" gypsum board
- Corrosion-resistant steel having a base metal thickness of 0.016"

Under certain qualifying conditions, an SPF applicator is allowed to use a non-prescriptive ignition barrier (materials other than those listed above), **BUT** the code does not spell out exactly what qualifies as a non-prescriptive ignition barrier; **THIS** is where ICC ES and the associated reports issued to SPF manufacturers come into play, utilizing the performance criteria spelled out in AC 377 Appendix X. The most common material used for this purpose is an intumescent coating.

The qualifying conditions are as follows:

- Entry is made only for the service of utilities
- There are no interconnected attic or basement areas
- Air is not circulated to other parts of the building
- Combustion air is provided in accordance with IMC Section 701
- Ventilation is provided when required by IBC Section 1203.2 or IRC Section R806, or as required, except when air-impermeable insulation is permitted in unvented attics in accordance with Section R806.4 of IRC

If these conditions are met, an intumescent coating may be used as a non-prescriptive ignition barrier.

Procedure to follow: Refer to the SPF manufacturer's ICC ES report to determine the coatings allowed for use based on their qualification under AC 377 Appendix X. Then simply follow the application instruction for the coating material as provided in the ICC ES report. This will include items such as minimum wet mil thickness and associated spread rate, expressed in square feet per gallon. **The ignition barrier coating must be applied to all exposed foam surfaces in the attic or crawl space.**

Please contact No-Burn Incorporated if we may offer additional assistance – 800-989-8577 / info@noburn.com / www.noburn.com

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