

Kent



County

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Effective **July 1, 2018**, the Kent County Levy Court Division of Inspections shall enforce the following requirements for use of *Spray Polyurethane Foam Insulation (SPFI)*:

**SPFI usage documentation:** Permit applicants must provide two (2) copies of documentation: one set to be kept with the permit docket and one set to be left on the job site from prior to product application till time of final inspection for C of O.

- 1. Product documentation:** Manufacturer's Published Technical Data Sheet, Manufacturer's Application Guide, and an independent code compliance report<sup>i</sup> for the exact SPFI product utilized. This report shall be issued by an agency accredited under ISO Standard 17065.
- 2. Installer documentation:** Copy of State of Delaware business license covering installation of insulation, Proof of installer being a Certified Manufacturer-trained Installer for the exact SPFI being applied.

**SPFI applications in conditioned crawlspaces:**

Any spray foam insulation applied must have a prescriptive ignition barrier<sup>ii</sup> or an alternate ignition barrier assembly installed as specified in the code compliance report specific to the individual SPFI product applied.

Concerning SPFI used in conditioned crawlspaces, *accessed only via the exterior* of the structure, one of the following alternatives must be utilized in lieu of a transfer grille or return<sup>iii</sup>:

1. An exhaust fan controlled by a timer must be installed in accordance with IRC 2012 R408.3.2.2.1.
2. A dehumidifier with condensate ejection must be installed.

## **SPFI applications in attics:**

Concerning any **vented attic space without storage** wherein SPFI is applied to the immediate attic side of any HVAC treated air space of the structure; the following conditions must be met:

Any spray foam insulation applied must have a prescriptive ignition barrier or an alternate ignition barrier assembly installed as specified in the code compliance report of the exact SPFI applied.

Concerning any **limited-access unvented attic spaces without storage** wherein spray foam is applied to the bottom-side of the roof system, gable wall(s), and soffit area(s) the following conditions must be met:

1. Entry to the unvented attic space is only to service utilities.
2. No storage is permitted in the unvented attic space.
3. Singular access must be via a non-scuttle panel placed horizontally on the attic floor. The access shall open only toward the living space, shall not be locked, and shall use spring loaded or pneumatic closure mechanisms. Pull-down ladder units are permitted.
4. There shall be neither interconnected air spaces nor air circulation between the unvented attic and any other area of the structure.
5. Any spray foam applied to the bottom side of the roofing system, on the gable wall(s), and soffit area(s) must have a prescriptive ignition barrier or an alternate ignition barrier assembly installed as specified in the exact SPFI product's code compliance report. For code compliance reports that allow unvented attics **without** ignition barriers, all code compliance report rules (min. /max. thickness, hatch requirements, pipes coverage, signage, etc.) related to those assemblies must be obeyed.
6. For code compliance reports that allow unvented attics **without** ignition barriers, unless an Engineering Letter allows unprotected pipes, any plastic tubular penetrations (skylight tubes, plumbing vents, etc.) used in the attic space (instead of rigid metal) penetrating the roof deck or gable must be covered with the minimum thickness of SPFI as specified in the code compliance report of the exact SPFI product installed.
7. Any non-metallic exhaust flex duct(s) or HVAC duct board (supply and return) in the attic space do not need to be protected with the approved SPFI under the following condition: where such duct materials are used, the fan units or HVAC unit must be alarmed to switch off with smoke/heat alarm switches mounted within the attic space. (see Figure 1) **Otherwise**, such duct materials **must** be covered with the approved SPF at the minimum thickness stated in the code compliance report of the exact SPFI product installed. (See Figures 2 & 3)
8. If all HVAC system ductwork and any exhaust/intake type ductwork is metallic rigid or flex, such metal duct work does not need to be protected with the SPFI as specified in the code compliance report for the exact SPFI product applied.

Concerning any attic space **with storage**, either **vented or unvented**, wherein SPFI is applied to the interior-side of the roof system, gable wall(s), and soffit area(s), the following conditions must be met:

- 9. Any spray foam applied to the bottom side of the roofing system, gable wall(s), and over the soffit area(s) must have a prescriptive 15-minute thermal barrier<sup>iv</sup> or an alternate thermal barrier assembly installed as specified in the product code compliance report of the exact SPFI installed. (See Figure 4)

These requirements are initiated based on: ICC IRC 2012 ed.: R316.5.3, R316.5.4, R408.1-408.4, R806.1, R806.5, R807, N1101.12, N1102.1, N1102.2.4, consultation with Priest & Associates Consulting, LLC engineering firm and representatives of the Spray Polyurethane Foam Alliance, and review of multiple Third-party SPFI product evaluation reports.

<sup>i</sup> “Code Compliance Report” may include but is not limited to an Evaluation Service Report (ESR) from ICC-ES, Code Compliance Research Report (CCRR) from Intertek, Evaluation Report (ER) from IAPMO Uniform Evaluation Services, TER Report from DrJ Engineering, Underwriters Laboratory Evaluation Report (ULER), or other report from a certified body. These code compliance reports are readily available from issuing certification agencies or product manufacturers’ websites.

<sup>ii</sup> IBC 2603.4.1.6 / IRC R316.5.3

<sup>iii</sup> IRC 2006 ed., Interpretation Commentary #48-07 R408.3

<sup>iv</sup> IBC 2603.4 / IRC R316.4

Figure 1 (Smoke/heat alarm switch)



Figure 2 (Flex duct)



Figure 3 (HVAC duct board)



Figure 4 (Attic with storage)

