



MITCHELL E. DANIELS, Jr., Governor
STATE OF INDIANA

DEPARTMENT OF HOMELAND SECURITY

JOSEPH E. WAINSCOTT JR., EXECUTIVE DIRECTOR

*Indiana Department of Homeland Security
Indiana Government Center South
302 West Washington Street
Indianapolis, IN 46204
317-232-3980*

July 14, 2010

Mr. Doug Crook
Seward Sales Corporation
6620 Binford Medical Drive
Indianapolis, IN 46220

Re: Requirements of Indiana Residential Code (675 IAC 14-4.3)
Section R602.8 for Fireblocking Material

Dear Mr. Crook:

I am in receipt of your letter (delivered by hand), dated May 20, 2010 regarding your request to have further interpretation concerning the use of spray foam products for compliance with the provisions of Section R602.8 of the 2005 Indiana Residential Code. Specifically, this is in regards to whether or not the product "Great Stuff Fireblock", as manufactured by The Dow Chemical Company, is acceptable for use as fireblocking in Type V residential construction. You have indicated in your letter, that several contractors are continuing to have an issue with local building officials as to whether this product is allowed for this type of construction.

As indicated in the Indiana Amendments for the 2005 Indiana Residential Code, Section R602.8 was amended as follows:

"675 IAC 14-4.3-96.5 Section R602.8; fireblocking required

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 96.5. Change item 4 in Section R602.8 to read as follows: 4. At openings around vents, pipes, ducts, cables, and wires at ceiling and floor level, with an approved material to resist the passage of flame and products of combustion. Approved materials shall have demonstrated that they comply with materials listed in R602.8.1 or any of the following:

- a. Materials tested for noncombustibility in accordance with ASTM E136.*
- b. Materials tested under the fire conditions of ASTM E814 or UL 1479.*
- c. Materials tested for use as fireblocking material under the fire conditions of ASTM E 119 and installed in accordance with the specifications under which the material was tested."*

For help in simplifying the issue, I have obtained some additional clarity regarding what these tests are, and why they are utilized. Information I found to help understand each test is as follows:

ASTM E 136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees:
In this test, a material (just the material itself) is placed into a small tube furnace. The pass/fail criteria relates to how much weight the specimen loses and whether its fuel content raises the air temperature in the oven.

While the test is simple to run, it is difficult to pass. All organic materials burn! Thus, for the most part, materials that pass E136 must be largely comprised of inorganic materials (stone or mineral powders or fibers).

ASTM E 814:

"Fire Tests of Through Penetration Firestops" or ASTM E 814 is the complementary test to ASTM E 119 that evaluates penetrations through a tested, fire-resistive (ASTM E 119 tested) wall or floor assembly. The test involves a standard time-temperature curve, a hose stream test and assigns ratings based on "T" (temperature rise) and "F" (flame occurrence through the firestop/penetration). The objective of specifying this type of system is to return the floor or wall to the compartment's original fire rating. An "L" (air leakage) rating can also be assigned. Air leakage simulates smoke movement through a penetration, measured in cubic feet per minute for authorities having jurisdiction to make judgments.

ASTM 119:

Fire test method, "Fire Tests of Building Construction and Materials," is conducted to evaluate the ability of a fire-resistive floor or wall assembly to perform its barrier function, resisting the passage of heat, flames, hot gases, and smoke in a fire situation.

It is my understanding that on August 11, 2008, my predecessor, Mr. Donald H. Bradley, RA authored a letter regarding this very topic (see attached). I verified this letter was the most recent response from my office regarding this issue. In his letter he made the following statement:

"If the container of Great Stuff Pro Gaps and Cracks is labeled for use as fireblocking, and the material has been successfully tested in accordance with Section R602.8, Item 4, (a), (b), or (c), also amended, the material would be acceptable."

I believe, based on the research and information I have reviewed, the crux of the issue is in regards to the testing of the product. In the ES Report ESR-1961, dated October 1, 2007 (see attached), it indicates the following regarding the test procedure under Section 3.1, General:

"The foam sealant has a flame-spread index of less than 25 and a smoke-developed index of less than 450 when tested in accordance with ASTM E 84. The packaging consists of a straw, gun or cylinder foam delivery configuration. The foam has been tested in accordance with ASTM E 814 (modified) to establish that the integrity of the fireblocking is maintained when the fireblocking is penetrated."

What is observed in this report is that all information regarding testing for this product is reduced to only consider the information on the ASTM E 814 test, as there is no mention of the product being tested to conform to either the ASTM E 119 or ASTM E 136 tests. It was also noted that the same report further documented the fact the ASTM E 814 testing was modified, as noted under Sections 3.1 and 6.3.

Additionally, I performed research in regards to the term "(modified)", and attempted to determine what exactly was modified in the test. All information found indicates the test was deemed "modified" as it did not include a hose-stream test. It was also determined the test performed by Underwriter's Laboratory (UL) was modified as well, because as the foam material was "applied to inorganic reinforced cement board" as indicated on the test data BLIS.R13655 (see attached). This is contrary to the purpose of fireblocking for use around wood framing, or similar products utilized in Type V residential construction.

Finally, upon additional review of the Indiana amendments for R602.8, they state that a product meeting the criteria for "Materials tested under the fire conditions of ASTM E814 or UL 1479", may be utilized. Unfortunately, the amendments do not address the viability of a "modified" version of ASTM E814. Therefore I am provided with two conclusions:

1. The 2005 Indiana Residential Code does not provide for a modified version of the ASTM E 814 test.
2. The test data indicates the product only meets the criteria of ASTM E 814 because the test was modified.

Given these two facts, I have determined this product, as well as similar products of this type, does not meet the criteria for use as fireblocking in Type V residential construction as defined by Section R602.8 of the 2005 Indiana Residential Code.

Please be advised that if you desire administrative review of this action, you must file a written petition for review with the Fire Prevention and Building Safety Commission at 302 West Washington Street, Room W-246, Indianapolis, IN 46204, identifying the action for which you seek review **no later than 18 days from the mailing date of this action** unless such date is a Saturday, Sunday, legal holiday under state statute, or day that the Department of Homeland Security's offices are closed during regular business hours, in which case the deadline would be the first day thereafter that is not a Saturday, Sunday, legal holiday under state statute, or day that the Department of Homeland Security's offices are closed during regular business hours. If you do so, your petition for review will be granted and an administrative proceeding will be conducted by an administrative law judge appointed by the Fire Prevention and Building Safety Commission. If you do not file a petition for review, this action will be FINAL and you MUST comply with its requirements.

Please be further advised that you may request an opportunity to informally discuss this action prior to filing a petition for review. Such information, discussion, or a request therefore, does not extend the deadline for filing a petition for review and, therefore, any requested for an information discussion should be made promptly, by telephone at (317) 232-1404, facsimile at (317) 232-0146, or by email to sperez@dhs.in.gov upon receipt of this action.

This written interpretation as issued under IC 22-13-5 binds the interested person and the county or municipality with whom the interested person has the dispute until overruled under IC 4-21.5. A written interpretation of a building law binds all counties and municipalities if the building law compliance officer in the Department of Homeland Security publishes the written interpretation of the building law in the Indiana Register under IC 4-22-7-7(b).

Regards,
Indiana Department of Homeland Security



Scott Michael Perez, AIA, CSI, CCS, CCCA, LEED ® AP, NCARB
Building Code Compliance Officer

Encl. Letter dated 5/20/10 from Doug Crook with enclosures
Letter dated 8/11/2008 from Donald H. Bradley

	<u>Name/Group</u>	<u>Entity</u>	<u>E-mail</u>
c:	Dan Jacobs Code Committee	Town of Fishers IDHS-DFBS	djacobs@fishers.in.us

Fire & Building Code Inspectors IDSH-DFBS