

CODE ALERT!!!

FIREBLOCKING PENETRATIONS FOR LIFE SAFETY R602.8.4

The 2006/2007 ICC Building Code Development Hearing has some “Hot” life safety code change proposals that if adopted, could add valuable escape time for occupants in fire situations.

At least 5 code change proposals have been submitted pertaining to the **Fireblocking** code sections for the 2009 International Residential Code for One- and Two- Family Dwellings. The fireblocking requirements are covered in sections **R602.8 – R602.8.1.2** and explain the proper materials and locations that building materials should be installed to resist the free passage of flame to other areas of the building through concealed spaces. The premise of this code section is to cut off vertical and horizontal concealed draft openings and to create an effective barrier between stories to resist the free passage of flame and products of combustion. Using the specified fireblocking materials in the proper locations can ultimately contain the spread of flames, smoke and toxic gases and delay the total involvement of the fire allowing valuable time for occupants to escape to safety.

With approximately 72% of all residential fires occurring in single family dwellings and an overall 83% of all civilian deaths occurring in residential fires, it is time the building industry as a whole takes a serious look at what standards need to be in place to help reduce these fatality statistics. In addition to the implementation of these standards, the knowledge and enforcement must be widespread to initiate a reduction in the loss of life statistics that we face today.

In doing so, several code change proposals have been submitted to clarify the proper type of materials to be used when fireblocking the annular space of non-rated penetrations around vents, pipes, ducts, cables, and wires at ceiling and floor levels. Traditionally, all model building codes required the use of an approved “**noncombustible**” material when addressing the protection of penetrations. The term “noncombustible” is defined as a material that has been tested to **ASTM-E136** which is tested to 1380° F and exhibit no signs of combustion for an established period of time. Materials that are noncombustible have a **0 flame spread** and **0 smoke development** rating and **add no fuel to the fire**.

With the adoption of the 2000 IRC, the term “noncombustible” has been written out of the code and replaced with the word “approved material” which no longer specifies a particular standard or material and places the responsibility of determining what material or standard should be “approved” on the shoulders of the building official having jurisdiction.

Protecting penetrations with noncombustible (ASTM-E136) materials had been in the building codes for many years and the code wording and intent of this section was precise and clearly defined. When the trades penetrate top-plates or built-in fireblocks to run their wires, pipes, ducts, or other

mechanical penetrating items, a noncombustible material was used to fill the annular space around the penetrating items to resume the integrity of the fireblock as per R602.8.1.2., which requires **the integrity of all fireblocks to be maintained**. ASTM-E136 tested (noncombustible) materials have a greater resistance to heat and flame than the wood in which it has been installed, therefore, resuming the integrity of wood.

With the current code wording requiring an “approved” material, many polyurethane foam products have been allowed for fireblocking penetrations. Foam sealants may be good for air infiltration; however, **all polyurethane foam sealants are flammable and produce dense smoke and toxic gasses when burned**. As a result, several code change submittals are directed at changing the code wording from “*approved*” material back to approved “*noncombustible*” material. These code changes will reinstate a uniform standard which offers clarity and consistency to fulfill the code wording and intent of the fireblocking code requirements and will truly restore and maintain “fireblocking integrity” with in the building code.

Fireblocking Code Change Proposals:

IBC-Fire Safety 9/22/06 – 9/24/06 – IBC Sec. 717.2.1

IRC-Building Energy 9/28/06 – 10/01/06 – IRC Sec. 602.8.1

Proponent:

- Brian Tollisen, P.E., New York State Division of Code Enforcement

Proposed Change:

- Fireblocking or fill *shall not be of any flammable material* which can be shaped, fitted, and permanently secured in position.

IRC-Building Energy 9/28/06 – 10/01/06 – IRC Sec. 602.8.4

Proponent:

- Donald LeBurn, CBO, State of Indiana, Representing the Indiana Association of Building Code Officials

Proposed Change:

- Change from “Approved Material” to “Approved Noncombustible Material” or “The material filling the annular space shall not be required to meet the ASTM-E136 requirements.”

Proponent:

- Jason C. Lynch, Flame Tech Inc.

Proposed Change:

- Change from “Approved Material” to “Approved Noncombustible Material”

IRC-Building Energy 9/28/06 – 10/01/06 – IRC Sec. 602.8

Proponent:

Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C.,

Proposed Change:

New Item 7 – At openings around dryer exhaust duct in accordance with section M1501.2. = Where a clothes dryer exhaust duct penetrates a wall or ceiling membrane, the annular space shall be sealed with *noncombustible material*, approved fire caulking, or a noncombustible dryer exhaust duct wall receptacle.

For additional related articles and information pertaining to residential fireblocking, please call **1-800-638-3160** or visit www.firestoppingcaulk.com