

Memorandum

To: All Rectorseal Sales Managers and Reps

CC:

From: Jim Park

Date: 05/09/02

Re: Changes in the building Code

As some of you are aware, there are requirements for firestopping in the new International Residential Code for one and two family dwellings. Previously an ASTM E-136 (this is the test for non-combustibility) product like our Rectorseal RS 136 was required for penetrations through the wood plates from the basement to the first floor and subsequently through the floors up into the attic. This product is simply a non combustible caulk. A non-combustible material was what the previous code required.

The language of the new residential building code is very similar to that of the regular commercial building code. Notable changes are the elimination of the term “non- combustible material”. Generally firestop materials are not non-combustible.

However, there doesn't seem to be a reference to openings in non-rated construction except in the plumbing section P2603.4 “annular space around sleeves” where it requires an approved material. Though the wording “approved material” leaves something to interpretation, there is no mention of a material other than a real firestop material. It follows that some areas might still allow an ASTM E-136 product like RS 136 for those applications where a draft stop is required, but still others may require a real firestop tested product, and following that a firestop system .

Remember, the focus of the new code is on rated construction which usually occurs in tenant separations and the wall between the garage and the house.

The following, for your reference, are actual excerpts from the new International Residential Code.

R321.1 Two Family Dwellings. Dwelling units in Two family dwellings shall be separated from each other by wall and /or floor assemblies of not less than 1-hour fire-resistance rating when tested in accordance with ASTM E119..... *(note:ASTM E-119 is the standard test for fire rated construction components like gypsum walls, ceiling assemblies, and columns.)*

R321.2 Town Houses shall be considered a separate building and shall be separated by fire-resistance rated wall assemblies meeting the requirements of Section 320 for exterior walls.

R321.3 Rated penetrations. Penetrations of wall or floor ceiling assemblies required to be fire-resistance rated in accordance with Section R321.1 or 321.2 shall be protected in accordance with this section.

R321.3.1 Through penetrations. Through penetrations of fire-resistance rated wall or floor ceiling assemblies shall comply with Section R321.3.1.1 or R321.3.1.2.

Exception; Where the penetrating items are steel, ferrous or collar pipes or steel conduits, the annular space shall be permitted to be protected as follows:

1. In concrete or masonry wall or floor assemblies where the penetrating item is maximum 6 inches nominal diameter and the opening is a maximum of 144 sq. in., concrete, grout, or mortar shall be permitted where installed the full thickness of the wall or floor assembly or the thickness required to maintain the fire-resistance rating.
2. The material used to fill the annular space shall prevent the passage of flame and hot gasses sufficient to ignite cotton waste where subjected to ASTM E119 time temperature fire conditions under a minimum positive pressure differential of 0.01 inches of water (3Pa) at the location of the penetration for the time period equivalent to the fire-resistance rating of the construction penetrated.

Section R321.3.1 Fire resistance rated assembly. Penetrations shall be installed as tested in the approved fire-resistance rated assembly.

Section R321.3.1.2 Penetration Firestop System. Penetrations shall be protected by an approved penetration firestop system installed as tested in accordance with ASTM E 814, with a positive pressure differential of 0.01 inches of water (3Pa) and shall have an F rating of not less than the required fire-resistance rating of the wall or floor ceiling assembly being penetrated.

Section R321.3.2 Membrane Penetrations: Membrane penetrations shall comply with Section R321.3.1. Where walls are required to have a minimum 1-hour fire-resistance rating, recessed lighting fixtures shall be installed such that the required fire-resistance rating will not be reduced.

Exceptions:

1. Steel Electrical Boxes that do not exceed 16 sq. in. in an area provided the area does not exceed 100 sq. in. for ant 100 sq. ft. of wall area. Outlet boxes on opposite sides of the wall shall be separated as follows:
 1. By a horizontal distance of not less than 24 inches, or
 2. By a horizontal distance not less than the depth of the wall cavity when the wall cavity is filled with cellulose loose-fill or mineral fiber insulation, or
 3. By molded Fireblocking in accordance with Section R602.8, or
 4. By other listed materials and methods.
2. Two hour fire-resistance rated non-metallic electrical outlet boxes shall be installed in accordance with their listings.
3. The annular space created by the penetration of fire sprinkler provided it is covered by a metal escutcheon plate.

Section R602.8 Fireblocking: Fireblocking shall be provided in the following locations:

1. At openings around vents, pipes, ducts, at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion

Section P2603.4 Sleeves. Annular spaces between sleeves and pipes shall be filled or tightly caulked as approved by the building official. Annular spaces between sleeves and pipes in fire-rated assemblies shall be filled or tightly caulked in accordance with the building portion of this code.