

permanent fixture of the occupancy and owned by the homeowner.

R315.7.4 Combination detectors. Combination carbon monoxide and smoke detectors installed in carbon monoxide detection systems in lieu of carbon monoxide detectors shall be *listed* in accordance with UL 2075 and UL 268.

SECTION R316 FOAM PLASTIC

R316.1 General. The provisions of this section shall govern the materials, design, application, construction and installation of foam plastic materials.

R316.2 Labeling and identification. Packages and containers of foam plastic insulation and foam plastic insulation components delivered to the job site shall bear the *label* of an *approved agency* showing the manufacturer's name, the product listing, product identification and information sufficient to determine that the end use will comply with the requirements.

R316.3 Surface burning characteristics. Unless otherwise allowed in Section R316.5, foam plastic, or foam plastic cores used as a component in manufactured assemblies, used in building construction shall have a flame spread index of not more than 75 and shall have a smoke-developed index of not more than 450 when tested in the maximum thickness and density intended for use in accordance with ASTM E84 or UL 723. Loose-fill-type foam plastic insulation shall be tested as board stock for the flame spread index and smoke-developed index.

Exception: Foam plastic insulation more than 4 inches (102 mm) thick shall have a flame spread index of not more than 75 and a smoke-developed index of not more than 450 where tested at a thickness of not more than 4 inches (102 mm), provided that the end use is *approved* in accordance with Section R316.6 using the thickness and density intended for use.

R316.4 Thermal barrier. Unless otherwise allowed in Section R316.5, foam plastic shall be separated from the interior of a building by an *approved* thermal barrier of not less than $\frac{1}{2}$ -inch (12.7 mm) gypsum wallboard, $\frac{23}{32}$ -inch (18.2 mm) wood structural panel or a material that is tested in accordance with and meets the acceptance criteria of both the Temperature Transmission Fire Test and the Integrity Fire Test of NFPA 275.

R316.5 Specific requirements. The following requirements shall apply to these uses of foam plastic unless specifically *approved* in accordance with Section R316.6 or by other sections of the code or the requirements of Sections R316.2 through R316.4 have been met.

R316.5.1 Masonry or concrete construction. The thermal barrier specified in Section R316.4 is not required in a masonry or concrete wall, floor or roof where the foam plastic insulation is separated from the interior of the building by not less than a 1-inch (25 mm) thickness of masonry or concrete.

R316.5.2 Roofing. The thermal barrier specified in Section R316.4 is not required where the foam plastic in a roof assembly or under a roof covering is installed in accordance with the code and the manufacturer's instructions and is separated from the interior of the building by tongue-and-groove wood planks or wood structural panel sheathing, in accordance with Section R803, that is not less than $\frac{15}{32}$ inch (11.9 mm) thick bonded with exterior glue, identified as Exposure 1 and with edges supported by blocking or tongue-and-groove joints or an equivalent material. The smoke-developed index for roof applications shall not be limited.

R316.5.3 Attics. The thermal barrier specified in Section R316.4 is not required where all of the following apply:

1. *Attic* access is required by Section R807.1.
2. The space is entered only for purposes of repairs or maintenance.
3. The foam plastic insulation has been tested in accordance with Section R316.6 or the foam plastic insulation is protected against ignition using one of the following ignition barrier materials:
 - 3.1. $\frac{1}{2}$ -inch-thick (38 mm) mineral fiber insulation.
 - 3.2. $\frac{1}{4}$ -inch-thick (6.4 mm) wood structural panels.
 - 3.3. $\frac{3}{8}$ -inch (9.5 mm) particleboard.
 - 3.4. $\frac{1}{4}$ -inch (6.4 mm) hardboard.
 - 3.5. $\frac{3}{8}$ -inch (9.5 mm) gypsum board.
 - 3.6. Corrosion-resistant steel having a base metal thickness of 0.016 inch (0.406 mm).
 - 3.7. $\frac{1}{2}$ -inch-thick (38 mm) cellulose insulation.
 - 3.8. $\frac{1}{4}$ -inch (6.4 mm) fiber-cement panel, soffit or backer board.

The ignition barrier is not required where the foam plastic insulation has been tested in accordance with Section R316.6.

R316.5.4 Crawl spaces. The thermal barrier specified in Section R316.4 is not required where all of the following apply:

1. Crawl space access is required by Section R408.4.
2. Entry is made only for purposes of repairs or maintenance.
3. The foam plastic insulation has been tested in accordance with Section R316.6 or the foam plastic insulation is protected against ignition using one of the following ignition barrier materials:
 - 3.1. $\frac{1}{2}$ -inch-thick (38 mm) mineral fiber insulation.
 - 3.2. $\frac{1}{4}$ -inch-thick (6.4 mm) wood structural panels.