



Un-vented Attics in One and Two-Family Dwellings

This handout is in response to recent inquiries about the use of un-vented foam insulated attics in buildings regulated by the 2003 Michigan Residential Code (MRC). While similar issues exist with buildings regulated by the Michigan Building Code (MBC), those requirements are not addressed in this document.

The issue is with insulation systems that consist of spray applied foam insulation applied to the bottom of the roof sheathing, instead of on top of the ceiling membrane. These systems are being aggressively marketed with unsubstantiated claims that are misleading and/or totally false. These systems violate some or all of the following provisions of the 2003 MRC:

- R806 Attic Ventilation (also see definition of attic in Chapter 2 of the MRC). *These systems have no attic ventilation.*
- R316 Insulation. The surface of the foam is required to have a flame spread rating of not more than 25 and a smoke developed rating of 450.
- R314.2.3 Attics & Crawl Spaces. Foam plastics used in attics and crawl spaces must be protected from ignition.
- R318 Moisture Control. A vapor retarder is required on the warm in winter side of the insulation.
- Rule 1074 of the Michigan Uniform Energy Code (adopted March 1999). The energy code requires a minimum of R30 for Ottawa County. In accordance with the Federal Trade Commission rules, all R-value claims must be substantiated by testing to the ASTM C518 standard.

Notwithstanding the above code requirements, an un-vented attic with exposed foam insulation MAY be permitted under the provisions of R104.11 of the MRC, but ONLY when testing reports from an approved agency show to the satisfaction of the building official that the system meets the intent of the code. We consider ICC Evaluation Services to be an approved agency. Approved evaluation reports can be viewed by clicking on the "Evaluation Reports" icon on the ICC web site at: <http://www.iccsafe.org>.

New code requirements are being developed that would streamline, provide uniformity, and provide reasonable conditions for use of un-vented attic systems in the next edition of the Michigan Residential Code. If/when that occurs, this memo will be obsolete and the new code requirements shall apply.

More information on the issues relating to un-vented attics using foam insulation can be found in the discussion of this topic on the ICC bulletin board. Click on the "Jobs and Code Talk" tab on the ICC web site, then on the bulletin board tab, then do a search on "foam" in the "Non-Structural" issues section.